



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Jeff Christenson

Wasson #1-31

31-4s-29w Decatur,KS

Start Date: 2012.06.29 @ 21:30:00

End Date: 2012.06.30 @ 05:06:30

Job Ticket #: 46094 DST #: 1

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

Printed: 2012.07.06 @ 15:03:58

Murfin Drilling Co. 31-4s-29w Decatur,KS Wasson #1-31 DST # 1 LKC-A,B 2012.06.29



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

31-4s-29w Decatur, KS

250 N. Water Ste. 300
Wichita KS 67202

Wasson #1-31

Job Ticket: 46094

DST#: 1

ATTN: Jeff Christenson

Test Start: 2012.06.29 @ 21:30:00

GENERAL INFORMATION:

Formation: **LKC-A,B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:15:30

Time Test Ended: 05:06:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 3882.00 ft (KB) To 3926.00 ft (KB) (TVD)

Reference Elevations: 2800.00 ft (KB)

Total Depth: 3926.00 ft (KB) (TVD)

2795.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8791

Inside

Press @ Run Depth: 19.22 psig @ 3885.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.06.29

End Date:

2012.06.30

Last Calib.:

2012.06.30

Start Time:

21:30:05

End Time:

05:06:29

Time On Btm:

2012.06.30 @ 00:13:00

Time Off Btm:

2012.06.30 @ 03:10:30

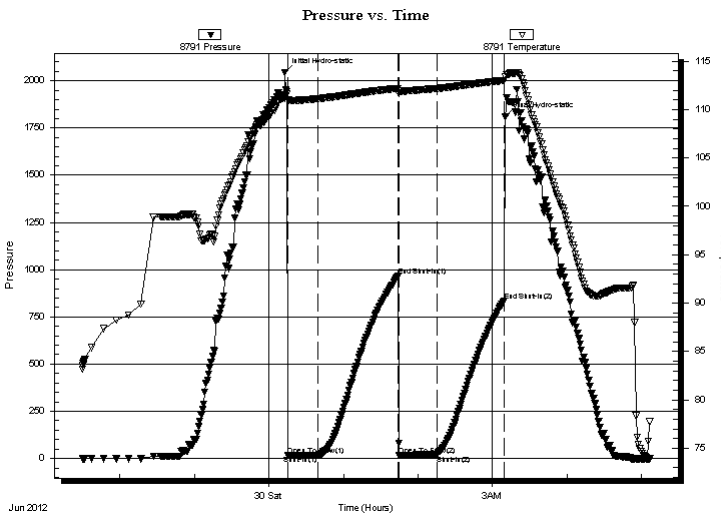
TEST COMMENT: IF: Weak surface blow, Died in 3 mins.

IS: No blow over 60 mins.

FF: No blow over 30 mins.

FS: No blow back over 60 mins.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2044.85	111.16	Initial Hydro-static
3	15.96	110.97	Open To Flow (1)
26	16.26	111.12	Shut-In(1)
91	967.52	112.20	End Shut-In(1)
92	18.19	111.91	Open To Flow (2)
122	19.22	112.17	Shut-In(2)
177	835.69	113.01	End Shut-In(2)
178	1811.93	113.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud-100%M	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

31-4s-29w Decatur, KS

250 N. Water Ste. 300
Wichita KS 67202

Wasson #1-31

Job Ticket: 46094

DST#: 1

ATTN: Jeff Christenson

Test Start: 2012.06.29 @ 21:30:00

Tool Information

Drill Pipe:	Length: 3699.00 ft	Diameter: 3.80 inches	Volume: 51.89 bbl	Tool Weight: 2600.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 52.80 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3882.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	72.00 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			3859.00	
Hydraulic tool	5.00			3864.00	
Jars	5.00			3869.00	
Safety Joint	3.00			3872.00	
Packer	5.00			3877.00	28.00 Bottom Of Top Packer
Packer	5.00			3882.00	
Stubb	1.00			3883.00	
Perforations	1.00			3884.00	
Change Over Sub	1.00			3885.00	
Recorder	0.00	8791	Inside	3885.00	
Recorder	0.00	8673	Outside	3885.00	
Drill Pipe	32.00			3917.00	
Change Over Sub	1.00			3918.00	
Perforations	5.00			3923.00	
Bullnose	3.00			3926.00	44.00 Bottom Packers & Anchor

Total Tool Length: 72.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

31-4s-29w Decatur,KS

250 N. Water Ste. 300
Wichita KS 67202

Wasson #1-31

Job Ticket: 46094

DST#: 1

ATTN: Jeff Christenson

Test Start: 2012.06.29 @ 21:30:00

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: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud-100%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8791

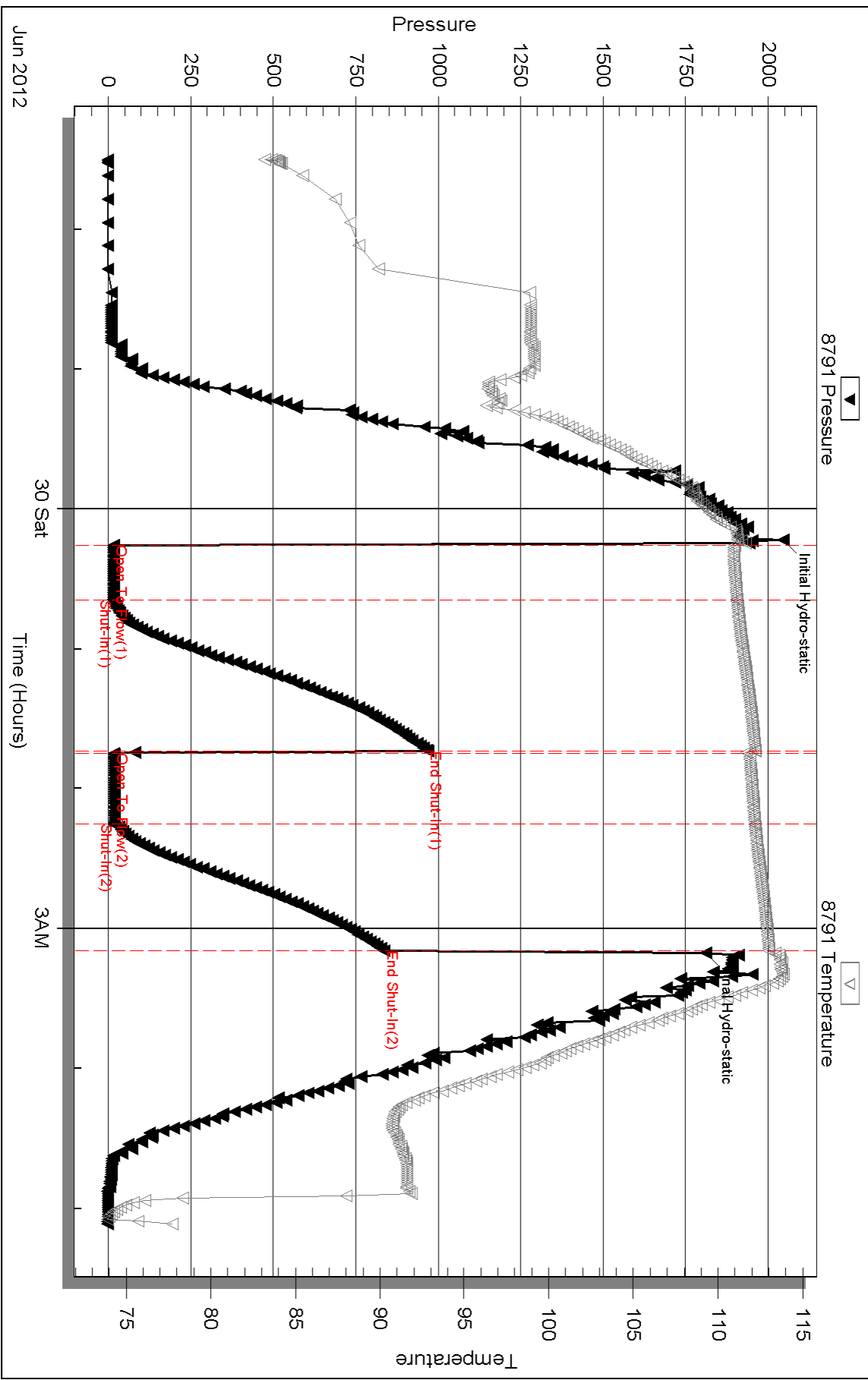
Inside

Murfin Drilling Co.

Masson #1-31

DST Test Number: 1

Pressure vs. Time

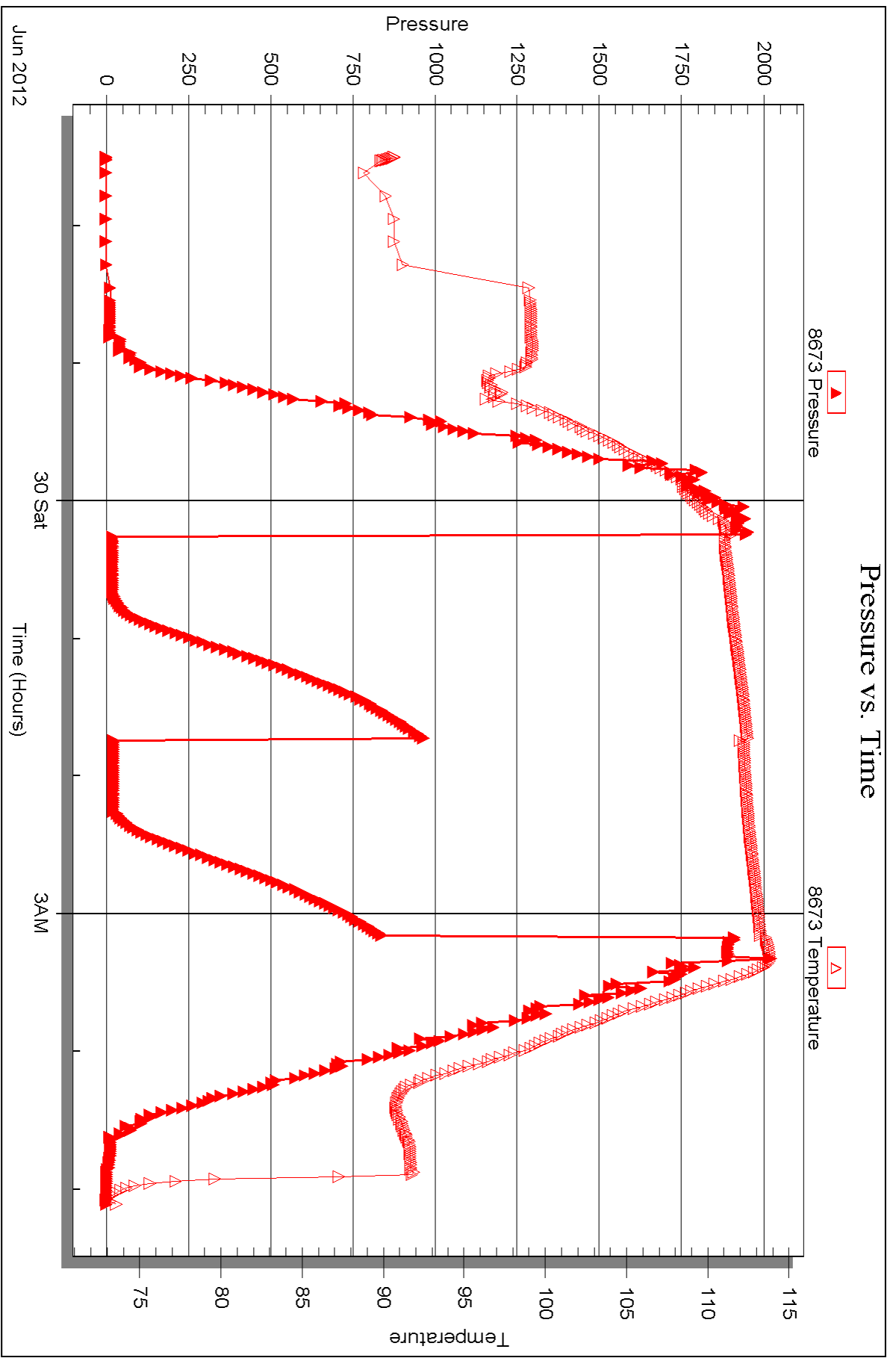


Serial #: 8673

Outside Murfin Drilling Co.

Masson #1-31

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Jeff Christenson

Wasson #1-31

31-4s-29w Decatur,KS

Start Date: 2012.06.30 @ 14:15:00

End Date: 2012.06.30 @ 22:08:00

Job Ticket #: 46095 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.07.06 @ 15:02:50



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

31-4s-29w Decatur, KS

250 N. Water Ste. 300
Wichita KS 67202

Wasson #1-31

Job Ticket: 46095

DST#: 2

ATTN: Jeff Christenson

Test Start: 2012.06.30 @ 14:15:00

GENERAL INFORMATION:

Formation: **LKC-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:18:30

Time Test Ended: 22:08:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 3940.00 ft (KB) To 3970.00 ft (KB) (TVD)

Reference Elevations: 2800.00 ft (KB)

Total Depth: 3970.00 ft (KB) (TVD)

2795.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8791

Inside

Press @ Run Depth: 51.26 psig @ 3942.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.06.30

End Date:

2012.06.30

Last Calib.:

2012.06.30

Start Time: 14:15:05

End Time:

22:07:59

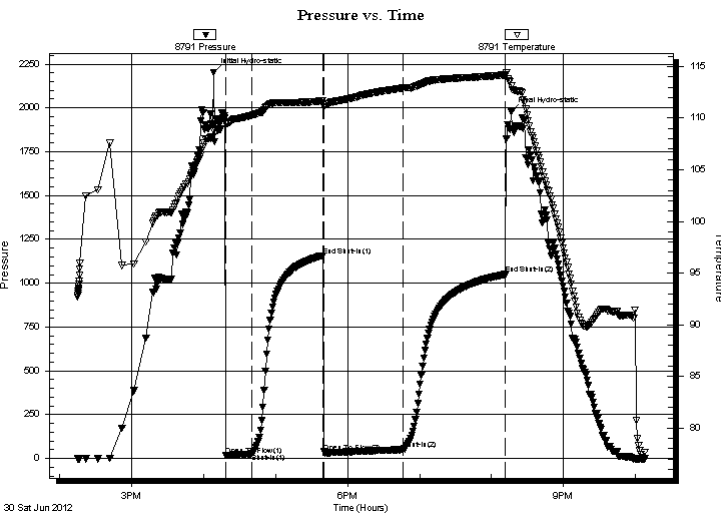
Time On Btm:

2012.06.30 @ 16:08:30

Time Off Btm:

2012.06.30 @ 20:16:30

TEST COMMENT: IF: Weak blow, Built to 1 1/4in. over 30 mins. Stacked out 86 ft. from bottom, pushed 36 ft. to bottom.
 IS: NO blow back over 60 mins.
 FF: Weak blow, Built to 3 in. over 60 mins.
 FSI: No blow back over 90 mins.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2202.45	108.73	Initial Hydro-static
10	17.76	109.48	Open To Flow (1)
32	28.78	110.27	Shut-In(1)
91	1157.84	111.66	End Shut-In(1)
92	37.99	111.13	Open To Flow (2)
158	51.26	112.92	Shut-In(2)
243	1051.02	114.17	End Shut-In(2)
248	1977.70	113.10	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	gmco-5%g25%m75%o	0.30
40.00	go-10%g90%0	0.20

* 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.

31-4s-29w Decatur,KS

250 N. Water Ste. 300
Wichita KS 67202

Wasson #1-31

Job Ticket: 46095

DST#: 2

ATTN: Jeff Christenson

Test Start: 2012.06.30 @ 14:15:00

Tool Information

Drill Pipe:	Length: 3731.00 ft	Diameter: 3.80 inches	Volume: 52.34 bbl	Tool Weight: 2600.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 53.25 bbl</u>	Tool Chased 36.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3940.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	58.00 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			3917.00	
Hydraulic tool	5.00			3922.00	
Jars	5.00			3927.00	
Safety Joint	3.00			3930.00	
Packer	5.00			3935.00	28.00 Bottom Of Top Packer
Packer	5.00			3940.00	
Stubb	1.00			3941.00	
Perforations	1.00			3942.00	
Recorder	0.00	8791	Inside	3942.00	
Recorder	0.00	8673	Outside	3942.00	
Perforations	25.00			3967.00	
Bullnose	3.00			3970.00	30.00 Bottom Packers & Anchor

Total Tool Length: 58.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

31-4s-29w Decatur,KS

250 N. Water Ste. 300
Wichita KS 67202

Wasson #1-31

Job Ticket: 46095

DST#: 2

ATTN: Jeff Christenson

Test Start: 2012.06.30 @ 14:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	gmco-5%g25%m75%o	0.295
40.00	go-10%g90%0	0.197

Total Length: 100.00 ft Total Volume: 0.492 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 33@90*=31

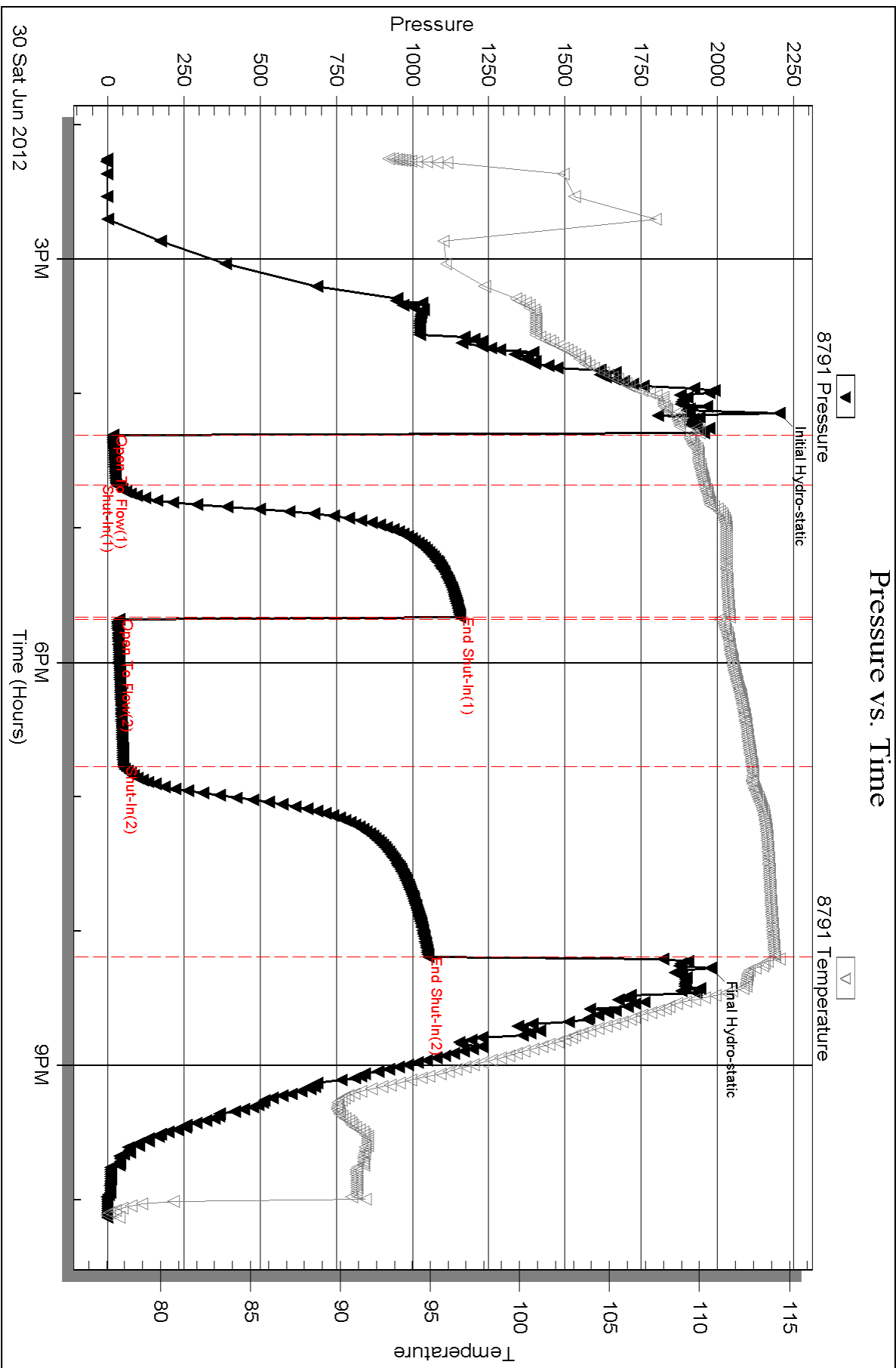
Serial #: 8791

Inside

Murfin Drilling Co.

Masson #1-31

DST Test Number: 2

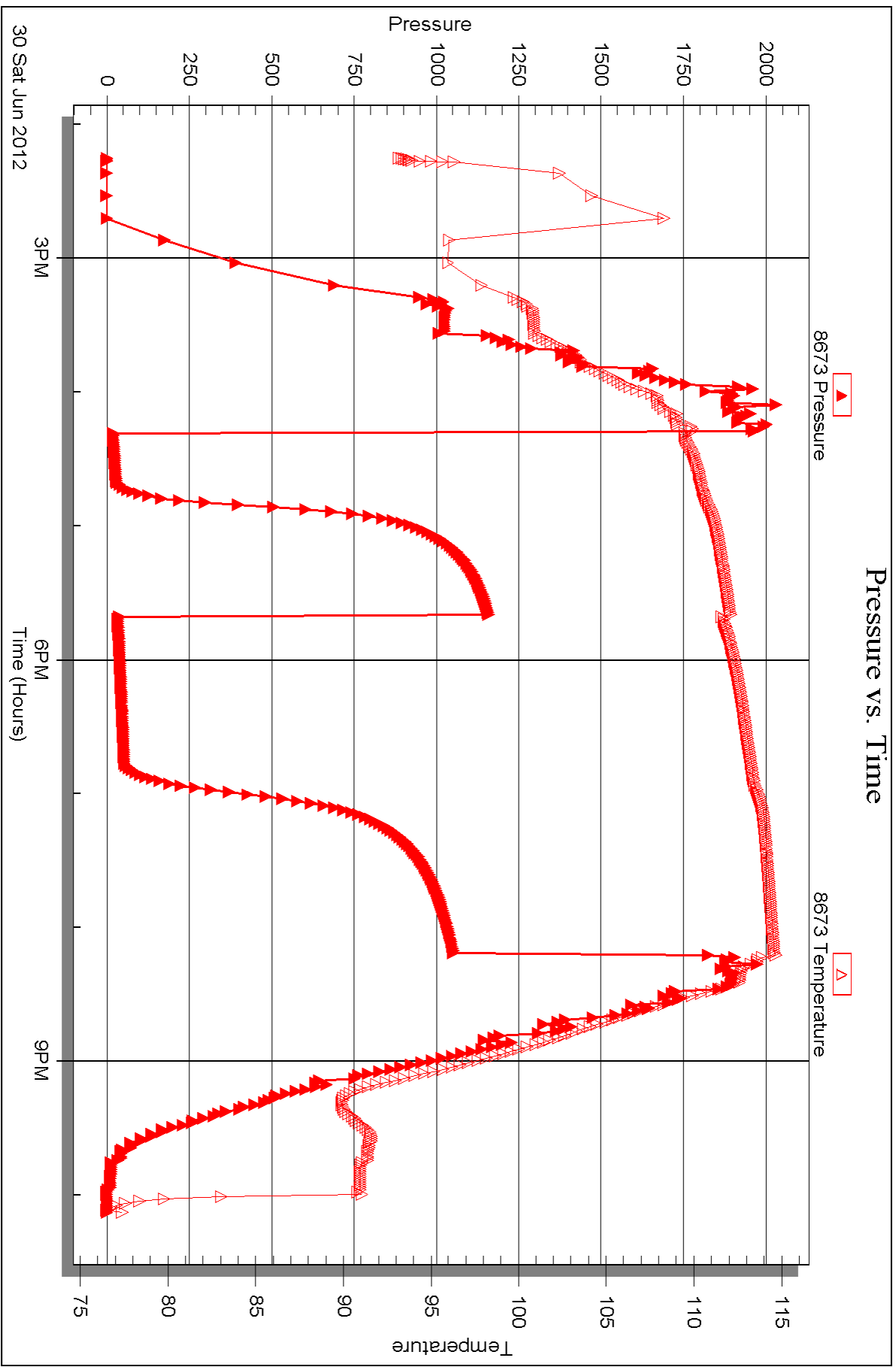


Serial #: 8673

Outside Murfin Drilling Co.

Masson #1-31

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Jeff Christenson

Wasson #1-31

31-4s-29w Decatur,KS

Start Date: 2012.07.01 @ 05:05:00

End Date: 2012.07.01 @ 13:49:30

Job Ticket #: 46096 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.07.06 @ 15:01:20



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

31-4s-29w Decatur, KS

250 N. Water Ste. 300
Wichita KS 67202

Wasson #1-31

Job Ticket: 46096

DST#: 3

ATTN: Jeff Christenson

Test Start: 2012.07.01 @ 05:05:00

GENERAL INFORMATION:

Formation: **LKC-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:25:30

Time Test Ended: 13:49:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 3968.00 ft (KB) To 3982.00 ft (KB) (TVD)

Reference Elevations: 2800.00 ft (KB)

Total Depth: 3982.00 ft (KB) (TVD)

2795.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8791

Inside

Press @ Run Depth: 336.92 psig @ 3969.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.07.01

End Date:

2012.07.01

Last Calib.:

2012.07.01

Start Time:

05:05:05

End Time:

13:49:30

Time On Btm:

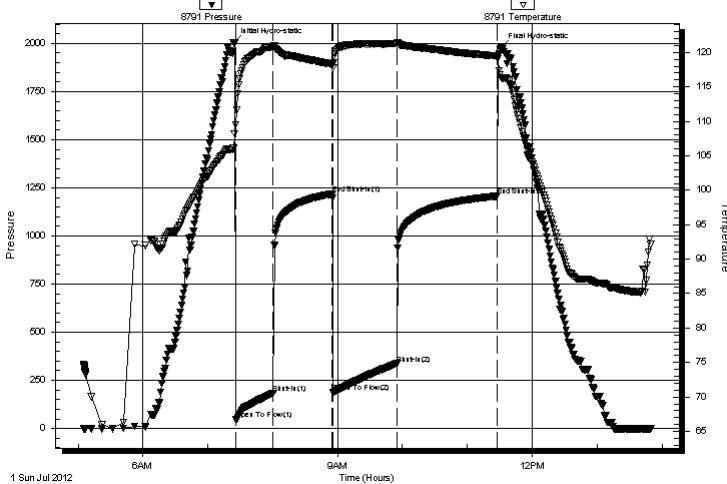
2012.07.01 @ 07:23:30

Time Off Btm:

2012.07.01 @ 11:31:30

TEST COMMENT: IF: Fair blow, Built to B.O.B in 11 mins.
IS: No blow back over 60 mins.
FF: Fair blow, Built to B.O.B in 12 mins.
FS: No blow back over 90 mins.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2005.18	106.09	Initial Hydro-static
2	48.02	109.50	Open To Flow (1)
37	183.83	120.82	Shut-In(1)
92	1218.36	118.28	End Shut-In(1)
93	187.55	117.80	Open To Flow (2)
151	336.92	121.28	Shut-In(2)
244	1206.75	119.47	End Shut-In(2)
248	1975.91	116.34	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
682.00	water-100%w	7.87
10.00	oil-100%o	0.14

* 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.

31-4s-29w Decatur,KS

250 N. Water Ste. 300
Wichita KS 67202

Wasson #1-31

Job Ticket: 46096

DST#: 3

ATTN: Jeff Christenson

Test Start: 2012.07.01 @ 05:05:00

Tool Information

Drill Pipe:	Length: 3764.00 ft	Diameter: 3.80 inches	Volume: 52.80 bbl	Tool Weight: 2600.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 53.71 bbl</u>	Tool Chased 15.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3968.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	14.00 ft			
Tool Length:	42.00 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			3945.00	
Hydraulic tool	5.00			3950.00	
Jars	5.00			3955.00	
Safety Joint	3.00			3958.00	
Packer	5.00			3963.00	28.00 Bottom Of Top Packer
Packer	5.00			3968.00	
Stubb	1.00			3969.00	
Recorder	0.00	8791	Inside	3969.00	
Recorder	0.00	8673	Outside	3969.00	
Perforations	10.00			3979.00	
Bullnose	3.00			3982.00	14.00 Bottom Packers & Anchor

Total Tool Length: 42.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

31-4s-29w Decatur,KS

250 N. Water Ste. 300
Wichita KS 67202

Wasson #1-31

Job Ticket: 46096

DST#: 3

ATTN: Jeff Christenson

Test Start: 2012.07.01 @ 05:05:00

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:

6000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
682.00	water-100%w	7.872
10.00	oil-100%o	0.140

Total Length: 692.00 ft

Total Volume: 8.012 bbl

Num Fluid Samples: 0

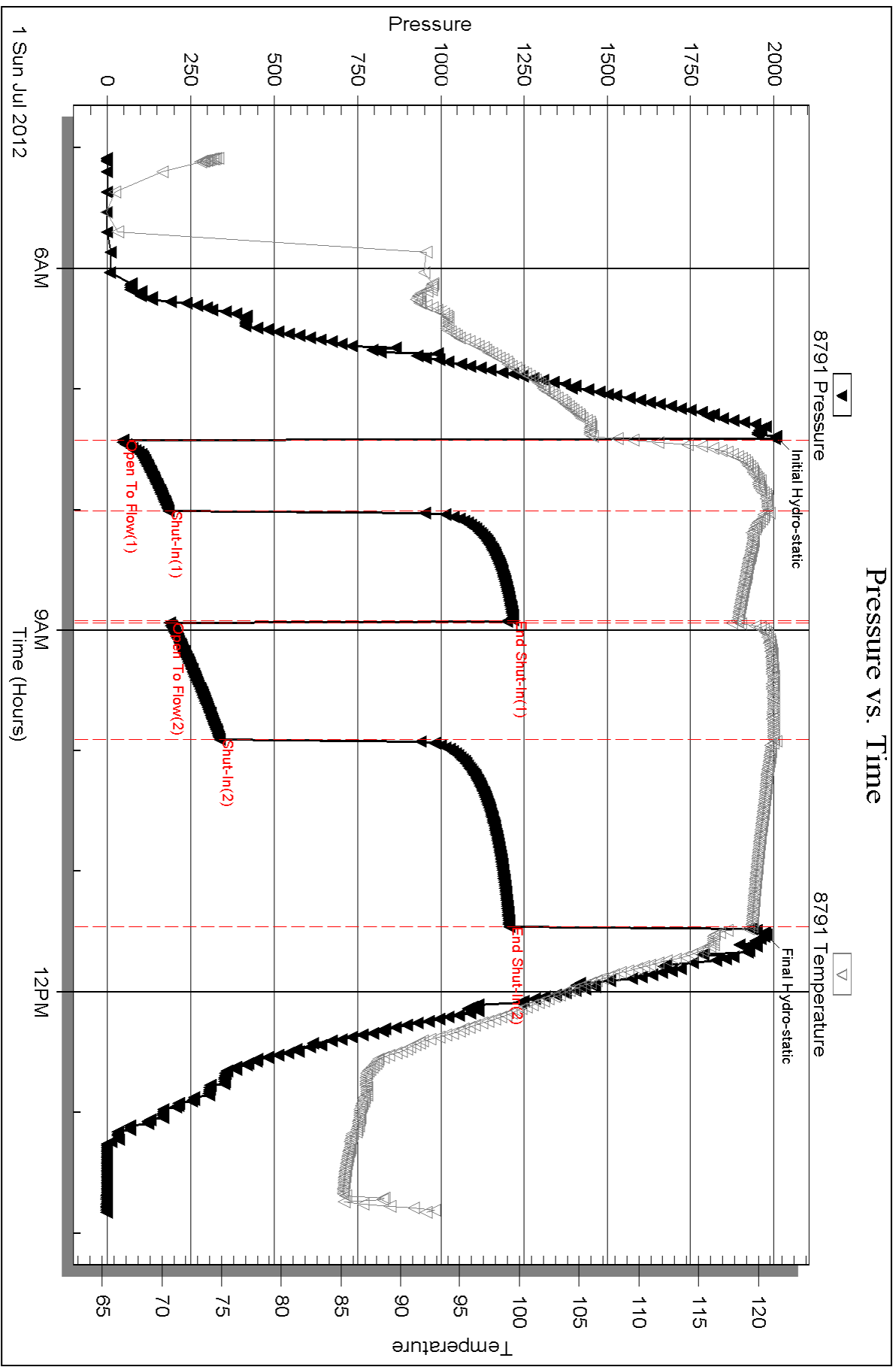
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

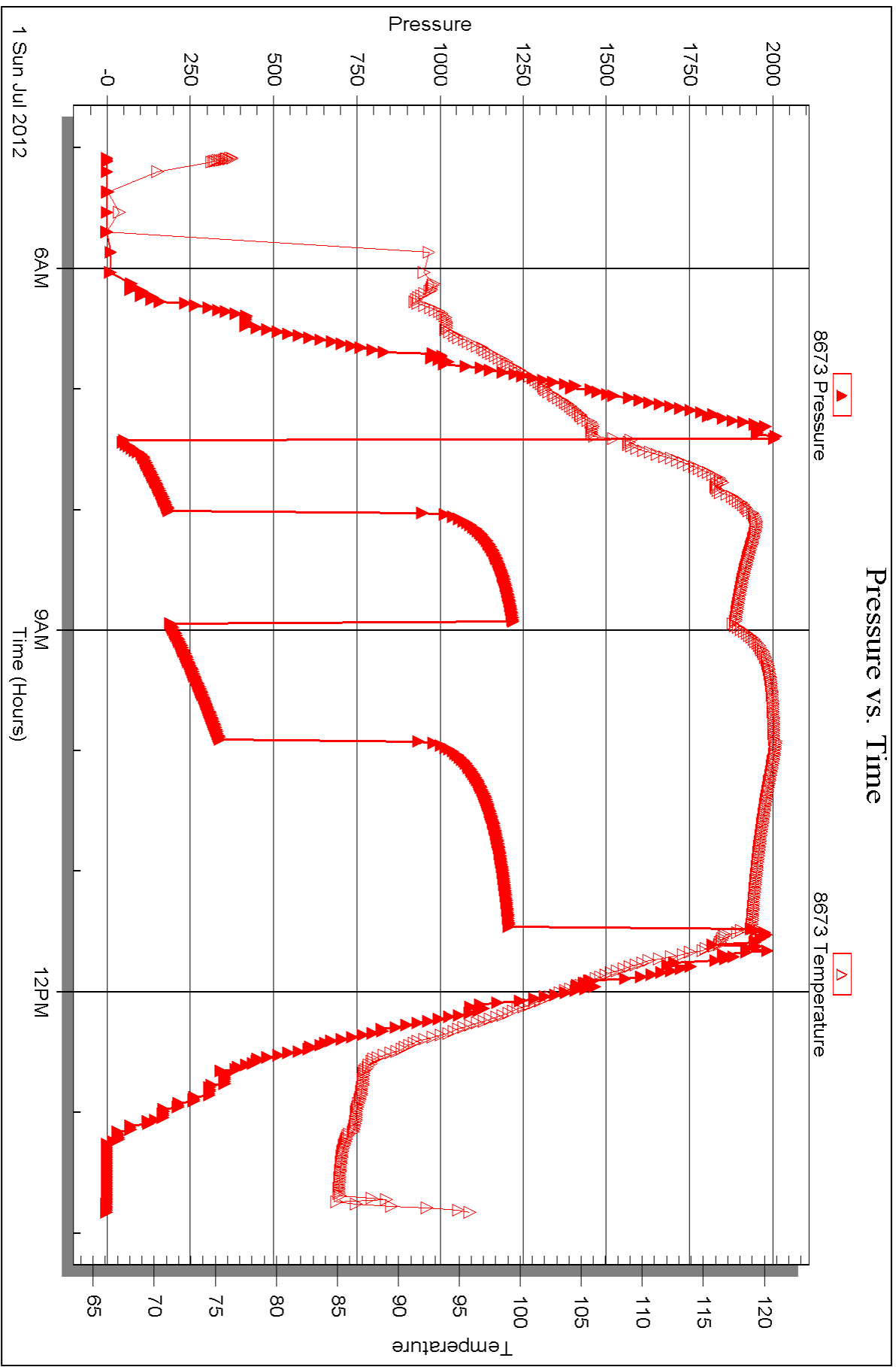


Serial #: 8673

Outside Murfin Drilling Co.

Masson #1-31

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Jeff Christenson

Wasson #1-31

31-4s-29w Decatur,KS

Start Date: 2012.07.02 @ 02:10:00

End Date: 2012.07.02 @ 10:46:00

Job Ticket #: 46097 DST #: 4

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

Printed: 2012.07.06 @ 15:00:15



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

31-4s-29w Decatur, KS

250 N. Water Ste. 300
Wichita KS 67202

Wasson #1-31

Job Ticket: 46097

DST#: 4

ATTN: Jeff Christenson

Test Start: 2012.07.02 @ 02:10:00

GENERAL INFORMATION:

Formation: **LKC-H,I,J,K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:16:00

Time Test Ended: 10:46:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 3984.00 ft (KB) To 4076.00 ft (KB) (TVD)

Reference Elevations: 2800.00 ft (KB)

Total Depth: 4076.00 ft (KB) (TVD)

2795.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8791

Inside

Press @ Run Depth: 160.56 psig @ 3988.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.07.02

End Date:

2012.07.02

Last Calib.:

2012.07.02

Start Time:

02:10:05

End Time:

10:46:00

Time On Btm:

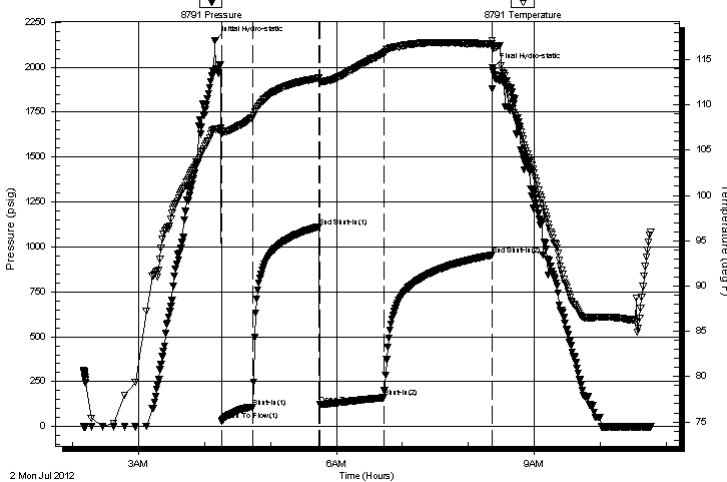
2012.07.02 @ 04:09:30

Time Off Btm:

2012.07.02 @ 08:22:00

TEST COMMENT: IF: Fair blow ,Built to B.O.B in 30 mins.
IS: No blow back over 60 mins.
FF: Weak blow , Built to 8 in. over 60 mins.
FS: No blow back over 90 mins.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2149.42	107.32	Initial Hydro-static
7	33.22	106.96	Open To Flow (1)
34	108.22	108.61	Shut-In(1)
94	1112.26	112.93	End Shut-In(1)
95	122.86	112.56	Open To Flow (2)
154	160.56	115.59	Shut-In(2)
252	954.10	116.75	End Shut-In(2)
253	1999.63	116.25	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	water-100%w	0.30
186.00	mcw -20% m80%w	1.48
20.00	oil-100%o	0.28

* 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.

31-4s-29w Decatur,KS

250 N. Water Ste. 300
Wichita KS 67202

Wasson #1-31

Job Ticket: 46097

DST#: 4

ATTN: Jeff Christenson

Test Start: 2012.07.02 @ 02:10:00

Tool Information

Drill Pipe:	Length: 3793.00 ft	Diameter: 3.80 inches	Volume: 53.21 bbl	Tool Weight: 2600.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 54.12 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3984.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	92.00 ft			
Tool Length:	120.00 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			3961.00	
Hydraulic tool	5.00			3966.00	
Jars	5.00			3971.00	
Safety Joint	3.00			3974.00	
Packer	5.00			3979.00	28.00 Bottom Of Top Packer
Packer	5.00			3984.00	
Stubb	1.00			3985.00	
Perforations	1.00			3986.00	
Change Over Sub	2.00			3988.00	
Recorder	0.00	8791	Inside	3988.00	
Recorder	0.00	8673	Outside	3988.00	
Drill Pipe	64.00			4052.00	
Change Over Sub	1.00			4053.00	
Perforations	20.00			4073.00	
Bullnose	3.00			4076.00	92.00 Bottom Packers & Anchor

Total Tool Length: 120.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

31-4s-29w Decatur,KS

250 N. Water Ste. 300
Wichita KS 67202

Wasson #1-31

Job Ticket: 46097

DST#: 4

ATTN: Jeff Christenson

Test Start: 2012.07.02 @ 02:10:00

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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	water-100%w	0.305
186.00	mcw -20% m80%w	1.480
20.00	oil-100%o	0.281

Total Length: 268.00 ft Total Volume: 2.066 bbl

Num Fluid Samples: 0

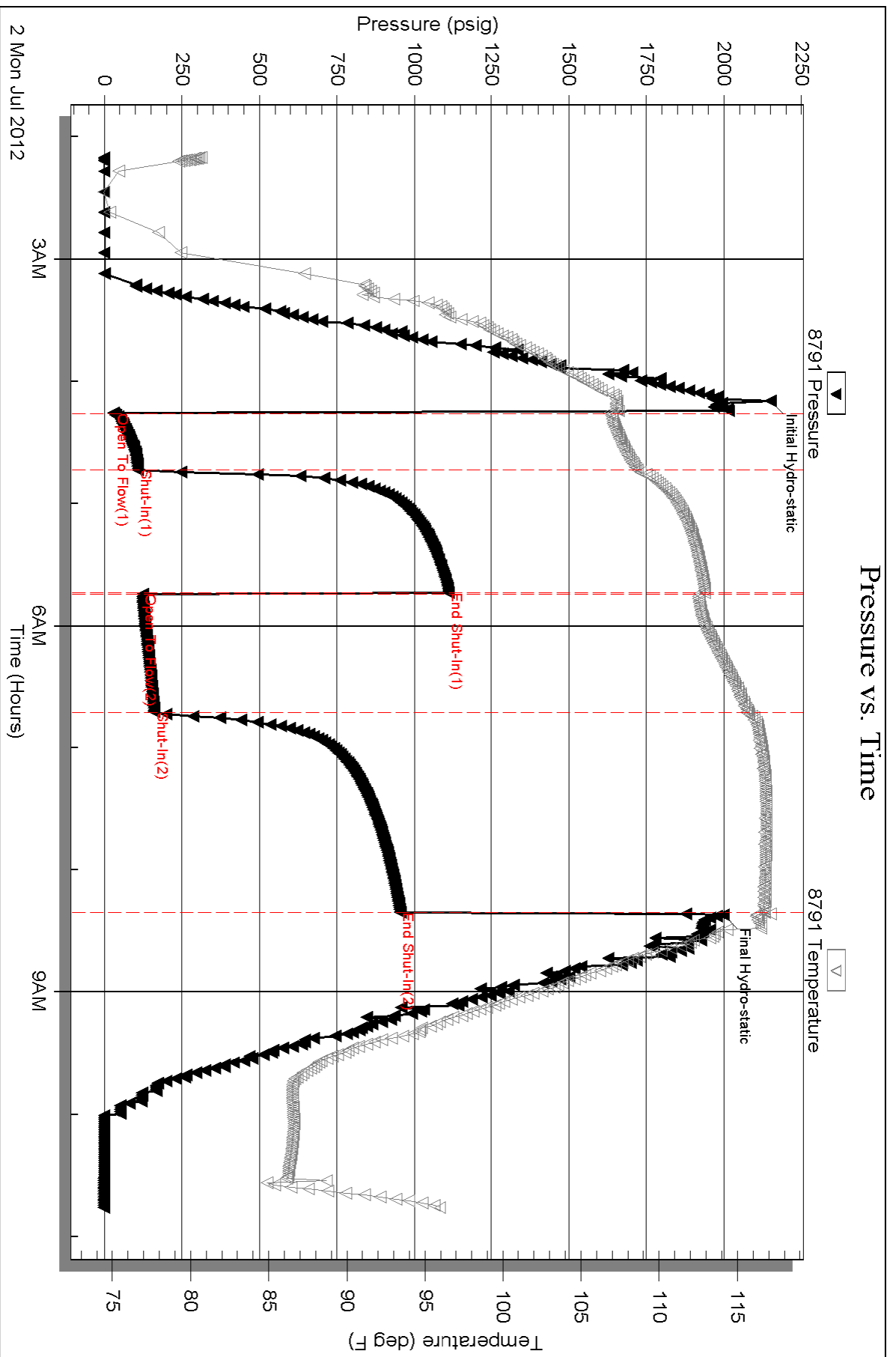
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



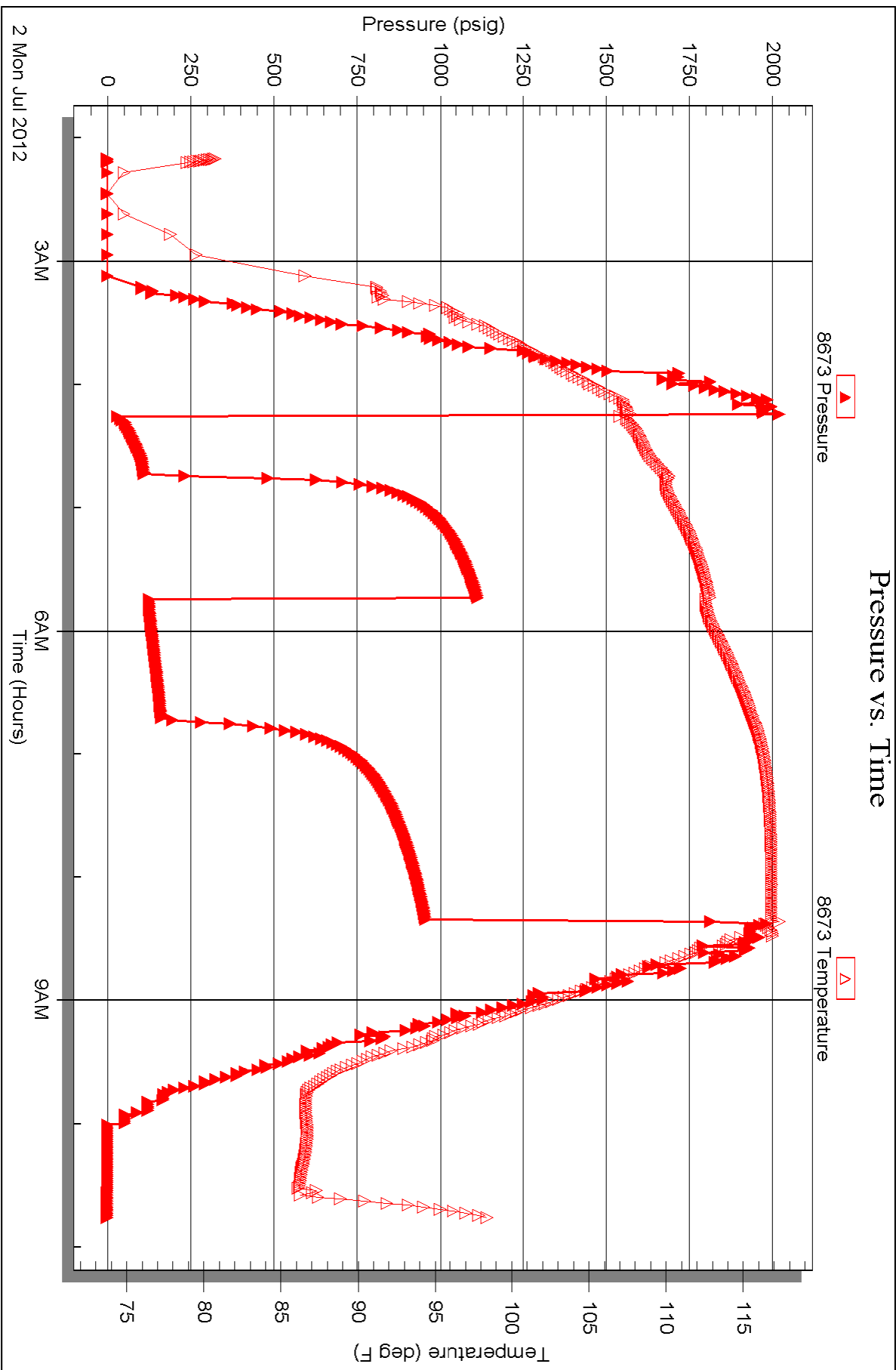
Serial #: 8673

Outside

Murfin Drilling Co.

Masson #1-31

DST Test Number: 4





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. **46094**

4/10

Well Name & No. Wasson #1-31 Test No. 1 Date 6-29-2012
 Company Murfin Drilling Co. Elevation 2800 KB 2795 GL
 Address 250 N. Water Ste. 300 Wichita KS 67202
 Co. Rep / Geo. Jeff Christenson Rig Murfin #8
 Location: Sec. 31 Twp. 4S Rge. 29W Co. Decatur State Ks.

Interval Tested 3882 3926 Zone Tested LKC-AEB
 Anchor Length 44 Drill Pipe Run 3699 Mud Wt. 9.2
 Top Packer Depth 3877 Drill Collars Run 186 Vis 54
 Bottom Packer Depth 3882 Wt. Pipe Run -0- WL 6.0
 Total Depth 3926 Chlorides 1,000 ppm System LCM 5#

Blow Description IF: Weak surface Blow, Diced in 3mins.
ISI: No blow back over 60 mins.
FF: No blow over 30
FSS: No blow back over 60 mins.

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</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 Total 5 BHT 113 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2045</u>	<input checked="" type="checkbox"/> Test 1150	T-On Location <u>19:50</u>
(B) First Initial Flow <u>16</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>21:30</u>
(C) First Final Flow <u>16</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>00:15</u>
(D) Initial Shut-In <u>968</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>3:15</u>
(E) Second Initial Flow <u>18</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>5:06</u>
(F) Second Final Flow <u>19</u>	<input checked="" type="checkbox"/> Mileage <u>2012 = 40 x 1.55</u> 62	Comments _____
(G) Final Shut-In <u>836</u>	<input type="checkbox"/> Sampler	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>1812</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Total <u>1537</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	MP/DST Disc't _____
	<input type="checkbox"/> Accessibility	
	Sub Total <u>1537</u>	

Approved By _____ Our Representative Chuk [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

Test Ticket

NO. 46095

Well Name & No. Wasson #1-31 Test No. 2 Date 6-30-2012
 Company Murfin Drilling Co. Elevation 2800 KB 2795 GL
 Address 250 N. Water Ste 300 Wichita KS. 67202
 Co. Rep / Geo. Jeff Christinson Rig Murfin#8
 Location: Sec. 31 Twp. 45 Rge. 29w Co. Decatur State KS

Interval Tested 3940 3970 Zone Tested LKC-F
 Anchor Length 30 Drill Pipe Run 3731 Mud Wt. 9.1
 Top Packer Depth 3935 Drill Collars Run 186 Vis 60
 Bottom Packer Depth 3940 Wt. Pipe Run -0- WL 6.0
 Total Depth 3970 Chlorides 1,000 ppm System LCM 5#

Blow Description IF: Pushed tool 36ft to Bottom, Tool opened, weak blow, Built to 1/4 in.
ISF: No blow back over 60 mins
FF: Weak blow, Built to 3 in. over 60 mins
FSI: No blow back over 90 mins.

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>90</u>	<u>10</u>	<u>90</u>		
<u>60</u>	<u>GMCO</u>	<u>5</u>	<u>70</u>		<u>25</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 100 BHT 114 Gravity 31 API RW 40023 @ °F Chlorides ppm

(A) Initial Hydrostatic 2203 Test 1150 T-On Location 13:30
 (B) First Initial Flow 18 Jars 250 T-Started 14:15
 (C) First Final Flow 29 Safety Joint 75 T-Open 16:18
 (D) Initial Shut-In 1158 Circ Sub T-Pulled 20:10
 (E) Second Initial Flow 38 Hourly Standby T-Out 22:08
 (F) Second Final Flow 51 Mileage 20x2 = 40x1.55 62 Comments Not stacked out 86 ft from
 (G) Final Shut-In 1051 Sampler Bottom. Worked the next 30 min
 (H) Final Hydrostatic 1978 Straddle Pushing it to Bottom
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Initial Open 30 Extra Packer
 Initial Shut-In 60 Extra Recorder
 Final Flow 60 Day Standby
 Final Shut-In 90 Accessibility
 Sub Total 1537 MP/DST Disc't

Approved By _____

Our Representative Chuck [Signature]

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 46096

Well Name & No. Wasson #1-31 Test No. 3 Date 7-1-2012
 Company MurFin Drilling Co. Elevation 2800 KB 2295 GL
 Address 250 N. water Ste. 300 Wichita Ks. 67202
 Co. Rep / Geo. Jeff Christinson Rig MurFin #8
 Location: Sec. 31 Twp. 4S Rge. 29W Co. Decatur State KS

Interval Tested 3968 3982 Zone Tested LKC - G
 Anchor Length 14 Drill Pipe Run 3264 Mud Wt. 9.1
 Top Packer Depth 3963 Drill Collars Run 186 Vis 60
 Bottom Packer Depth 3968 Wt. Pipe Run -0- WL 6.0
 Total Depth 3982 Chlorides 1,000 ppm System LCM 5#

Blow Description IF: Fair blow, Built to B.O.B in 11mins.

ISI: No blow back over 60mins.

FF: Fair blow, Built to B.O.B in 12mins.

FSI: No blow back over 90mins.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>oil</u>		<u>100</u>		
<u>682</u>	<u>water</u>			<u>100</u>	

Rec Total 692 BHT 119 Gravity _____ API RW .08 @ 90 ° F Chlorides 6000 ppm

(A) Initial Hydrostatic 2005 Test 1150 T-On Location 5:00
 (B) First Initial Flow 48 Jars 250 T-Started 5:05
 (C) First Final Flow 184 Safety Joint 75 T-Open 7:25
 (D) Initial Shut-In 1218 Circ Sub _____ T-Pulled 11:25
 (E) Second Initial Flow 188 Hourly Standby _____ T-Out 13:49
 (F) Second Final Flow 337 Mileage 20x2 = 40x1.55 62 Comments _____
 (G) Final Shut-In 1207 Sampler _____
 (H) Final Hydrostatic 1976 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 1537
 Final Flow 60 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 90 Sub Total 1537

Approved By _____

Our Representative Chuck [Signature]

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RILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 46097

Well Name & No. Wasson #1-31 Test No. 4 Date 7-2-2012
 Company Murfin Drilling Co. Elevation 2800 KB 2795 GL
 Address 250 N. Water Ste. 300 Wichita KS 67202
 Co. Rep / Geo. Jeff Christanson Rig Murfin #8
 Location: Sec. 31 Twp. 45 Rge. 24W Co. Decatur State Ks.

Interval Tested 3984 4076 Zone Tested H-I, J, K
 Anchor Length 92 Drill Pipe Run 3793 Mud Wt. 9.2
 Top Packer Depth 3979 Drill Collars Run 187 Vis 60
 Bottom Packer Depth 3984 Wt. Pipe Run - 0' WL 5.2
 Total Depth 4076 Chlorides 1000 ppm System LCM 5#

Blow Description IF: ^{fair} weak blow, Built to B.OB in 30 mins.
ISE: No blow back over 60 mins.
FFB: Weak blow, Built to 8in. over 60 mins.
FST: No blow back over 90 mins.

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>oil</u>		<u>100%</u>		
<u>186</u>	<u>MCW</u>			<u>80%</u>	<u>20</u>
<u>62</u>	<u>water water</u>			<u>100%</u>	

Rec Total 268 BHT 116 Gravity API RW .8 @ 90 °F Chlorides 6000 ppm

(A) Initial Hydrostatic <u>2149</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>2:05</u>
(B) First Initial Flow <u>33</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>2:10</u>
(C) First Final Flow <u>108</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>4:16</u>
(D) Initial Shut-In <u>1112</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>8:15</u>
(E) Second Initial Flow <u>123</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>10:46</u>
(F) Second Final Flow <u>161</u>	<input checked="" type="checkbox"/> Mileage <u>20x2 = 40x 1.55 x 2 = 124</u>	Comments <u>Loaded to oil 5 on 7-4-2012 at 7:30 AM</u>
(G) Final Shut-In <u>954</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2000</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>800</u>
Final Flow <u>60</u>	<input checked="" type="checkbox"/> Day Standby <u>1 Day 21 Hrs.</u>	Total <u>2499</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1699</u>	

Approved By _____ Our Representative Chuck Kays

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