



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita, KS 67202 - 1216

ATTN: Larry Nicholson

DAMW #1-11

11-17s-33w Scott,KS

Start Date: 2014.12.03 @ 13:05:19

End Date: 2014.12.03 @ 21:15:04

Job Ticket #: 59715 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.12 @ 10:52:58



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co Inc
 250 N Water Ste 300
 Wichita, KS 67202 - 1216
 ATTN: Larry Nicholson

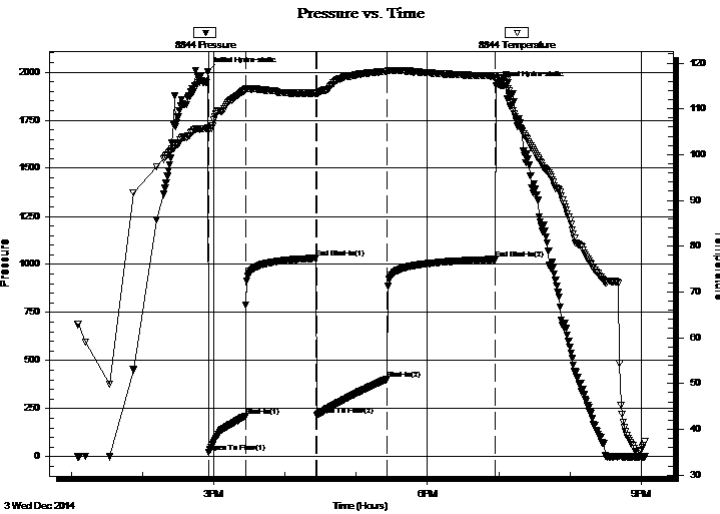
11-17s-33w Scott,KS
DAMW #1-11
 Job Ticket: 59715 **DST#: 1**
 Test Start: 2014.12.03 @ 13:05:19

GENERAL INFORMATION:

Formation: **LKC B-D**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 14:55:49
 Time Test Ended: 21:15:04
 Interval: **4010.00 ft (KB) To 4076.00 ft (KB) (TVD)**
 Total Depth: 4076.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Shane McBride
 Unit No: 55
 Reference Elevations: 3018.00 ft (KB)
 3007.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8844 Outside
 Press@RunDepth: 403.59 psig @ 4011.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.12.03 End Date: 2014.12.03 Last Calib.: 2014.12.03
 Start Time: 13:05:19 End Time: 21:03:04 Time On Btm: 2014.12.03 @ 14:54:49
 Time Off Btm: 2014.12.03 @ 18:57:49

TEST COMMENT: B.O.B. in 12 min
 No return
 B.O.B. in 17 min.
 No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2001.04	105.76	Initial Hydro-static
1	24.36	105.25	Open To Flow (1)
32	211.62	114.15	Shut-In(1)
92	1032.76	113.47	End Shut-In(1)
92	216.63	113.25	Open To Flow (2)
152	403.59	118.18	Shut-In(2)
242	1026.49	117.16	End Shut-In(2)
243	1930.20	116.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
496.00	water 100%w	4.71
186.00	s m c w 10%m 90%w	2.61
155.00	m c w 40%m 60%w w/oil spots on top	2.17

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc
250 N Water Ste 300
Wichita, KS 67202 - 1216
ATTN: Larry Nicholson

11-17s-33w Scott,KS
DAMW #1-11
Job Ticket: 59715 **DST#: 1**
Test Start: 2014.12.03 @ 13:05:19

Tool Information

Drill Pipe:	Length: 3766.00 ft	Diameter: 3.80 inches	Volume: 52.83 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: 247.00 ft	Diameter: 2.25 inches	Volume: 1.21 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 54.04 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4010.00 ft			Final 73000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	66.00 ft			
Tool Length:	94.00 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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Change Over Sub	1.00			3983.00	
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	4.00			4010.00	
Stubb	1.00			4011.00	
Recorder	0.00	6771	Inside	4011.00	
Recorder	0.00	8844	Outside	4011.00	
Perforations	26.00			4037.00	
Change Over Sub	1.00			4038.00	
Drill Pipe	32.00			4070.00	
Change Over Sub	1.00			4071.00	
Bullnose	5.00			4076.00	66.00 Bottom Packers & Anchor

Total Tool Length: 94.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc
250 N Water Ste 300
Wichita, KS 67202 - 1216
ATTN: Larry Nicholson

11-17s-33w Scott,KS
DAMW #1-11
Job Ticket: 59715 **DST#: 1**
Test Start: 2014.12.03 @ 13:05:19

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 30000 ppm
Viscosity: 59.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.33 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 3500.00 ppm		
Filter Cake: 2.00 inches		

Recovery Information

Recovery Table

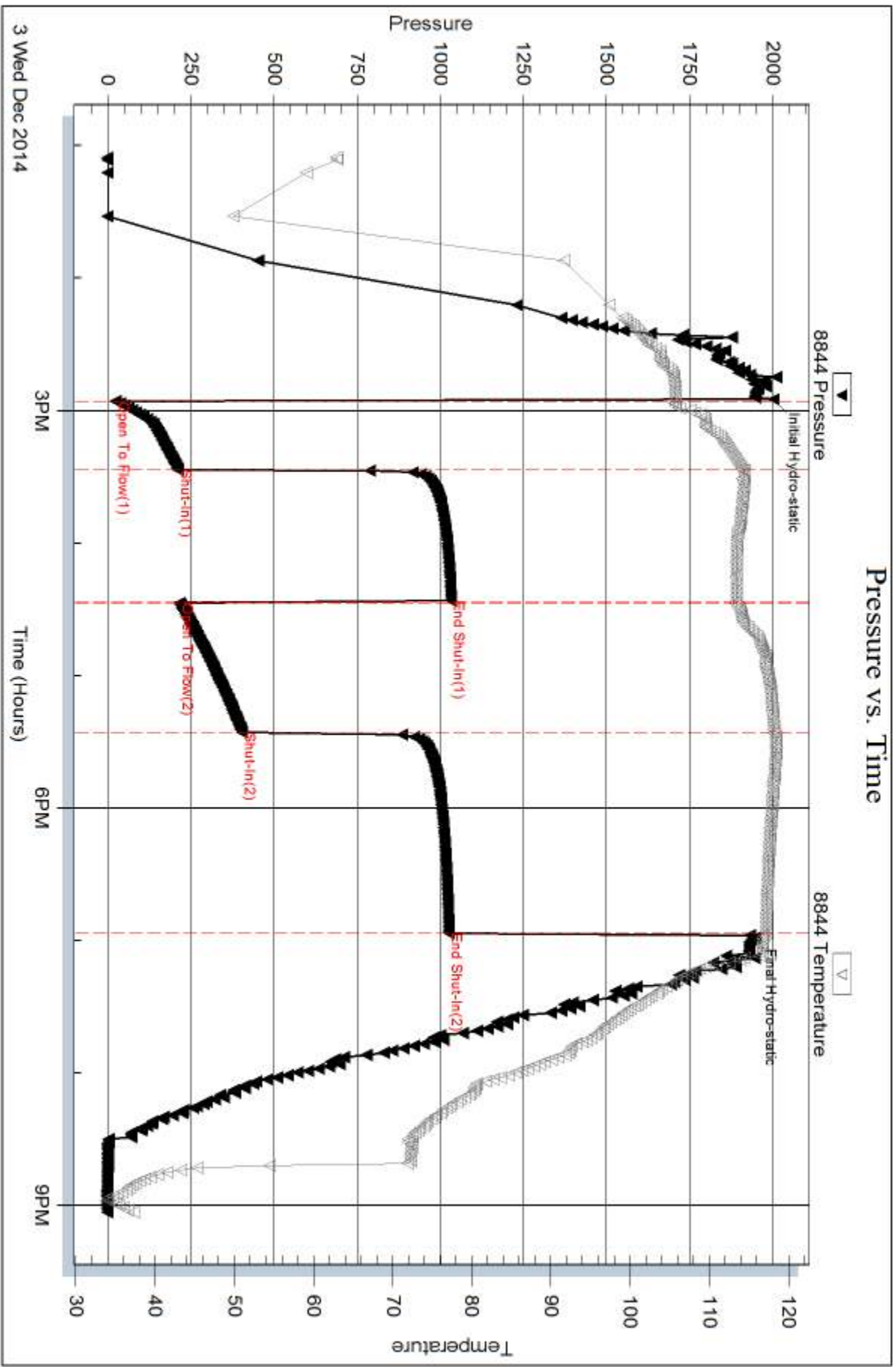
Length ft	Description	Volume bbl
496.00	water 100%w	4.708
186.00	s m c w 10%m 90%w	2.609
155.00	m c w 40%m 60%w w/oil spots on top	2.174

Total Length: 837.00 ft Total Volume: 9.582 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: rw .268 @ 60*f =30,000 chlor



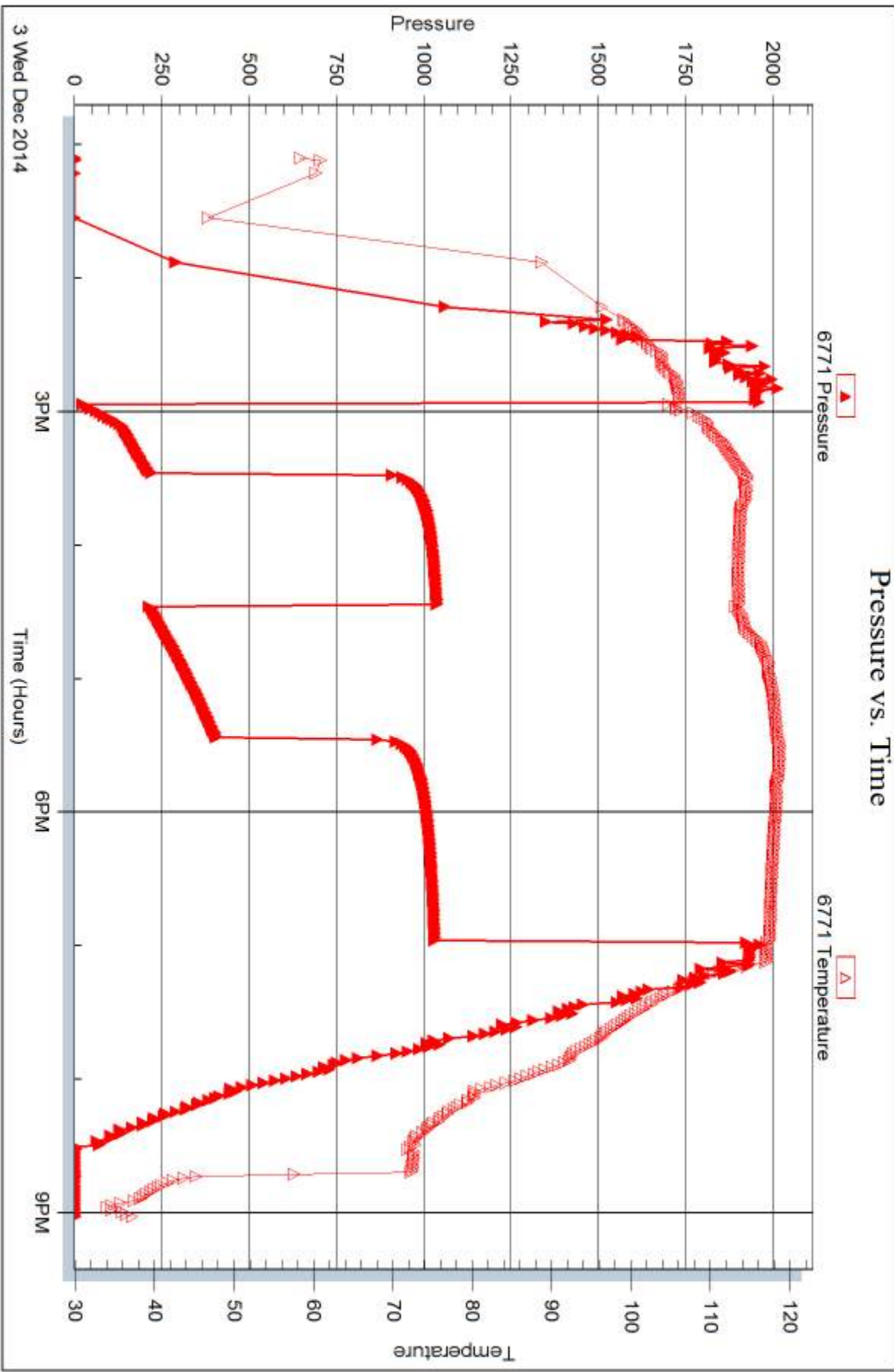
Serial #: 6771

Inside

Murfin Drilling Co Inc

DAMW #1-11

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 59715

Printed: 2014.12.12 @ 10:53:00



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita, KS 67202 - 1216

ATTN: Larry Nicholson

DAMW #1-11

11-17s-33w Scott,KS

Start Date: 2014.12.04 @ 21:15:50

End Date: 2014.12.05 @ 03:40:50

Job Ticket #: 59716 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.12 @ 10:52:18



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co Inc
250 N Water Ste 300
Wichita, KS 67202 - 1216
ATTN: Larry Nicholson

11-17s-33w Scott,KS
DAMW #1-11
Job Ticket: 59716 **DST#: 2**
Test Start: 2014.12.04 @ 21:15:50

GENERAL INFORMATION:

Formation: **K**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 23:16:05
Time Test Ended: 03:40:50
Test Type: Conventional Bottom Hole (Reset)
Tester: Shane McBride
Unit No: 55
Interval: **4266.00 ft (KB) To 4314.00 ft (KB) (TVD)**
Reference Elevations: 3018.00 ft (KB)
Total Depth: 4314.00 ft (KB) (TVD) 3007.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

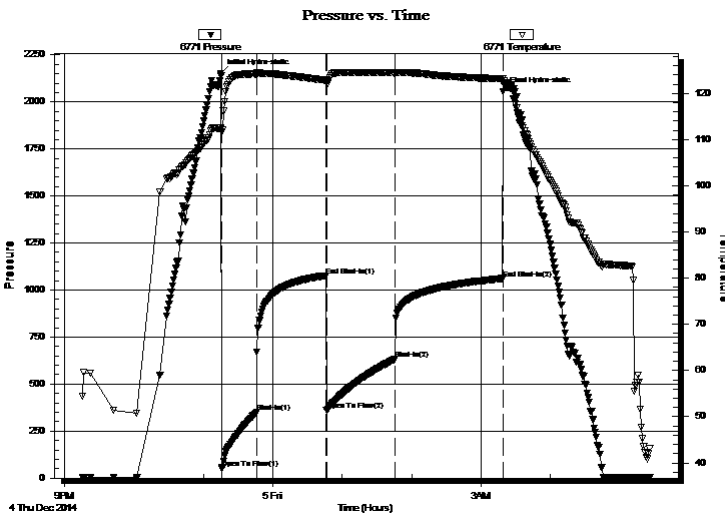
Serial #: 6771

Inside

Press@RunDepth: 631.58 psig @ 4267.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.12.04 End Date: 2014.12.05 Last Calib.: 2014.12.05
Start Time: 21:15:50 End Time: 05:25:50 Time On Btm: 2014.12.04 @ 23:15:05
Time Off Btm: 2014.12.05 @ 03:19:05

TEST COMMENT: B.O.B. in 5 min
No return
B.O.B. in 10 min
No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2152.50	112.49	Initial Hydro-static
1	51.31	111.69	Open To Flow (1)
31	350.41	124.17	Shut-In(1)
91	1076.83	122.85	End Shut-In(1)
92	362.72	122.28	Open To Flow (2)
151	631.58	124.41	Shut-In(2)
244	1061.48	123.13	End Shut-In(2)
244	2055.64	123.21	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
740.00	water w/heavy oil scum 100%w	8.13
186.00	s o & m c w 3%o 10%m 87%w	2.61
156.00	s o c m w 4%o 46%m 50%w	2.19
3.00	free oil	0.04

* 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
250 N Water Ste 300
Wichita, KS 67202 - 1216
ATTN: Larry Nicholson

11-17s-33w Scott,KS
DAMW #1-11
Job Ticket: 59716 **DST#: 2**
Test Start: 2014.12.04 @ 21:15:50

Tool Information

Drill Pipe:	Length: 4016.00 ft	Diameter: 3.80 inches	Volume: 56.33 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 247.00 ft	Diameter: 2.25 inches	Volume: 1.21 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 57.54 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4266.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	48.00 ft			
Tool Length:	76.00 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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Change Over Sub	1.00			4239.00	
Shut In Tool	5.00			4244.00	
Hydraulic tool	5.00			4249.00	
Jars	5.00			4254.00	
Safety Joint	3.00			4257.00	
Packer	5.00			4262.00	28.00 Bottom Of Top Packer
Packer	4.00			4266.00	
Stubb	1.00			4267.00	
Recorder	0.00	6771	Inside	4267.00	
Recorder	0.00	8844	Outside	4267.00	
Perforations	9.00			4276.00	
Change Over Sub	1.00			4277.00	
Drill Pipe	31.00			4308.00	
Change Over Sub	1.00			4309.00	
Bullnose	5.00			4314.00	48.00 Bottom Packers & Anchor

Total Tool Length: 76.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc
250 N Water Ste 300
Wichita, KS 67202 - 1216
ATTN: Larry Nicholson

11-17s-33w Scott,KS
DAMW #1-11
Job Ticket: 59716 **DST#: 2**
Test Start: 2014.12.04 @ 21:15:50

Mud and Cushion Information

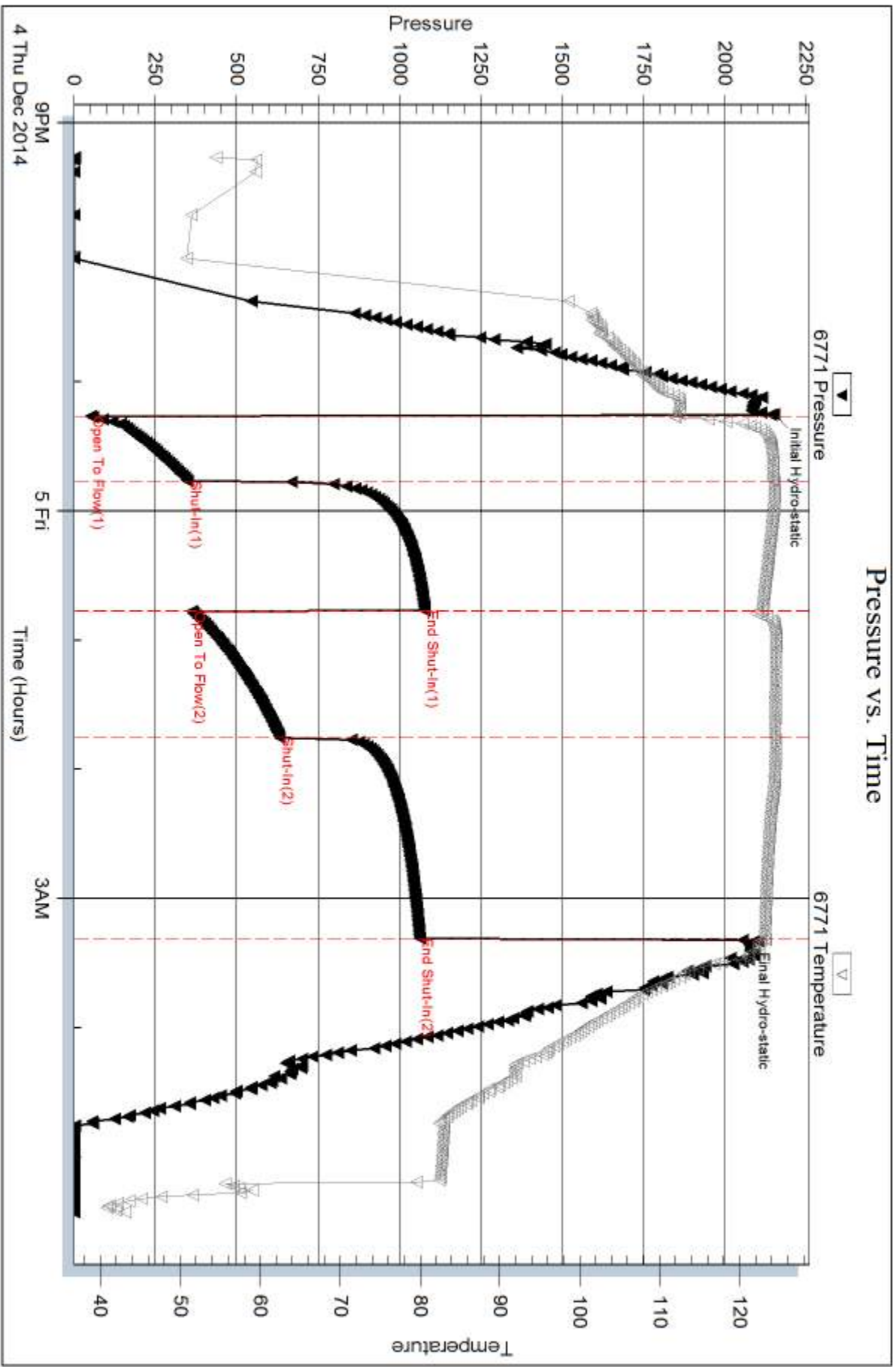
Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 37000 ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl	
Water Loss: 5.95 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 5200.00 ppm		
Filter Cake: 2.00 inches		

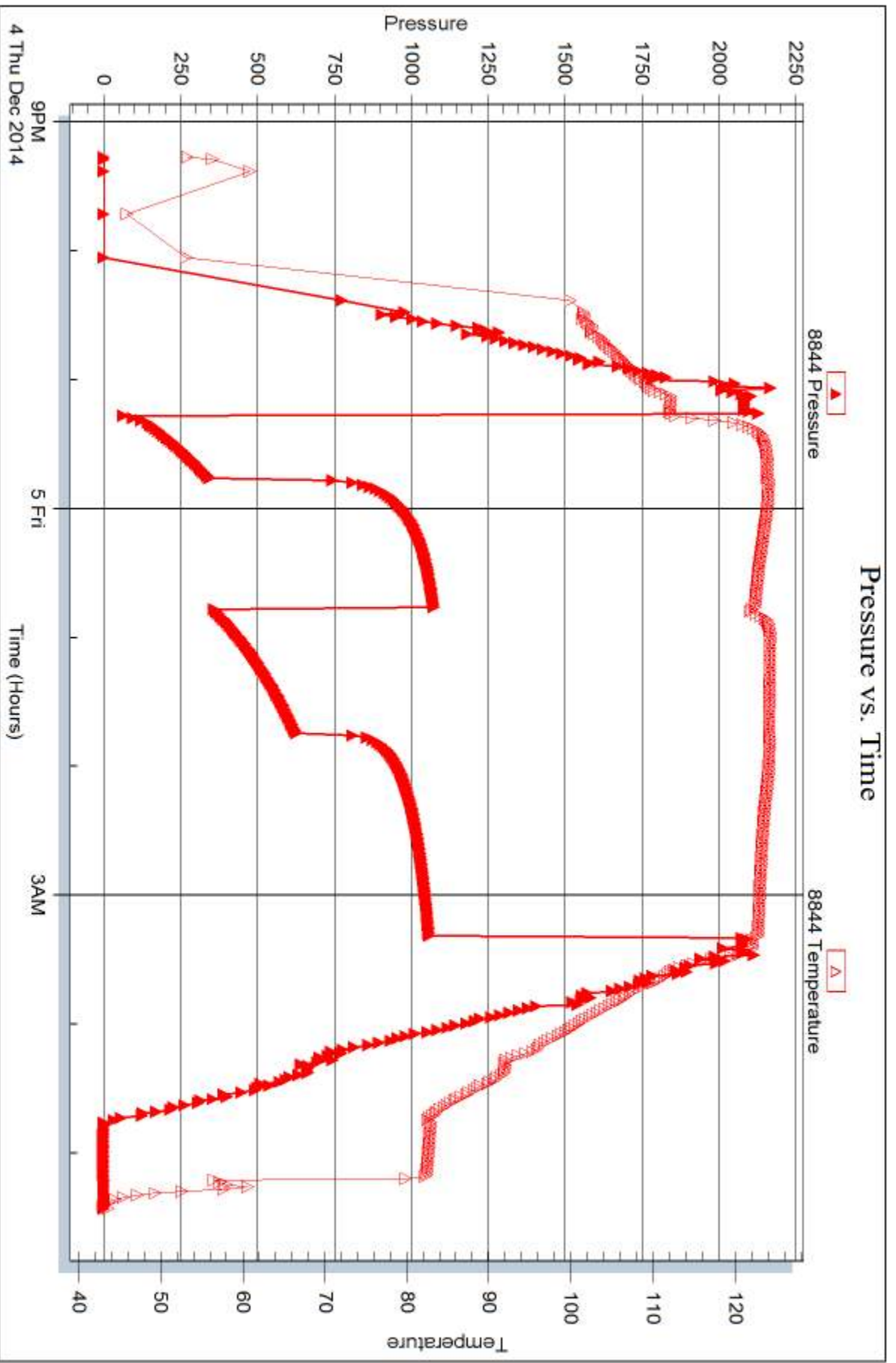
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
740.00	water w/heavy oil scum 100%w	8.130
186.00	s o & m c w 3%o 10%m 87%w	2.609
156.00	s o c m w 4%o 46%m 50%w	2.188
3.00	free oil	0.042

Total Length: 1085.00 ft Total Volume: 12.969 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: rw .268 @ 51*f=37000 chlort







DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita, KS 67202 - 1216

ATTN: Larry Nicholson

DAMW #1-11

11-17s-33w Scott,KS

Start Date: 2014.12.05 @ 12:40:24

End Date: 2014.12.05 @ 20:45:39

Job Ticket #: 59717 DST #: 3

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.12 @ 10:51:40



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co Inc
 250 N Water Ste 300
 Wichita, KS 67202 - 1216
 ATTN: Larry Nicholson

11-17s-33w Scott,KS
DAMW #1-11
 Job Ticket: 59717 **DST#: 3**
 Test Start: 2014.12.05 @ 12:40:24

GENERAL INFORMATION:

Formation: **LKC L - Lenapah**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 14:29:24
 Time Test Ended: 20:45:39
 Interval: **4312.00 ft (KB) To 4394.00 ft (KB) (TVD)**
 Total Depth: 4394.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Shane McBride
 Unit No: 55
 Reference Elevations: 3018.00 ft (KB)
 3007.00 ft (CF)
 KB to GR/CF: 11.00 ft

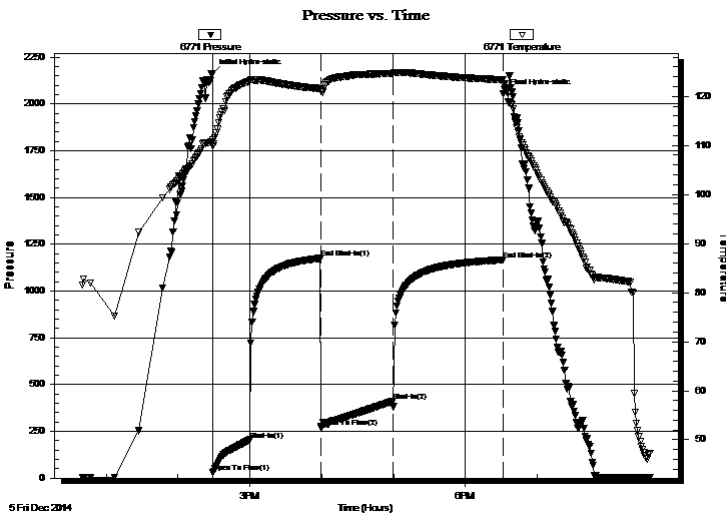
Serial #: 6771

Inside

Press@RunDepth: 411.52 psig @ 4313.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.12.05 End Date: 2014.12.05 Last Calib.: 2014.12.05
 Start Time: 12:40:24 End Time: 20:34:39 Time On Btm: 2014.12.05 @ 14:29:09
 Time Off Btm: 2014.12.05 @ 18:31:54

TEST COMMENT: B.O.B. in 13 min.
 No return
 B.O.B. in 21 min.
 No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2162.69	111.04	Initial Hydro-static
1	32.17	109.90	Open To Flow (1)
31	204.41	123.08	Shut-In(1)
90	1174.95	121.57	End Shut-In(1)
91	270.39	121.07	Open To Flow (2)
151	411.52	124.65	Shut-In(2)
243	1167.15	123.40	End Shut-In(2)
243	2054.46	122.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
434.00	water 100%w	3.84
186.00	s m c w 10%m 90%w	2.61
174.00	m c w w/oil spots on top 35%m 65%w	2.44

* 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
250 N Water Ste 300
Wichita, KS 67202 - 1216
ATTN: Larry Nicholson

11-17s-33w Scott,KS
DAMW #1-11
Job Ticket: 59717 **DST#: 3**
Test Start: 2014.12.05 @ 12:40:24

Tool Information

Drill Pipe:	Length: 4047.00 ft	Diameter: 3.80 inches	Volume: 56.77 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: 247.00 ft	Diameter: 2.25 inches	Volume: 1.21 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 57.98 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4312.00 ft			Final 73000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	82.00 ft			
Tool Length:	110.00 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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Change Over Sub	1.00			4285.00	
Shut In Tool	5.00			4290.00	
Hydraulic tool	5.00			4295.00	
Jars	5.00			4300.00	
Safety Joint	3.00			4303.00	
Packer	5.00			4308.00	28.00 Bottom Of Top Packer
Packer	4.00			4312.00	
Stubb	1.00			4313.00	
Recorder	0.00	6771	Inside	4313.00	
Recorder	0.00	8844	Outside	4313.00	
Perforations	11.00			4324.00	
Change Over Sub	1.00			4325.00	
Drill Pipe	63.00			4388.00	
Change Over Sub	1.00			4389.00	
Bullnose	5.00			4394.00	82.00 Bottom Packers & Anchor

Total Tool Length: 110.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc
250 N Water Ste 300
Wichita, KS 67202 - 1216
ATTN: Larry Nicholson

11-17s-33w Scott,KS
DAMW #1-11
Job Ticket: 59717 **DST#: 3**
Test Start: 2014.12.05 @ 12:40:24

Mud and Cushion Information

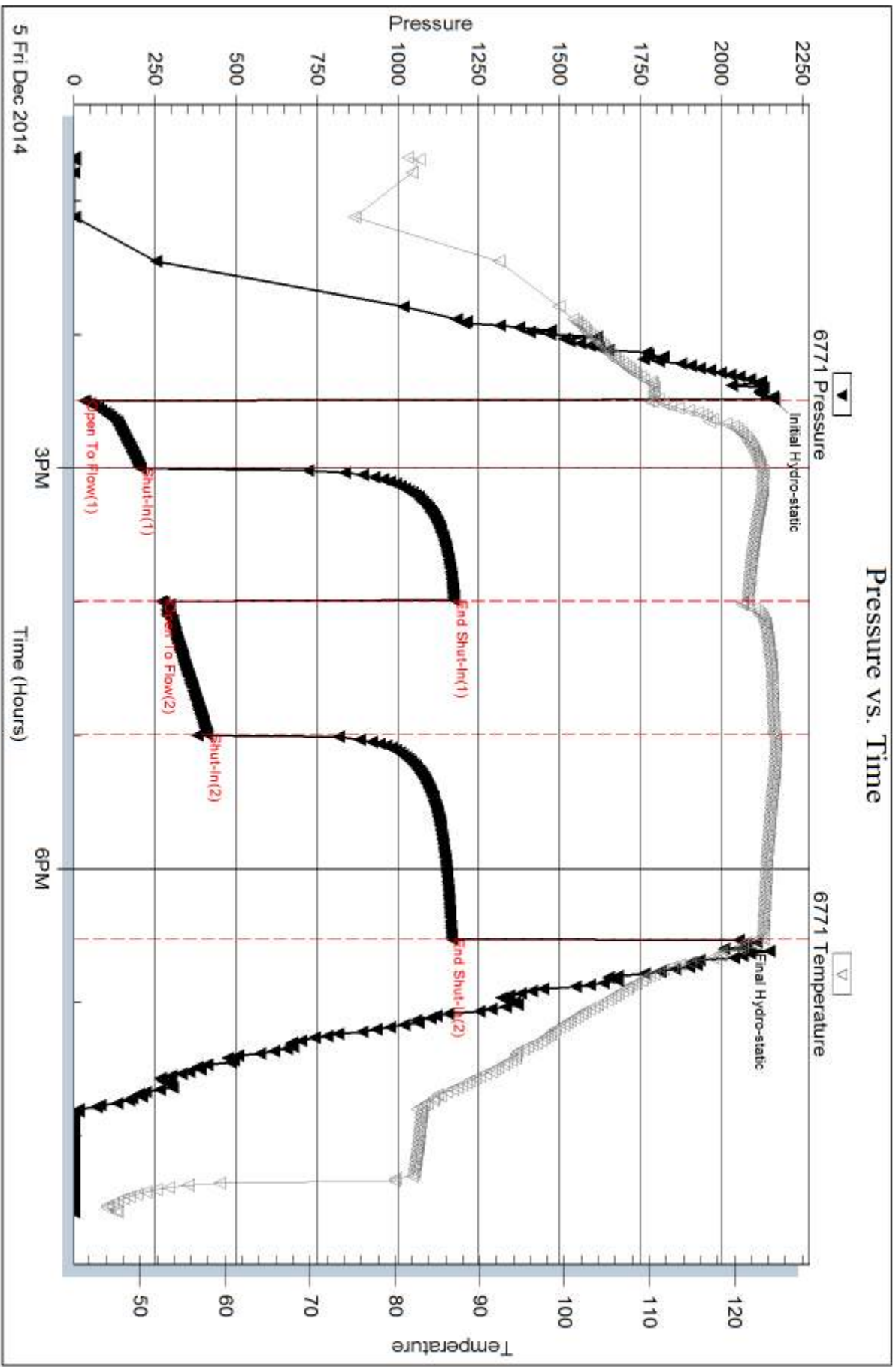
Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 31000 ppm
Viscosity: 59.00 sec/qt	Cushion Volume: bbl	
Water Loss: 5.95 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 5900.00 ppm		
Filter Cake: 2.00 inches		

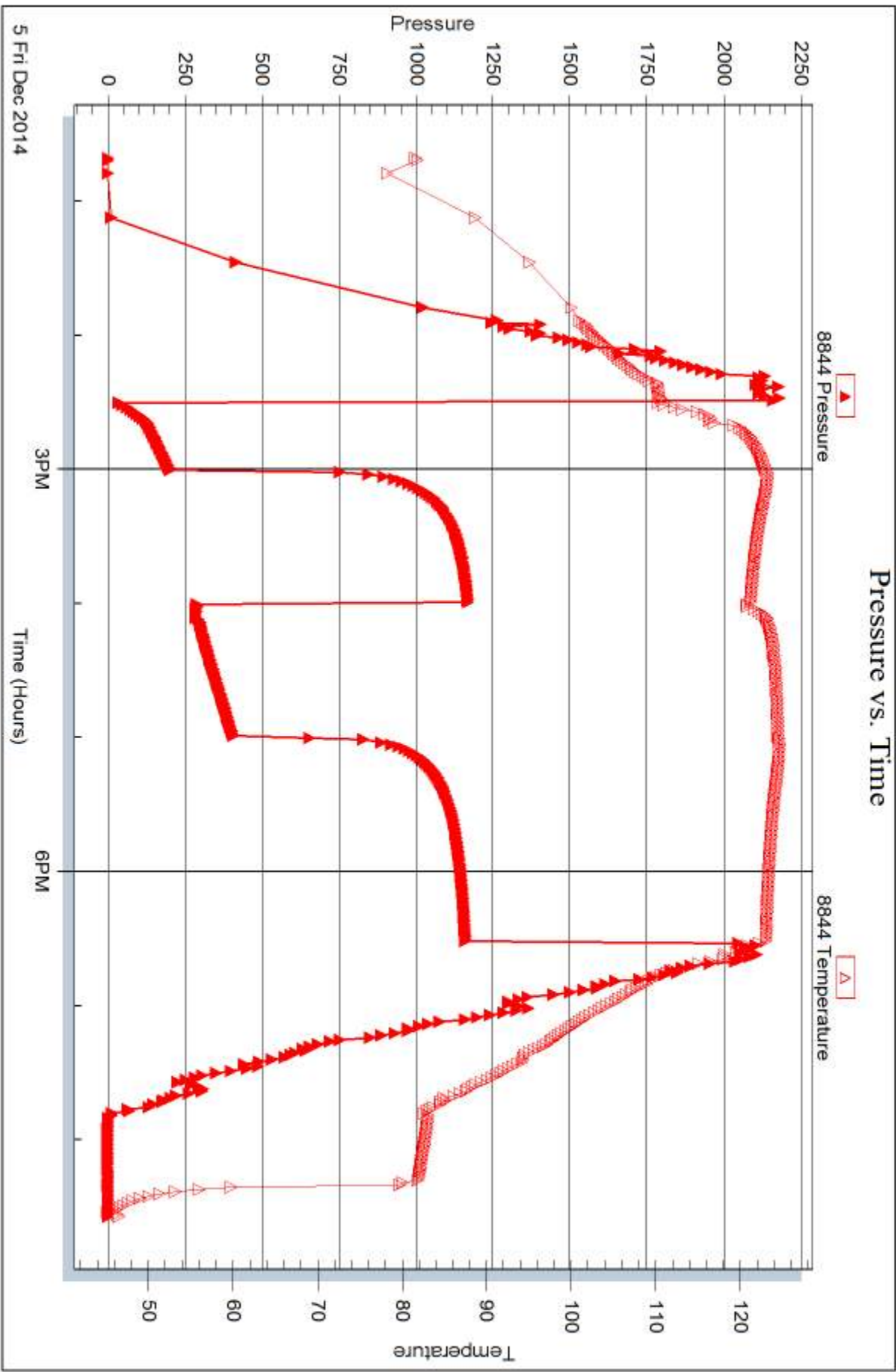
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
434.00	w ater 100%w	3.838
186.00	s m c w 10%m 90%w	2.609
174.00	m c w w /oil spots on top 35%m 65%w	2.441

Total Length: 794.00 ft Total Volume: 8.888 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: rw .351 @ 43*f= 31,000 chlor







DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita, KS 67202 - 1216

ATTN: Larry Nicholson

DAMW #1-11

11-17s-33w Scott,KS

Start Date: 2014.12.06 @ 07:35:42

End Date: 2014.12.06 @ 16:55:57

Job Ticket #: 59718 DST #: 4

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.12 @ 10:51:14



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co Inc
 250 N Water Ste 300
 Wichita, KS 67202 - 1216
 ATTN: Larry Nicholson

11-17s-33w Scott,KS
DAMW #1-11
 Job Ticket: 59718 **DST#: 4**
 Test Start: 2014.12.06 @ 07:35:42

GENERAL INFORMATION:

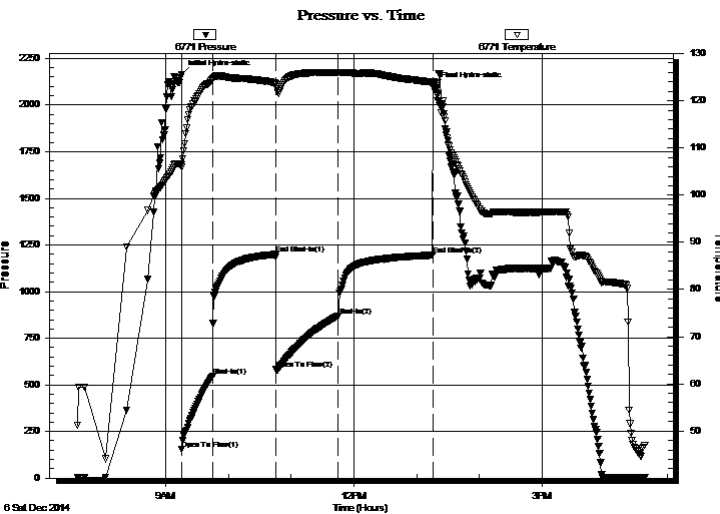
Formation: **Marmaton A-C**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:15:27
 Time Test Ended: 16:55:57
 Interval: **4393.00 ft (KB) To 4484.00 ft (KB) (TVD)**
 Total Depth: 4484.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Shane McBride
 Unit No: 55
 Reference Elevations: 3018.00 ft (KB)
 3007.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 6771

Inside

Press@RunDepth: 868.69 psig @ 4394.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.12.06 End Date: 2014.12.06 Last Calib.: 2014.12.06
 Start Time: 07:35:42 End Time: 16:38:57 Time On Btm: 2014.12.06 @ 09:15:12
 Time Off Btm: 2014.12.06 @ 13:16:12

TEST COMMENT: B.O.B. in 2 1/2 min.
 B led off for 6 min. , Return blow built to B.O.B. in 10 min.
 B.O.B. @ open
 Bled off for 7min , Return to B.O.B. in 40 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2162.15	106.51	Initial Hydro-static
1	153.23	105.91	Open To Flow (1)
30	548.00	124.55	Shut-In(1)
90	1199.85	123.69	End Shut-In(1)
91	581.95	123.37	Open To Flow (2)
150	868.69	125.94	Shut-In(2)
241	1195.32	123.94	End Shut-In(2)
241	2098.75	124.07	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	under circ sub g o c m 20g 35o 45m	0.61
2170.00	c g o reversed out 20%g 80%o	29.32
50.00	c g o dumped 20%g 80%o	0.70
0.00	1250' gas in pipe	0.00

* 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
250 N Water Ste 300
Wichita, KS 67202 - 1216
ATTN: Larry Nicholson

11-17s-33w Scott,KS
DAMW #1-11
Job Ticket: 59718 **DST#: 4**
Test Start: 2014.12.06 @ 07:35:42

Tool Information

Drill Pipe:	Length: 4144.00 ft	Diameter: 3.80 inches	Volume: 58.13 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: 247.00 ft	Diameter: 2.25 inches	Volume: 1.21 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 59.34 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4393.00 ft			Final 73000.00 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 Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4366.00	
Shut In Tool	5.00			4371.00	
Hydraulic tool	5.00			4376.00	
Jars	5.00			4381.00	
Safety Joint	3.00			4384.00	
Packer	5.00			4389.00	28.00 Bottom Of Top Packer
Packer	4.00			4393.00	
Stubb	1.00			4394.00	
Recorder	0.00	6771	Inside	4394.00	
Recorder	0.00	8844	Outside	4394.00	
Perforations	21.00			4415.00	
Change Over Sub	1.00			4416.00	
Drill Pipe	62.00			4478.00	
Change Over Sub	1.00			4479.00	
Bullnose	5.00			4484.00	91.00 Bottom Packers & Anchor

Total Tool Length: 119.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc
250 N Water Ste 300
Wichita, KS 67202 - 1216
ATTN: Larry Nicholson

11-17s-33w Scott,KS
DAMW #1-11
Job Ticket: 59718 **DST#: 4**
Test Start: 2014.12.06 @ 07:35:42

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 30 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 0 ppm
Viscosity: 59.00 sec/qt	Cushion Volume: bbl	
Water Loss: 5.96 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 5900.00 ppm		
Filter Cake: 2.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	under circ sub g o c m 20g 35o 45m	0.610
2170.00	c g o reversed out 20%g 80%o	29.319
50.00	c g o dumped 20%g 80%o	0.701
0.00	1250' gas in pipe	0.000

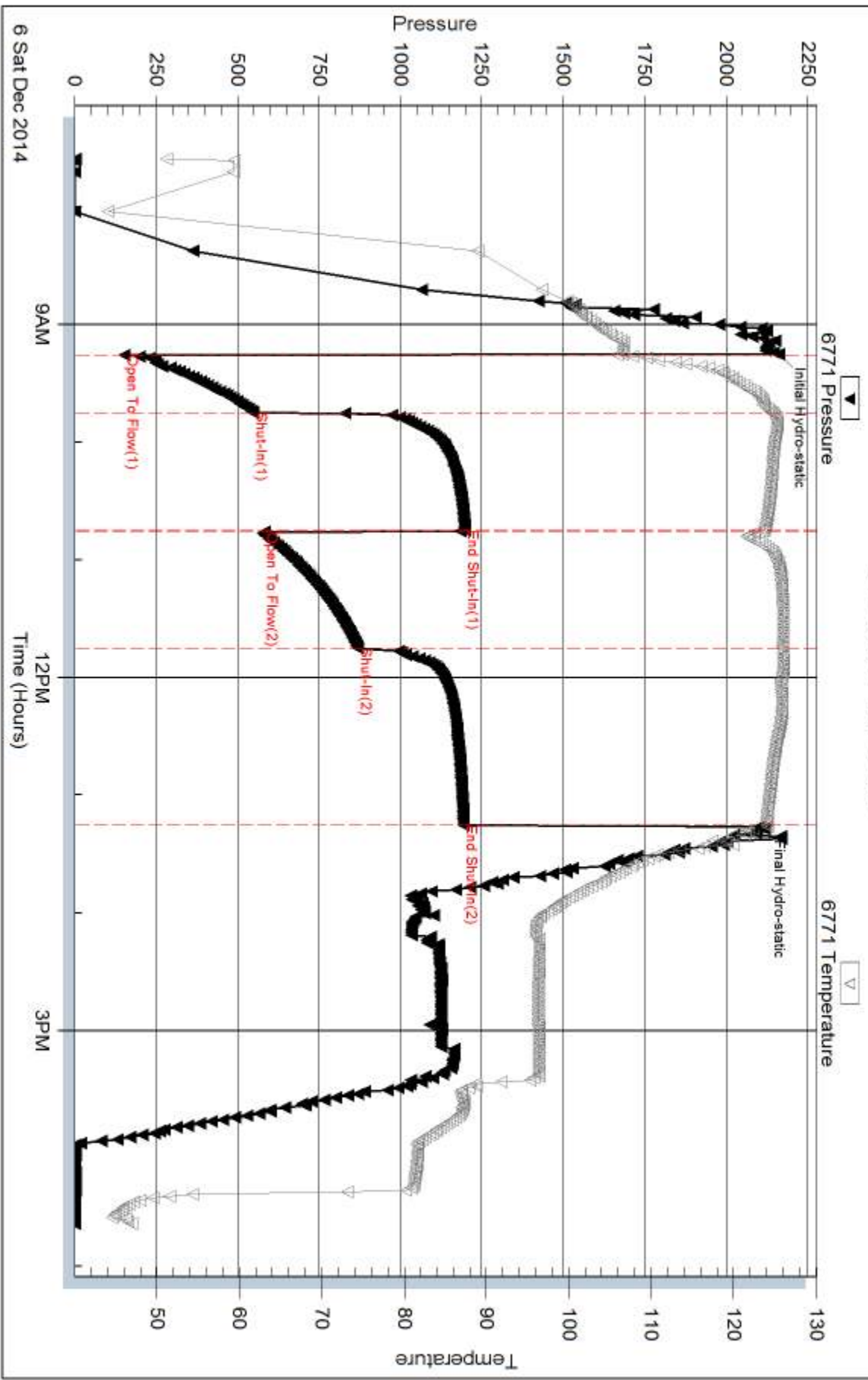
Total Length: 2344.00 ft Total Volume: 30.630 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time

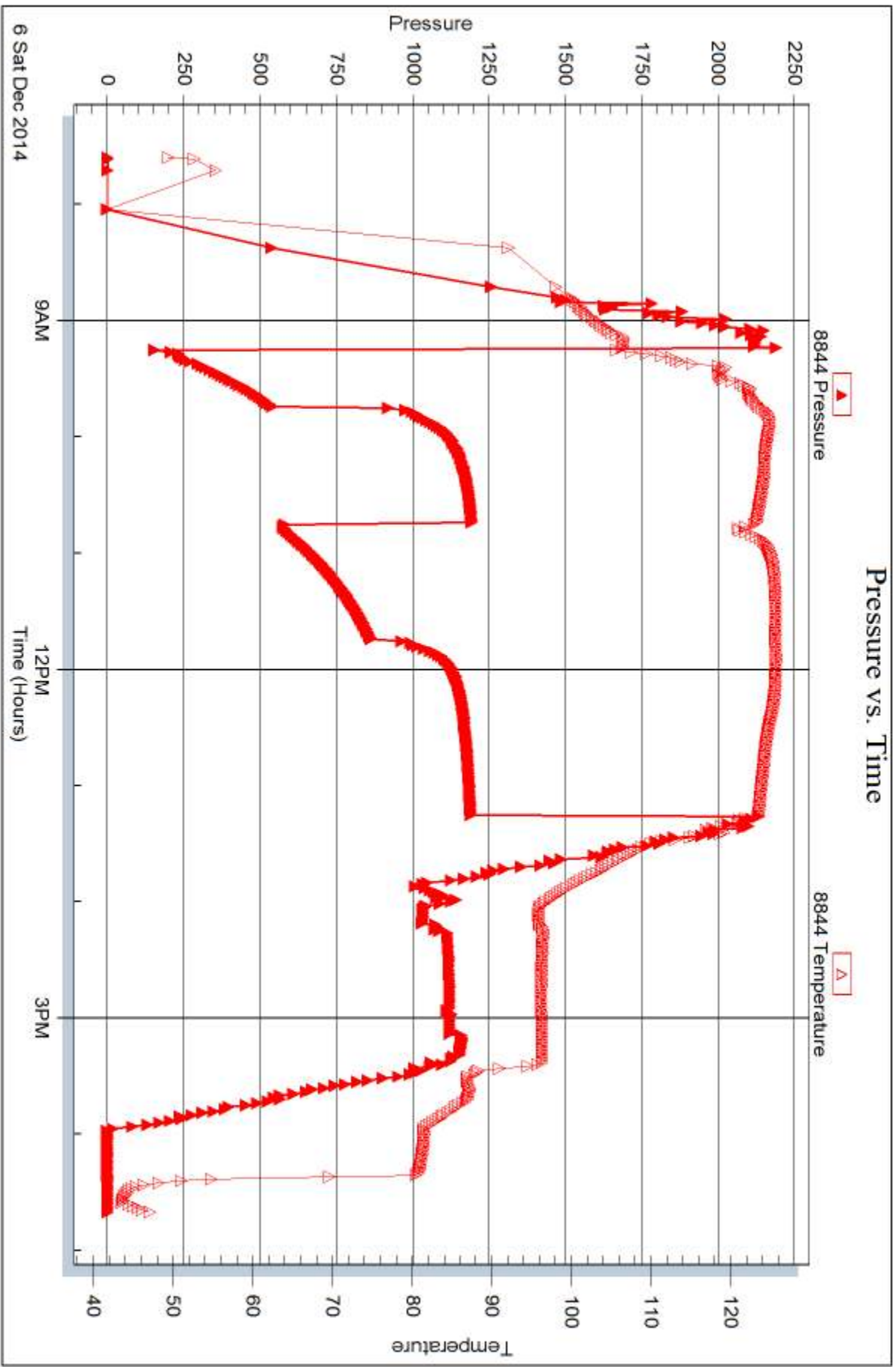


Serial #: 8844

Outside Murfin Drilling Co Inc

DAMW #1-11

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita, KS 67202 - 1216

ATTN: Larry Nicholson

DAMW #1-11

11-17s-33w Scott,KS

Start Date: 2014.12.07 @ 01:50:58

End Date: 2014.12.07 @ 08:55:28

Job Ticket #: 59719 DST #: 5

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.12 @ 10:50:35



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co Inc
250 N Water Ste 300
Wichita, KS 67202 - 1216
ATTN: Larry Nicholson

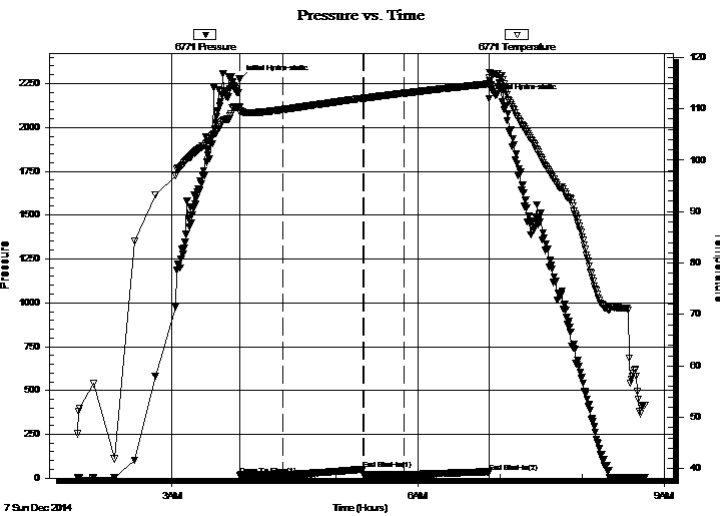
11-17s-33w Scott,KS
DAMW #1-11
Job Ticket: 59719 **DST#: 5**
Test Start: 2014.12.07 @ 01:50:58

GENERAL INFORMATION:

Formation: **Lower Pawnee**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:49:43
Time Test Ended: 08:55:28
Interval: **4513.00 ft (KB) To 4535.00 ft (KB) (TVD)**
Total Depth: 4535.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Shane McBride
Unit No: 55
Reference Elevations: 3018.00 ft (KB)
3007.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 6771 Inside
Press@RunDepth: 22.44 psig @ 4514.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.12.07 End Date: 2014.12.07 Last Calib.: 2014.12.07
Start Time: 01:50:58 End Time: 08:45:28 Time On Btm: 2014.12.07 @ 03:49:28
Time Off Btm: 2014.12.07 @ 06:51:43

TEST COMMENT: Weak surface blow , died in 8 min.
No return
No blow
No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2275.02	110.31	Initial Hydro-static
1	16.85	109.33	Open To Flow (1)
32	18.92	109.83	Shut-In(1)
90	51.13	112.03	End Shut-In(1)
91	19.21	112.04	Open To Flow (2)
120	22.44	113.01	Shut-In(2)
182	35.75	114.81	End Shut-In(2)
183	2162.87	115.99	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	mud w / oil spots 100%m	0.00

* 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
250 N Water Ste 300
Wichita, KS 67202 - 1216
ATTN: Larry Nicholson

11-17s-33w Scott,KS
DAMW #1-11
Job Ticket: 59719 **DST#: 5**
Test Start: 2014.12.07 @ 01:50:58

Tool Information

Drill Pipe:	Length: 4268.00 ft	Diameter: 3.80 inches	Volume: 59.87 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: 247.00 ft	Diameter: 2.25 inches	Volume: 1.21 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume: 61.08 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	70000.00 lb
Depth to Top Packer:	4513.00 ft			Final	70000.00 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
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Change Over Sub	1.00			4486.00	
Shut In Tool	5.00			4491.00	
Hydraulic tool	5.00			4496.00	
Jars	5.00			4501.00	
Safety Joint	3.00			4504.00	
Packer	5.00			4509.00	28.00 Bottom Of Top Packer
Packer	4.00			4513.00	
Stubb	1.00			4514.00	
Recorder	0.00	6771	Inside	4514.00	
Recorder	0.00	8844	Outside	4514.00	
Perforations	16.00			4530.00	
Bullnose	5.00			4535.00	22.00 Bottom Packers & Anchor

Total Tool Length: 50.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc
250 N Water Ste 300
Wichita, KS 67202 - 1216
ATTN: Larry Nicholson

11-17s-33w Scott,KS
DAMW #1-11
Job Ticket: 59719 **DST#: 5**
Test Start: 2014.12.07 @ 01:50:58

Mud and Cushion Information

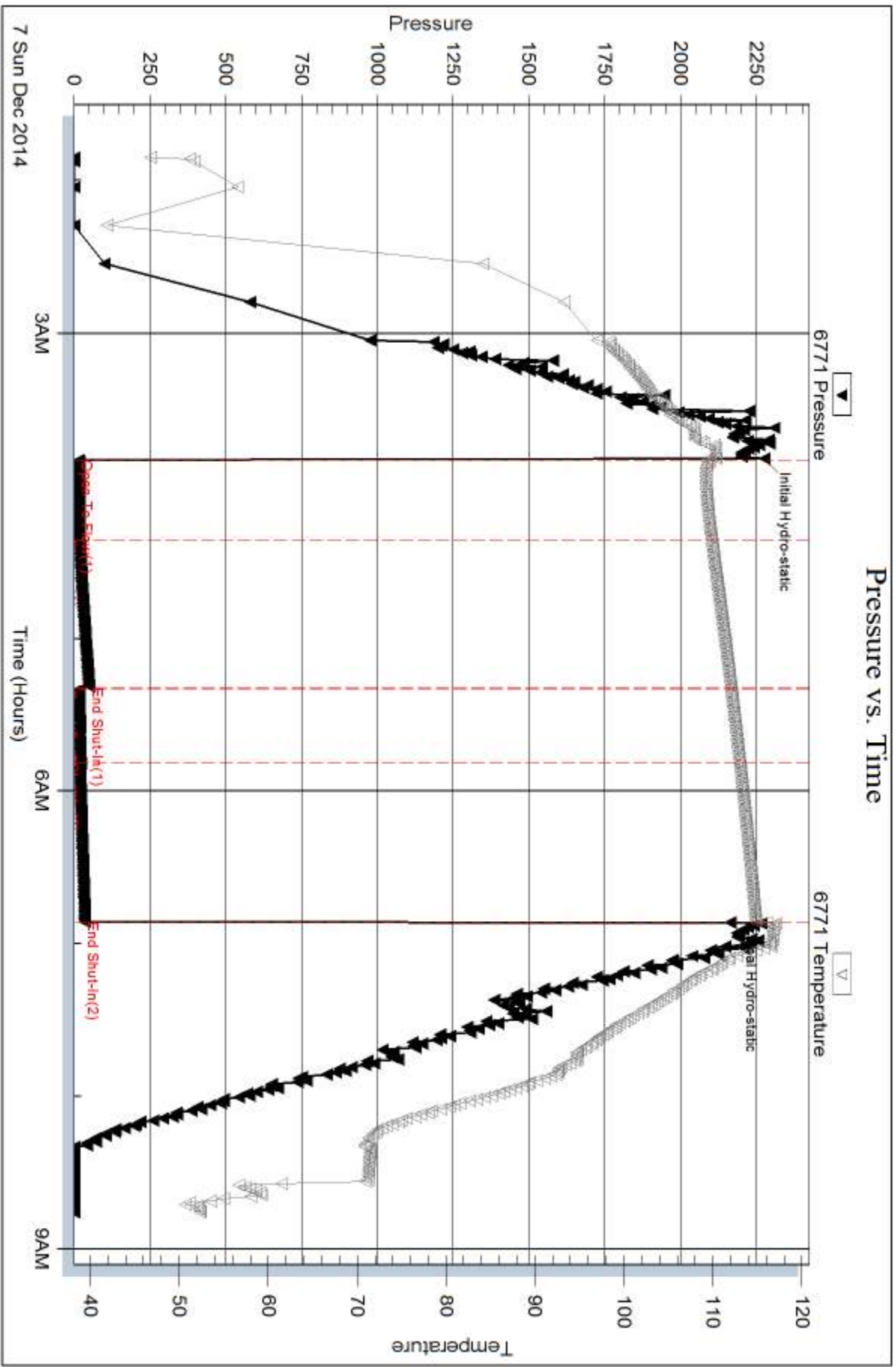
Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.17 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 5300.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	mud w / oil spots 100%m	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

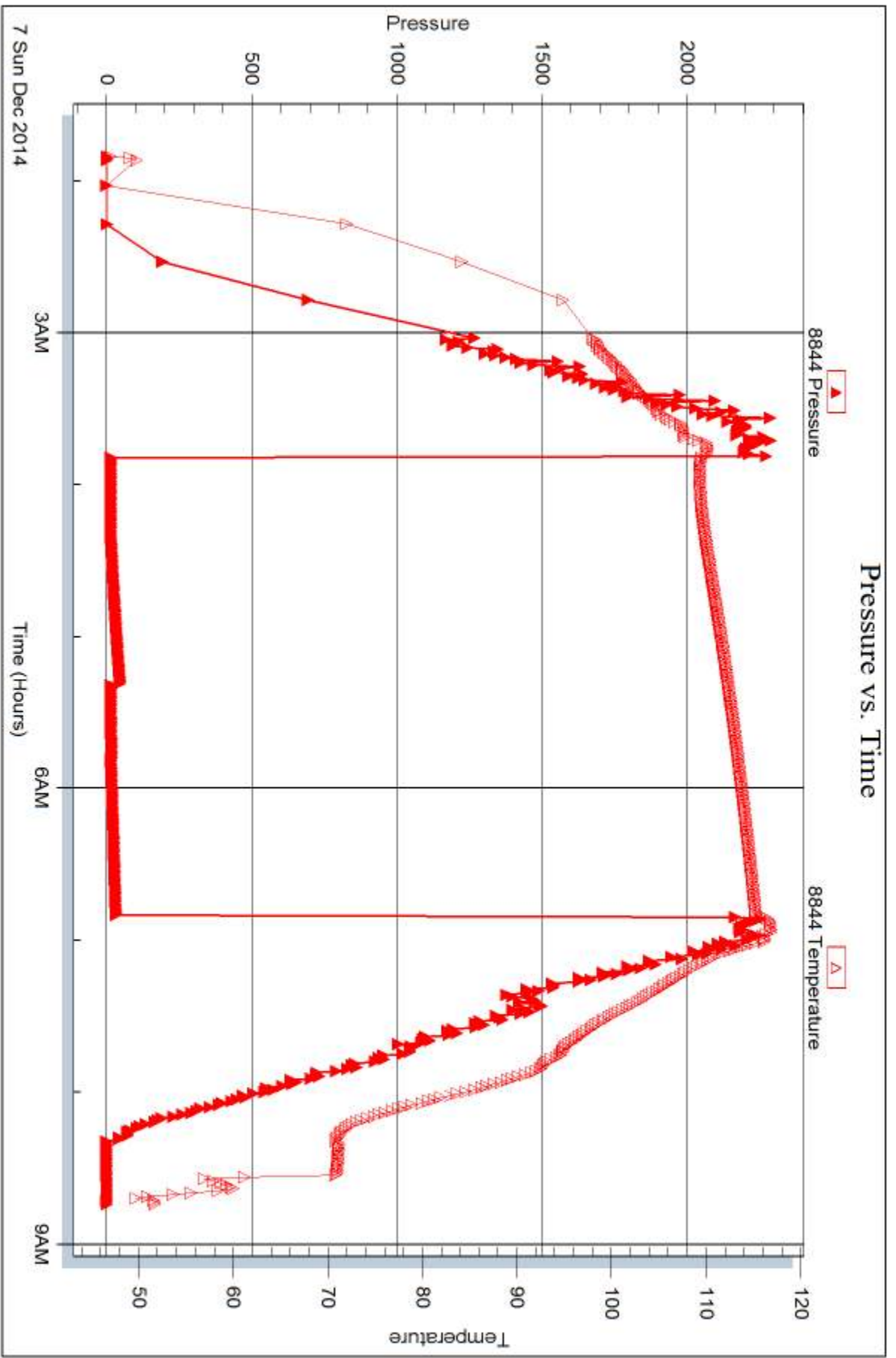


Serial #: 8844

Outside Murfin Drilling Co Inc

DAMW #1-11

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 59719

Printed: 2014.12.12 @ 10:50:37



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita, KS 67202 - 1216

ATTN: Larry Nicholson

DAMW #1-11

11-17s-33w Scott,KS

Start Date: 2014.12.08 @ 00:15:28

End Date: 2014.12.08 @ 09:10:28

Job Ticket #: 59720 DST #: 6

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.12 @ 10:49:54

Murfin Drilling Co Inc
11-17s-33w Scott,KS
DAMW #1-11
DST # 6
Johnson - Atoka
2014.12.08



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co Inc
 250 N Water Ste 300
 Wichita, KS 67202 - 1216
 ATTN: Larry Nicholson

11-17s-33w Scott,KS
DAMW #1-11
 Job Ticket: 59720 **DST#: 6**
 Test Start: 2014.12.08 @ 00:15:28

GENERAL INFORMATION:

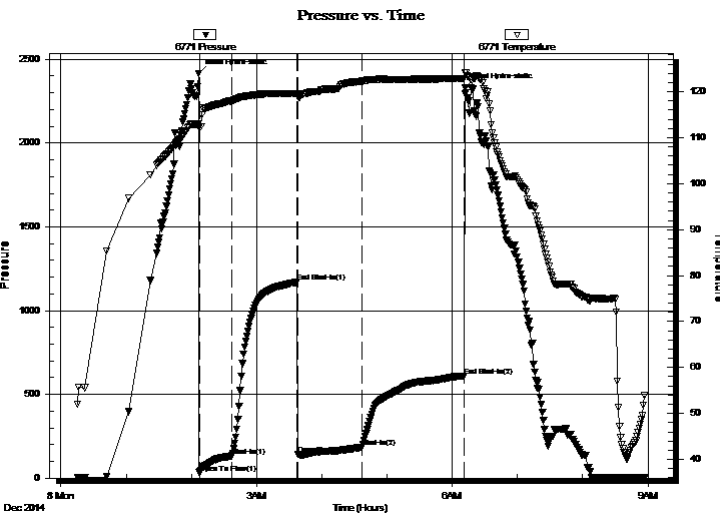
Formation: **Johnson - Atoka**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:07:13
 Time Test Ended: 09:10:28
 Interval: **4582.00 ft (KB) To 4660.00 ft (KB) (TVD)**
 Total Depth: 4660.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Shane McBride
 Unit No: 55
 Reference Elevations: 3018.00 ft (KB)
 3007.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 6771

Inside

Press@RunDepth: 185.04 psig @ 4583.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.12.08 End Date: 2014.12.08 Last Calib.: 2014.12.08
 Start Time: 00:15:28 End Time: 08:57:28 Time On Btm: 2014.12.08 @ 02:06:58
 Time Off Btm: 2014.12.08 @ 06:12:13

TEST COMMENT: B.O.B. in 10 1/2 min.
 2" in return blow
 B.O.B. in 8 min.
 Bled off for 2 min. Return to B.O.B. in 21 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2416.43	113.04	Initial Hydro-static
1	30.83	112.39	Open To Flow (1)
31	133.23	117.93	Shut-In(1)
91	1169.87	119.56	End Shut-In(1)
91	143.99	118.97	Open To Flow (2)
151	185.04	122.30	Shut-In(2)
244	610.57	122.90	End Shut-In(2)
246	2330.56	124.20	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
247.00	g m c o 60%g 30%o 10%m	1.21
321.00	c g o 20%g 80%o	4.50
0.00	1788' Gas In Pipe	0.00

* 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
250 N Water Ste 300
Wichita, KS 67202 - 1216
ATTN: Larry Nicholson

11-17s-33w Scott,KS
DAMW #1-11
Job Ticket: 59720 **DST#: 6**
Test Start: 2014.12.08 @ 00:15:28

Tool Information

Drill Pipe:	Length: 4332.00 ft	Diameter: 3.80 inches	Volume: 60.77 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: 247.00 ft	Diameter: 2.25 inches	Volume: 1.21 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 61.98 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4582.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	78.00 ft			
Tool Length:	106.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4555.00	
Shut In Tool	5.00			4560.00	
Hydraulic tool	5.00			4565.00	
Jars	5.00			4570.00	
Safety Joint	3.00			4573.00	
Packer	5.00			4578.00	28.00 Bottom Of Top Packer
Packer	4.00			4582.00	
Stubb	1.00			4583.00	
Recorder	0.00	6771	Inside	4583.00	
Recorder	0.00	8844	Outside	4583.00	
Perforations	8.00			4591.00	
Change Over Sub	1.00			4592.00	
Drill Pipe	62.00			4654.00	
Change Over Sub	1.00			4655.00	
Bullnose	5.00			4660.00	78.00 Bottom Packers & Anchor

Total Tool Length: 106.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc
250 N Water Ste 300
Wichita, KS 67202 - 1216
ATTN: Larry Nicholson

11-17s-33w Scott,KS
DAMW #1-11
Job Ticket: 59720 **DST#: 6**
Test Start: 2014.12.08 @ 00:15:28

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 27 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 0 ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.19 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 5300.00 ppm		
Filter Cake: 2.00 inches		

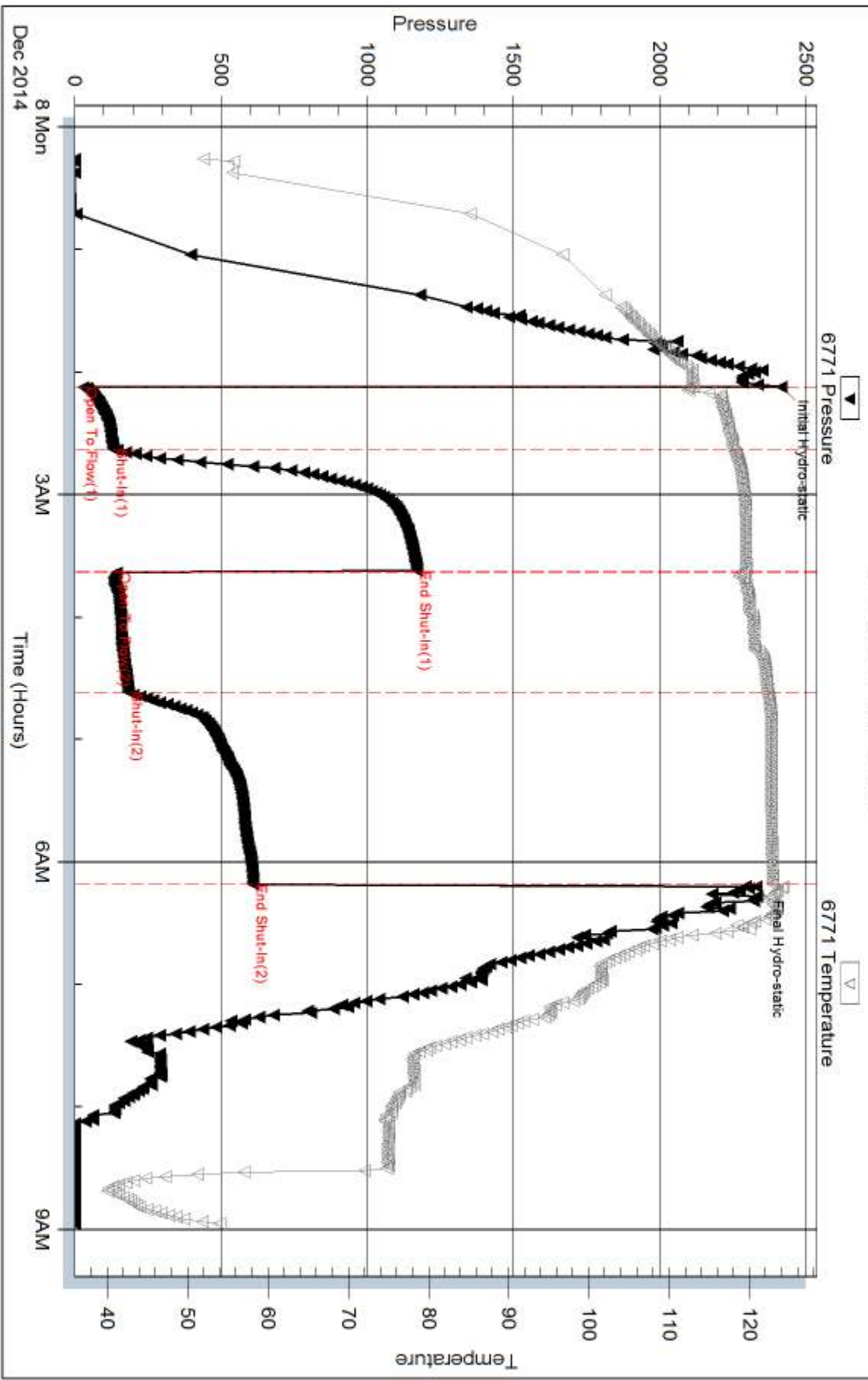
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
247.00	g m c o 60%g 30%o 10%m	1.215
321.00	c g o 20%g 80%o	4.503
0.00	1788' Gas In Pipe	0.000

Total Length: 568.00 ft Total Volume: 5.718 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Pressure vs. Time

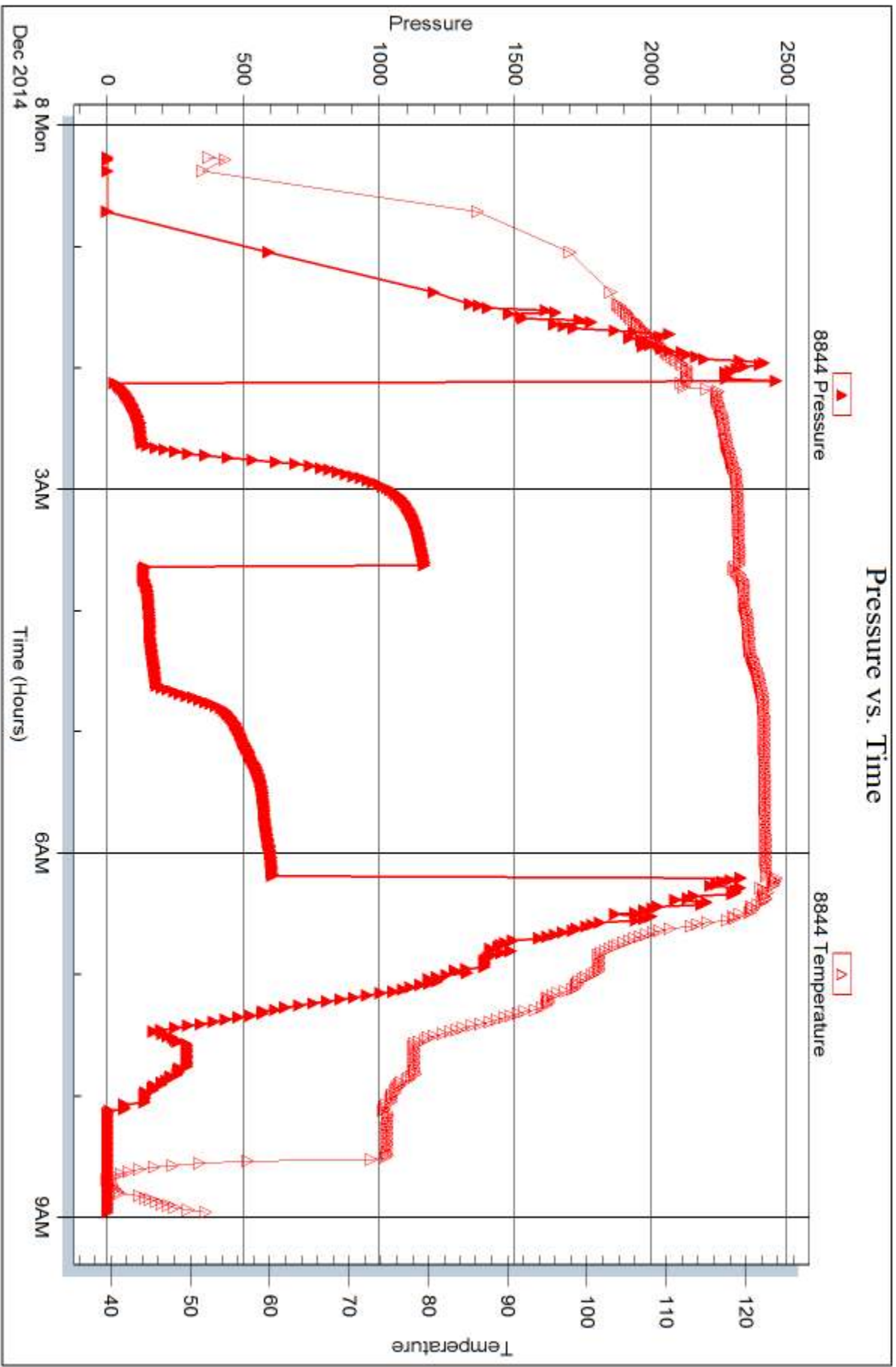


Serial #: 8844

Outside Murfin Drilling Co Inc

DAMW #1-11

DST Test Number: 6





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N Water Ste 300
Wichita, KS 67202 - 1216

ATTN: Larry Nicholson

DAMW #1-11

11-17s-33w Scott,KS

Start Date: 2014.12.08 @ 18:36:06

End Date: 2014.12.09 @ 03:45:21

Job Ticket #: 59721 DST #: 7

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.12.12 @ 10:49:01



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co Inc
 250 N Water Ste 300
 Wichita, KS 67202 - 1216
 ATTN: Larry Nicholson

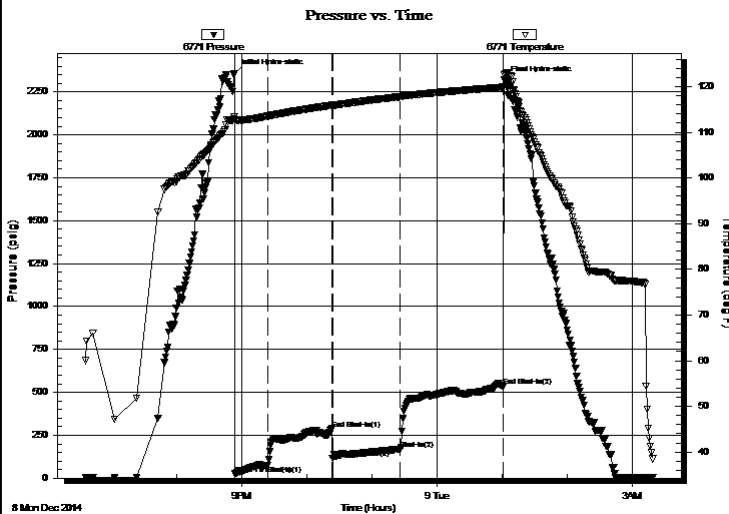
11-17s-33w Scott,KS
DAMW #1-11
 Job Ticket: 59721 **DST#: 7**
 Test Start: 2014.12.08 @ 18:36:06

GENERAL INFORMATION:

Formation: **Morrow Sand**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 20:53:36
 Time Test Ended: 03:45:21
 Interval: **4658.00 ft (KB) To 4697.00 ft (KB) (TVD)**
 Total Depth: 4697.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Shane McBride
 Unit No: 55
 Reference Elevations: 3018.00 ft (KB)
 3007.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 6771 Inside
 Press@RunDepth: 170.19 psig @ 4659.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.12.08 End Date: 2014.12.09 Last Calib.: 2014.12.09
 Start Time: 18:36:06 End Time: 03:19:21 Time On Btm: 2014.12.08 @ 20:53:06
 Time Off Btm: 2014.12.09 @ 01:01:36

TEST COMMENT: B.O.B. in 4 1/2 min
 B.O.B. return in 23 min.
 B.O.B. @ open
 B.O.B. return in 18 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2358.36	113.39	Initial Hydro-static
1	24.23	112.75	Open To Flow (1)
31	74.83	113.51	Shut-In(1)
90	287.17	115.92	End Shut-In(1)
91	115.01	115.87	Open To Flow (2)
153	170.19	117.77	Shut-In(2)
248	533.87	119.88	End Shut-In(2)
249	2318.99	122.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	g s m c o 50g 10m 40o	0.30
526.00	c g o 40g 60o	5.69
0.00	1766' gas in pipe	0.00

* 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
250 N Water Ste 300
Wichita, KS 67202 - 1216
ATTN: Larry Nicholson

11-17s-33w Scott,KS
DAMW #1-11
Job Ticket: 59721 **DST#: 7**
Test Start: 2014.12.08 @ 18:36:06

Tool Information

Drill Pipe:	Length: 4396.00 ft	Diameter: 3.80 inches	Volume: 61.66 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: 247.00 ft	Diameter: 2.25 inches	Volume: 1.21 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 62.87 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4658.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	39.00 ft			
Tool Length:	67.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Change Over Sub	1.00			4631.00	
Shut In Tool	5.00			4636.00	
Hydraulic tool	5.00			4641.00	
Jars	5.00			4646.00	
Safety Joint	3.00			4649.00	
Packer	5.00			4654.00	28.00 Bottom Of Top Packer
Packer	4.00			4658.00	
Stubb	1.00			4659.00	
Recorder	0.00	6771	Inside	4659.00	
Recorder	0.00	8844	Outside	4659.00	
Perforations	1.00			4660.00	
Change Over Sub	1.00			4661.00	
Drill Pipe	30.00			4691.00	
Change Over Sub	1.00			4692.00	
Bullnose	5.00			4697.00	39.00 Bottom Packers & Anchor

Total Tool Length: 67.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc
250 N Water Ste 300
Wichita, KS 67202 - 1216
ATTN: Larry Nicholson

11-17s-33w Scott,KS
DAMW #1-11
Job Ticket: 59721 **DST#: 7**
Test Start: 2014.12.08 @ 18:36:06

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 26 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 0 ppm
Viscosity: 59.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.33 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 3500.00 ppm		
Filter Cake: 2.00 inches		

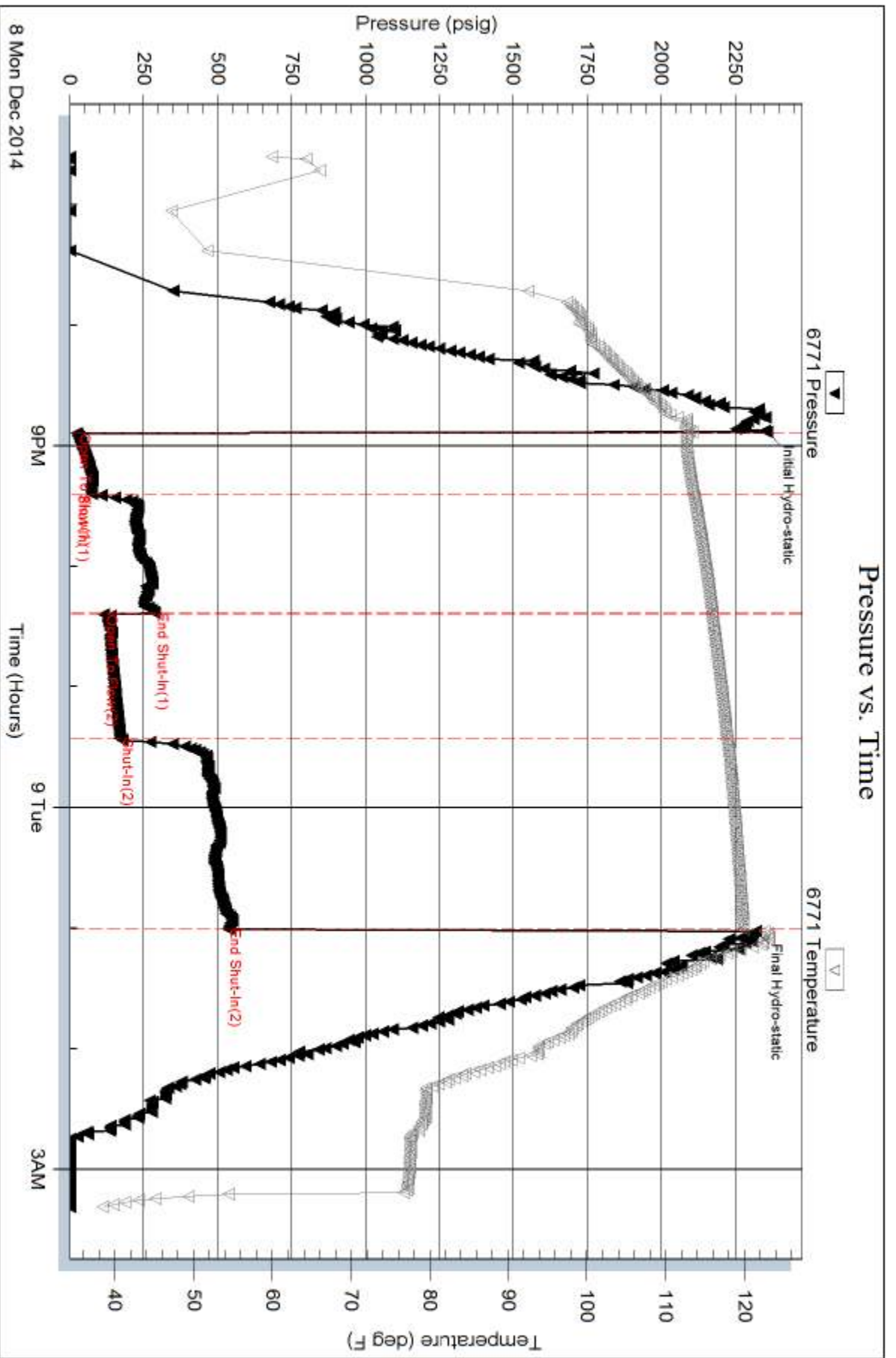
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	g s m c o 50g 10m 40o	0.305
526.00	c g o 40g 60o	5.693
0.00	1766' gas in pipe	0.000

Total Length: 588.00 ft Total Volume: 5.998 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Pressure vs. Time

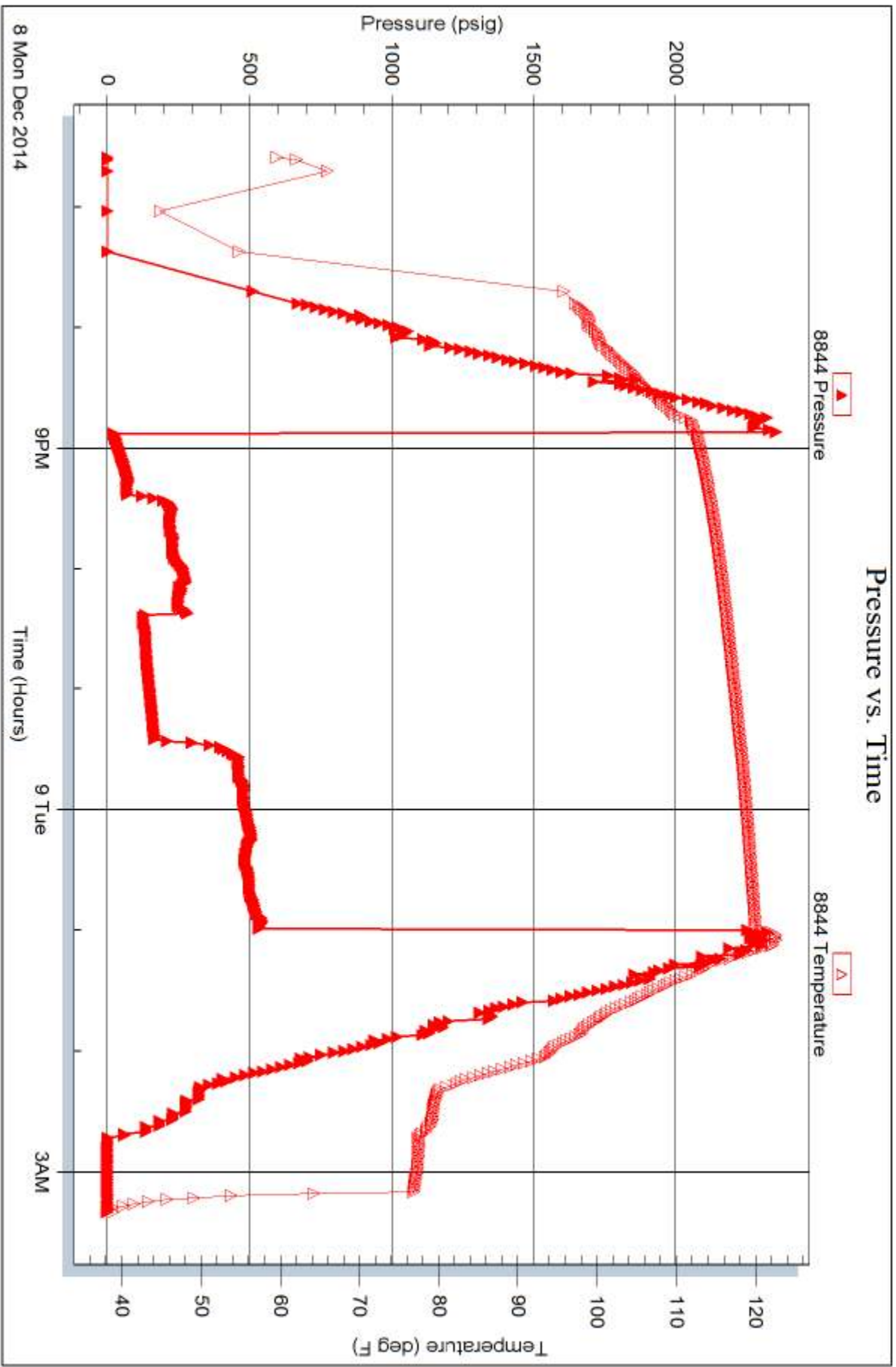


Serial #: 8844

Outside Murfin Drilling Co Inc

DAMW #1-11

DST Test Number: 7





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59715

4/10

Well Name & No. DAMW # 1-11 Test No. # 1 Date 12/3/14
 Company Mullin Drilling Co. Inc. Elevation 3018' KB 3007' GL
 Address 250 N. Water St. 300 Wichita, Ks 67202-1214
 Co. Rep / Geo. Darryl Nicholson Rig Mullin # 21
 Location: Sec. 11 Twp. 17s Rge. 33w Co. Scott State Ks

Interval Tested 4010 4074 Zone Tested B-D
 Anchor Length 66 Drill Pipe Run 3766' Mud Wt. 9.0
 Top Packer Depth 4005 Drill Collars Run 247' Vis 59
 Bottom Packer Depth 4010 Wt. Pipe Run --- WL 6.4
 Total Depth 4074 Chlorides 3500 ppm System LCM # 4

Blow Description B.O.B. in 12 min
No return
B.O.B. in 17 min
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>155</u>	<u>MCW spots on top</u>	<u>spots</u>	<u>60</u>	<u>40</u>	
<u>186</u>	<u>SMCW</u>		<u>90</u>	<u>10</u>	
<u>496</u>	<u>WATER</u>		<u>100</u>		

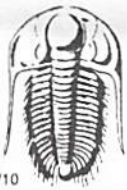
Rec Total 837' BHT 117° Gravity --- API RW .268@ 60° F Chlorides 30,000 ppm

(A) Initial Hydrostatic <u>2001</u>	<input type="checkbox"/> Test <u>1250</u>	T-On Location <u>12:20</u>
(B) First Initial Flow <u>24</u>	<input type="checkbox"/> Jars <u>250</u>	T-Started <u>13:05</u>
(C) First Final Flow <u>211</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>14:56</u>
(D) Initial Shut-In <u>1032</u>	<input type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>18:56</u>
(E) Second Initial Flow <u>216</u>	<input type="checkbox"/> Hourly Standby	T-Out
(F) Second Final Flow <u>403</u>	<input checked="" type="checkbox"/> Mileage <u>26 RT</u> 40.30	Comments
(G) Final Shut-In <u>1026</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1930</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

Initial Open 30 Extra Packer Extra Copies
 Initial Shut-In 60 Extra Recorder Sub Total 0
 Final Flow 60 Day Standby Total 1615.30
 Final Shut-In 90 Accessibility MP/DST Disc't
 Sub Total 1615.30

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59716

Well Name & No. DAMW #1-11 Test No. #2 Date 12/5/14
 Company Mullins Drilling Co. Inc. Elevation _____ KB _____ GL _____
 Address 250 N Water St. 300 W. 2nd St. Hays, KS 67202
 Co. Rep / Geo. Larry Nicholson Rig Mullins #21
 Location: Sec. 11 Twp. 17S Rge. 3W Co. Scott State KS

Interval Tested 4266 4314 Zone Tested K
 Anchor Length _____ 48 Drill Pipe Run 4016' Mud Wt. 9.5
 Top Packer Depth _____ 4261 Drill Collars Run 247' Vis SS
 Bottom Packer Depth _____ 4266 Wt. Pipe Run _____ WL 6.0
 Total Depth _____ 4314 Chlorides 5200 ppm System LCM #3

Blow Description B.O.B. in 5 min
No return
B.O.B. in 10 min
No return

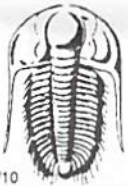
Rec	Feet of	%gas	%oil	%water	%mud
<u>3'</u>	<u>Free oil</u>	<u>100</u>			
<u>156</u>	<u>SOC mud</u>	<u>4</u>	<u>50</u>	<u>46</u>	
<u>186</u>	<u>SOC mud</u>	<u>3</u>	<u>87</u>	<u>10</u>	
<u>740</u>	<u>Water w/ Heavy Oil Scum</u>	<u>Scum</u>	<u>100</u>		

Rec Total 1085 BHT 125° Gravity _____ API RW 268 @ 31 °F Chlorides 37000 ppm
 (A) Initial Hydrostatic 2152 Test 1250 T-On Location 18:35
 (B) First Initial Flow 51 Jars 250 T-Started 19:15
 (C) First Final Flow 350 Safety Joint 75 T-Open 21:14
 (D) Initial Shut-In 1076 Circ Sub W/JE T-Pulled 01:14
 (E) Second Initial Flow 362 Hourly Standby _____ T-Out 03:40
 (F) Second Final Flow 631 Mileage 26.25 40.30
 (G) Final Shut-In 1061 Sampler _____
 (H) Final Hydrostatic 2055 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____

Initial Open 30 Sub Total 0
 Initial Shut-In 60 Total 1615.30
 Final Flow 60 MP/DST Disc't _____
 Final Shut-In 90 Sub Total 1615.30

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59717

Well Name & No. DAMW #1-11 Test No. #3 Date 12/5/14
 Company Murkin Drilling Co Inc. Elevation 3018 KB 3007 GL
 Address 250 N Water Ste 300 Wichita, KS 67202
 Co. Rep / Geo. Larry Nicholson Rig Mark #21
 Location: Sec. 11 Twp. 17E Rge. 33W Co. Scott State KS

Interval Tested 4312 4394 Zone Tested L - Lenape
 Anchor Length 82 Drill Pipe Run 4047' Mud Wt. 9.2
 Top Packer Depth 4307 Drill Collars Run 247' Vis 59
 Bottom Packer Depth 4312 Wt. Pipe Run --- WL 6.0
 Total Depth 4394 Chlorides 5900 ppm System LCM #5

Blow Description B.O.B. on 13 min
No return
B.O.B. on 21 min.
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>174</u>	<u>mcw w/oil spots on Top</u>	<u>Spits</u>	<u>65</u>	<u>35</u>	
<u>186</u>	<u>Smcw</u>		<u>90</u>	<u>10</u>	
<u>434</u>	<u>water</u>		<u>100</u>		

Rec Total 794 BHT 125° Gravity --- API RW .351 @ 43° F Chlorides 31,000 ppm

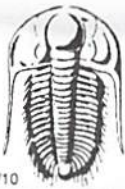
(A) Initial Hydrostatic <u>2162</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>12:15</u>
(B) First Initial Flow <u>32</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>12:40</u>
(C) First Final Flow <u>204</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>14:29</u>
(D) Initial Shut-In <u>1174</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>18:29</u>
(E) Second Initial Flow <u>270</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>20:45</u>
(F) Second Final Flow <u>411</u>	<input checked="" type="checkbox"/> Mileage <u>Murt</u> <u>40.30</u>	Comments
(G) Final Shut-In <u>1167</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2054</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

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

Sub Total 1615.30

Approved By [Signature] Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59718

4/10

Well Name & No. DAMW # 1-11 Test No. #4 Date 12/6/14
 Company Murkin Drilling Co Inc. Elevation 3018 KB 3007 GL
 Address 250 N. Water St. 300, Wichita, KS 67202
 Co. Rep / Geo Darryl Nicholson Rig Murkin #21
 Location: Sec. 11 Twp. 17S Rge. 33W Co. Scott State KS

Interval Tested 4393 4484 Zone Tested Marmaton A-C
 Anchor Length 91 Drill Pipe Run 4144' Mud Wt. 9.2
 Top Packer Depth 4388 Drill Collars Run 247' Vis 59
 Bottom Packer Depth 4393 Wt. Pipe Run WL 6.0
 Total Depth 4484 Chlorides 5900 ppm System LCM #5

Blow Description B.O.B. in 2 1/2 min.
Bled off for 6 min, Return blow built to B.O.B. in 10 min.

B.O.B. @ open
Bled off for 7 min, Return blow built to B.O.B. in 4 min

Rec	Feet of	%gas	%oil	%water	%mud
<u>50'</u>	<u>cgo</u>	<u>20%</u>	<u>80%</u>		
<u>2170'</u>	<u>cgo (Reversed out)</u>	<u>20%</u>	<u>80%</u>		
<u>124'</u>	<u>under circ Sub go cm</u>	<u>20%</u>	<u>35%</u>		<u>45%</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
	<u>(1250' GAS IN PIPE)</u>				
Rec Total	<u>2344'</u>	BHT <u>126'</u>	Gravity <u>30</u>	API RW <u> </u>	@ <u> </u> ° F Chlorides <u> </u> ppm

(A) Initial Hydrostatic	<u>2162</u>	<input checked="" type="checkbox"/> Test	<u>1615.30</u>	T-On Location	<u>07:00</u>
(B) First Initial Flow	<u>153</u>	<input checked="" type="checkbox"/> Jars	<u>250</u>	T-Started	<u>07:35</u>
(C) First Final Flow	<u>548</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75</u>	T-Open	<u>09:15</u>
(D) Initial Shut-In	<u>1199</u>	<input checked="" type="checkbox"/> Circ Sub	<u>#50.00</u>	T-Pulled	<u>13:15</u>
(E) Second Initial Flow	<u>581</u>	<input type="checkbox"/> Hourly Standby		T-Out	
(F) Second Final Flow	<u>868</u>	<input checked="" type="checkbox"/> Mileage	<u>24.45</u> 40.30	Comments	
(G) Final Shut-In	<u>1195</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>2098</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	

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

Sub Total 1665.30
 Total 1665.30
 MP/DST Disc't

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59719

Well Name & No. DAMW # 1-11 Test No. #5 Date 12/7/14
 Company Murfin Drilling Co Inc Elevation 3018' KB 3007' GL
 Address 250 N. Water Ste 300, Wichita, KS 67202
 Co. Rep / Geo. Larry Nicholson Rig Murfin #21
 Location: Sec. 11 Twp. 17s Rge. 33w Co. Scott State KS

Interval Tested 4513 4535 Zone Tested Lower Pennsylv
 Anchor Length 22 Drill Pipe Run 4268' Mud Wt. 9.1
 Top Packer Depth 4508 Drill Collars Run 247' Vis 52
 Bottom Packer Depth 4513 Wt. Pipe Run --- WL 7.2
 Total Depth 4535 Chlorides 5300 ppm System LCM #6

Blow Description Weak surface blow died in 8 min.
No return
No blow
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>1'</u>	<u>Mud w/oil spots</u>	<u>spots</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 1' BHT 115° Gravity --- API RW --- @ --- °F Chlorides --- ppm

- (A) Initial Hydrostatic 2275
- (B) First Initial Flow 16
- (C) First Final Flow 18
- (D) Initial Shut-In 31
- (E) Second Initial Flow 19
- (F) Second Final Flow 22
- (G) Final Shut-In 35
- (H) Final Hydrostatic 2162

- Test 1250
- Jars 250
- Safety Joint 75
- Circ Sub N/C
- Hourly Standby
- Mileage 2400 40.30
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility
- Sub Total 1615.30

- T-On Location 01:30
- T-Started 01:50
- T-Open 03:50
- T-Pulled 06:50
- T-Out 08:55

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

Comments ---
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1615.30
 MP/DST Disc't ---

Approved By [Signature] Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59720

4/10

Well Name & No. DAMW # 1-11 Test No. #4 Date 12/8/14
 Company Murkin Drilling Co. Inc. Elevation 3018 KB 3007 GL
 Address 250 N. Water Ste. 300 Wich Hays, KS 67202
 Co. Rep / Geo. Larry Nicholson Rig Murkin #21
 Location: Sec. 11 Twp. 17S Rge. 33W Co. Scott State KS

Interval Tested 4582 4660 Zone Tested Johnson - Roka
 Anchor Length 78 Drill Pipe Run 4332 Mud Wt. 9.1
 Top Packer Depth 4577 Drill Collars Run 247' Vis 53
 Bottom Packer Depth 4582 Wt. Pipe Run --- WL 7.2
 Total Depth 4660 Chlorides 5300 ppm System LCM #6

Blow Description B.O.B. in 10 1/2 min
2" in return blow
B.O.B. in 8 min.
Bled off for 2 min Return to B.O.B. in 21 min

Rec	Feet of	%gas	%oil	%water	%mud
<u>321'</u>	<u>cgo</u>	<u>20</u>	<u>80</u>		
<u>247'</u>	<u>gmc 0</u>	<u>60</u>	<u>30</u>		<u>10</u>

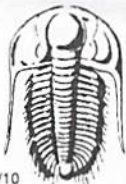
Rec Total 568' BHT 124° Gravity 27 API RW --- @ --- °F Chlorides --- ppm

(A) Initial Hydrostatic 2416 Test 1250 T-On Location 23:35
 (B) First Initial Flow 30 Jars 250 T-Started 00:15
 (C) First Final Flow 133 Safety Joint 75 T-Open 02:07
 (D) Initial Shut-In 1169 Circ Sub N/C T-Pulled 06:07
 (E) Second Initial Flow 143 Hourly Standby --- T-Out 09:10
 (F) Second Final Flow 185 Mileage 26.15 40.30
 (G) Final Shut-In 610 Sampler ---
 (H) Final Hydrostatic 2330 Straddle --- Ruined Shale Packer ---
 Shale Packer --- Ruined Packer ---
 Extra Packer --- Extra Copies ---
 Extra Recorder ---

Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90
 Sub Total 1615.30
 Total 1615.30
 MP/DST Disc't ---

Approved By [Signature] Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59721

Well Name & No. DAMW #1-11 Test No. #7 Date 12/9/14
 Company Murford Drilling Co Inc Elevation 3098 KB 3007 GL
 Address 250 N Water Ste 300, Wichita KS 67202
 Co. Rep / Geo. Jerry Nicholas Rig Murford 1
 Location: Sec. 11 Twp. 17S Rge. 33W Co. Scott State KS

Interval Tested 4658 4697 Zone Tested moist sand
 Anchor Length 39 Drill Pipe Run 4396 Mud Wt. 9.3
 Top Packer Depth 4653 Drill Collars Run 247 Vis 53
 Bottom Packer Depth 4658 Wt. Pipe Run --- WL 8.8
 Total Depth 4697 Chlorides 8500 ppm System LCM #4

Blow Description B.O.B. in 4 1/2 min
B.O.B. return blow in 23 min.
B.O.B. @ open
B.O.B. return in 18 min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>526</u>	<u>cgo</u>	<u>40</u>	<u>60</u>		
<u>62</u>	<u>gsmc</u>	<u>50</u>	<u>40</u>		<u>10</u>
	<u>(1766' gas entire)</u>				

Rec Total 588' BHT 122 Gravity 26 API RW --- @ --- °F Chlorides --- ppm

(A) Initial Hydrostatic	<u>2358</u>
(B) First Initial Flow	<u>24</u>
(C) First Final Flow	<u>74</u>
(D) Initial Shut-In	<u>287</u>
(E) Second Initial Flow	<u>115</u>
(F) Second Final Flow	<u>170</u>
(G) Final Shut-In	<u>533</u>
(H) Final Hydrostatic	<u>2318</u>

Test 1250
 Jars 250
 Safety Joint 75
 Circ Sub n/c
 Hourly Standby
 Mileage 26.05 40.30
 Sampler
 Straddle
 Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility
 Sub Total 1615.30

T-On Location 18110
 T-Started 18535
 T-Open 20153
 T-Pulled 0053
 T-Out 03:45

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

Comments
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1615.30
 MP/DST Disc't

Approved By R. Nichol Our Representative [Signature]

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