

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE #300
Wichita, KS 67202

ATTN: Jeff Christian

Erickson #1-21

21-5s-31w Rawlins, KS

Start Date: 2012.06.18 @ 15:41:00

End Date: 2012.06.18 @ 23:04:30

Job Ticket #: 48111 DST #: 1

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

Printed: 2012.06.27 @ 11:43:14



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

21-5s-31w Rawlins, KS
Erickson #1-21
 Job Ticket: 48111 **DST#: 1**
 Test Start: 2012.06.18 @ 15:41:00

GENERAL INFORMATION:

Formation: **Toronto - LKC "A-B"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 18:07:00
 Time Test Ended: 23:04:30
 Interval: **3845.00 ft (KB) To 3932.00 ft (KB) (TVD)**
 Total Depth: 3932.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Kevin Mack
 Unit No: 57
 Reference Elevations: 2890.00 ft (KB)
 2885.00 ft (CF)
 KB to GR/CF: 5.00 ft

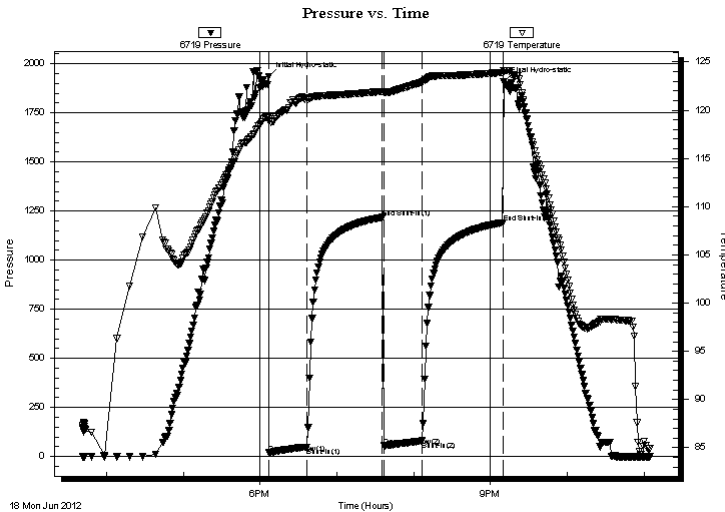
Serial #: 6719

Inside

Press @ Run Depth: 79.75 psig @ 3846.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.06.18 End Date: 2012.06.18 Last Calib.: 2012.06.18
 Start Time: 15:41:05 End Time: 23:04:29 Time On Btm: 2012.06.18 @ 18:06:30
 Time Off Btm: 2012.06.18 @ 21:10:30

TEST COMMENT: 30 - IF- 1/4" Blow built to 1 3/4"
 60 - IS- No Return
 30 - FF- No Blow
 60 - FS- No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1936.09	119.31	Initial Hydro-static
1	18.94	118.92	Open To Flow (1)
30	48.98	121.15	Shut-In(1)
89	1218.28	121.95	End Shut-In(1)
90	54.09	121.81	Open To Flow (2)
120	79.75	122.93	Shut-In(2)
183	1191.09	123.90	End Shut-In(2)
184	1907.86	124.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	Mud 100M	0.59

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

21-5s-31w Rawlins, KS

250 N Water STE #300
Wichita, KS 67202

Erickson #1-21

Job Ticket: 48111

DST#: 1

ATTN: Jeff Christian

Test Start: 2012.06.18 @ 15:41:00

Tool Information

Drill Pipe:	Length: 3669.00 ft	Diameter: 3.80 inches	Volume: 51.47 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: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 58000.00 lb
			<u>Total Volume: 52.36 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3845.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	87.00 ft			
Tool Length:	115.00 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			3822.00	
Hydraulic tool	5.00			3827.00	
Jars	5.00			3832.00	
Safety Joint	3.00			3835.00	
Packer	5.00			3840.00	28.00 Bottom Of Top Packer
Packer	5.00			3845.00	
Stubb	1.00			3846.00	
Recorder	0.00	6719	Inside	3846.00	
Recorder	0.00	8671	Outside	3846.00	
Perforations	18.00			3864.00	
Change Over Sub	1.00			3865.00	
Drill Pipe	63.00			3928.00	
Change Over Sub	1.00			3929.00	
Bullnose	3.00			3932.00	87.00 Bottom Packers & Anchor

Total Tool Length: 115.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

21-5s-31w Rawlins, KS

250 N Water STE #300
Wichita, KS 67202

Erickson #1-21

Job Ticket: 48111

DST#: 1

ATTN: Jeff Christian

Test Start: 2012.06.18 @ 15:41:00

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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	Mud 100M	0.590

Total Length: 120.00 ft Total Volume: 0.590 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

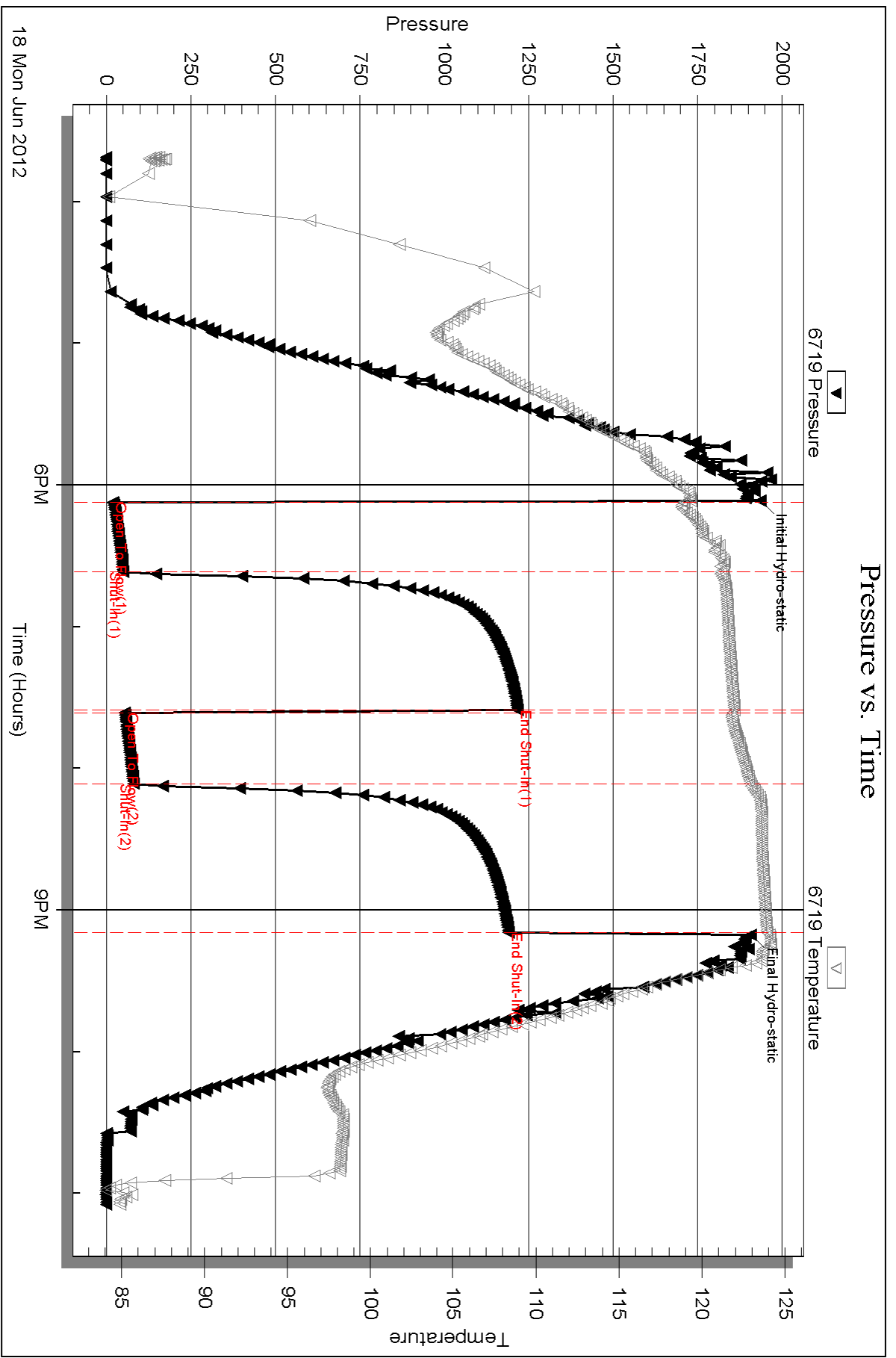
Serial #: 6719

Inside

Murfin Drilling Co.

Erickson #1-21

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 48111

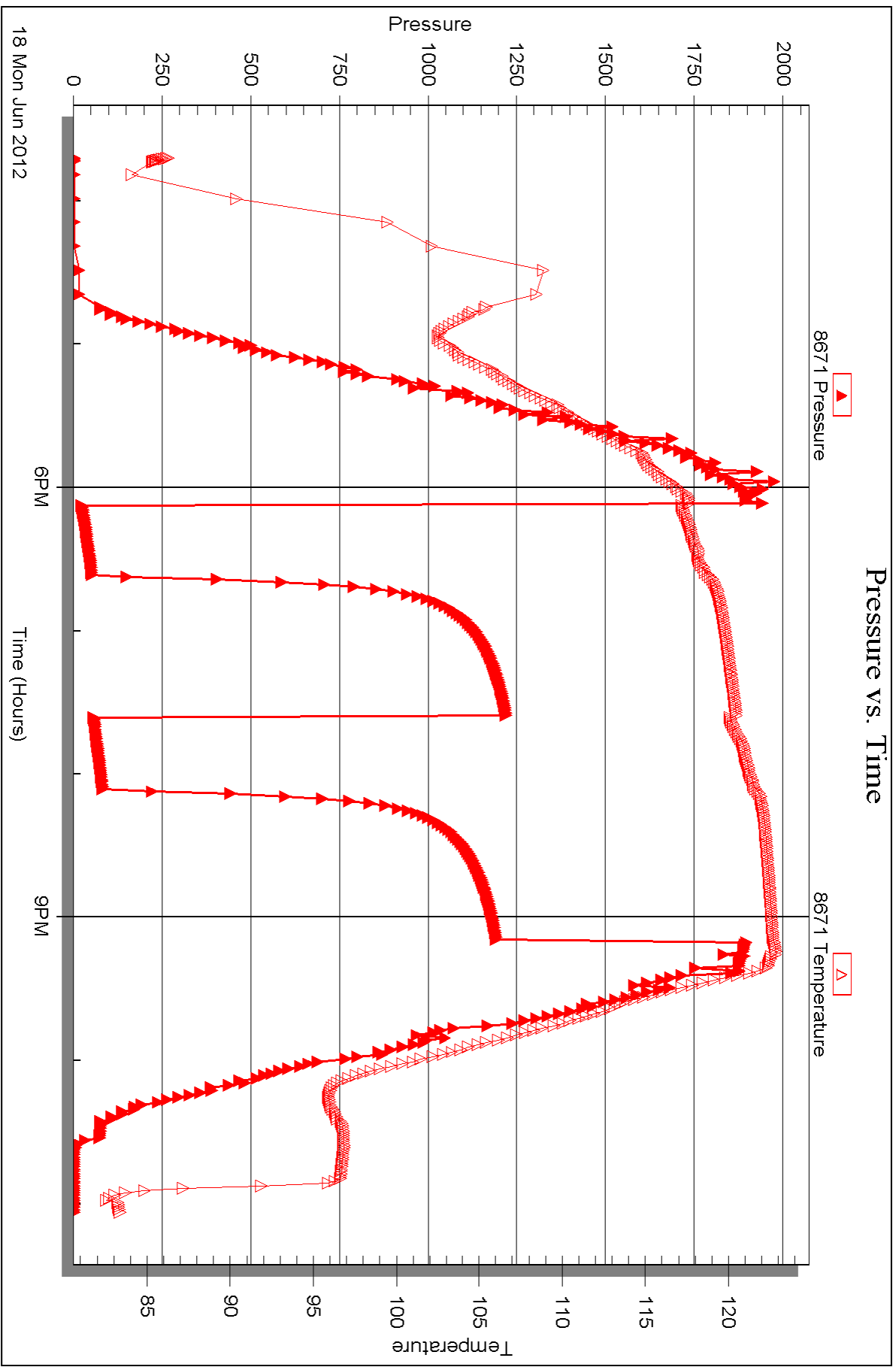
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Serial #: 8671

Outside Murfin Drilling Co.

Erickson #1-21

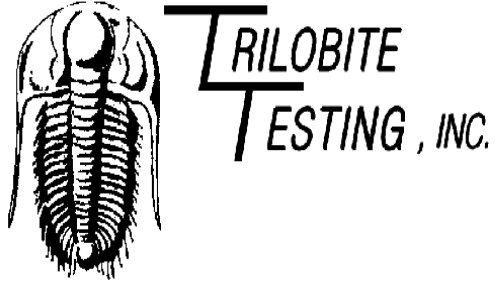
DST Test Number: 1



Triobite Testing, Inc

Ref. No: 48111

Printed: 2012.06.27 @ 11:43:16



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE #300
Wichita, KS 67202

ATTN: Jeff Christian

Erickson #1-21

21-5s-31w Rawlins, KS

Start Date: 2012.06.19 @ 07:40:00

End Date: 2012.06.19 @ 15:04:30

Job Ticket #: 48112 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.06.27 @ 11:42:29



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

21-5s-31w Rawlins, KS
Erickson #1-21
Job Ticket: 48112 **DST#: 2**
Test Start: 2012.06.19 @ 07:40:00

GENERAL INFORMATION:

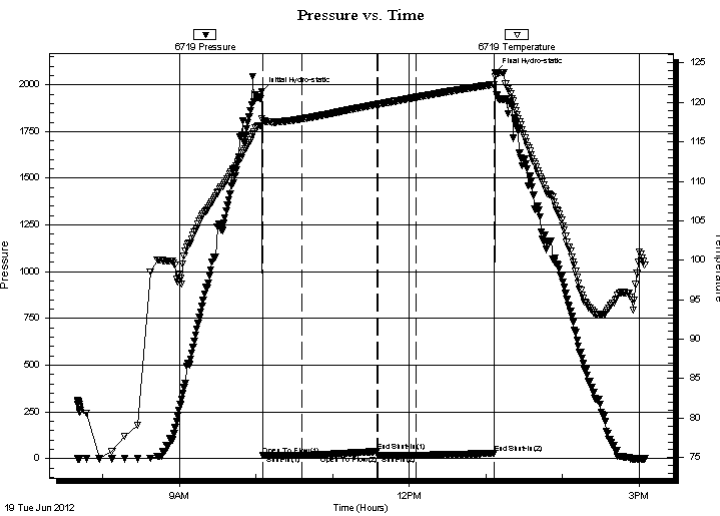
Formation: **LKC "E-F"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 10:05:30
Time Test Ended: 15:04:30
Interval: **3947.00 ft (KB) To 3976.00 ft (KB) (TVD)**
Total Depth: 3976.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Initial)
Tester: Kevin Mack
Unit No: 57
Reference Elevations: 2890.00 ft (KB)
2885.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 6719

Inside

Press @ Run Depth: 16.61 psig @ 3948.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.06.19 End Date: 2012.06.19 Last Calib.: 2012.06.19
Start Time: 07:40:05 End Time: 15:04:29 Time On Btm: 2012.06.19 @ 10:04:30
Time Off Btm: 2012.06.19 @ 13:07:30

TEST COMMENT: 30 - IF- 1/8" Blow built to 1/4" Then died back to weak surface blow.
60 - IS- No Return
30 - FF- No Blow
60 - FS- No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1963.60	117.90	Initial Hydro-static
1	15.87	117.64	Open To Flow (1)
31	15.78	117.89	Shut-In(1)
90	37.33	119.74	End Shut-In(1)
91	16.42	119.76	Open To Flow (2)
121	16.61	120.64	Shut-In(2)
182	28.11	122.28	End Shut-In(2)
183	2066.61	123.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM 100M (oil spots)	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

21-5s-31w Rawlins, KS

250 N Water STE #300
Wichita, KS 67202

Erickson #1-21

Job Ticket: 48112

DST#: 2

ATTN: Jeff Christian

Test Start: 2012.06.19 @ 07:40:00

Tool Information

Drill Pipe:	Length: 3764.00 ft	Diameter: 3.80 inches	Volume: 52.80 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: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 53.69 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3947.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	29.00 ft			
Tool Length:	57.00 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			3924.00	
Hydraulic tool	5.00			3929.00	
Jars	5.00			3934.00	
Safety Joint	3.00			3937.00	
Packer	5.00			3942.00	28.00 Bottom Of Top Packer
Packer	5.00			3947.00	
Stubb	1.00			3948.00	
Recorder	0.00	6719	Inside	3948.00	
Recorder	0.00	8671	Outside	3948.00	
Perforations	25.00			3973.00	
Bullnose	3.00			3976.00	29.00 Bottom Packers & Anchor

Total Tool Length: 57.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

21-5s-31w Rawlins, KS

250 N Water STE #300
Wichita, KS 67202

Erickson #1-21

Job Ticket: 48112

DST#: 2

ATTN: Jeff Christian

Test Start: 2012.06.19 @ 07:40:00

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: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	OSM 100M (oil spots)	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

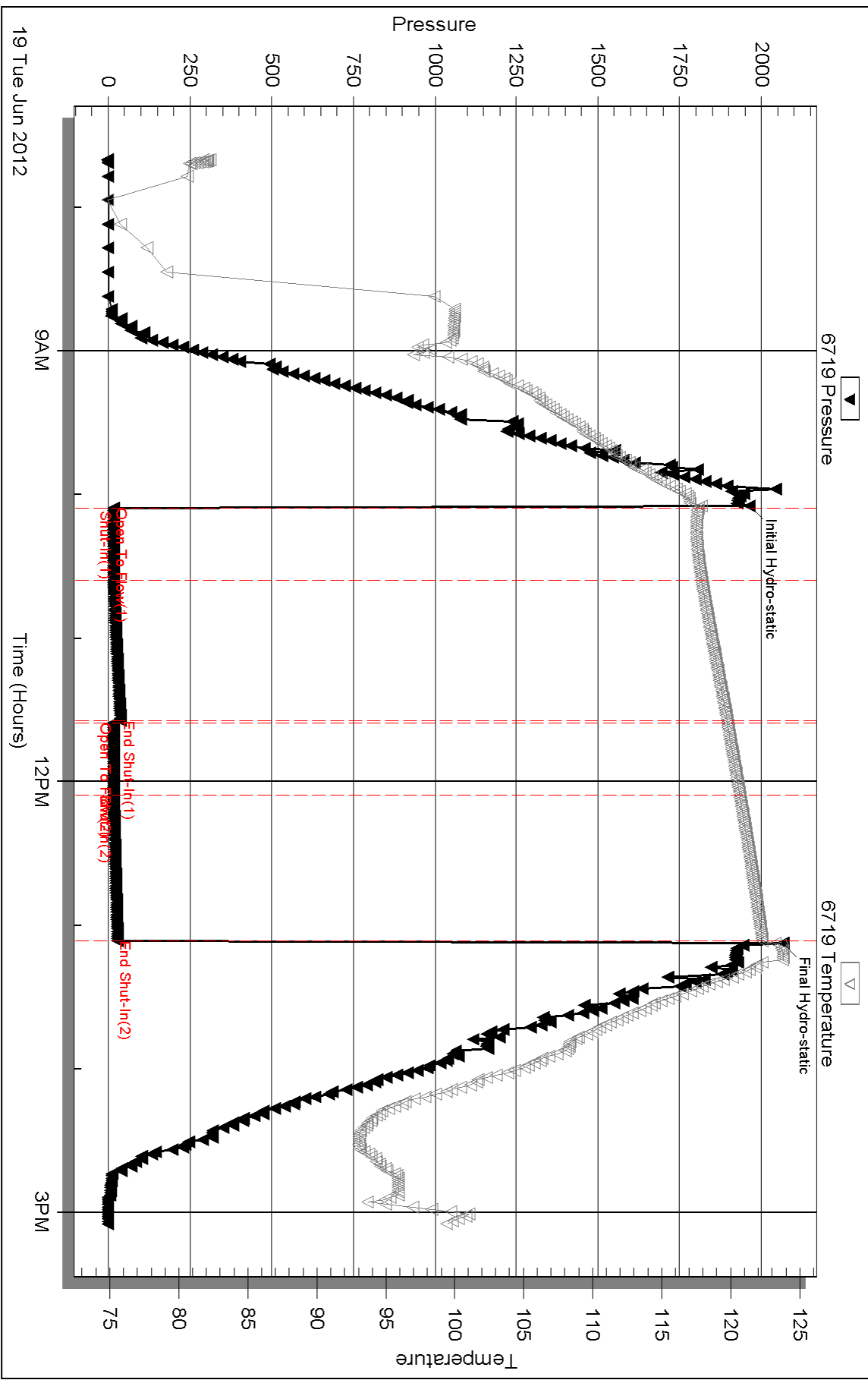
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

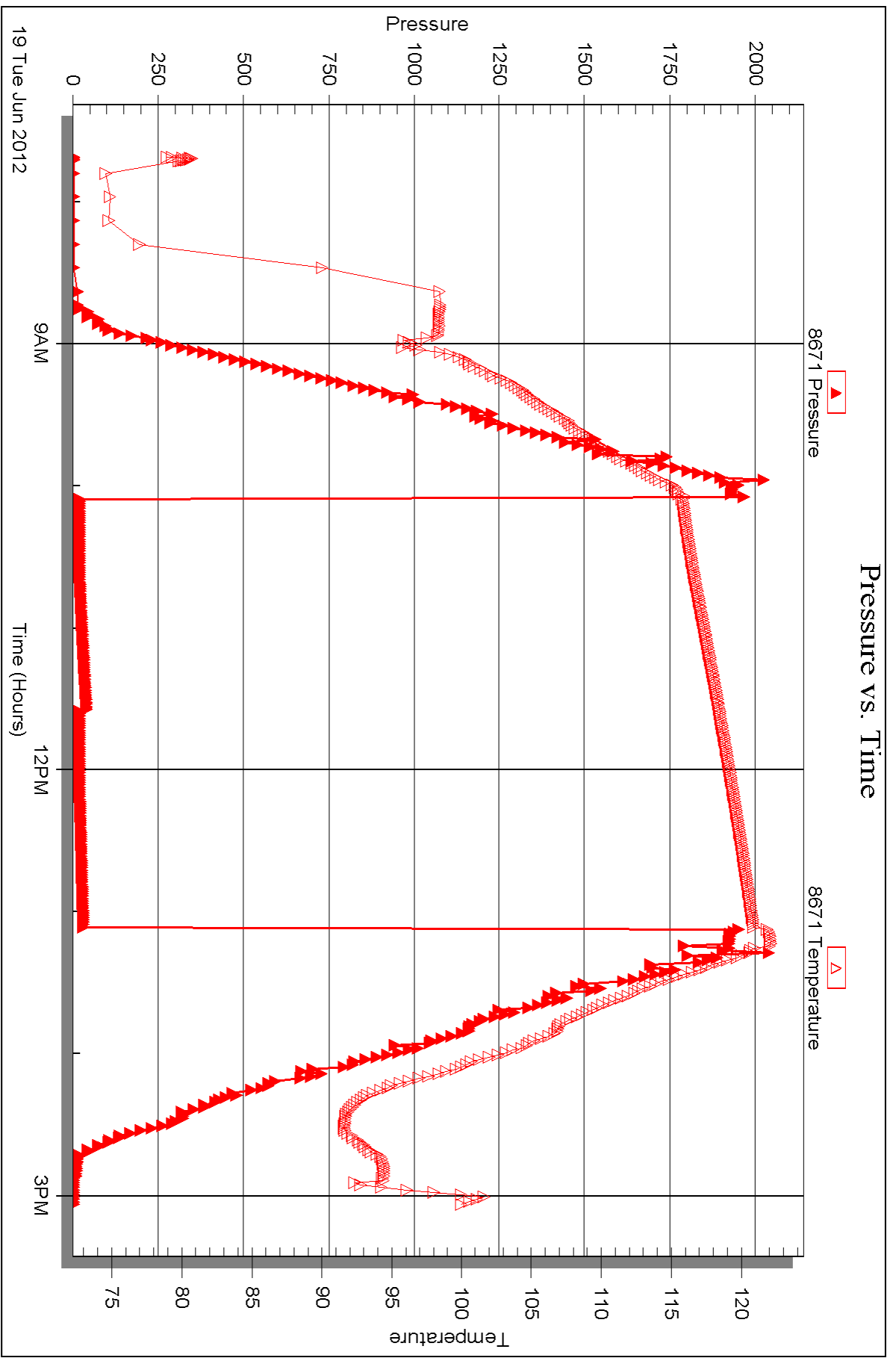


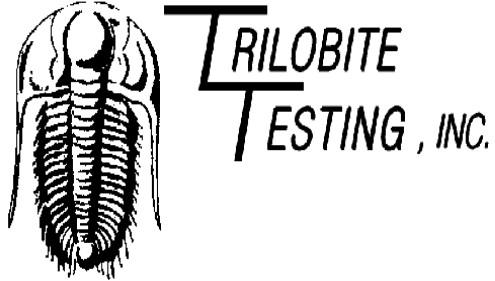
Serial #: 8671

Outside Murfin Drilling Co.

Erickson #1-21

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE #300
Wichita, KS 67202

ATTN: Jeff Christian

Erickson #1-21

21-5s-31w Rawlins, KS

Start Date: 2012.06.20 @ 07:47:00

End Date: 2012.06.20 @ 16:11:30

Job Ticket #: 48113 DST #: 3

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

Printed: 2012.06.27 @ 11:41:46



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

21-5s-31w Rawlins, KS
Erickson #1-21
 Job Ticket: 48113 **DST#: 3**
 Test Start: 2012.06.20 @ 07:47:00

GENERAL INFORMATION:

Formation: **LKC "H-K"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 10:05:30
 Time Test Ended: 16:11:30
 Interval: **4020.00 ft (KB) To 4100.00 ft (KB) (TVD)**
 Total Depth: 4100.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Kevin Mack
 Unit No: 57
 Reference Elevations: 2890.00 ft (KB)
 2885.00 ft (CF)
 KB to GR/CF: 5.00 ft

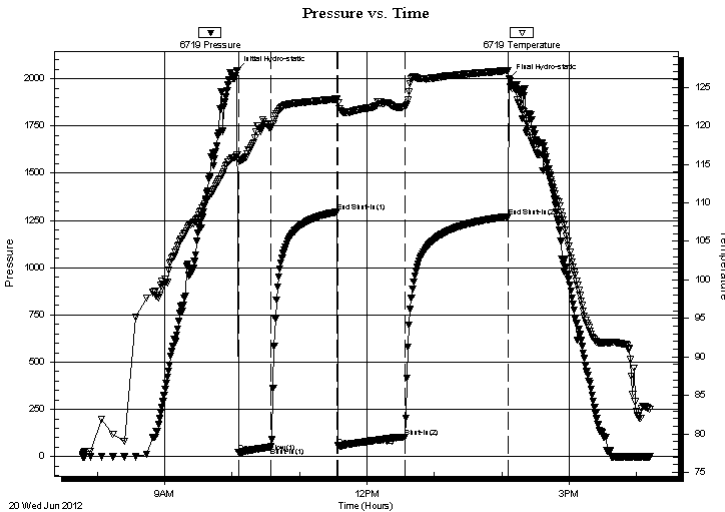
Serial #: 6719

Inside

Press @ Run Depth: 102.77 psig @ 4021.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.06.20 End Date: 2012.06.20 Last Calib.: 2012.06.20
 Start Time: 07:47:05 End Time: 16:11:29 Time On Btm: 2012.06.20 @ 10:04:30
 Time Off Btm: 2012.06.20 @ 14:06:30

TEST COMMENT: 30 - IF- 1/4" Blow built to 2 1/2"
 60 - IS- No Return
 60 - FF- Blow started at 20 min. Built to 2"
 90 - FS- No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2044.76	116.22	Initial Hydro-static
1	21.74	115.59	Open To Flow (1)
30	51.71	119.79	Shut-In(1)
89	1296.05	123.49	End Shut-In(1)
90	56.39	123.03	Open To Flow (2)
149	102.77	122.50	Shut-In(2)
241	1270.95	127.21	End Shut-In(2)
242	1999.48	126.05	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MW 40M 60W	0.59
65.00	WM 90M 10W	0.37

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

21-5s-31w Rawlins, KS

250 N Water STE #300
Wichita, KS 67202

Erickson #1-21

Job Ticket: 48113

DST#: 3

ATTN: Jeff Christian

Test Start: 2012.06.20 @ 07:47:00

Tool Information

Drill Pipe:	Length: 3827.00 ft	Diameter: 3.80 inches	Volume: 53.68 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: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 54.57 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4020.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	80.00 ft			
Tool Length:	108.00 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			3997.00	
Hydraulic tool	5.00			4002.00	
Jars	5.00			4007.00	
Safety Joint	3.00			4010.00	
Packer	5.00			4015.00	28.00 Bottom Of Top Packer
Packer	5.00			4020.00	
Stubb	1.00			4021.00	
Recorder	0.00	6719	Inside	4021.00	
Recorder	0.00	8671	Outside	4021.00	
Perforations	10.00			4031.00	
Change Over Sub	1.00			4032.00	
Drill Pipe	64.00			4096.00	
Change Over Sub	1.00			4097.00	
Bullnose	3.00			4100.00	80.00 Bottom Packers & Anchor

Total Tool Length: 108.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

21-5s-31w Rawlins, KS

250 N Water STE #300
Wichita, KS 67202

Erickson #1-21

Job Ticket: 48113

DST#: 3

ATTN: Jeff Christian

Test Start: 2012.06.20 @ 07:47:00

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:

30000 ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
120.00	MW 40M 60W	0.590
65.00	WM 90M 10W	0.365

Total Length: 185.00 ft Total Volume: 0.955 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .2 @ 81 deg. = 30,000ppm

Serial #: 6719

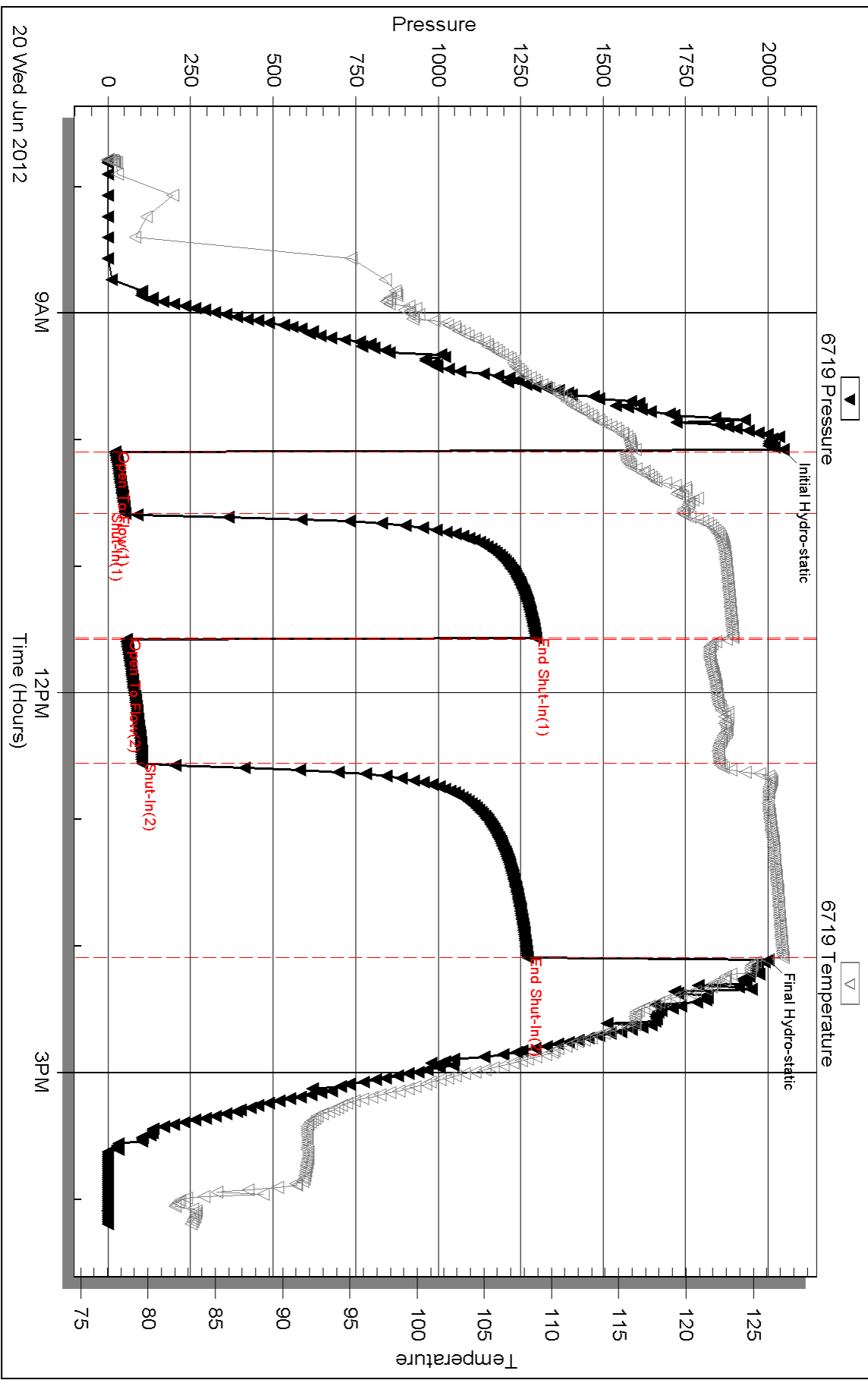
Inside

Murfin Drilling Co.

Erickson #1-21

DST Test Number: 3

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 48113

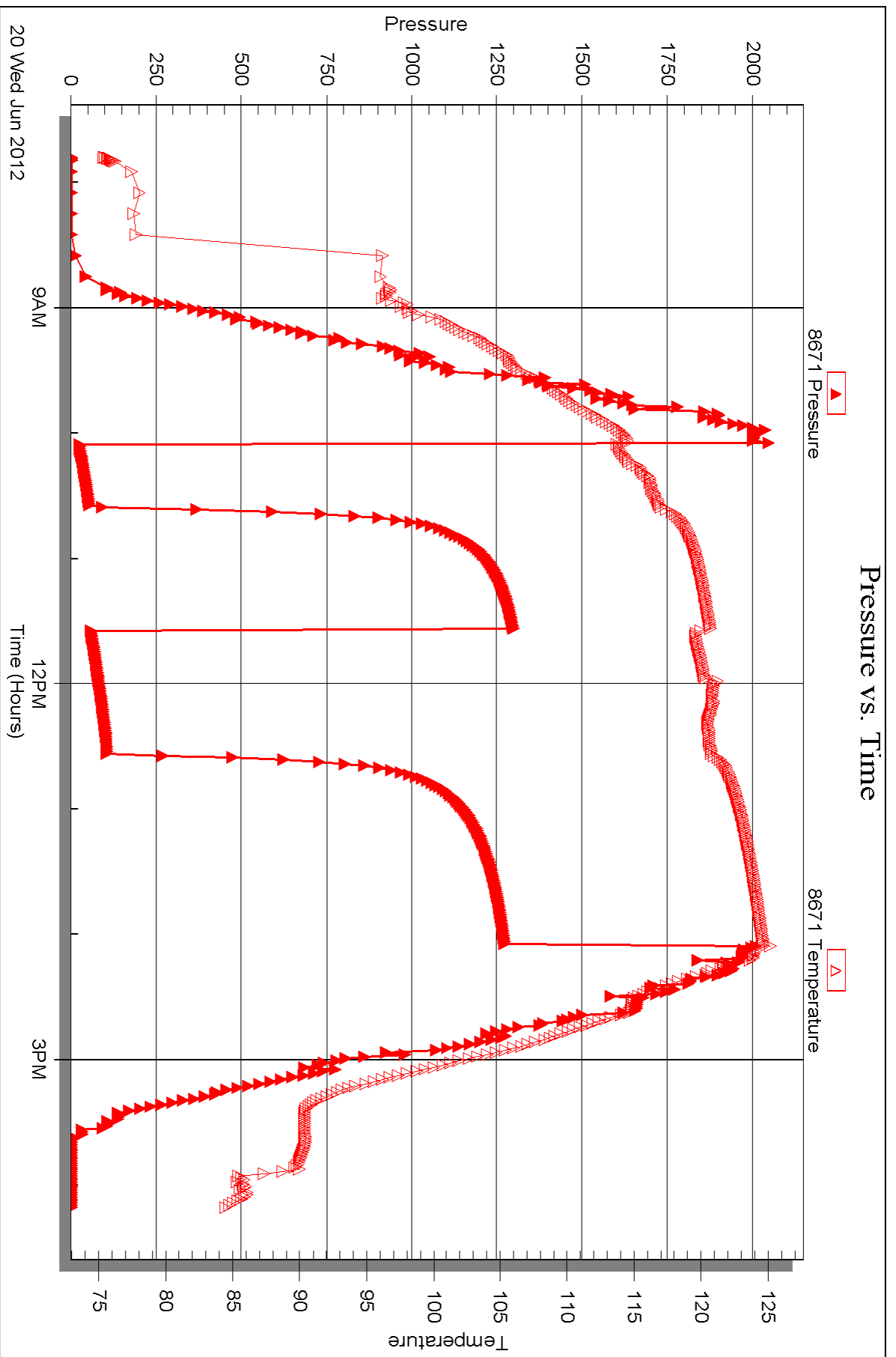
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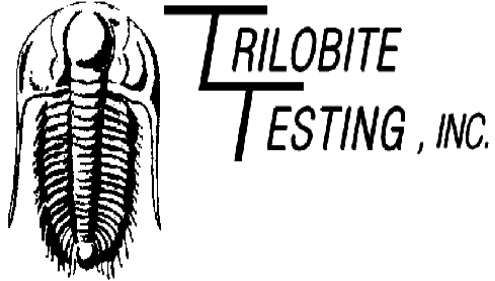
Serial #: 8671

Outside Murfin Drilling Co.

Erickson #1-21

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE #300
Wichita, KS 67202

ATTN: Jeff Christian

Erickson #1-21

21-5s-31w Rawlins, KS

Start Date: 2012.06.21 @ 19:15:00

End Date: 2012.06.22 @ 02:23:00

Job Ticket #: 48114 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.06.27 @ 11:40:54

Murfin Drilling Co. 21-5s-31w Rawlins, KS Erickson #1-21 DST # 4 Cherokee 2012.06.21



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

21-5s-31w Rawlins, KS

250 N Water STE #300
Wichita, KS 67202

Erickson #1-21

Job Ticket: 48114

DST#: 4

ATTN: Jeff Christian

Test Start: 2012.06.21 @ 19:15:00

Tool Information

Drill Pipe:	Length: 4175.00 ft	Diameter: 3.80 inches	Volume: 58.56 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: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 59.45 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4351.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	19.00 ft			
Tool Length:	47.00 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			4328.00	
Hydraulic tool	5.00			4333.00	
Jars	5.00			4338.00	
Safety Joint	3.00			4341.00	
Packer	5.00			4346.00	28.00 Bottom Of Top Packer
Packer	5.00			4351.00	
Stubb	1.00			4352.00	
Recorder	0.00	6719	Inside	4352.00	
Recorder	0.00	8671	Outside	4352.00	
Perforations	15.00			4367.00	
Bullnose	3.00			4370.00	19.00 Bottom Packers & Anchor

Total Tool Length: 47.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

21-5s-31w Rawlins, KS

250 N Water STE #300
Wichita, KS 67202

Erickson #1-21

Job Ticket: 48114

DST#: 4

ATTN: Jeff Christian

Test Start: 2012.06.21 @ 19:15:00

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: 5.99 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100M	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 #: 6719

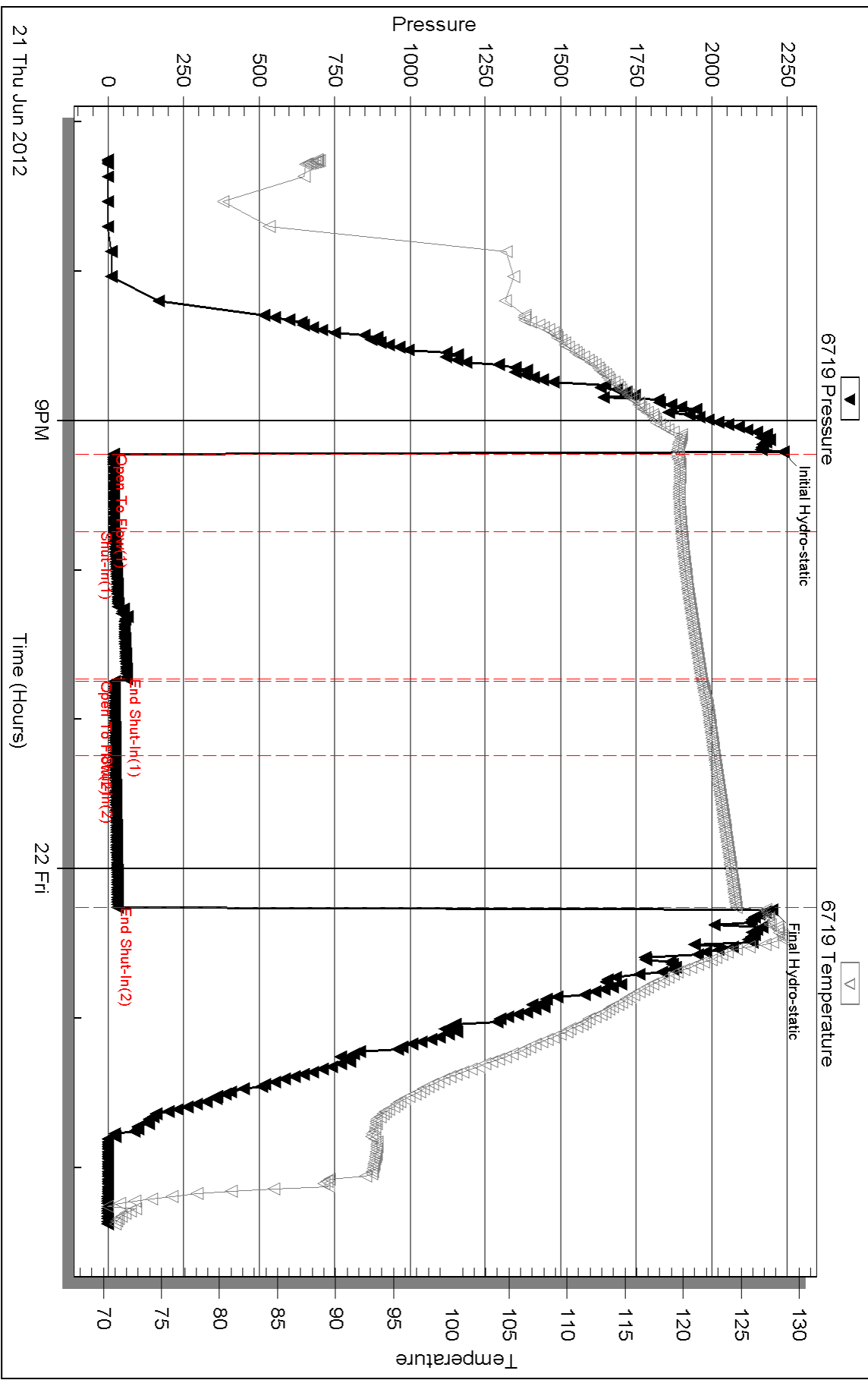
Inside

Murfin Drilling Co.

Erickson #1-21

DST Test Number: 4

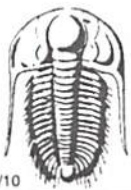
Pressure vs. Time



Triobite Testing, Inc

Ref. No: 48114

Printed: 2012.06.27 @ 11:40:56



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48111

Well Name & No. Erickson #1-21 Test No. 1 Date 6-18-12
 Company Murphy Drilling Co. Elevation 2890 KB 2825 GL
 Address 250 N Water STE #300 Wichita, KS 67202
 Co. Rep / Geo. Jeff Christian Rig Murphy #8
 Location: Sec. 21 Twp. 5s Rge. 31w Co. Rawlins State KS

Interval Tested 3845-3932 Zone Tested Toronto-LKC "A-B"
 Anchor Length 87' Drill Pipe Run 3669 Mud Wt. 9.3
 Top Packer Depth 3841 Drill Collars Run 180' Vis 55
 Bottom Packer Depth 3845 Wt. Pipe Run Ø WL 6.0
 Total Depth 3932 Chlorides 1,100 ppm System LCM 4.0 #
 Blow Description IF- 1/4" Blow built to 1 3/4"
IS- NO Return
EF- NO Blow
FS- NO Return

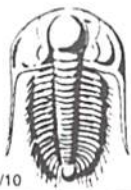
Rec	Feet of	%gas	%oil	%water	%mud
<u>120</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 120 BHT 124 Gravity — API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic <u>1936</u>	<input checked="" type="checkbox"/> Test 1150	T-On Location <u>2:15 PM</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>3:41 PM</u>
(C) First Final Flow <u>48</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>6:06 PM</u>
(D) Initial Shut-In <u>1218</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>9:06 PM</u>
(E) Second Initial Flow <u>54</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>11:02 PM</u>
(F) Second Final Flow <u>74</u>	<input checked="" type="checkbox"/> Mileage <u>62 RT</u> 96.10	Comments _____
(G) Final Shut-In <u>1191</u>	<input type="checkbox"/> Sampler	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>1907</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>1571.10</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	MP/DST Disc't _____
	<input type="checkbox"/> Accessibility	
	Sub Total <u>1571.10</u>	

Approved By _____ Our Representative [Signature]

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



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48112

Well Name & No. Erickson # 1-21 Test No. 2 Date 6-19-12
 Company Murfin Drilling Co. Elevation 2890 KB 2885 GL
 Address 250 N Wacker STE # 300 Wichita, KS 67202
 Co. Rep / Geo. Jeff Christian Rig Murfin #8
 Location: Sec. 21 Twp. 5s Rge. 31w Co. Rawlins State KS

Interval Tested 3947-3976 Zone Tested LKC "E-F"
 Anchor Length 29' Drill Pipe Run 3764 Mud Wt. 9.2
 Top Packer Depth 3943 Drill Collars Run 180' Vis 65
 Bottom Packer Depth 3947 Wt. Pipe Run Ø WL 5.2
 Total Depth 3976 Chlorides 1,200 ppm System LCM 5#
 Blow Description IF- 1/8" Blow built to 1/4" then died back to work surface.
IS- NO Return
FF- NO Blow
FS- NO Return

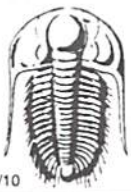
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>OSM</u>	<u>Spots</u>		<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 123 Gravity — API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic <u>1963</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>7:10 AM</u>
(B) First Initial Flow <u>15</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>7:40 AM</u>
(C) First Final Flow <u>15</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>10:05 AM</u>
(D) Initial Shut-In <u>37</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>1:05 PM</u>
(E) Second Initial Flow <u>16</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>3:04 PM</u>
(F) Second Final Flow <u>16</u>	<input checked="" type="checkbox"/> Mileage <u>62 RT</u> 96.10	Comments
(G) Final Shut-In <u>28</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2066</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	Total <u>1571.10</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1571.10</u>	

Approved By _____ Our Representative 

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48113

Well Name & No. Erickson #1-2 Test No. 3 Date 6-20-12
 Company Murfin Drilling Co. Elevation 2890 KB 2885 GL
 Address 250 N Water STE #200 Wichita, KS 67202
 Co. Rep / Geo. Jeff Christian Rig Murfin #8
 Location: Sec. 21 Twp. 5s Rge. 31w Co. Rawlins State KS

Interval Tested 4020-4100 Zone Tested LKC "H-K"
 Anchor Length ~~70~~ 80' Drill Pipe Run 3827 Mud Wt. 9.3
 Top Packer Depth ~~4020~~ 4016 Drill Collars Run 120 Vis 62
 Bottom Packer Depth ~~4020~~ 4020 Wt. Pipe Run 8 WL 5.6
 Total Depth 4100 Chlorides 1,200 ppm System LCM 6#
 Blow Description IF - 1/4" Blow built to 2 1/2"
IS - NO Return
FF - Surface blow started at 20 min. Built to 2"
FS - NO Return

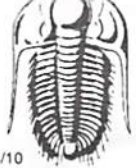
Rec	Feet of	%gas	%oil	%water	%mud
<u>65</u>	<u>WM</u>		<u>10</u>	<u>90</u>	
<u>120</u>	<u>MW</u>		<u>60</u>	<u>40</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 185 BHT 127 Gravity _____ API RW 2 @ 81 °F Chlorides 30,000 ppm

(A) Initial Hydrostatic 2044 Test 1250 T-On Location 4:15 AM
 (B) First Initial Flow 21 Jars 250 T-Started 7:47 AM
 (C) First Final Flow 57 Safety Joint 75 T-Open 10:04 AM
 (D) Initial Shut-In 1296 Circ Sub N/C T-Pulled 2:04 PM
 (E) Second Initial Flow 56 Hourly Standby 2h 200 T-Out 4:10 PM
 (F) Second Final Flow 102 Mileage 62 RT 96.10 Comments Rig was tripping back
 (G) Final Shut-In 1270 Sampler _____ in to clean hole when
 (H) Final Hydrostatic 1999 Straddle _____ I arrived. I was not called
 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 1871.10 Sub Total 0
 Total 1871.10 MP/DST Disc't _____

Approved By _____ Our Representative 

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KILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48114

Well Name & No. Erickson # 121 Test No. 4 Date 6-21-12
 Company Muffin Drilling Co. Elevation 2890 KB 2885 GL
 Address 200 N Water STE #300 Wichita, KS 67202
 Co. Rep / Geo. Jeff Christian Rig Muffin #8
 Location: Sec. 21 Twp. 5s Rge. 31w Co. Rawlins State Ks

Interval Tested 4351-4370 Zone Tested Cherokee
 Anchor Length 19' Drill Pipe Run 4175 Mud Wt. 9.3
 Top Packer Depth 4347 Drill Collars Run 180 Vis 59
 Bottom Packer Depth 4351 Wt. Pipe Run Ø WL 6.0
 Total Depth 4370 Chlorides 1200 ppm System LCM 6#
 Blow Description IF- 1/8" Blow did not build or die
IS- No Return
FF- No Blow
FS- No Return

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	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 125 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2236</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>6:45 PM</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>7:15 PM</u>
(C) First Final Flow <u>20</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>9:13 PM</u>
(D) Initial Shut-In <u>62</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>12:13 AM</u>
(E) Second Initial Flow <u>22</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>2:23 AM</u>
(F) Second Final Flow <u>22</u>	<input checked="" type="checkbox"/> Mileage <u>62 RT X2</u> 192.20	Comments <u>Loaded tools at 12:00 AM 6-22-12</u>
(G) Final Shut-In <u>31</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2200</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	Total <u>1767.20</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1767.20</u>	

Approved By _____ Our Representative [Signature]

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