



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Company
250 N Water STE #300
Wichita, KS 67202
ATTN: Rocky Milford

Torlueke #1-18
18/2s/29w/Decatur/KS
Job Ticket: 041122 **DST#: 1**
Test Start: 2011.06.13 @ 20:50:00

GENERAL INFORMATION:

Formation: **LKC "A"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 23:18:45
Time Test Ended: 04:10:00
Interval: **3752.00 ft (KB) To 3805.00 ft (KB) (TVD)**
Total Depth: 3805.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole
Tester: Kevin Mack
Unit No: 43
Reference Elevations: 2787.00 ft (KB)
2782.00 ft (CF)
KB to GR/CF: 5.00 ft

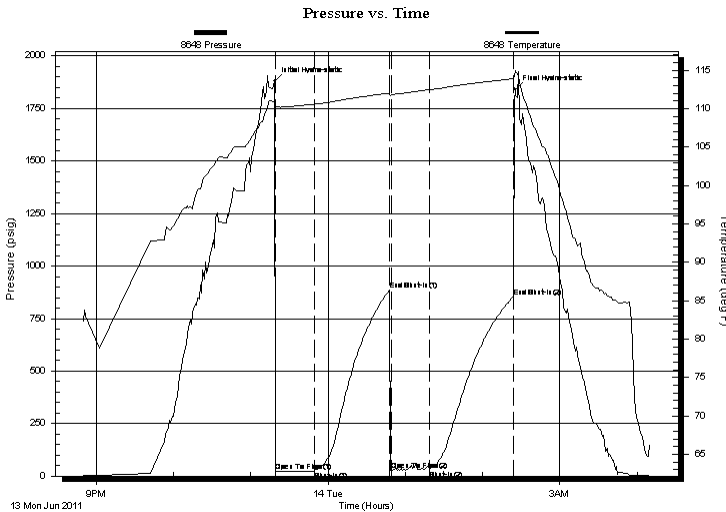
Serial #: 8648

Inside

Press @ Run Depth: 29.98 psig @ 3753.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.06.13 End Date: 2011.06.14 Last Calib.: 2011.06.14
Start Time: 20:50:05 End Time: 04:09:59 Time On Btm: 2011.06.13 @ 23:18:30
Time Off Btm: 2011.06.14 @ 02:25:30

TEST COMMENT: IF: Surface blow built to 1/4"
IS: No Return
FF: No Blow
FS: No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1878.93	110.78	Initial Hydro-static
1	21.27	110.22	Open To Flow (1)
31	24.92	110.59	Shut-In(1)
90	886.13	112.03	End Shut-In(1)
91	28.24	111.68	Open To Flow (2)
120	29.98	112.47	Shut-In(2)
186	853.63	113.91	End Shut-In(2)
187	1841.88	114.98	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100M	0.02

Gas Rates

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



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FLUID SUMMARY

Murfin Drilling Company

Torlueke #1-18

250 N Water STE #300
Wichita, KS 67202

18/2s/29w/Decatur/KS

Job Ticket: 041122

DST#: 1

ATTN: Rocky Milford

Test Start: 2011.06.13 @ 20:50:00

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: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.00 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
5.00	Mud 100M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

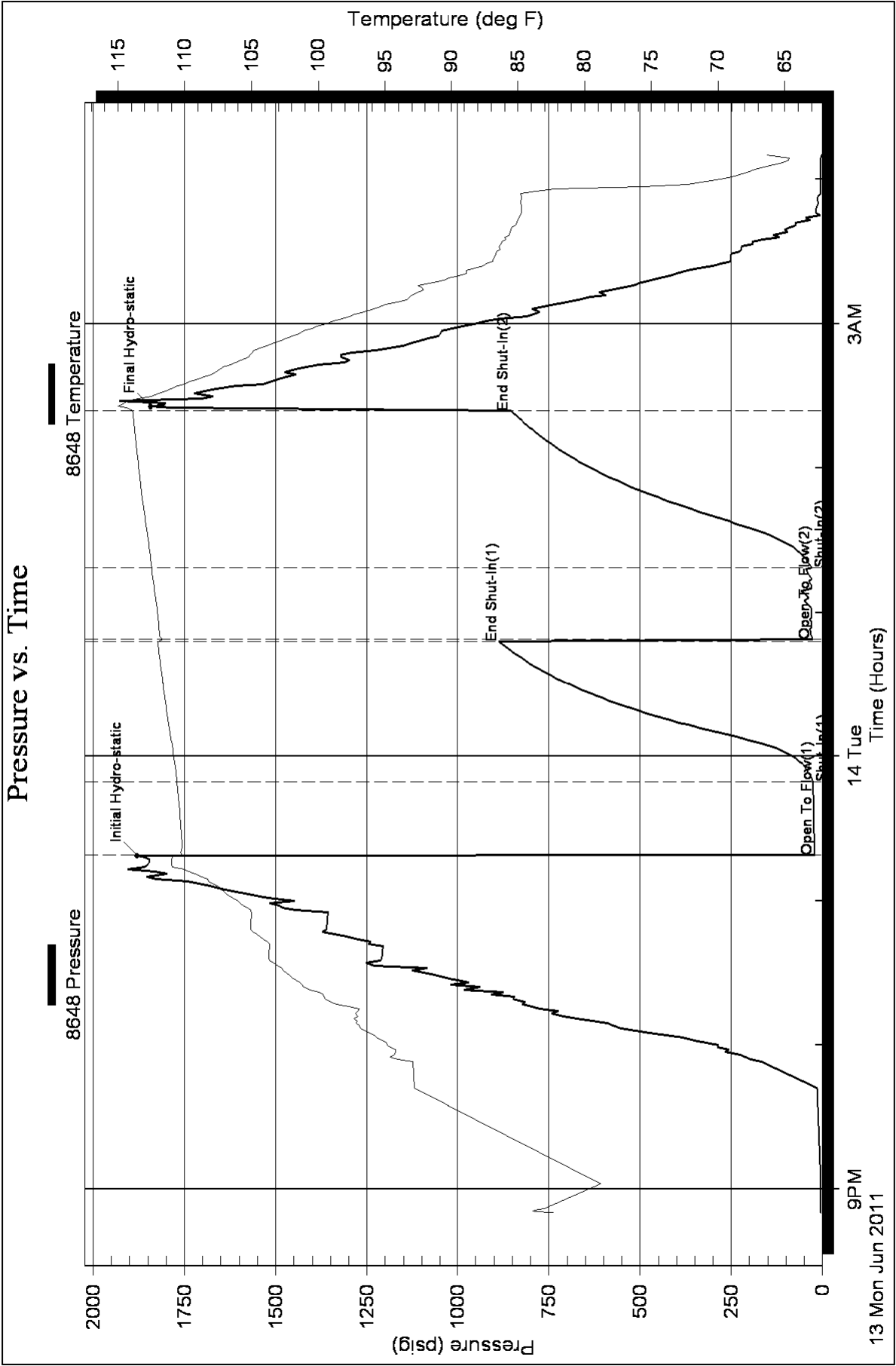
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Company
 250 N Water STE #300
 Wichita, KS 67202
 ATTN: Rocky Milford

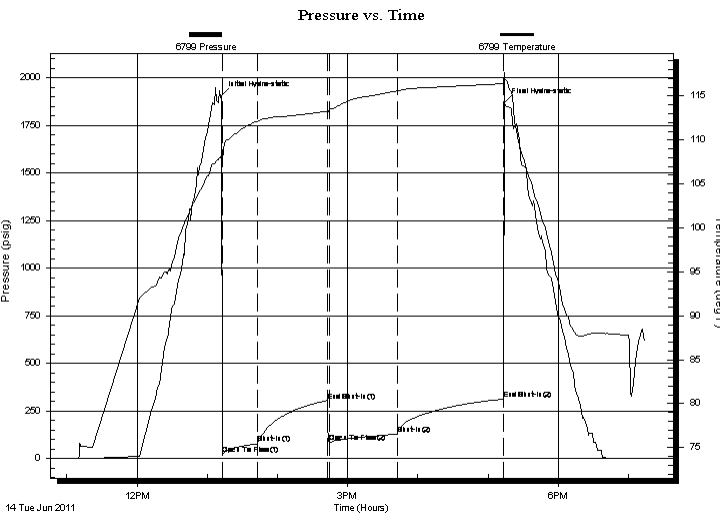
Torluemke #1-18
18/2s/29w/Decatur/KS
 Job Ticket: 041123 **DST#: 2**
 Test Start: 2011.06.14 @ 11:10:00

GENERAL INFORMATION:

Formation: **Lans. A sd-D**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:12:45
 Time Test Ended: 19:13:45
 Interval: **3801.00 ft (KB) To 3842.00 ft (KB) (TVD)**
 Total Depth: 3842.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole
 Tester: Kevin Mack
 Unit No: 43
 Reference Elevations: 2787.00 ft (KB)
 2782.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6799 Inside
 Press @ Run Depth: 128.56 psig @ 3802.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.06.14 End Date: 2011.06.14 Last Calib.: 2011.06.14
 Start Time: 11:10:05 End Time: 19:13:44 Time On Btm: 2011.06.14 @ 13:12:00
 Time Off Btm: 2011.06.14 @ 17:14:00

TEST COMMENT: IF: Surface blow built to BoB in 18 min.
 IS: Surface return started at 8 min. Built to 1/2"
 FF: 3/4" Blow built to BoB in 19 min
 FS: Surface return started at 5 min. Built to 2"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1905.04	108.06	Initial Hydro-static
1	21.91	107.60	Open To Flow (1)
31	79.12	112.13	Shut-In(1)
91	300.18	113.27	End Shut-In(1)
92	83.39	113.30	Open To Flow (2)
151	128.56	115.61	Shut-In(2)
241	311.62	116.42	End Shut-In(2)
242	1870.03	117.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	480' GIP	0.00
60.00	GMCO 5G 55o 40M	0.30
180.00	GMCO 10G 60o 30M	0.89
30.00	Clean Gassy Oil 10G 90o	0.15

Gas Rates

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



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FLUID SUMMARY

Murfin Drilling Company

Torluemke #1-18

250 N Water STE #300
Wichita, KS 67202

18/2s/29w/Decatur/KS

Job Ticket: 041123

DST#: 2

ATTN: Rocky Milford

Test Start: 2011.06.14 @ 11:10:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.00 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	480' GIP	0.000
60.00	GMCO 5G 55o 40M	0.295
180.00	GMCO 10G 60o 30M	0.885
30.00	Clean Gassy Oil 10G 90o	0.148

Total Length: 270.00 ft Total Volume: 1.328 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

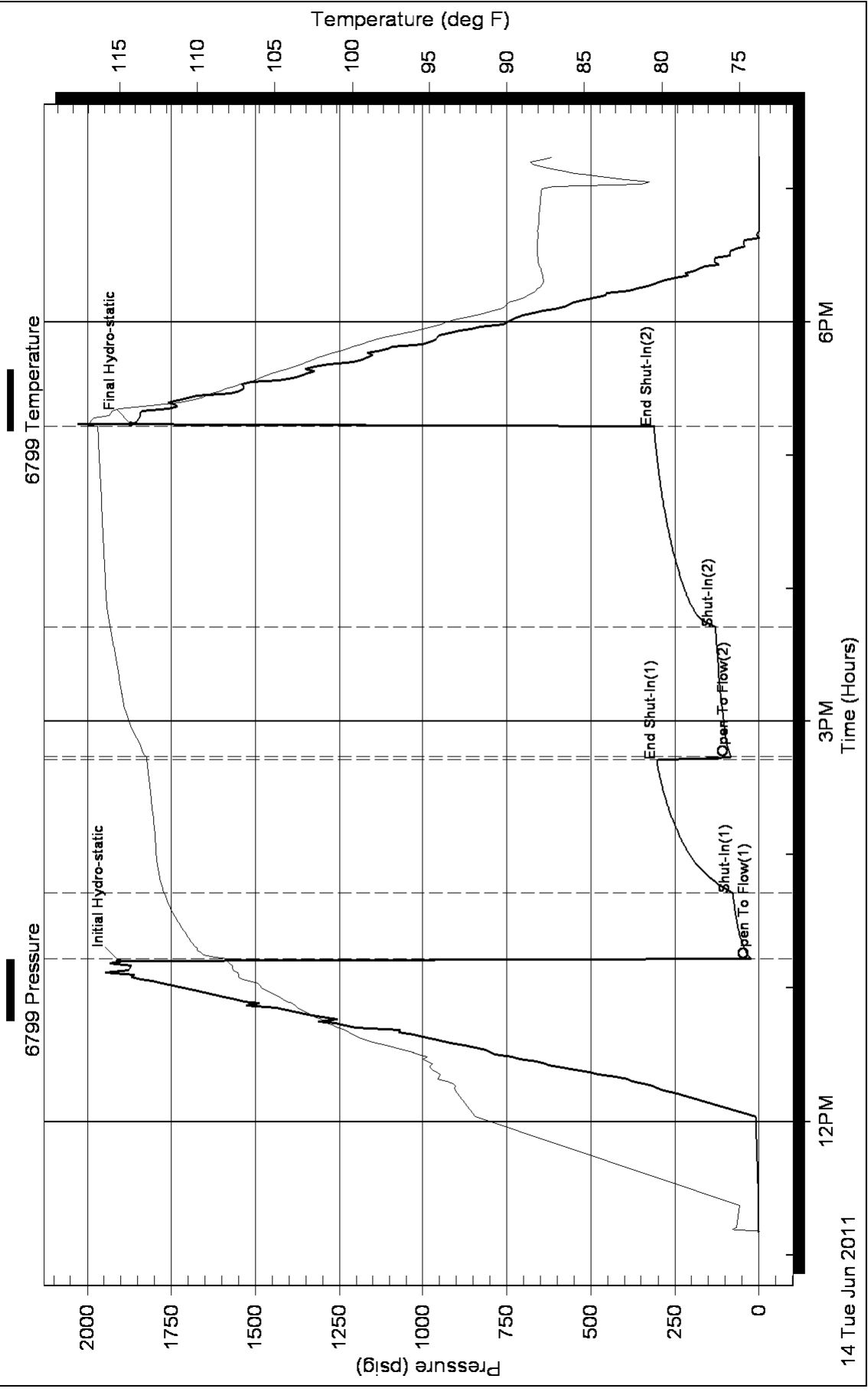
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Oil API 38 @ 80 Deg.= 36 cor.

Pressure vs. Time





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Murfin Drilling Company
 250 N Water STE #300
 Wichita, KS 67202
 ATTN: Rocky Milford

Torluemke #1-18
18/2s/29w/Decatur/KS
 Job Ticket: 041123 **DST#: 3**
 Test Start: 2011.06.15 @ 03:18:00

GENERAL INFORMATION:

Formation: **LKC "EG"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole
 Time Tool Opened: 05:35:45
 Tester: Kevin Mack
 Time Test Ended: 11:15:15
 Unit No: 43
 Interval: **3842.00 ft (KB) To 3891.00 ft (KB) (TVD)**
 Reference Elevations: 2787.00 ft (KB)
 Total Depth: 3891.00 ft (KB) (TVD)
 2782.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 5.00 ft

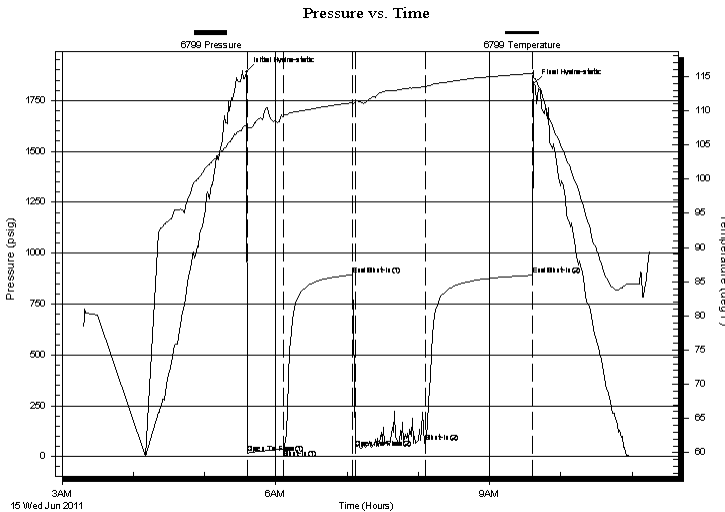
Serial #: 6799

Inside

Press @ Run Depth: 72.70 psig @ 3843.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.06.15 End Date: 2011.06.15 Last Calib.: 2011.06.15
 Start Time: 03:18:05 End Time: 11:15:14 Time On Btm: 2011.06.15 @ 05:35:15
 Time Off Btm: 2011.06.15 @ 09:37:15

TEST COMMENT: IF: Surface blow built to 2 1/8"
 IS: No Return
 FF: Surface blow started at 25 min. Built to 3/4"
 FS: No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1890.84	107.89	Initial Hydro-static
1	16.76	107.39	Open To Flow (1)
31	38.42	109.23	Shut-In(1)
90	893.27	111.20	End Shut-In(1)
92	41.68	111.30	Open To Flow (2)
151	72.70	113.53	Shut-In(2)
241	891.10	115.48	End Shut-In(2)
242	1834.60	114.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	OSM 100M (oil spots)	0.44

Gas Rates

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



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FLUID SUMMARY

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Torluemke #1-18

250 N Water STE #300
Wichita, KS 67202

18/2s/29w/Decatur/KS

Job Ticket: 041123

DST#: 3

ATTN: Rocky Milford

Test Start: 2011.06.15 @ 03:18:00

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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.60 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	OSM 100M (oil spots)	0.443

Total Length: 90.00 ft Total Volume: 0.443 bbl

Num Fluid Samples: 0

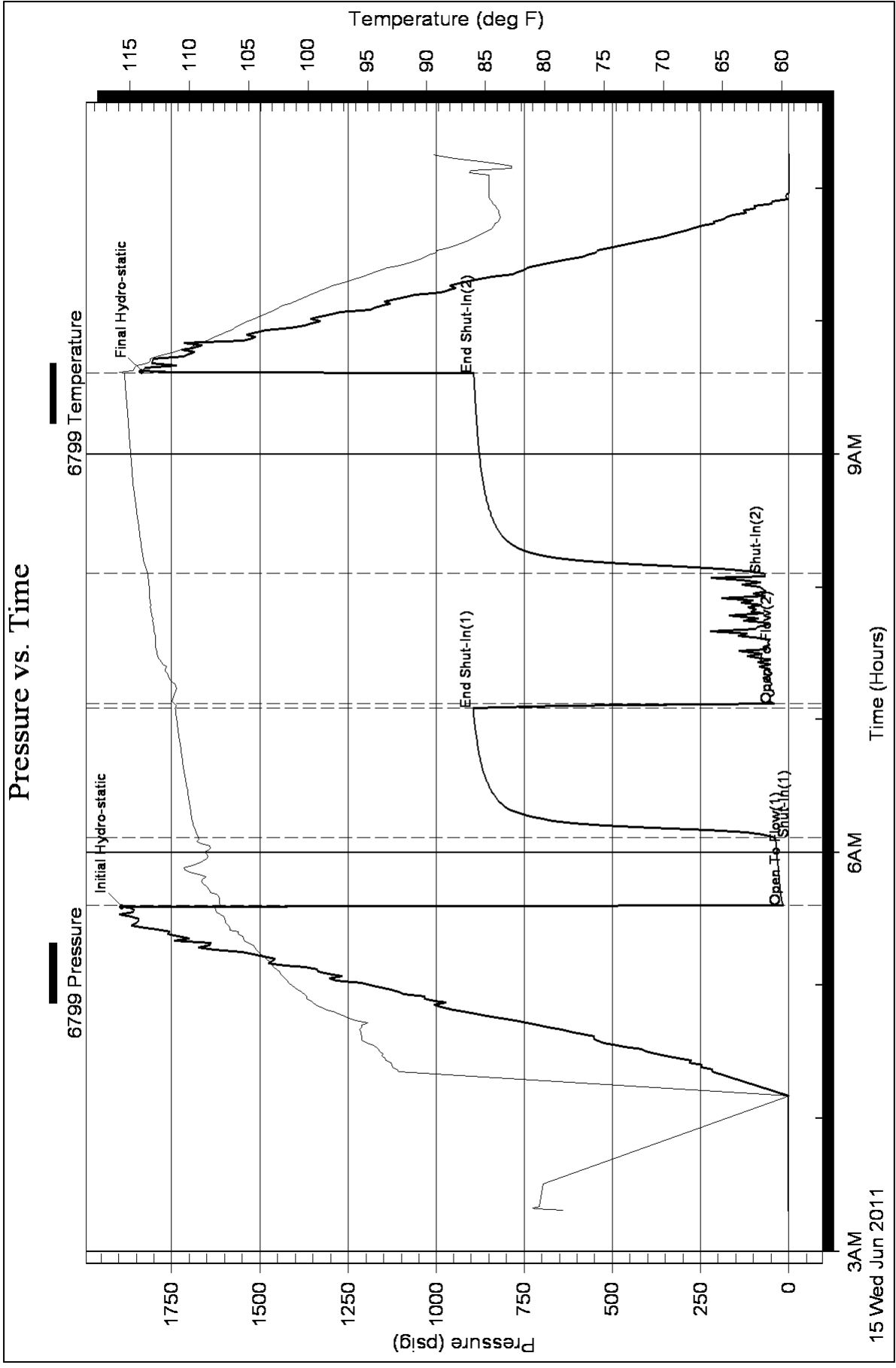
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





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Murfin Drilling Company
250 N Water STE #300
Wichita, KS 67202
ATTN: Rocky Milford

Torluemke #1-18
18/2s/29w/Decatur/KS
Job Ticket: 041125 **DST#: 4**
Test Start: 2011.06.15 @ 18:12:00

GENERAL INFORMATION:

Formation: **LKC "H"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:25:45
Time Test Ended: 02:25:45
Interval: **3890.00 ft (KB) To 3925.00 ft (KB) (TVD)**
Total Depth: 3925.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole
Tester: Kevin Mack
Unit No: 43
Reference Elevations: 2787.00 ft (KB)
2782.00 ft (CF)
KB to GR/CF: 5.00 ft

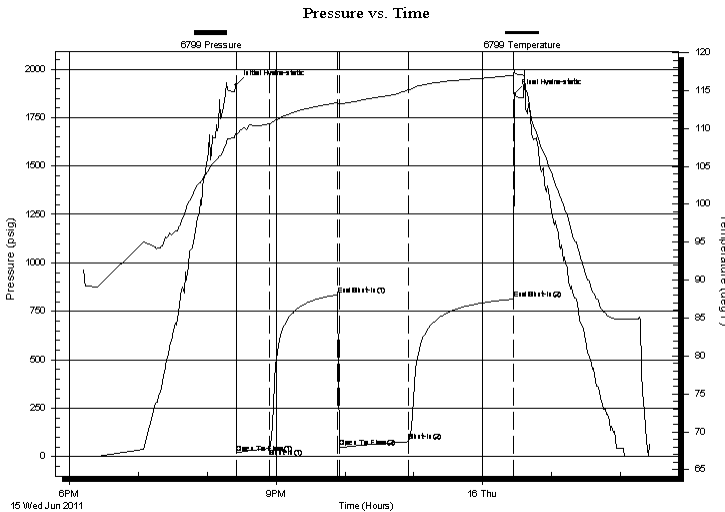
Serial #: 6799

Inside

Press @ Run Depth: 79.20 psig @ 3891.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.06.15 End Date: 2011.06.16 Last Calib.: 2011.06.16
Start Time: 18:12:05 End Time: 02:25:44 Time On Btm: 2011.06.15 @ 20:25:00
Time Off Btm: 2011.06.16 @ 00:28:00

TEST COMMENT: IF: Surface blow built to 2"
IS: No Return
FF: Surface blow started at 25 min. Built to 1"
FS: No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1919.02	109.35	Initial Hydro-static
1	18.19	109.16	Open To Flow (1)
29	41.86	110.63	Shut-In(1)
89	835.58	113.41	End Shut-In(1)
90	45.70	113.19	Open To Flow (2)
151	79.20	115.11	Shut-In(2)
242	812.93	117.03	End Shut-In(2)
243	1871.85	117.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
130.00	Mud 100M	0.64

Gas Rates

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



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FLUID SUMMARY

Murfin Drilling Company

Torluemke #1-18

250 N Water STE #300
Wichita, KS 67202

18/2s/29w/Decatur/KS

Job Ticket: 041125

DST#: 4

ATTN: Rocky Milford

Test Start: 2011.06.15 @ 18:12:00

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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.60 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
130.00	Mud 100M	0.639

Total Length: 130.00 ft Total Volume: 0.639 bbl

Num Fluid Samples: 0

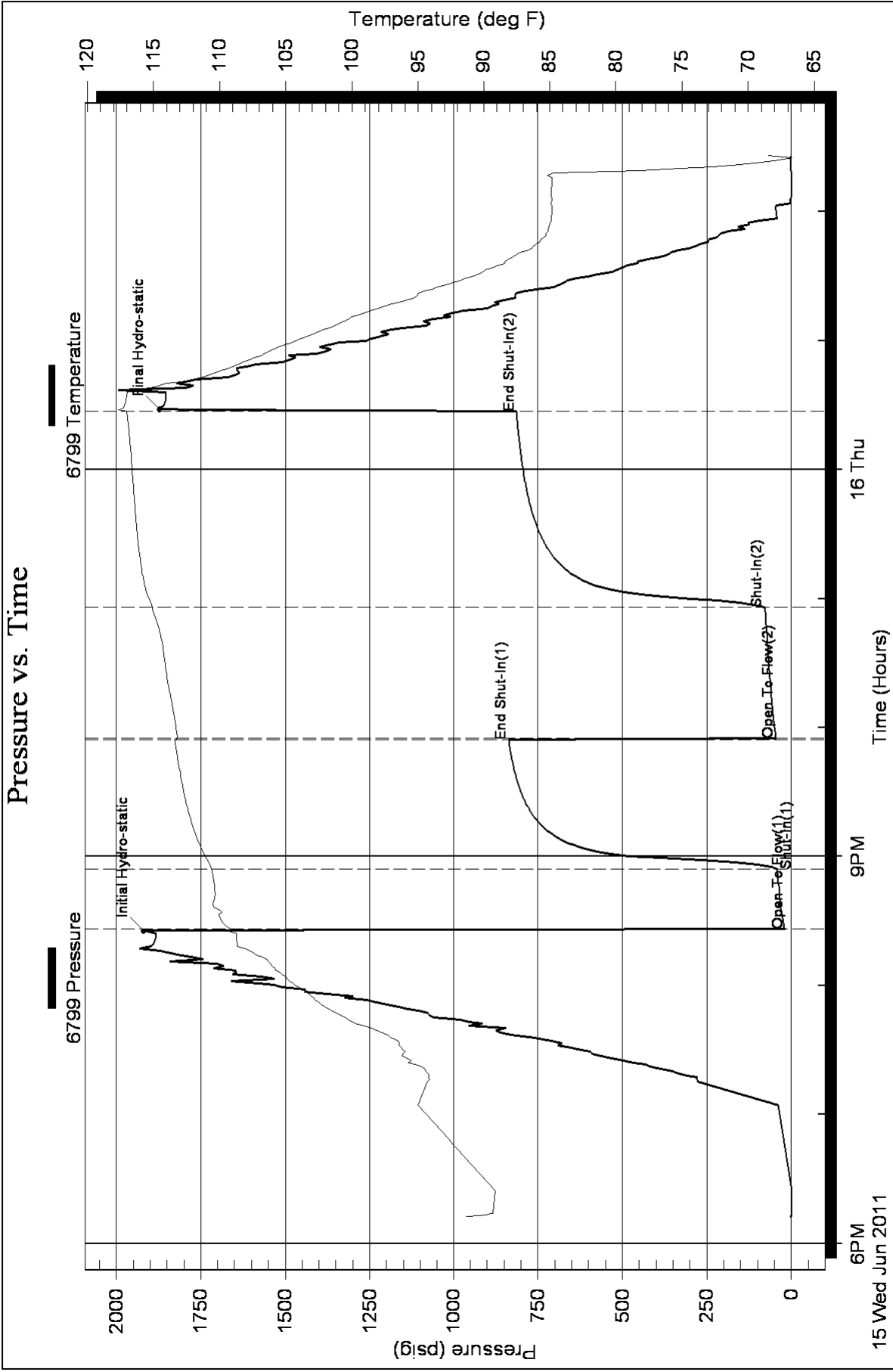
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Company
 250 N Water STE #300
 Wichita, KS 67202
 ATTN: Rocky Milford

Torluemke #1-18
18/2s/29w/Decatur/KS
 Job Ticket: 43351 **DST#: 5**
 Test Start: 2011.06.16 @ 09:59:00

GENERAL INFORMATION:

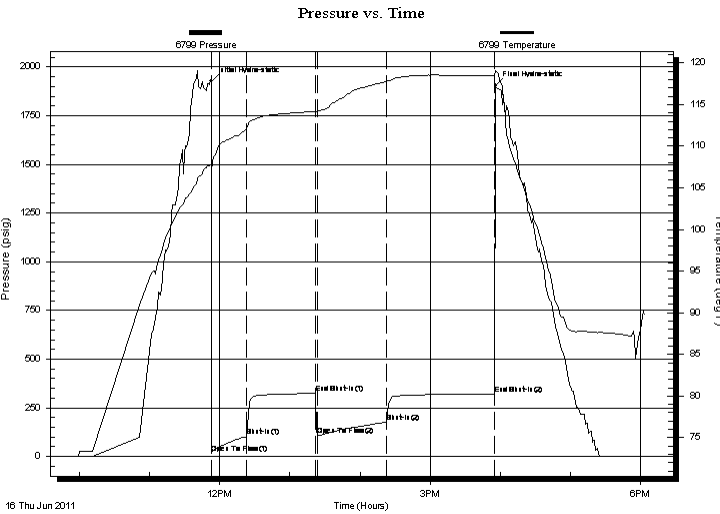
Formation: **LKC "J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:52:45
 Time Test Ended: 18:03:45
 Interval: **3918.00 ft (KB) To 3960.00 ft (KB) (TVD)**
 Total Depth: 3960.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole
 Tester: Kevin Mack
 Unit No: 43
 Reference Elevations: 2787.00 ft (KB)
 2782.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6799

Inside

Press @ Run Depth: 176.75 psig @ 3919.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.06.16 End Date: 2011.06.16 Last Calib.: 2011.06.16
 Start Time: 09:59:05 End Time: 18:03:44 Time On Btm: 2011.06.16 @ 11:52:30
 Time Off Btm: 2011.06.16 @ 15:56:15

TEST COMMENT: IF: Blow built to BoB in 20 min
 IS: Surface return started at 3 min. Built to 3/4"
 FF: Blow built to BoB in 24 min
 FS: Surface return started at 2 1/2 min. Built to 3 1/4"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1926.63	107.92	Initial Hydro-static
1	15.65	106.88	Open To Flow (1)
31	103.23	112.07	Shut-In(1)
90	323.33	114.19	End Shut-In(1)
92	106.77	114.14	Open To Flow (2)
151	176.75	117.77	Shut-In(2)
243	321.71	118.45	End Shut-In(2)
244	1904.42	119.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	244' GIP	0.00
60.00	GMCO 5G 50o 45M	0.30
180.00	GMCO 10G 60o 30M	0.89
190.00	Clean Gassy Oil 10G 90o	0.93

Gas Rates

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



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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

Torluemke #1-18

250 N Water STE #300
Wichita, KS 67202

18/2s/29w/Decatur/KS

Job Ticket: 43351

DST#: 5

ATTN: Rocky Milford

Test Start: 2011.06.16 @ 09:59:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.60 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	244' GIP	0.000
60.00	GMCO 5G 50o 45M	0.295
180.00	GMCO 10G 60o 30M	0.885
190.00	Clean Gassy Oil 10G 90o	0.934

Total Length: 430.00 ft Total Volume: 2.114 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

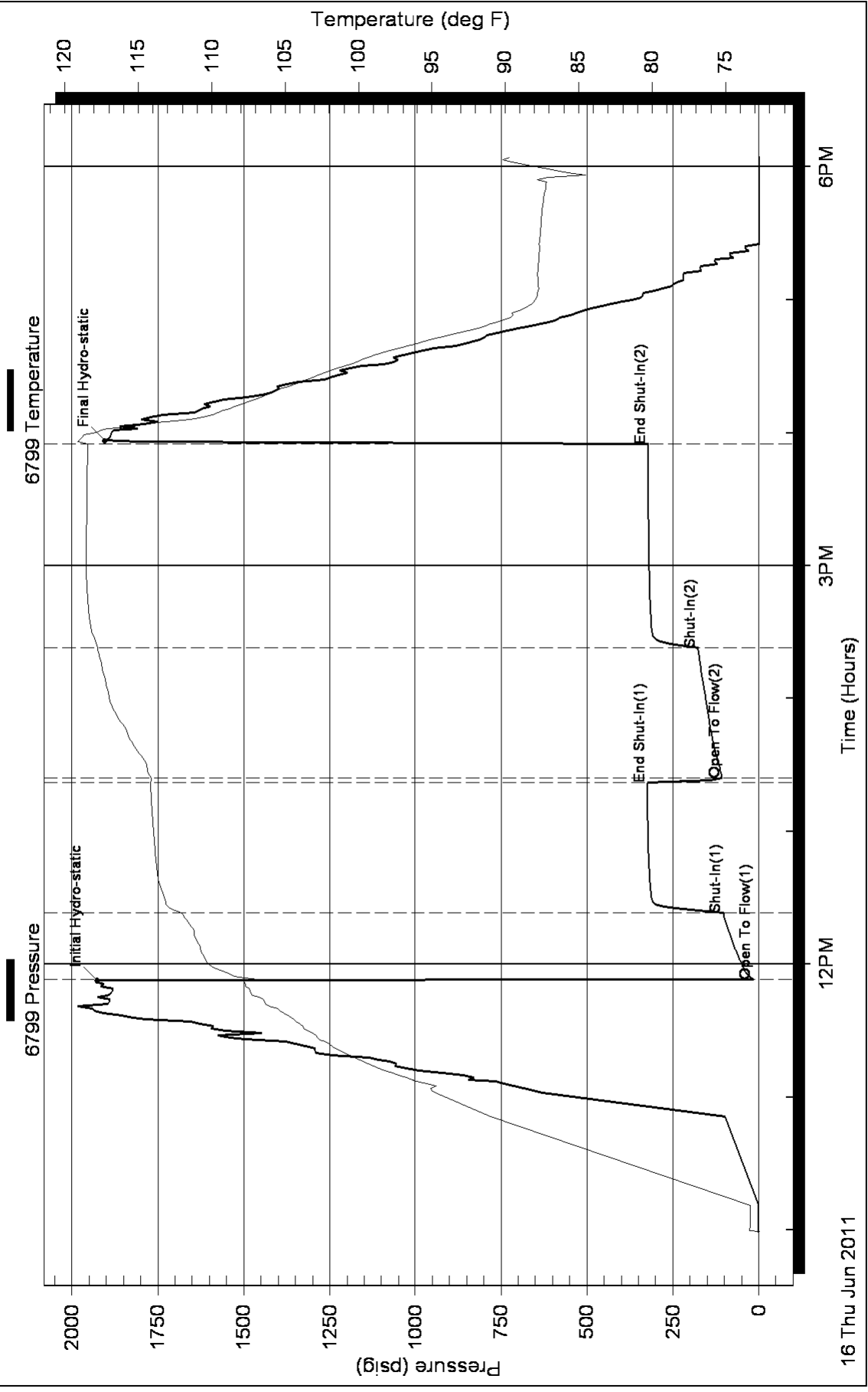
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Oil API 39 @ 83 deg = 37

Pressure vs. Time





**TRILOBITE
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DRILL STEM TEST REPORT

Murfin Drilling Company
250 N Water STE #300
Wichita, KS 67202
ATTN: Rocky Milford

Torluemke #1-18
18/2s/29w/Decatur/KS
Job Ticket: 43352 **DST#: 6**
Test Start: 2011.06.17 @ 03:32:00

GENERAL INFORMATION:

Formation: **LKC "K,L"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:48:30
Time Test Ended: 10:31:30
Test Type: Conventional Bottom Hole
Tester: Kevin Mack
Unit No: 43
Interval: **3956.00 ft (KB) To 4003.00 ft (KB) (TVD)**
Reference Elevations: 2787.00 ft (KB)
Total Depth: 4003.00 ft (KB) (TVD)
2782.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good
KB to GR/CF: 5.00 ft

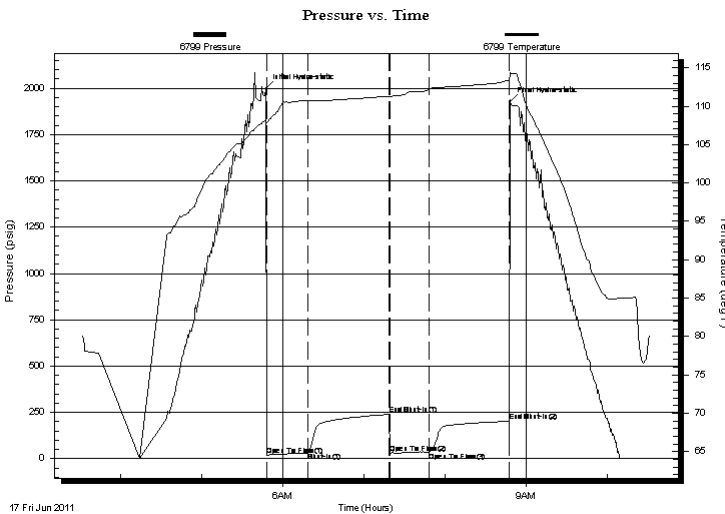
Serial #: 6799

Inside

Press @ Run Depth: 33.76 psig @ 3957.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.06.17 End Date: 2011.06.17 Last Calib.: 2011.06.17
Start Time: 03:32:05 End Time: 10:31:29 Time On Btm: 2011.06.17 @ 05:47:45
Time Off Btm: 2011.06.17 @ 08:48:15

TEST COMMENT: IF: Surface blow built to 1 1/4"
IS: No Return
FF: No Blow
FS: No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1996.92	108.15	Initial Hydro-static
1	16.81	107.86	Open To Flow (1)
31	33.76	110.72	Shut-In(1)
91	239.07	111.31	End Shut-In(1)
92	30.10	111.27	Open To Flow (2)
121	35.60	112.20	Open To Flow (3)
180	201.89	113.28	End Shut-In(2)
181	1929.76	114.40	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud 100M	0.07
5.00	OSM 100M (oil spots)	0.02

Gas Rates

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



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FLUID SUMMARY

Murfin Drilling Company

Torluemke #1-18

250 N Water STE #300
Wichita, KS 67202

18/2s/29w/Decatur/KS

Job Ticket: 43352

DST#: 6

ATTN: Rocky Milford

Test Start: 2011.06.17 @ 03:32:00

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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.00 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
15.00	Mud 100M	0.074
5.00	OSM 100M (oil spots)	0.025

Total Length: 20.00 ft Total Volume: 0.099 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

