



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.
 2050 N. Water
 Suite 300
 Wichita, KS 67202
 ATTN: Steve Miller

Pinkus Unit #1-13
S13-18-30 Lane KS
 Job Ticket: 43386 **DST#: 1**
 Test Start: 2011.07.16 @ 10:47:00

GENERAL INFORMATION:

Formation: **LKC 'H,I,J'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 12:53:00
 Time Test Ended: 19:03:00
 Interval: **4110.00 ft (KB) To 4198.00 ft (KB) (TVD)**
 Total Depth: 4198.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole
 Tester: Chuck Smith
 Unit No: 37
 Reference Elevations: 2842.00 ft (KB)
 2831.00 ft (CF)
 KB to GR/CF: 11.00 ft

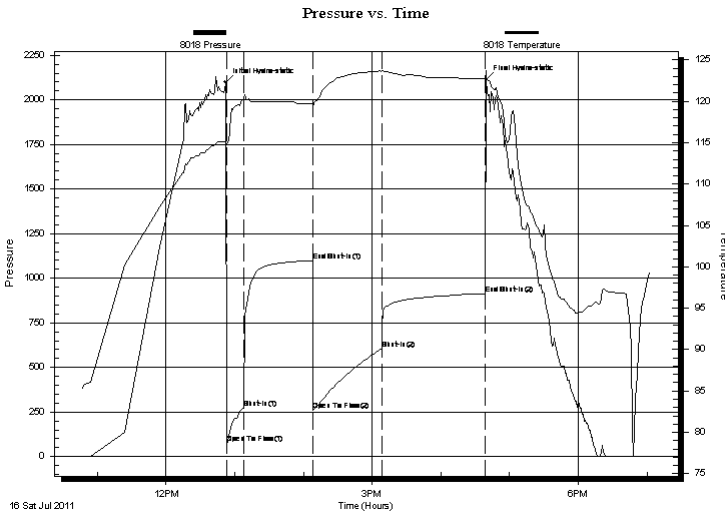
Serial #: 8018

Inside

Press @ Run Depth: 603.42 psig @ 4114.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.07.16 End Date: 2011.07.16 Last Calib.: 2011.07.16
 Start Time: 10:47:02 End Time: 19:03:00 Time On Btm: 2011.07.16 @ 12:51:40
 Time Off Btm: 2011.07.16 @ 16:39:30

TEST COMMENT: IF: B.O.B. @ 5 min.
 IS: No return.
 FF: B.O.B. @ 6 1/2 min.
 FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2097.87	115.03	Initial Hydro-static
2	75.55	114.81	Open To Flow (1)
16	271.21	120.38	Shut-In(1)
77	1098.88	119.70	End Shut-In(1)
77	259.84	119.33	Open To Flow (2)
137	603.42	123.65	Shut-In(2)
227	913.32	122.69	End Shut-In(2)
228	2113.07	122.91	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	RW: .120 @ 89 Degrees F = 47000 PPM	0.00
920.00	OSMW 5m 95w	11.02
310.00	GOCVM 5g 3o 42w 50m	4.35
110.00	OSM 4o 96m	1.54
5.00	CGO 5g 95o	0.07
0.00	10 Feet GIP	0.00

Gas Rates

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



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FLUID SUMMARY

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Pinkusu Unit #1-13

2050 N. Water
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ATTN: Steve Miller

S13-18-30 Lane KS

Job Ticket: 43386

DST#: 1

Test Start: 2011.07.16 @ 10:47:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

47000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	RW: .120 @ 89 Degrees F = 47000 PPM	0.000
920.00	OSMW 5m 95w	11.020
310.00	GOCWM 5g 3o 42w 50m	4.348
110.00	OSM 4o 96m	1.543
5.00	CGO 5g 95o	0.070
0.00	10 Feet GIP	0.000

Total Length: 1345.00 ft Total Volume: 16.981 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

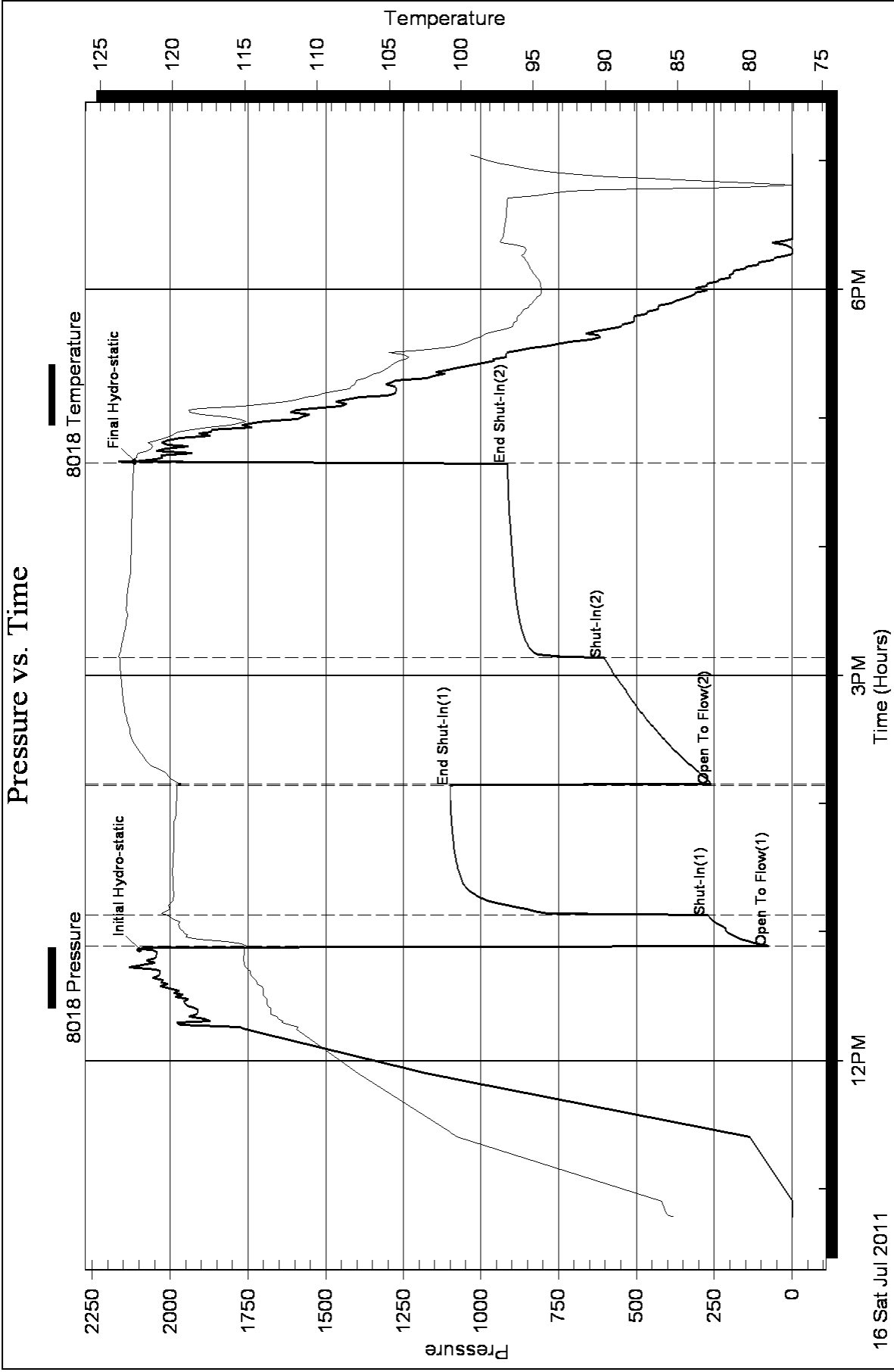
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API:39 @ 110 Degrees F = 34.

Pressure vs. Time





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2050 N. Water
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ATTN: Steve Miller

Pinkusu Unit #1-13
S13-18-30 Lane KS
Job Ticket: 43387 **DST#: 2**
Test Start: 2011.07.17 @ 02:37:00

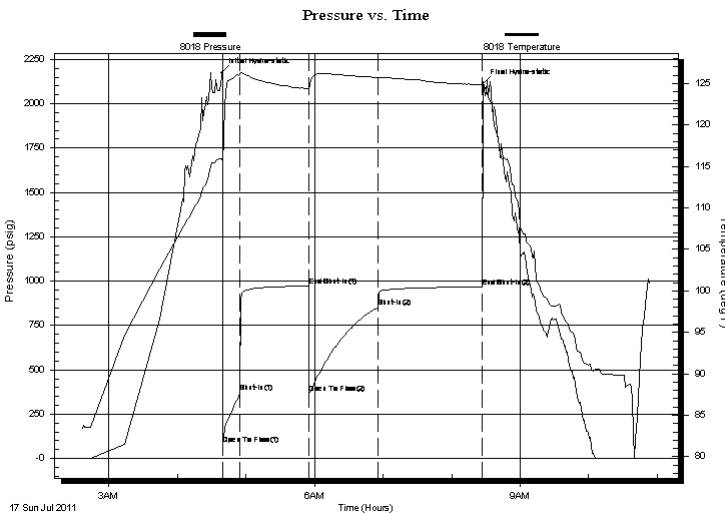
GENERAL INFORMATION:

Formation: **LKC 'K'**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole
Time Tool Opened: 04:39:40 Tester: Chuck Smith
Time Test Ended: 10:53:30 Unit No: 37
Interval: 4208.00 ft (KB) To 4234.00 ft (KB) (TVD) Reference Elevations: 2842.00 ft (KB)
Total Depth: 4234.00 ft (KB) (TVD) 2831.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 11.00 ft

Serial #: 8018 Inside
Press @ Run Depth: 854.37 psig @ 4212.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.07.17 End Date: 2011.07.17 Last Calib.: 2011.07.17
Start Time: 02:37:02 End Time: 10:53:30 Time On Btm: 2011.07.17 @ 04:38:50
Time Off Btm: 2011.07.17 @ 08:27:30

TEST COMMENT: IF: B.O.B. @ 2 1/2 min.
IS: No return.
FF: B.O.B. @ 3 1/2 min.
FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2174.96	115.89	Initial Hydro-static
1	82.62	114.94	Open To Flow (1)
17	372.53	126.09	Shut-In(1)
77	971.75	124.36	End Shut-In(1)
77	367.28	124.02	Open To Flow (2)
137	854.37	125.73	Shut-In(2)
228	967.24	124.85	End Shut-In(2)
229	2115.06	125.20	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	RW: .135 @ 80 Degrees F = 52000 PPM	0.00
90.00	MW 20m 80w	0.44
1545.00	MW 10m 90w	20.61
186.00	MW 40m 60w	2.61
29.00	OSMW 40m 60w	0.41

Gas Rates

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



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Pinkusu Unit #1-13

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ATTN: Steve Miller

S13-18-30 Lane KS

Job Ticket: 43387

DST#: 2

Test Start: 2011.07.17 @ 02:37:00

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:

52000 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
0.00	RW: .135 @ 80 Degrees F = 52000 PPM	0.000
90.00	MW 20m 80w	0.443
1545.00	MW 10m 90w	20.606
186.00	MW 40m 60w	2.609
29.00	OSMW 40m 60w	0.407

Total Length: 1850.00 ft

Total Volume: 24.065 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

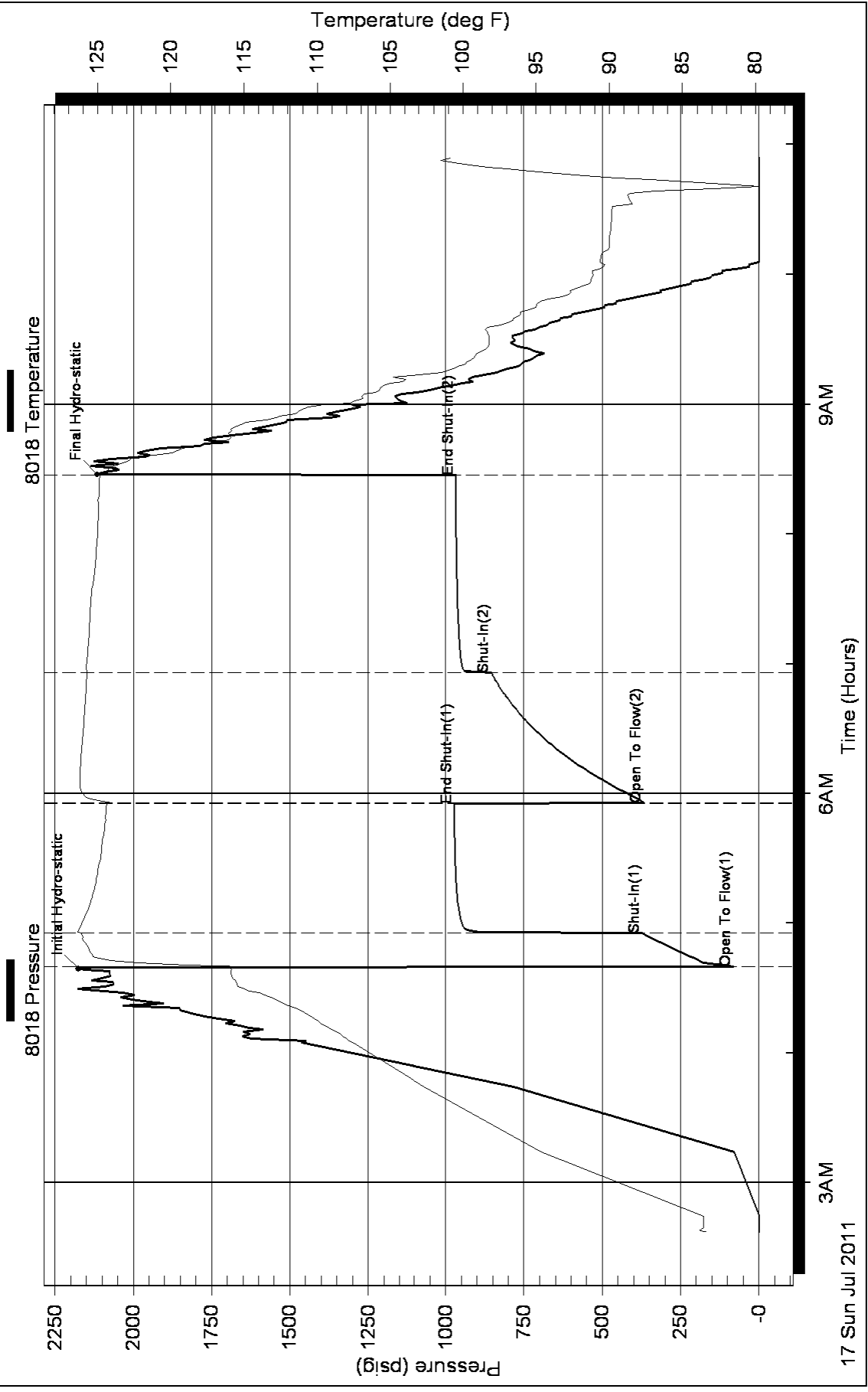
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





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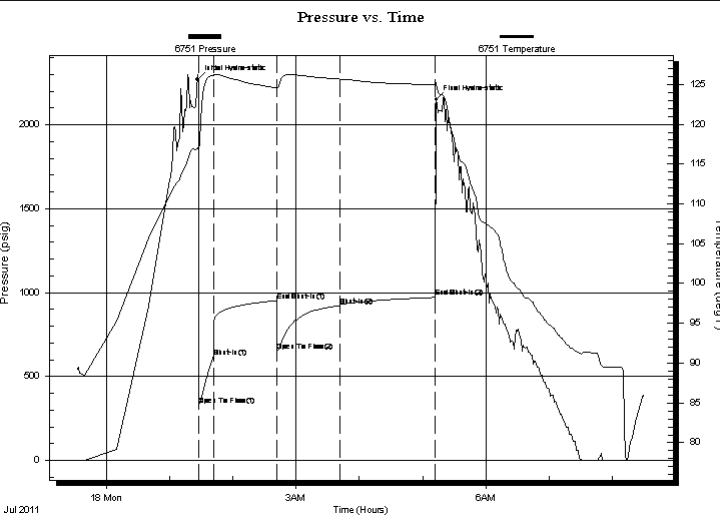
Pinkus Unit #1-13
S13-18-30 Lane KS
Job Ticket: 43388 **DST#: 3**
Test Start: 2011.07.17 @ 23:33:00

GENERAL INFORMATION:

Formation: **LKC 'L'**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole
Time Tool Opened: 01:27:40 Tester: Chuck Smith
Time Test Ended: 08:31:00 Unit No: 37
Interval: 4248.00 ft (KB) To 4308.00 ft (KB) (TVD) Reference Elevations: 2842.00 ft (KB)
Total Depth: 4308.00 ft (KB) (TVD) 2831.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 11.00 ft

Serial #: 6751 Outside
Press @ Run Depth: 922.62 psig @ 4251.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.07.17 End Date: 2011.07.18 Last Calib.: 2011.07.18
Start Time: 23:33:02 End Time: 08:31:00 Time On Btm: 2011.07.18 @ 01:26:30
Time Off Btm: 2011.07.18 @ 05:12:50

TEST COMMENT: IF: B.O.B. @ 1 min.
IS: Weak return died @ 10 min.
FF: B.O.B. @ 2 min.
FS: 1" Return died @ 35 min.



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2269.38	116.97	Initial Hydro-static
2	327.38	116.61	Open To Flow (1)
16	618.76	126.16	Shut-In(1)
76	953.14	124.59	End Shut-In(1)
76	650.23	124.47	Open To Flow (2)
136	922.62	125.66	Shut-In(2)
226	971.23	124.97	End Shut-In(2)
227	2149.98	125.14	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
609.00	OSMW 10m 90w	6.38
909.00	GOCMW 5g 15o 20m 60w	12.75
667.00	GWCOM 15g 20w 20o 45m	9.36
0.00	150 Feet GIP	0.00

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



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Pinkusu Unit #1-13

2050 N. Water
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ATTN: Steve Miller

S13-18-30 Lane KS

Job Ticket: 43388 **DST#: 3**
Test Start: 2011.07.17 @ 23:33:00

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:	52000 ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.19 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3000.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
609.00	OSMW 10m 90w	6.384
909.00	GOCMW 5g 15o 20m 60w	12.751
667.00	GWCOM 15g 20w 20o 45m	9.356
0.00	150 Feet GIP	0.000

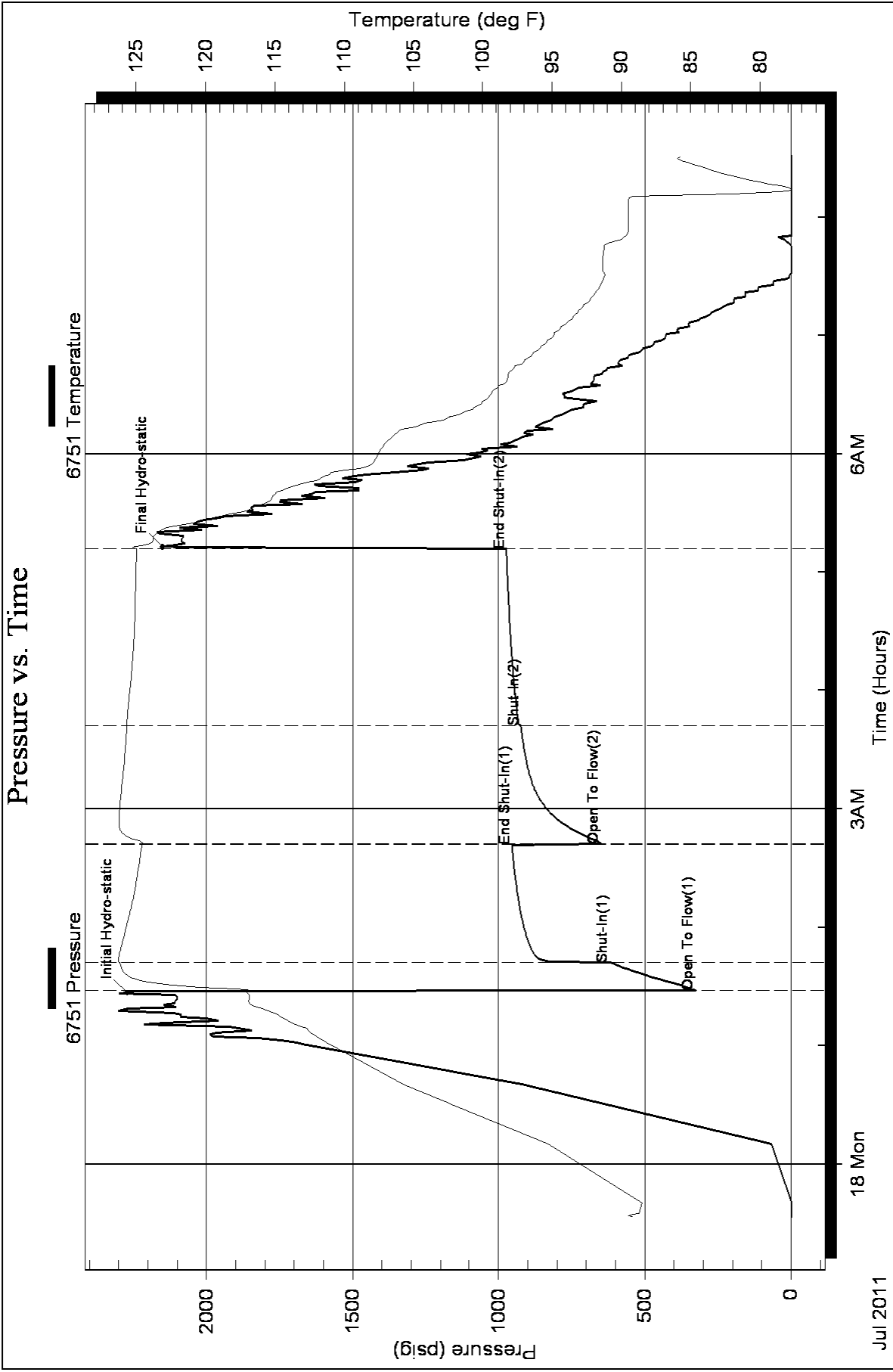
Total Length: 2185.00 ft Total Volume: 28.491 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW: .137 @ 77 Degrees F = 52000 PPM

Pressure vs. Time





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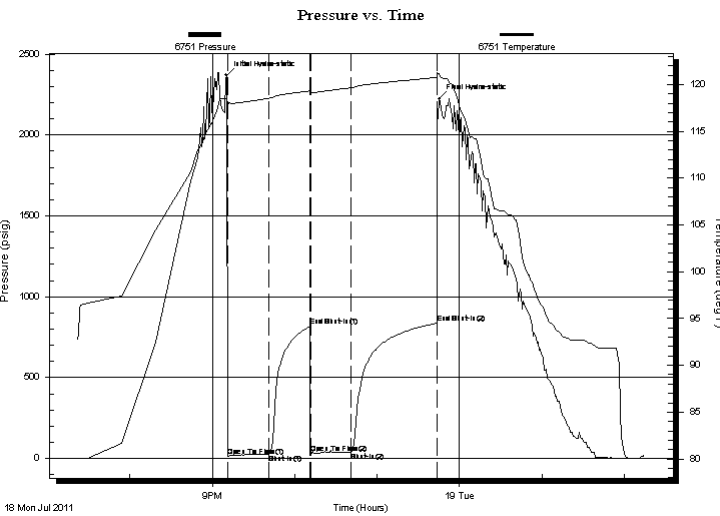
Pinkusu Unit #1-13
S13-18-30 Lane KS
Job Ticket: 43389 **DST#: 4**
Test Start: 2011.07.18 @ 19:22:00

GENERAL INFORMATION:

Formation: **Marmaton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:11:20
Time Test Ended: 02:14:39
Interval: **4316.00 ft (KB) To 4368.00 ft (KB) (TVD)**
Total Depth: 4368.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole
Tester: Chuck Smith
Unit No: 37
Reference Elevations: 2842.00 ft (KB)
2831.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 6751 Outside
Press @ Run Depth: 38.32 psig @ 4319.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.07.18 End Date: 2011.07.19 Last Calib.: 2011.07.19
Start Time: 19:22:02 End Time: 02:14:40 Time On Btm: 2011.07.18 @ 21:10:10
Time Off Btm: 2011.07.18 @ 23:45:09

TEST COMMENT: IF: 1/4" Blow receded to surface blow.
IS: No return.
FF: No blow.
FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2367.23	118.54	Initial Hydro-static
2	15.18	117.60	Open To Flow (1)
32	25.93	118.51	Shut-In(1)
61	816.40	119.31	End Shut-In(1)
62	30.52	118.92	Open To Flow (2)
91	38.32	119.64	Shut-In(2)
154	836.48	120.73	End Shut-In(2)
155	2222.72	121.13	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	OSM 100m	0.07

Gas Rates

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



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ATTN: Steve Miller

S13-18-30 Lane KS

Job Ticket: 43389

DST#: 4

Test Start: 2011.07.18 @ 19:22:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 10.00 lb/gal

Viscosity: 60.00 sec/qt

Water Loss: 7.60 in³

Resistivity: ohm.m

Salinity: 3900.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

Water Salinity: deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	OSM 100m	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

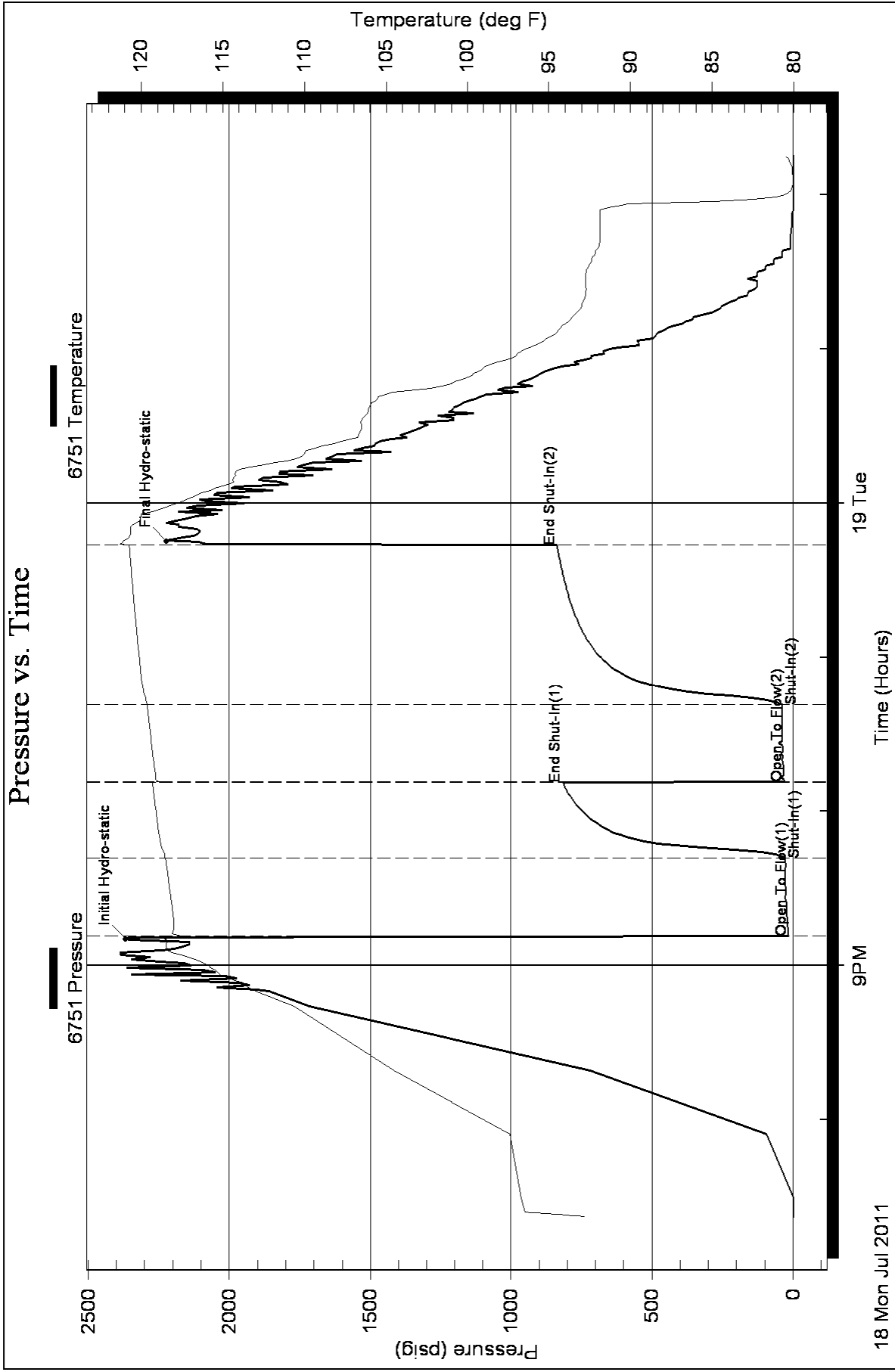
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





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S13-18-30 Lane KS

Job Ticket: 43391 **DST#: 5**
Test Start: 2011.07.19 @ 14:25:03

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: 56.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.80 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 3600.00 ppm		
Filter Cake: 2.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	GO 50g 50o	0.148
120.00	OCM 20o 80m	0.590
0.00	90 Feet GIP	0.000

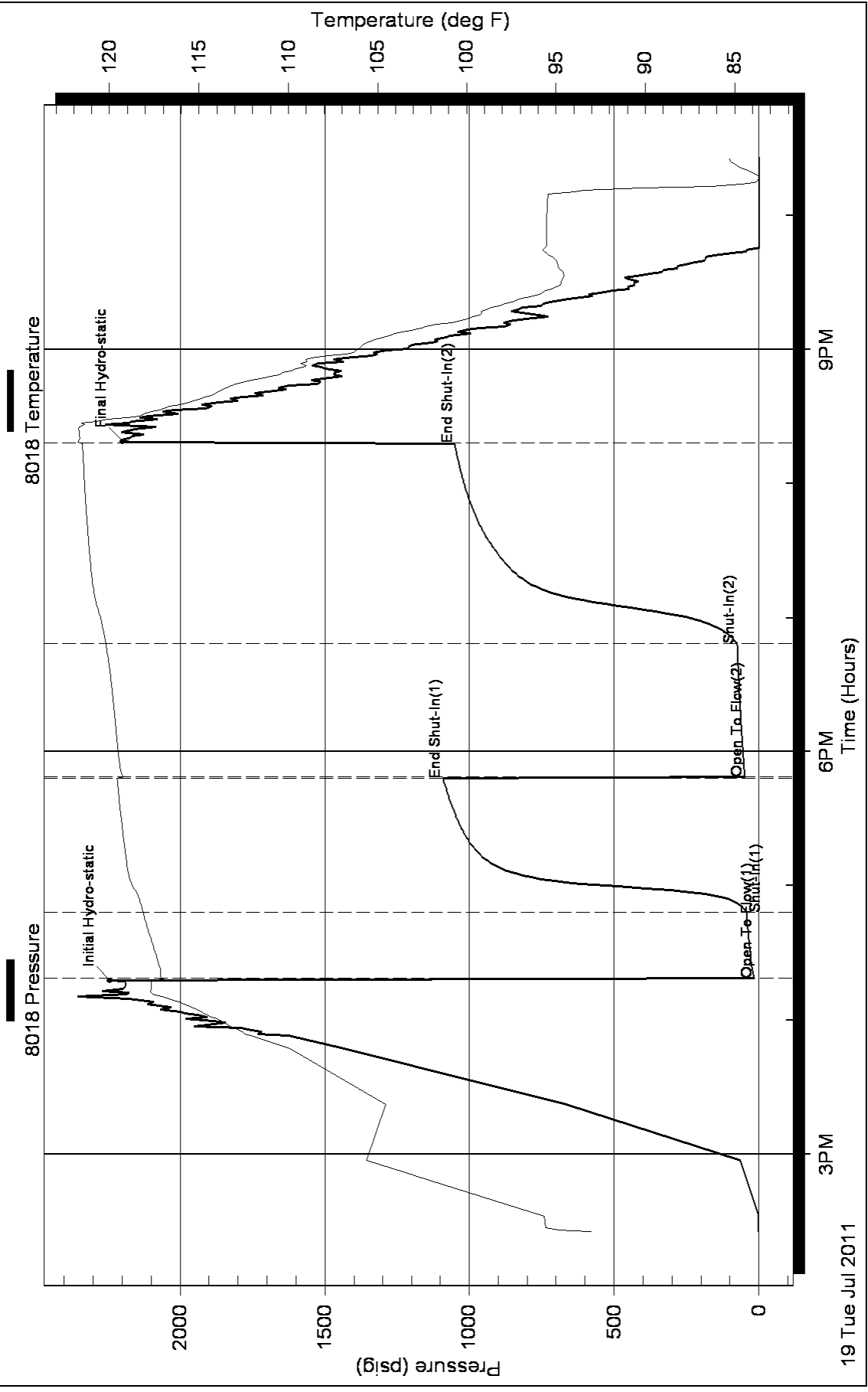
Total Length: 150.00 ft Total Volume: 0.738 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: API:40 @ 90 Dgrees F = 37

Pressure vs. Time





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2050 N. Water
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ATTN: Steve Miller

S13-18-30 Lane KS

Job Ticket: 43392

DST#: 6

Test Start: 2011.07.20 @ 12:53:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 65.00 sec/qt
Water Loss: 7.20 in³
Resistivity: ohm.m
Salinity: 3300.00 ppm
Filter Cake: 2.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: deg API
Water Salinity: 27000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	RW: .220 @ 84 Degrees F = 27000 PPM	0.000
60.00	WCM 10w 90m	0.295
40.00	OSM 100m	0.197

Total Length: 100.00 ft Total Volume: 0.492 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

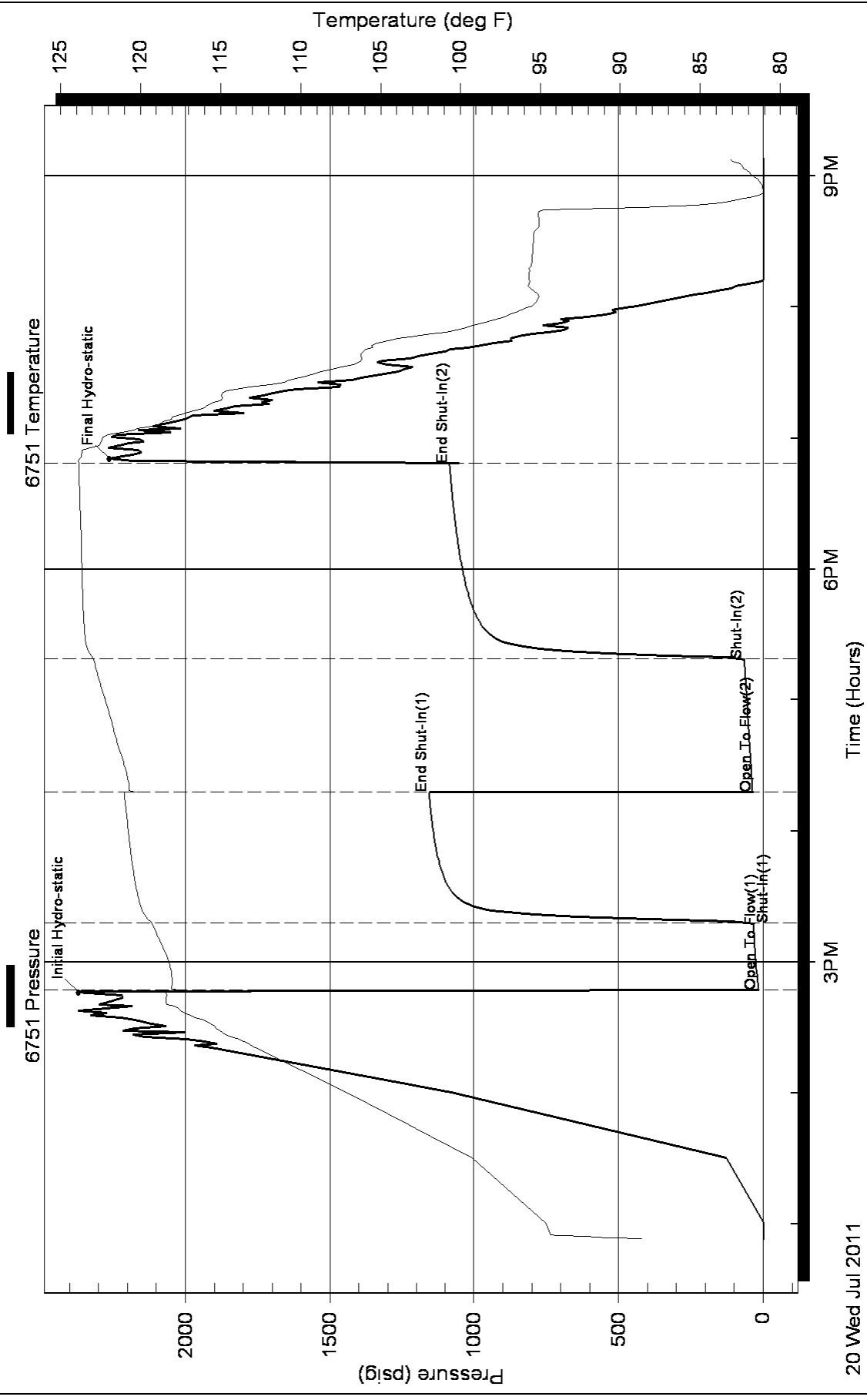
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





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Job Ticket: 43393 **DST#: 7**
Test Start: 2011.07.21 @ 12:48:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 10.00 lb/gal	Cushion Length: ft	Water Salinity:	32000 ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.97 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2700.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	RW: .188 @ 82 Degrees F = 32000 PPM	0.000
485.00	MW 10m 90w	4.918

Total Length: 485.00 ft Total Volume: 4.918 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time

