



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Woolsey Operating Com.

Cantrell #1

125MarketSTE1000
Wichita Ks 67202

Harper co

Job Ticket: 039212

DST#: 1

ATTN: Bill Klaver

Test Start: 2010.10.17 @ 13:10:52

GENERAL INFORMATION:

Formation: **mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:21:21

Time Test Ended: 23:10:21

Test Type: Conventional Bottom Hole

Tester: Justin Mayes

Unit No: 45

Interval: 4580.00 ft (KB) To 4610.00 ft (KB) (TVD)

Reference Elevations: 1291.00 ft (KB)

Total Depth: 4610.00 ft (KB) (TVD)

1280.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8367 Outside

Press @RunDepth: 48.83 psig @ 4581.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.10.17

End Date:

2010.10.17

Last Calib.: 2010.10.18

Start Time: 13:10:52

End Time:

23:10:21

Time On Btm: 2010.10.17 @ 16:15:51

Time Off Btm: 2010.10.17 @ 20:56:51

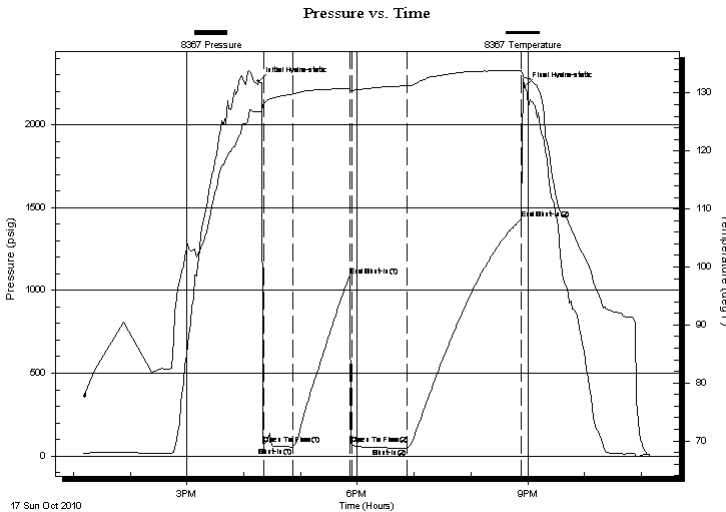
TEST COMMENT: IF:W/B-SLI Build BOB 5min.

IS:Fair Blow Back

FF:Strong Blow BOB Immediately

FS:No Blow Back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2261.34	126.78	Initial Hydro-static
6	71.77	128.16	Open To Flow (1)
36	55.46	129.87	Shut-In(1)
96	1085.41	130.72	End Shut-In(1)
98	70.57	130.43	Open To Flow (2)
157	48.83	131.25	Shut-In(2)
278	1432.47	133.90	End Shut-In(2)
281	2229.16	132.63	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
45.00	GOCM 2%g 2%o 96%m	0.63
0.00	1129ft GIP	0.00

Gas Rates

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



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FLUID SUMMARY

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Cantrell #1

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Harper co

Job Ticket: 039212

DST#: 1

ATTN: Bill Klaver

Test Start: 2010.10.17 @ 13:10:52

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:

5000 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
45.00	GOCM 2%g 2%o 96%m	0.631
0.00	1129ft GIP	0.000

Total Length: 45.00 ft Total Volume: 0.631 bbl

Num Fluid Samples: 0

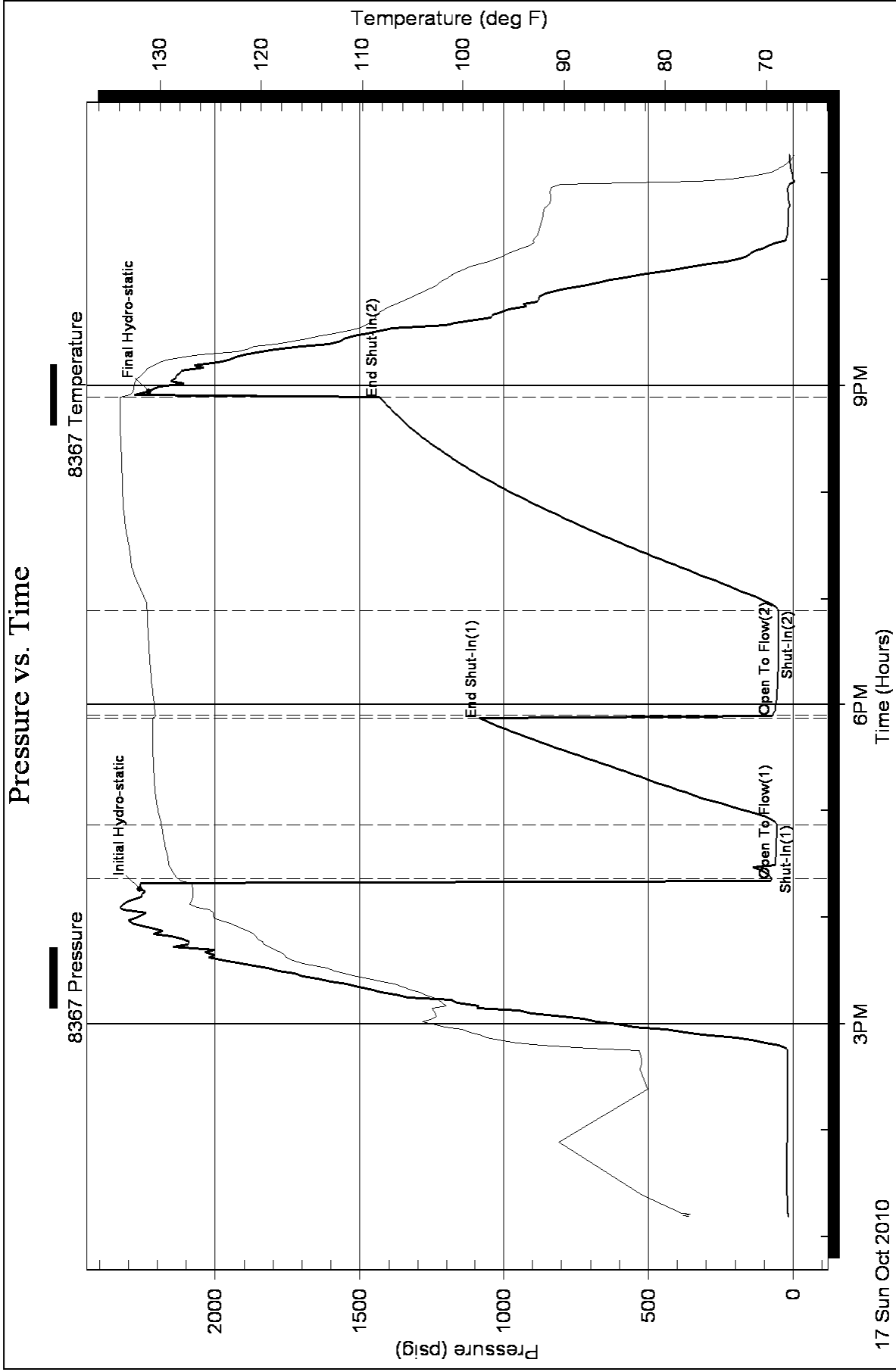
Num Gas Bombs: 0

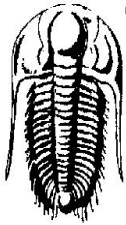
Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Woolsey Operating Com.
 125MarketSTE1000WichitaKs.67202
 ATTN: Bill Klaver

Cantrell #1
Harper co
 Job Ticket: 039213 **DST#: 2**
 Test Start: 2010.10.18 @ 09:05:00

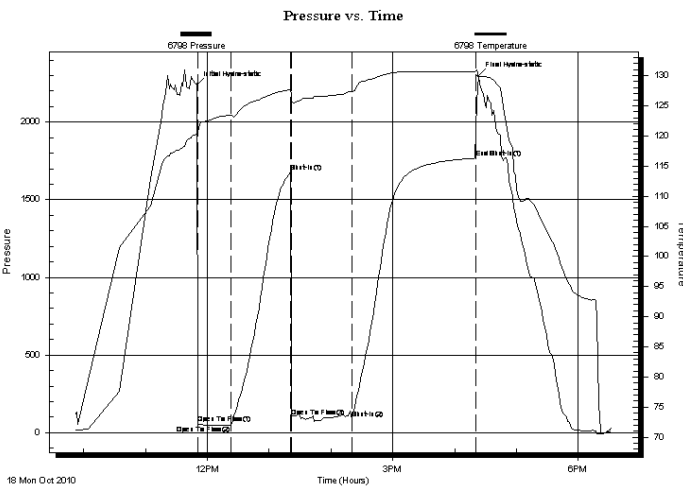
GENERAL INFORMATION:

Formation: **miss**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:00:00
 Time Test Ended: 00:00:00
 Interval: **4612.00 ft (KB) To 4644.00 ft (KB) (TVD)**
 Total Depth: 44644.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole
 Tester: Justin Mayes
 Unit No: 45
 Reference Elevations: 1291.00 ft (KB)
 1280.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 6798 Inside
 Press@RunDepth: 1768.05 psig @ 4613.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2010.10.18 End Date: 2010.10.18 Last Calib.: 1899.12.30
 Start Time: 09:52:29 End Time: 18:31:59 Time On Btm: 2010.10.18 @ 11:49:59
 Time Off Btm: 2010.10.18 @ 16:22:59

TEST COMMENT: IF: BOB in 15 MIN
 ISL: no blow back
 FF BOB immediateley
 FSI no blow back



PRESSURE SUMMARY

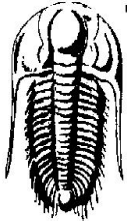
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2240.80	120.24	Initial Hydro-static
1	58.34	120.77	Open To Flow (1)
33	48.39	123.37	Open To Flow (2)
91	1677.20	127.63	Shut-In(1)
92	105.24	125.60	Open To Flow (3)
150	90.67	127.32	Shut-In(2)
271	1768.05	130.68	End Shut-In(1)
273	2298.27	129.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	1000 FT. GIP.	0.00
95.00	gocm 2%G 2 o 96%mud	1.33

Gas Rates

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



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FLUID SUMMARY

Woolsey Operating Com.

Cantrell #1

125MarketSTE1000WichitaKs.67202

Harper co

Job Ticket: 039213

DST#: 2

ATTN: Bill Klaver

Test Start: 2010.10.18 @ 09:05:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.97 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: 0.20 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	1000 FT. GIP.	0.000
95.00	gocm 2%G 2 o 96%mud	1.333

Total Length: 95.00 ft Total Volume: 1.333 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

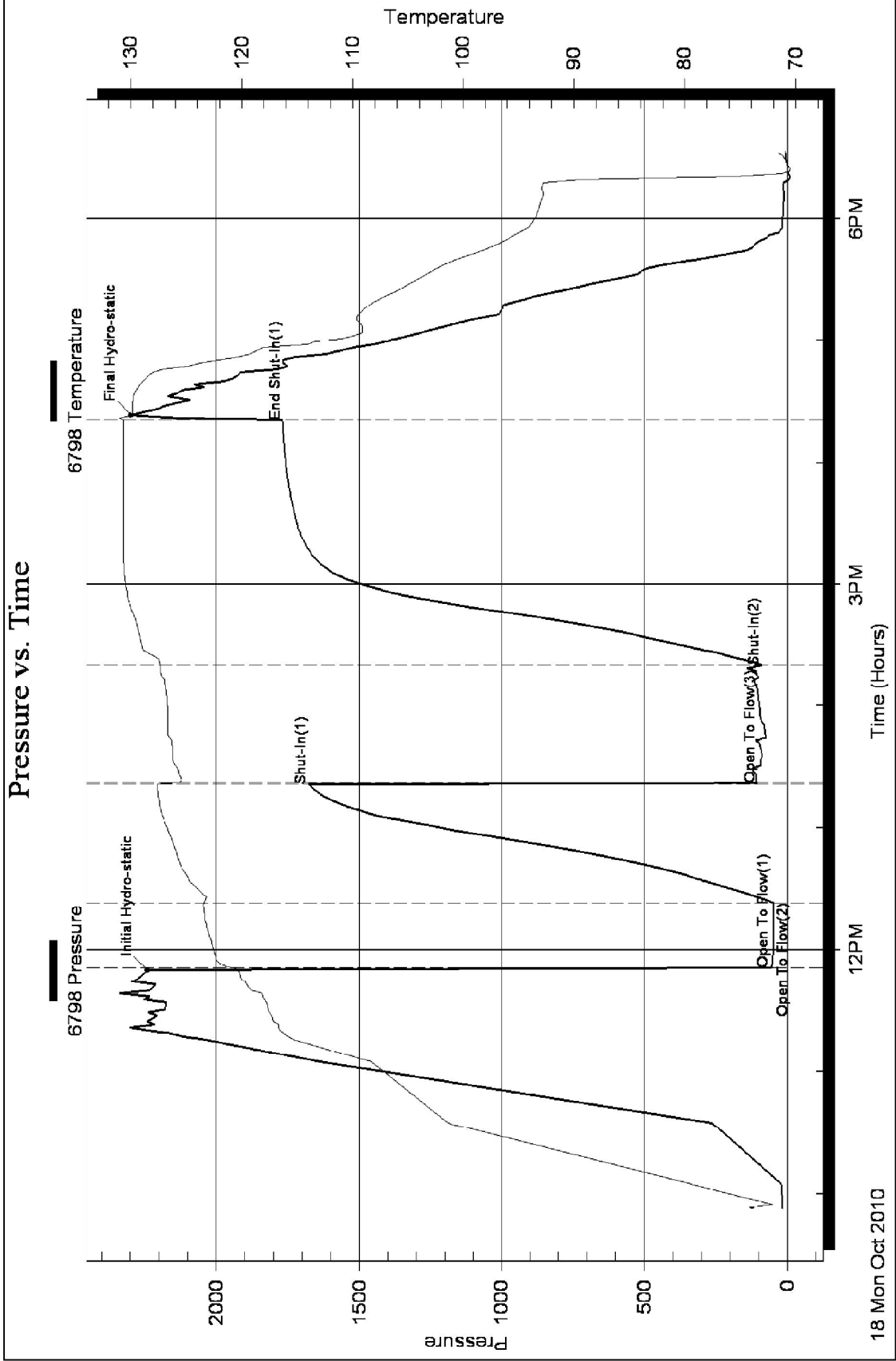
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





**TRILOBITE
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DRILL STEM TEST REPORT

Woolsey Operating Co

CANTRELL #1

125 N. Market
Suite 1000
Wichita, Ks 67202-1729
ATTN: Bill Klaver

23-34s-9w-HARPER-KS

Job Ticket: 39465 **DST#: 3**

Test Start: 2010.10.19 @ 02:00:00

GENERAL INFORMATION:

Formation: **MISSISSIPPIAN**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:41:40

Time Test Ended: 10:02:09

Test Type: Conventional Bottom Hole

Tester: Jake Fahrenbruch

Unit No: 43

Interval: 4646.00 ft (KB) To 4670.00 ft (KB) (TVD)

Reference Elevations: 1290.00 ft (KB)

Total Depth: 4670.00 ft (KB) (TVD)

1279.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8648

Inside

Press @ Run Depth: 30.98 psig @ 4647.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.10.19

End Date:

2010.10.19

Last Calib.: 2010.10.19

Start Time: 02:00:05

End Time:

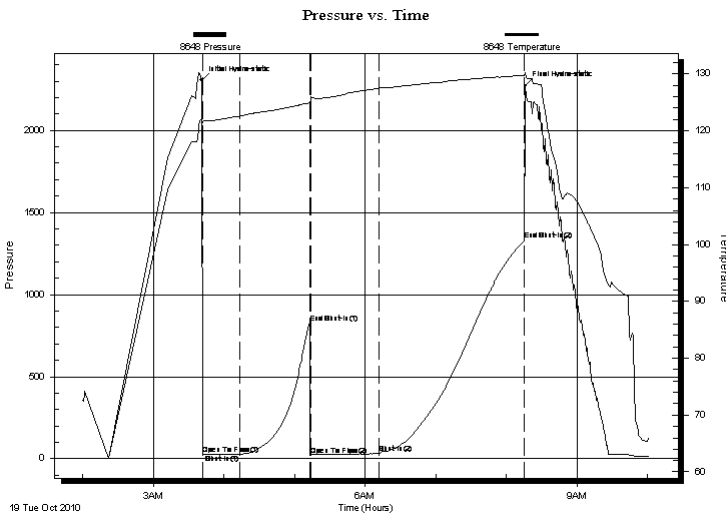
10:02:09

Time On Btm: 2010.10.19 @ 03:41:00

Time Off Btm: 2010.10.19 @ 08:16:00

TEST COMMENT: IF: Weak blow, sporadically built to 6" in bucket.
IS: Bled off, no blow back.
FF: Fair blow, steadily built to BOB in 28 minutes.
FS: Bled off, no blow back.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2304.38	121.73	Initial Hydro-static
1	25.60	121.38	Open To Flow (1)
33	25.87	122.60	Shut-In(1)
92	826.73	124.92	End Shut-In(1)
93	22.56	125.75	Open To Flow (2)
151	30.98	127.49	Shut-In(2)
275	1330.69	129.81	End Shut-In(2)
275	2272.56	130.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	SOCM 7%o 93%m	0.70
0.00	460' Gas In Pipe	0.00
0.00	Clean oil in tools	0.00

Gas Rates

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



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FLUID SUMMARY

Woolsey Operating Co

CANTRELL #1

125 N. Market
Suite 1000
Wichita, Ks 67202-1729
ATTN: Bill Klaver

23-34s-9w-HARPER-KS

Job Ticket: 39465 **DST#: 3**

Test Start: 2010.10.19 @ 02:00:00

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: bbl		
Water Loss: 8.74 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: 0.20 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	SOCM 7%o 93%m	0.701
0.00	460' Gas In Pipe	0.000
0.00	Clean oil in tools	0.000

Total Length: 50.00 ft Total Volume: 0.701 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

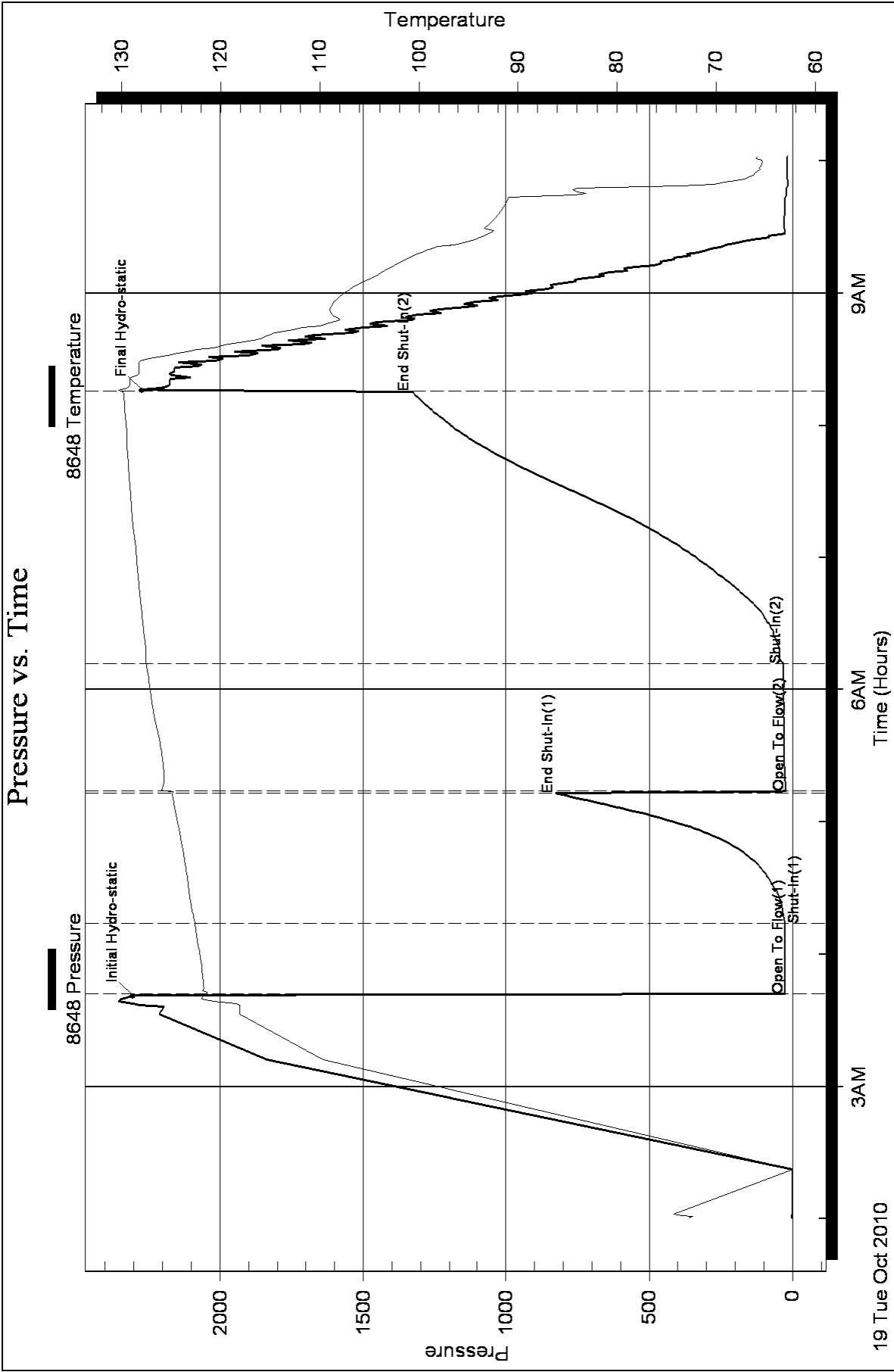
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





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Woolsey Operating Co

CANTRELL #1

125 N. Market
Suite 1000
Wichita, Ks 67202-1729
ATTN: Bill Klaver

23-34s-9w-HARPER-KS

Job Ticket: 39214 **DST#: 4**

Test Start: 2010.10.21 @ 22:06:00

GENERAL INFORMATION:

Formation: **SIMPSON**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:02:30

Time Test Ended: 06:21:00

Test Type: Conventional Bottom Hole

Tester: Jake Fahrenbruch

Unit No: 45

Interval: 5036.00 ft (KB) To 5060.00 ft (KB) (TVD)

Reference Elevations: 1290.00 ft (KB)

Total Depth: 5060.00 ft (KB) (TVD)

1279.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 6798 Inside

Press @ Run Depth: 36.23 psig @ 5037.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.10.21

End Date:

2010.10.22

Last Calib.:

2010.10.22

Start Time: 22:06:01

End Time:

06:21:00

Time On Btm:

2010.10.22 @ 00:00:30

Time Off Btm:

2010.10.22 @ 04:32:30

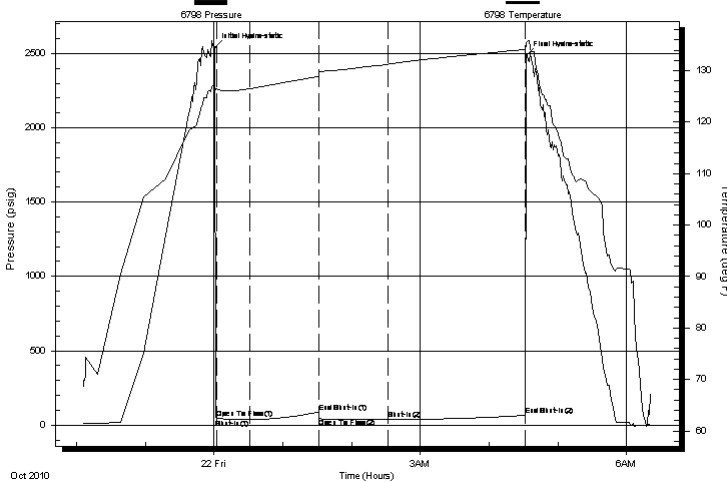
TEST COMMENT: IF: Weak blow, built to .25" in 5 minutes, dead blow after 13 minutes.

IS: No blow.

FF: No blow.

FS: No blow.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2537.69	127.03	Initial Hydro-static
2	45.89	126.43	Open To Flow (1)
31	37.31	126.51	Shut-In(1)
91	88.63	128.90	End Shut-In(1)
91	46.33	129.46	Open To Flow (2)
151	36.23	131.26	Shut-In(2)
271	65.58	134.14	End Shut-In(2)
272	2481.92	135.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
7.00	Drilling Mud 100% mud	0.10

Gas Rates

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



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ATTN: Bill Klaver

23-34s-9w-HARPER-KS

Job Ticket: 39214 **DST#: 4**

Test Start: 2010.10.21 @ 22:06:00

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: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 12.79 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 10000.00 ppm			
Filter Cake: 0.20 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
7.00	Drilling Mud 100% mud	0.098

Total Length: 7.00 ft Total Volume: 0.098 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time

