



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Woolsey Operating Company LLC

Zimmerman #1

125 N Market Ste 1000
Wichita KS 67202

5 34s 8w Harper

ATTN: Bill Klaver

Job Ticket: 37441

DST#: 1

Test Start: 2010.09.29 @ 00:22:09

GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:38:24

Time Test Ended: 10:15:39

Test Type: Conventional Bottom Hole

Tester: Esak Hadley

Unit No: 28

Interval: 4400.00 ft (KB) To 4430.00 ft (KB) (TVD)

Reference Elevations: 1321.00 ft (KB)

Total Depth: 4430.00 ft (KB) (TVD)

1310.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 6753

Inside

Press @ Run Depth: 41.95 psig @ 4401.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.09.29

End Date:

2010.09.29

Last Calib.:

2010.09.29

Start Time: 00:22:14

End Time:

10:15:39

Time On Btm:

2010.09.29 @ 03:36:39

Time Off Btm:

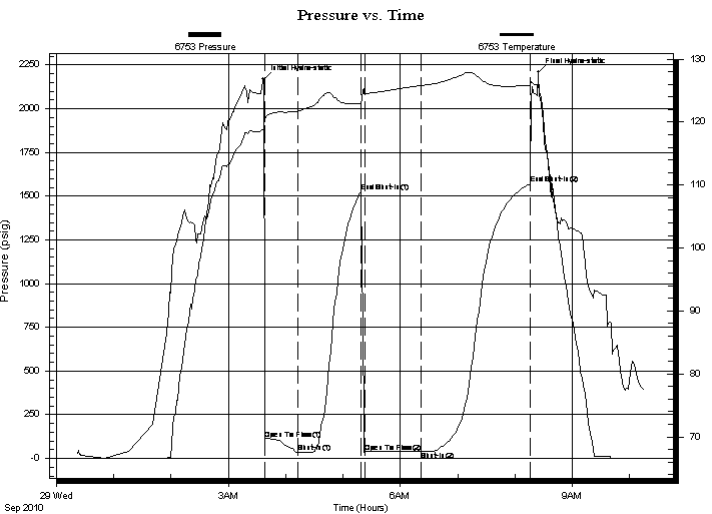
2010.09.29 @ 08:24:24

TEST COMMENT: IF Weak blow . No more than 1".

ISI No blow .

FF No blow .

FSI No blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2167.29	118.93	Initial Hydro-static
2	110.65	120.46	Open To Flow (1)
37	34.95	121.75	Shut-In(1)
102	1525.26	122.92	End Shut-In(1)
106	34.91	124.45	Open To Flow (2)
165	41.95	125.82	Shut-In(2)
280	1572.56	125.83	End Shut-In(2)
288	2207.48	126.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	MW 50%w 50%w Rw .21 @70degF=35000.42n	

Gas Rates

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



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Zimmerman #1

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ATTN: Bill Klaver

Job Ticket: 37444

DST#: 4

Test Start: 2010.10.02 @ 08:41:01

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:33:46

Time Test Ended: 21:32:16

Test Type: Conventional Bottom Hole

Tester: Esak Hadley

Unit No: 28

Interval: 4652.00 ft (KB) To 4730.00 ft (KB) (TVD)

Reference Elevations: 1321.00 ft (KB)

Total Depth: 4730.00 ft (KB) (TVD)

1310.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8676 Outside

Press @ Run Depth: 1816.51 psig @ 4653.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.10.02 End Date: 2010.10.02

Last Calib.: 2010.10.02

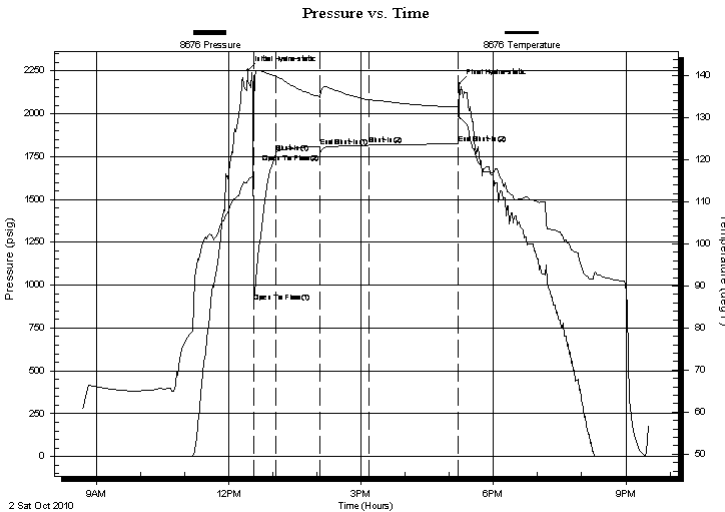
Start Time: 08:41:06 End Time: 21:32:16

Time On Btm: 2010.10.02 @ 12:26:01

Time Off Btm: 2010.10.02 @ 17:13:16

TEST COMMENT: IF Strong blow . BOB in 45 sec.
ISI No blow .
FF Strong blow . BOB in 40 sec. Blow decreased back to 2".
FSI No blow .

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2252.78	115.04	Initial Hydro-static
8	900.98	132.92	Open To Flow (1)
38	1772.97	139.88	Shut-In(1)
98	1809.07	135.05	End Shut-In(1)
98	1766.51	134.88	Open To Flow (2)
165	1816.51	134.31	Shut-In(2)
286	1824.24	132.55	End Shut-In(2)
288	2174.89	130.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
155.00	WM 20%w 80%m	2.17
186.00	WM 35%w 65%m	2.61
186.00	MW 40%m 60%w	2.61
93.00	MW 25%m 75%w	1.30
2976.00	100%w 6.0@64deg=900ppm	41.75

Gas Rates

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



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FLUID SUMMARY

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Job Ticket: 37444

DST#: 4

ATTN: Bill Klaver

Test Start: 2010.10.02 @ 08:41:01

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:

900 ppm

Viscosity: 44.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 25.92 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 18000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
155.00	WM 20%w 80%m	2.174
186.00	WM 35%w 65%m	2.609
186.00	MW 40%m 60%w	2.609
93.00	MW 25%m 75%w	1.305
2976.00	100%w 6.0@64deg=900ppm	41.745

Total Length: 3596.00 ft

Total Volume: 50.442 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

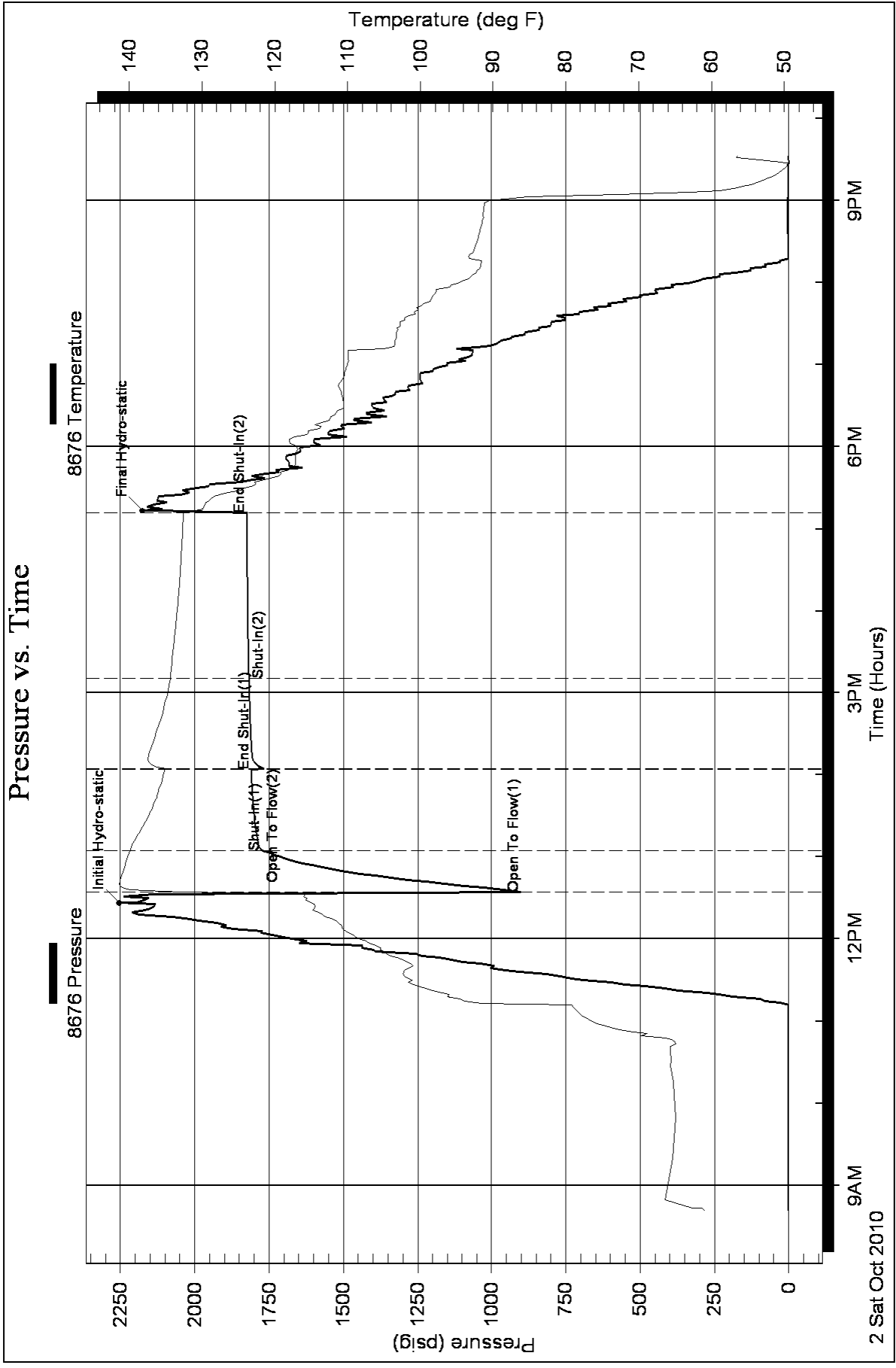
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





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DRILL STEM TEST REPORT

Woolsey Operating Company LLC

Zimmerman #1

125 N Market Ste 1000
Wichita KS 67202

5 34s 8w Harper

ATTN: Bill Klaver

Job Ticket: 37443

DST#: 3

Test Start: 2010.10.01 @ 11:22:06

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:55:06

Time Test Ended: 20:19:21

Test Type: Conventional Bottom Hole

Tester: Esak Hadley

Unit No: 28

Interval: 4610.00 ft (KB) To 4650.00 ft (KB) (TVD)

Reference Elevations: 1321.00 ft (KB)

Total Depth: 4650.00 ft (KB) (TVD)

1310.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 6753 Inside

Press @ Run Depth: 268.06 psig @ 4611.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.10.01 End Date: 2010.10.01

Last Calib.: 2010.10.01

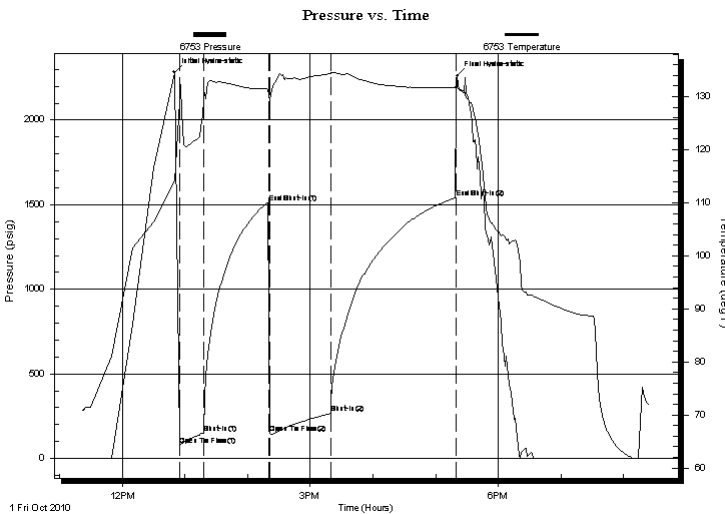
Start Time: 11:22:11 End Time: 20:25:06

Time On Btm: 2010.10.01 @ 12:50:06

Time Off Btm: 2010.10.01 @ 17:20:51

TEST COMMENT: IF Strong blow . BOB in 40 sec. GTS in 30 min.
ISI Weak blow . No more than 1".
FF Strong blow . BOB in 2 sec. (see gas flow report)
FSI Weak blow . No more than 1".

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2281.93	114.13	Initial Hydro-static
5	75.26	129.09	Open To Flow (1)
28	148.33	129.90	Shut-In(1)
90	1514.09	131.41	End Shut-In(1)
91	151.18	129.34	Open To Flow (2)
150	268.06	134.35	Shut-In(2)
269	1541.90	131.79	End Shut-In(2)
271	2261.55	131.82	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
93.00	salt water--didn't check chlorides	1.30
372.00	M&WCOG 5%m 5%w 30%o 60%g	5.22
62.00	M&WCOG 5%m 5%w 30%g 60%o	0.87

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	5.00	7.26
Last Gas Rate	0.13	25.00	14.75
Max. Gas Rate	0.13	25.00	14.75



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Job Ticket: 37443

DST#: 3

ATTN: Bill Klaver

Test Start: 2010.10.01 @ 11:22:06

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: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.54 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
93.00	salt water--didn't check chlorides	1.305
372.00	M&WCOG 5%m 5%w 30%o 60%g	5.218
62.00	M&WCGO 5%m 5%w 30%g 60%o	0.870

Total Length: 527.00 ft Total Volume: 7.393 bbl

Num Fluid Samples: 1

Num Gas Bombs: 2

Serial #: eh-2

Laboratory Name: Caraway

Laboratory Location: Liberal, KS

Recovery Comments: The stand of salt water was plugged & when I unplugged it, I was unduly drenched. And therefore, I could not catch a sample of the water and check the chlorides--as can be



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GAS RATES

Woolsey Operating Company LLC

Zimmerman #1

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Job Ticket: 37443

DST#: 3

ATTN: Bill Klaver

Test Start: 2010.10.01 @ 11:22:06

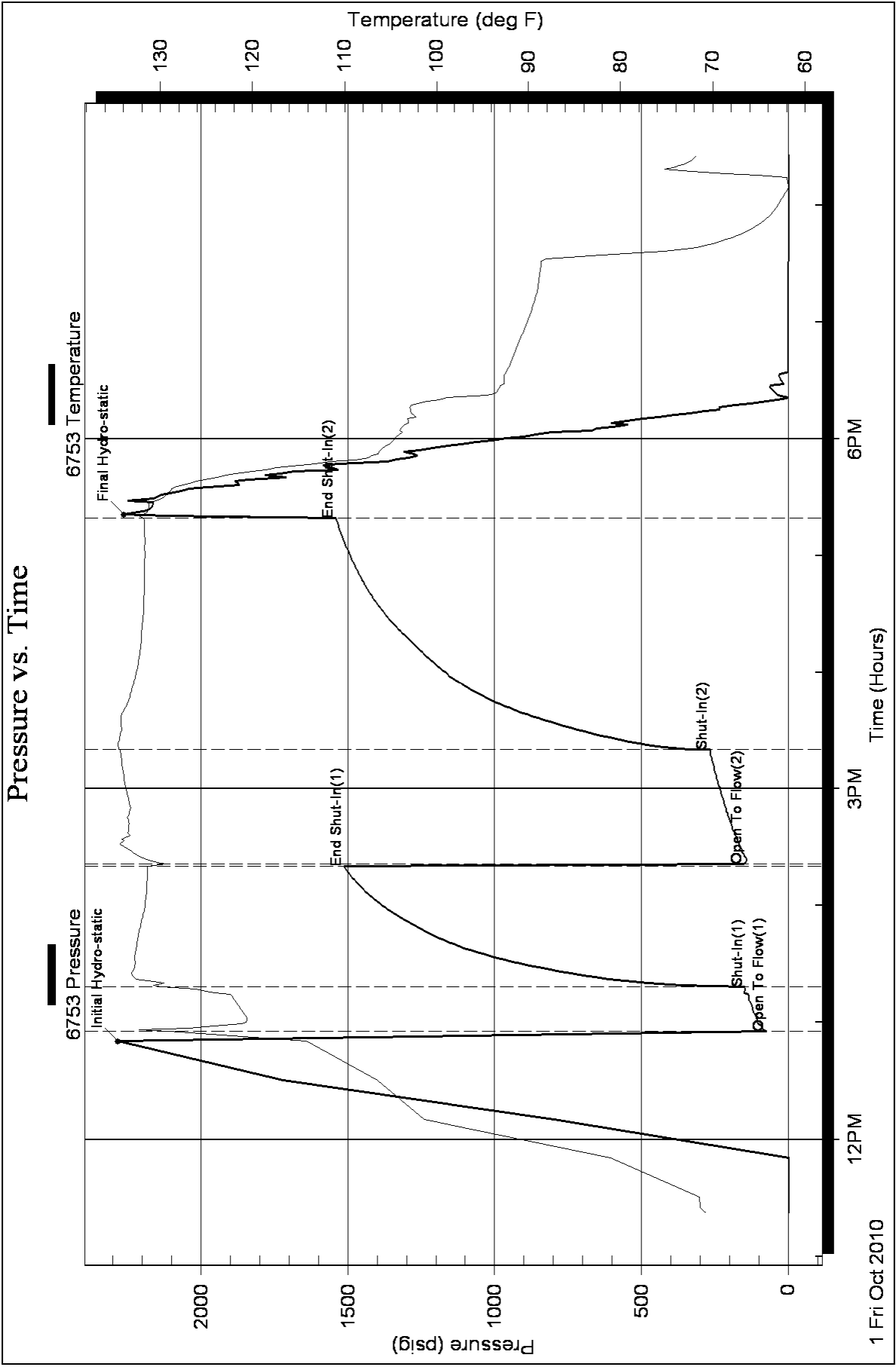
Gas Rates Information

Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
2	5	0.13	5.00	7.26
2	5	0.13	5.00	7.26
2	5	0.13	5.00	7.26
2	10	0.13	8.00	8.38
2	15	0.13	9.00	8.76
2	20	0.13	14.00	10.63
2	30	0.13	20.00	12.88
2	40	0.13	25.00	14.75

Pressure vs. Time





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DRILL STEM TEST REPORT

Woolsey Operating Company LLC

Zimmerman #1

125 N Market Ste 1000
Wichita KS 67202

5 34s 8w Harper

ATTN: Bill Klaver

Job Ticket: 37442

DST#: 2

Test Start: 2010.09.30 @ 13:57:14

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:49:29

Time Test Ended: 23:17:44

Test Type: Conventional Bottom Hole

Tester: Esak Hadley

Unit No: 28

Interval: 4568.00 ft (KB) To 4608.00 ft (KB) (TVD)

Reference Elevations: 1321.00 ft (KB)

Total Depth: 4608.00 ft (KB) (TVD)

1310.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8676 Inside

Press @ Run Depth: 46.76 psig @ 4569.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.09.30

End Date: 2010.09.30

Last Calib.: 2010.09.30

Start Time: 13:51:05

End Time: 23:11:30

Time On Btm: 2010.09.30 @ 16:38:45

Time Off Btm: 2010.09.30 @ 21:17:45

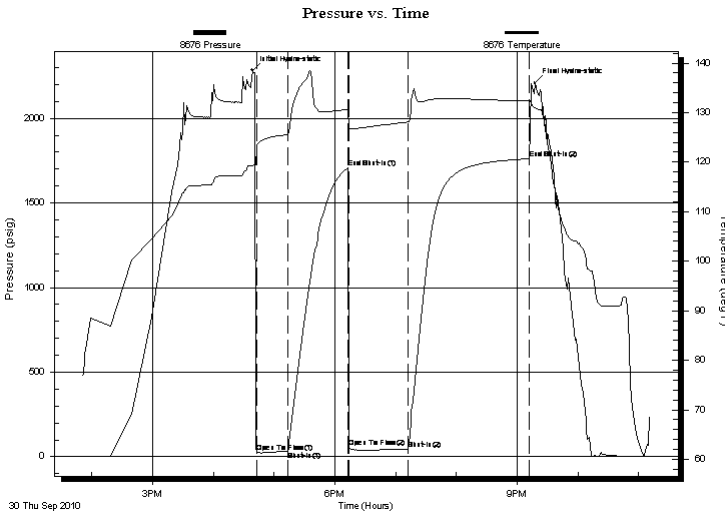
TEST COMMENT: IF Fair blow . BOB in 4 minutes.

ISI No blow .

FF Strong blow . BOB in 2 seconds. GTS in 8 minutes. (gas TSTM)

FSI No blow .

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2283.56	119.32	Initial Hydro-static
5	26.96	123.43	Open To Flow (1)
35	32.23	125.51	Shut-In(1)
94	1707.44	130.57	End Shut-In(1)
95	58.47	126.72	Open To Flow (2)
154	46.76	128.10	Shut-In(2)
274	1761.57	132.31	End Shut-In(2)
279	2210.06	130.95	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	W&OCMG 5%w 20%o 30%m 45%g	1.26

Gas Rates

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



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Zimmerman #1

125 N Market Ste 1000
Wichita KS 67202

5 34s 8w Harper

Job Ticket: 37442

DST#: 2

ATTN: Bill Klaver

Test Start: 2010.09.30 @ 13:57:14

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: 49.00 sec/qt

Cushion Volume: bbl

Water Loss: 10.78 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure: psig

Salinity: 8000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	W&OCMG 5%w 20%o 30%m 45%g	1.262

Total Length: 90.00 ft Total Volume: 1.262 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

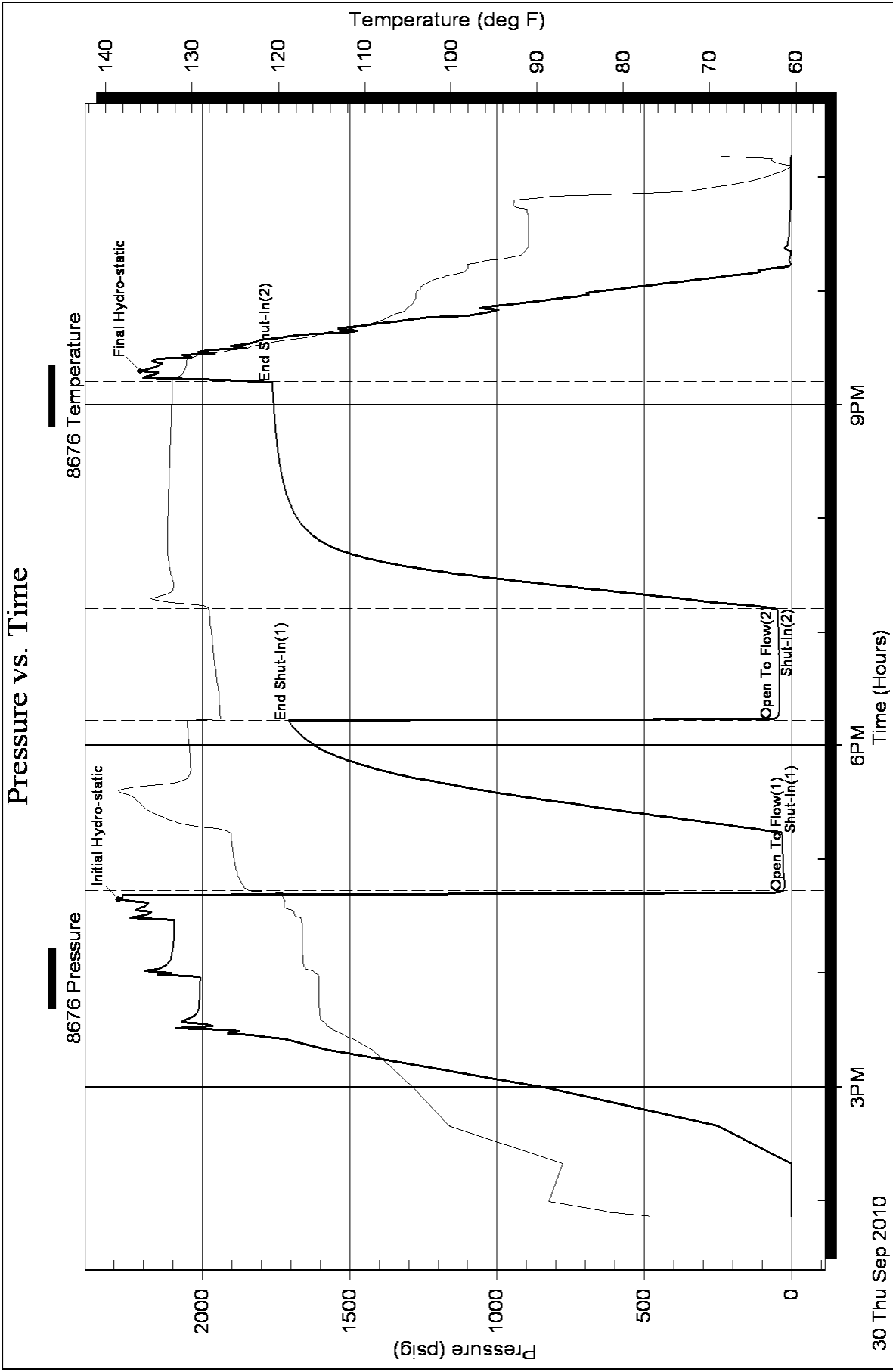
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





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Zimmerman #1

125 N Market Ste 1000
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Job Ticket: 37441

DST#: 1

ATTN: Bill Klaver

Test Start: 2010.09.29 @ 00:22:09

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:

35000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.56 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	MW 50% m 50% w Rw .21 @ 70 deg F = 35000 ppm	0.421

Total Length: 30.00 ft Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

