



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Woolsey Operating Co  
125 N Market Ste1000  
Wichita, KS 67202  
ATTN: Curtis Covey

**Deil F #1**  
**24-34S-11W**  
Job Ticket: 041396      **DST#: 1**  
Test Start: 2011.03.24 @ 12:29:15

## GENERAL INFORMATION:

Formation: **Stalnaker**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 15:11:30  
Time Test Ended: 20:46:45  
Interval: **3955.00 ft (KB) To 3968.00 ft (KB) (TVD)**  
Total Depth: 3968.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole  
Tester: Leal Cason  
Unit No: 45  
Reference Elevations: 1362.00 ft (KB)  
1353.00 ft (CF)  
KB to GR/CF: 9.00 ft

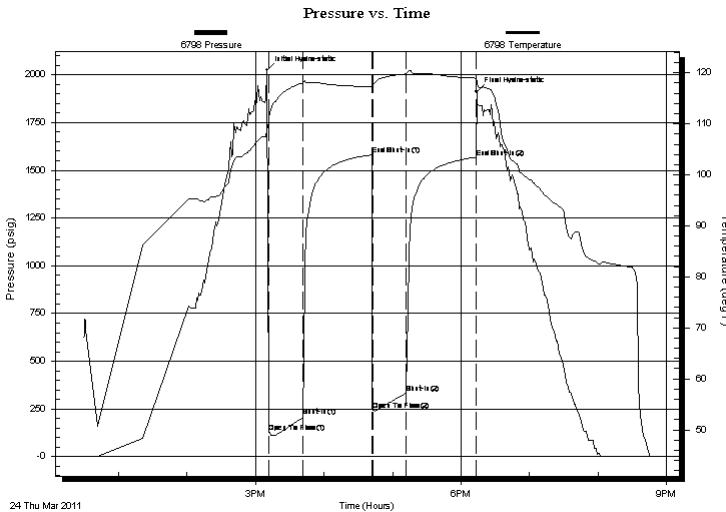
## Serial #: 6798

Inside

Press @ Run Depth: 335.52 psig @ 3956.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2011.03.24 End Date: 2011.03.24 Last Calib.: 2011.03.24  
Start Time: 12:29:16 End Time: 20:46:45 Time On Btm: 2011.03.24 @ 15:10:15  
Time Off Btm: 2011.03.24 @ 18:14:00

**TEST COMMENT:** IF: Strong Blow , BOB in 30 seconds  
IS: Bled Off, 2 inch Blow back  
FF: Fair Blow , BOB in 8 minutes  
FS: Bled Off, Surface Blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2023.36	108.58	Initial Hydro-static
2	128.30	111.06	Open To Flow (1)
32	213.52	118.06	Shut-In(1)
92	1579.14	117.26	End Shut-In(1)
93	244.56	117.15	Open To Flow (2)
122	335.52	119.80	Shut-In(2)
183	1568.65	118.95	End Shut-In(2)
184	1912.32	118.57	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	1550 Feet GIP	0.00
486.00	Salt Water	4.65
92.00	GWCM 5%G 25%W 70%M	1.29

## Gas Rates

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



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## FLUID SUMMARY

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**Deil F #1**

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**24-34S-11W**

Job Ticket: 041396

**DST#: 1**

ATTN: Curtis Covey

Test Start: 2011.03.24 @ 12:29:15

### 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:

80000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 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	1550 Feet GIP	0.000
486.00	Salt Water	4.649
92.00	GWCM 5%G 25%W 70%M	1.291

Total Length: 578.00 ft

Total Volume: 5.940 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

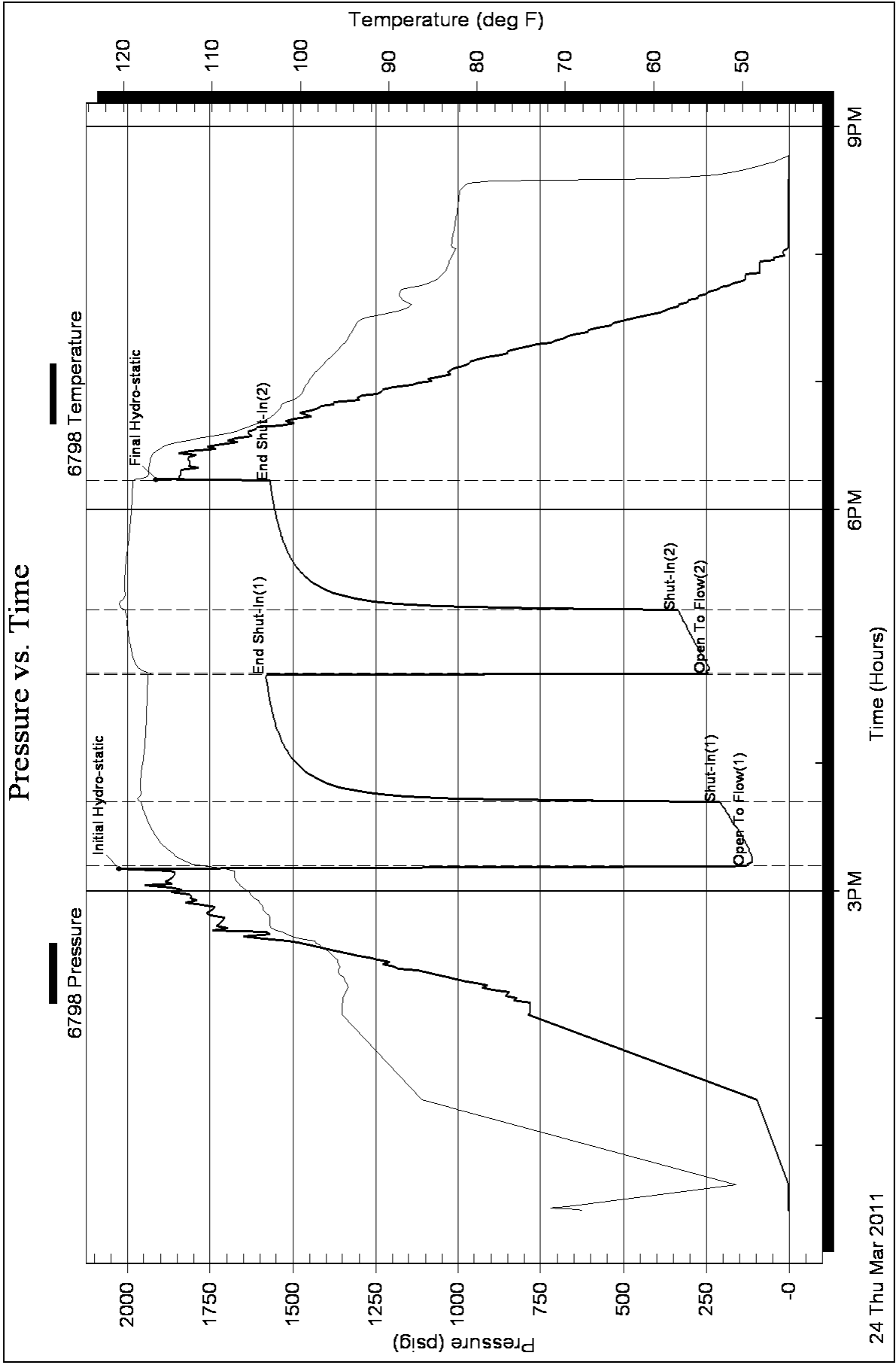
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time





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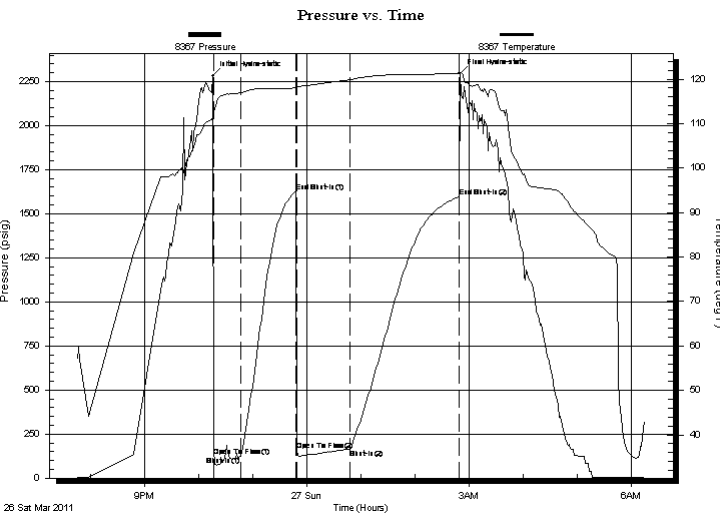
**Deil F #1**  
**24-34S-11W**  
Job Ticket: 041397      **DST#: 2**  
Test Start: 2011.03.26 @ 19:46:05

## GENERAL INFORMATION:

Formation: **Mississippi**  
Deviated: No    Whipstock:                      ft (KB)  
Time Tool Opened: 22:16:35  
Time Test Ended: 06:15:20  
**Interval: 4566.00 ft (KB) To 4704.00 ft (KB) (TVD)**  
Total Depth: 4704.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches    Hole Condition: Good  
Test Type: Conventional Bottom Hole  
Tester: Leal Cason  
Unit No: 45  
Reference Elevations: 1362.00 ft (KB)  
1353.00 ft (CF)  
KB to GR/CF: 9.00 ft

**Serial #: 8367      Outside**  
Press @ Run Depth: 164.25 psig @ 4567.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2011.03.26      End Date: 2011.03.27      Last Calib.: 2011.03.27  
Start Time: 19:46:06      End Time: 06:15:20      Time On Btm: 2011.03.26 @ 22:16:05  
Time Off Btm: 2011.03.27 @ 02:50:05

**TEST COMMENT:** IF: Strong Blow , BOB in 2 1/2 minutes  
IS: Bled Off, No Blow back  
FF: Strong Blow , BOB Immediate, GTS in 12 minutes (TSTM) Caught Gas Sample  
FS: Bled Off, No Blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2281.31	111.37	Initial Hydro-static
1	124.97	111.63	Open To Flow (1)
31	125.10	116.95	Shut-In(1)
92	1626.53	118.03	End Shut-In(1)
93	156.85	118.37	Open To Flow (2)
152	164.25	119.87	Shut-In(2)
273	1596.31	121.30	End Shut-In(2)
274	2296.49	121.53	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	4202 Feet GIP	0.00
238.00	GSY Mud 5%G 95%M	1.17
112.00	GSY SOCM 5%G 1%O 94%M	1.57

## Gas Rates

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



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## FLUID SUMMARY

Woolsey Operating Co

**Deil F #1**

125 N Market Ste1000  
Wichita, KS 67202

**24-34S-11W**

Job Ticket: 041397

**DST#: 2**

ATTN: Curtis Covey

Test Start: 2011.03.26 @ 19:46:05

### 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:

bbbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 0.20 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	4202 Feet GIP	0.000
238.00	GSY Mud 5%G 95%M	1.170
112.00	GSY SOCM 5%G 1%O 94%M	1.571

Total Length: 350.00 ft

Total Volume: 2.741 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

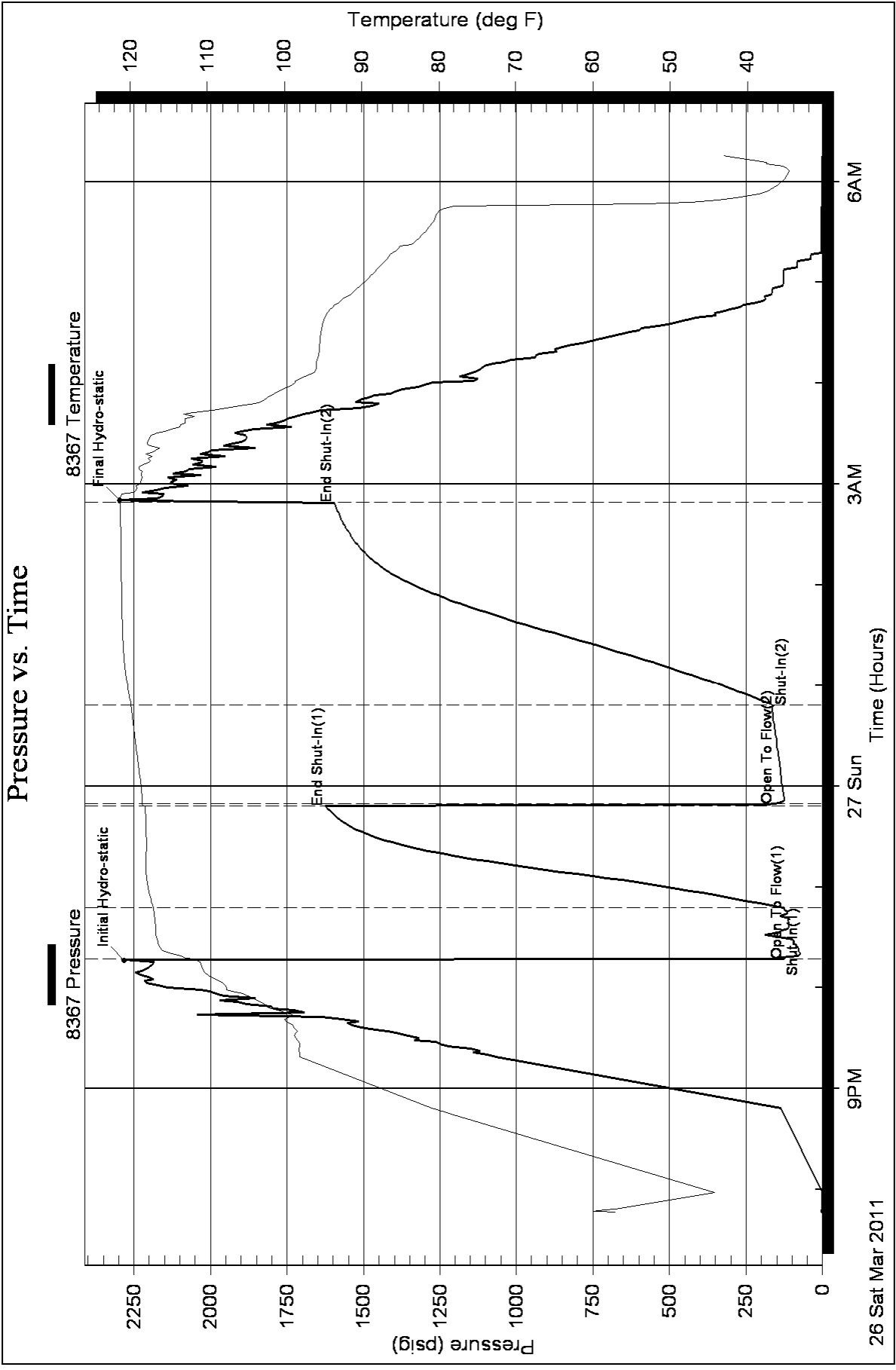
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time





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**Deil F #1**  
**24-34S-11W**  
Job Ticket: 041398 **DST#: 3**  
Test Start: 2011.03.27 @ 16:29:57

## GENERAL INFORMATION:

Formation: **Mississippi**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 19:00:57  
Time Test Ended: 02:30:57  
Interval: **4703.00 ft (KB) To 4731.00 ft (KB) (TVD)**  
Total Depth: 4731.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole  
Tester: Leal Cason  
Unit No: 45  
Reference Elevations: 1362.00 ft (KB)  
1353.00 ft (CF)  
KB to GR/CF: 9.00 ft

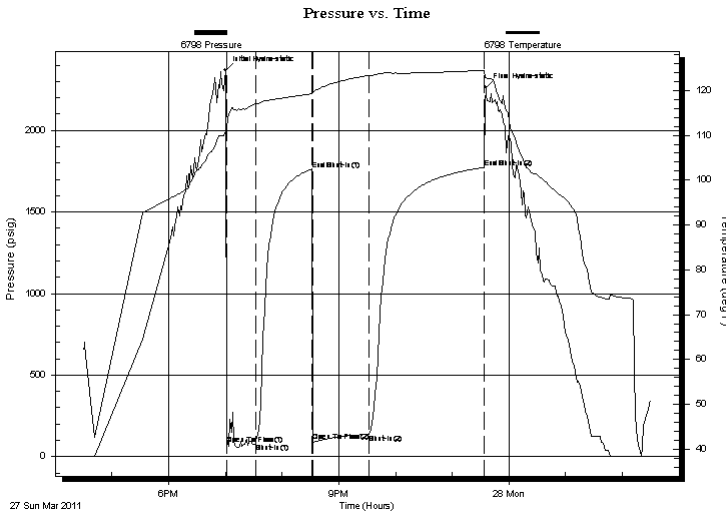
## Serial #: 6798

Inside

Press @ Run Depth: 137.81 psig @ 4704.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2011.03.27 End Date: 2011.03.28 Last Calib.: 2011.03.28  
Start Time: 16:29:58 End Time: 02:30:57 Time On Btm: 2011.03.27 @ 18:59:57  
Time Off Btm: 2011.03.27 @ 23:35:27

**TEST COMMENT:** IF: Fair Blow , Built to 4 1/2 inches  
IS: Bled Off, No Blow back  
FF: Weak Blow , 2 inches  
FS: Bled Off, No Blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2367.82	110.77	Initial Hydro-static
1	74.74	111.30	Open To Flow (1)
32	79.83	117.06	Shut-In(1)
92	1761.17	119.27	End Shut-In(1)
93	94.96	119.51	Open To Flow (2)
152	137.81	123.39	Shut-In(2)
274	1772.64	124.48	End Shut-In(2)
276	2262.71	122.91	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
118.00	Salt Water	0.58
120.00	MCW 30%M 70%W	0.59
20.00	GSY WCM 5%G 39%W 56%M	0.28

## Gas Rates

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



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**24-34S-11W**

Job Ticket: 041398

**DST#: 3**

ATTN: Curtis Covey

Test Start: 2011.03.27 @ 16:29:57

### 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: 125000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: 0.20 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
118.00	Salt Water	0.580
120.00	MCW 30%M 70%W	0.590
20.00	GSY WCM 5%G 39%W 56%M	0.281

Total Length: 258.00 ft

Total Volume: 1.451 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



# Pressure vs. Time

