



DRILL STEM TEST REPORT

Carrie Exploration & Development

John Roth #C-2

210 West 2nd Street
Hays, Kansas 67601

34-19s-11w

Job Ticket: 17212

DST#: 1

ATTN: Herb Deines

Test Start: 2011.09.13 @ 08:15:00

GENERAL INFORMATION:

Formation: **Kansas City "A & B"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:49:30

Time Test Ended: 14:10:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 3335-29

Interval: 3046.00 ft (KB) To 3085.00 ft (KB) (TVD)

Reference Elevations: 1780.00 ft (KB)

Total Depth: 3085.00 ft (KB) (TVD)

1772.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6806

Inside

Press@RunDepth: 53.88 psia @ 3081.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.09.13

End Date:

2011.09.13

Last Calib.: 2011.09.13

Start Time: 08:15:00

End Time:

14:10:30

Time On Btrn: 2011.09.13 @ 09:48:30

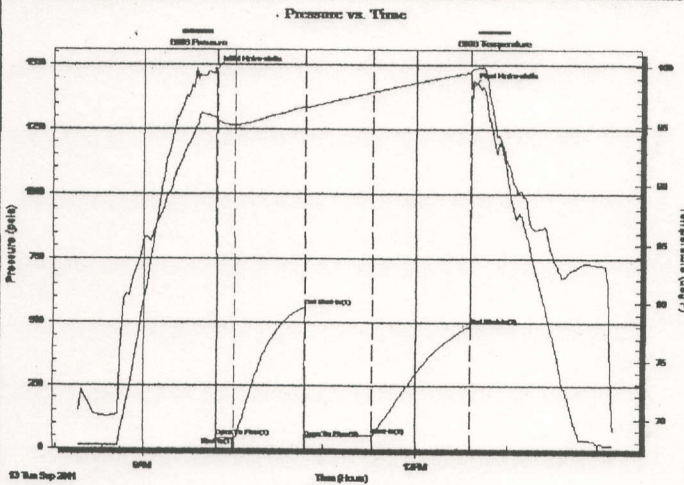
Time Off Btrn: 2011.09.13 @ 12:37:00

TEST COMMENT: 1st Opening 15 Minutes-Fair blow build to the bottom of a 5 gallon bucket in 10 minutes

1st Shut-In 45 Minutes-No blow back

2nd Opening 45 Minutes-Good blow built to the bottom of a 5 gallon bucket in 1 minute and decreased to a fair blow

2ns Shut-In 60 Minutes-No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1481.03	95.65	Initial Hydro-static
1	47.56	95.37	Open To Flow (1)
13	43.49	95.03	Shut-In(1)
59	561.55	96.64	End Shut-In(1)
60	43.87	96.54	Open To Flow (2)
104	53.88	97.86	Shut-In(2)
168	487.87	99.50	End Shut-In(2)
169	1416.00	99.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	400 feet of gas in the pipe	0.00
40.00	slightly oil cut mud	0.56
0.00	11%Gas 1% Oil 78% Mud 10% Water	0.00
0.00	Chlorides 10000	0.00

Gas Rates

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

Serial #: 6806

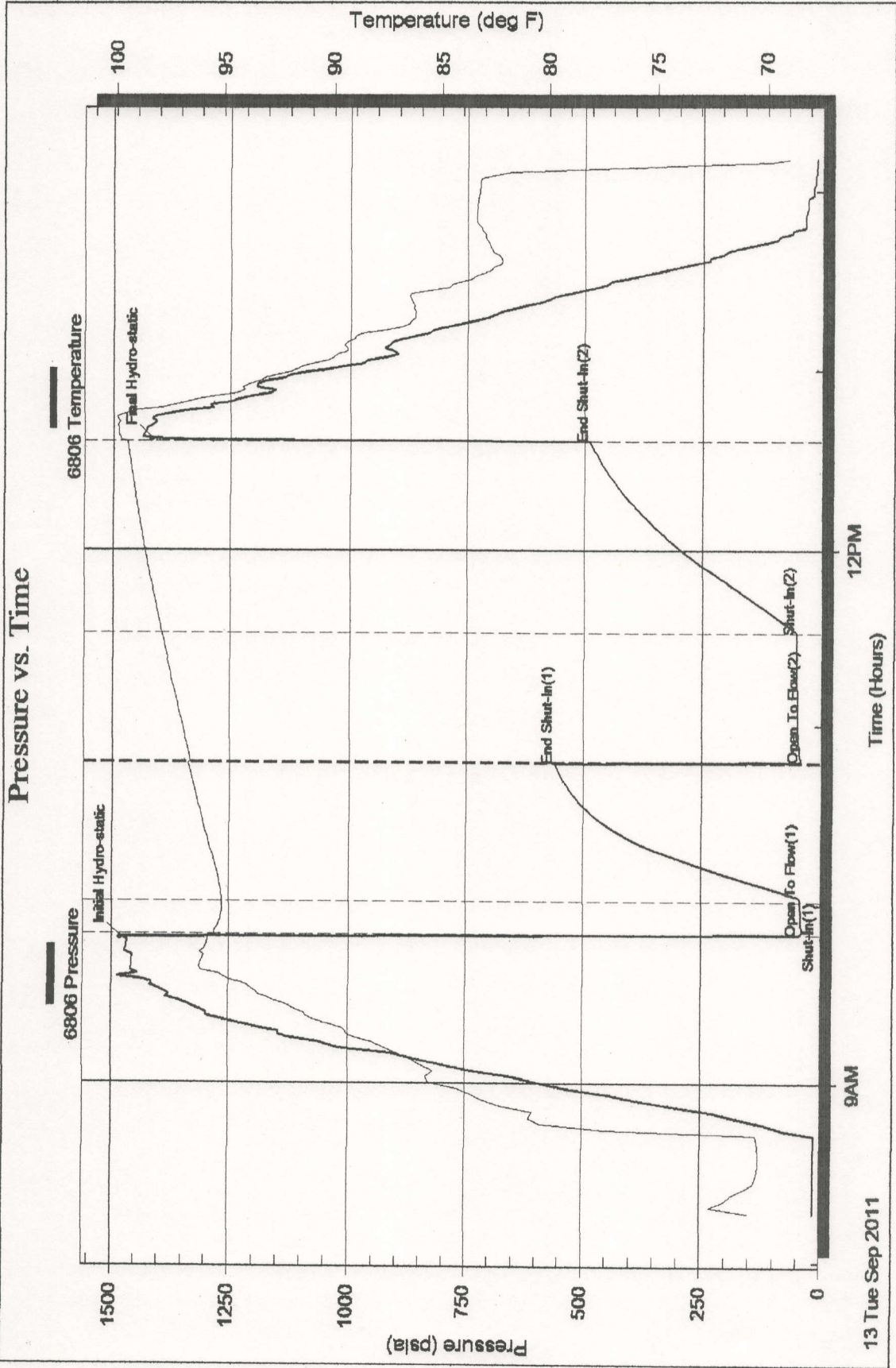
Inside

Carrie Exploration & Development

34-19s-11w

DST Test Number: 1

Pressure vs. Time





DRILL STEM TEST REPORT

Carrie Exploration & Development

John Roth #C-2

210 West 2nd Street
Hays, Kansas 67601

34-19s-11w

Job Ticket: 17213

DST#: 2

ATTN: Herb Deines

Test Start: 2011.09.14 @ 10:00:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 3335-29

Interval: **3292.00 ft (KB) To 3322.00 ft (KB) (TVD)**

Total Depth: 3322.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1780.00 ft (KB)

1772.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: **6806**

Inside

Press@RunDepth: 53.30 psia @ 3318.00 ft (KB)

Start Date: 2011.09.14

End Date:

2011.09.14

Capacity:

5000.00 psia

Start Time: 10:15:00

End Time:

15:37:00

Last Calib.:

2011.09.14

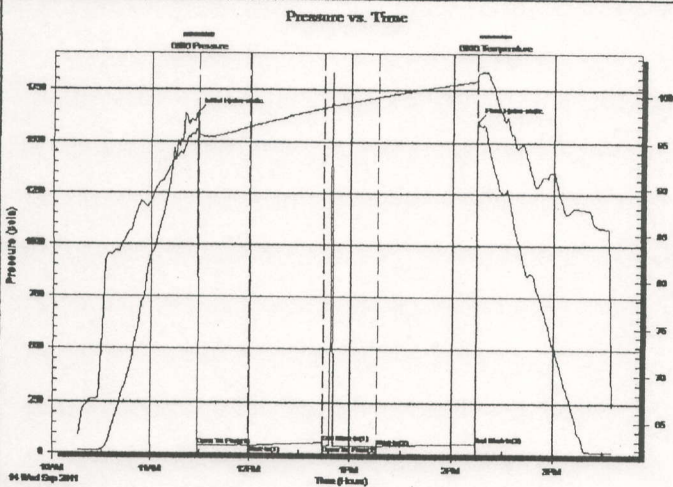
Time On Btm:

2011.09.14 @ 11:28:30

Time Off Btm:

2011.09.14 @ 14:15:00

TEST COMMENT: 1st Opening 30 Minutes-Very weak surface blow for 10 minutes and died
 1st Shut-In 45 Minutes-No blow back
 2nd Opening 30 Minutes-No blow flushed tool after 5 minutes good surge no help
 2nd Shut-In 60 Minutes-No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1639.01	96.52	Initial Hydro-static
1	38.02	96.04	Open To Flow (1)
31	38.31	96.71	Shut-In(1)
76	57.19	98.70	End Shut-In(1)
76	39.07	98.72	Open To Flow (2)
108	40.89	99.89	Shut-In(2)
166	53.30	101.65	End Shut-In(2)
167	1602.60	102.33	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Slightly oil spotted mud w with a good	0.14
0.00	of oil between the tools	0.00

Gas Rates

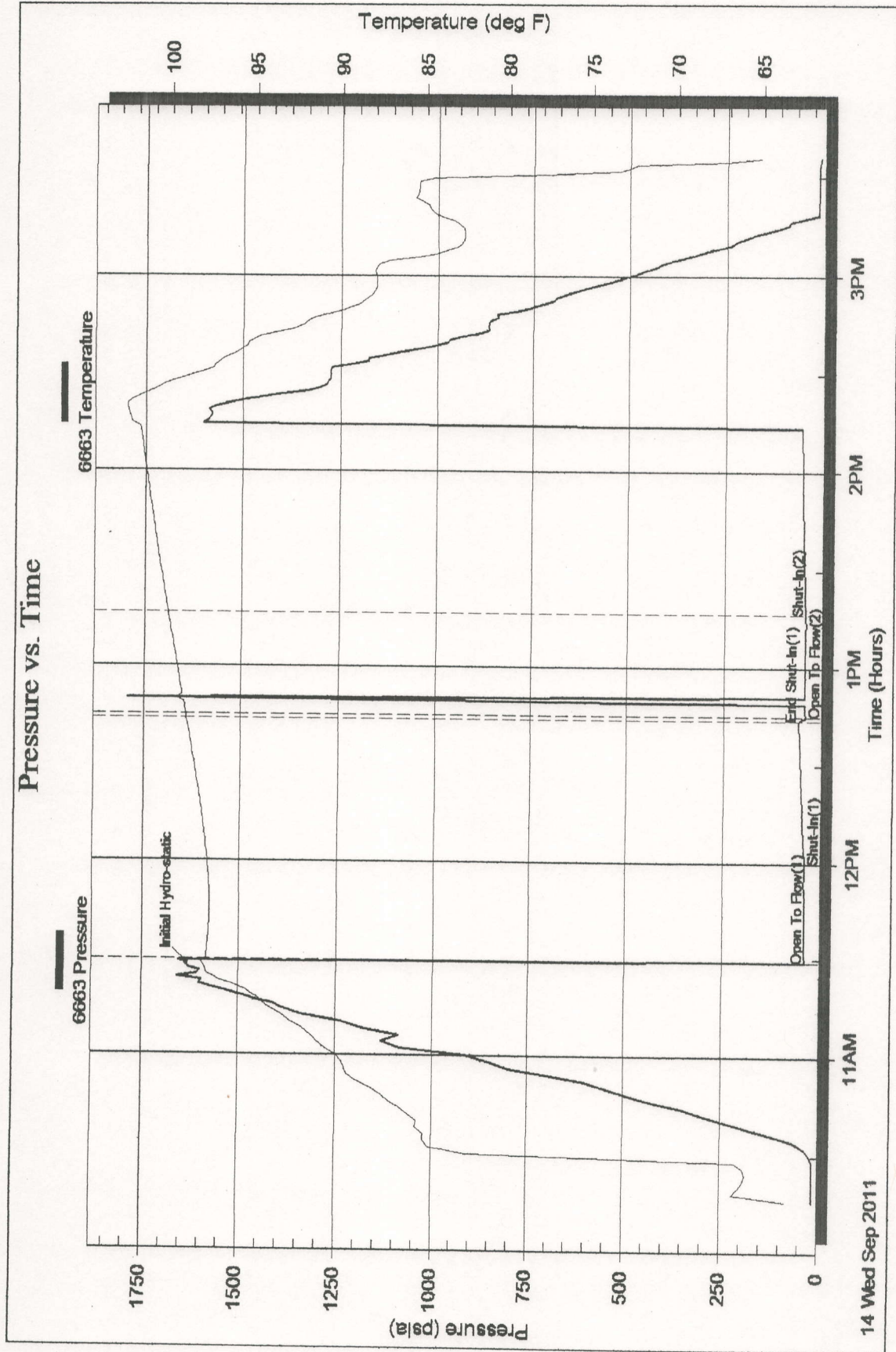
Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)

Serial #: 6663

Outside Carrie Exploration & Development

34-19s-11w

DST Test Number: 2



Superior Testers Enterprises LLC

Ref. No: 17213

Printed: 2011.09.14 @ 15:29:34



DRILL STEM TEST REPORT

Carrie Exploration & Development

John Roth #C-2

210 West 2nd Street
Hays, Kansas 67601

34-19s-11w

Job Ticket: 17214

DST#: 3

ATTN: Herb Deines

Test Start: 2011.09.14 @ 08:30:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 3335-30

Interval: **3320.00 ft (KB) To 3330.00 ft (KB) (TVD)**

Reference Elevations: 1780.00 ft (KB)

Total Depth: 3330.00 ft (KB) (TVD)

1772.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6663 Outside

Press@RunDepth: 185.26 psia @ 3327.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.09.15 End Date: 2011.09.15

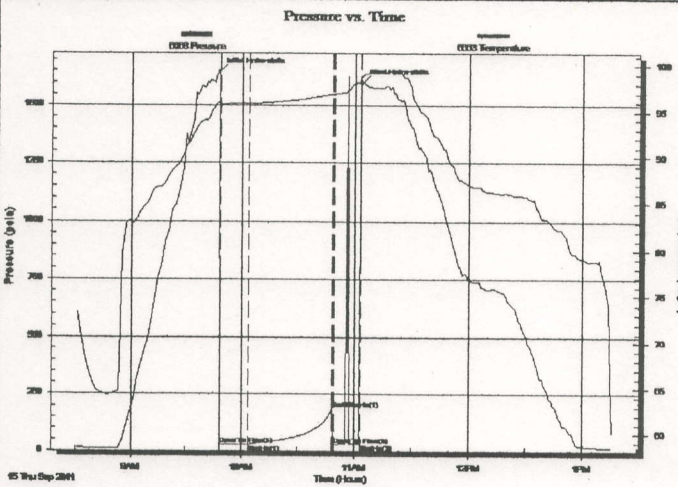
Last Calib.: 2011.09.15

Start Time: 08:30:00 End Time: 13:17:00

Time On Btm: 2011.09.15 @ 09:48:00

Time Off Btm: 2011.09.15 @ 11:04:00

TEST COMMENT: 1st Opening 15 Minutes-Very weak surface blow for 10 minutes and died
 1st Shut-In 45 Minutes-No blow back
 2nd Opening 15 Minutes-No blow flushed tool after 5 minutes good surge no blow pulled tool after 10 minutes
 2nd Shut-In NONE TAKEN



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1648.03	95.96	Initial Hydro-static
1	26.48	95.44	Open To Flow (1)
16	28.52	95.85	Shut-In(1)
61	185.26	96.94	End Shut-In(1)
62	28.26	96.92	Open To Flow (2)
75	31.50	98.23	Shut-In(2)
76	1603.30	98.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	very slightly oil spotted mud	0.14
0.00	there was a good show of oil	0.00
0.00	betw een the tools	0.00

Gas Rates

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

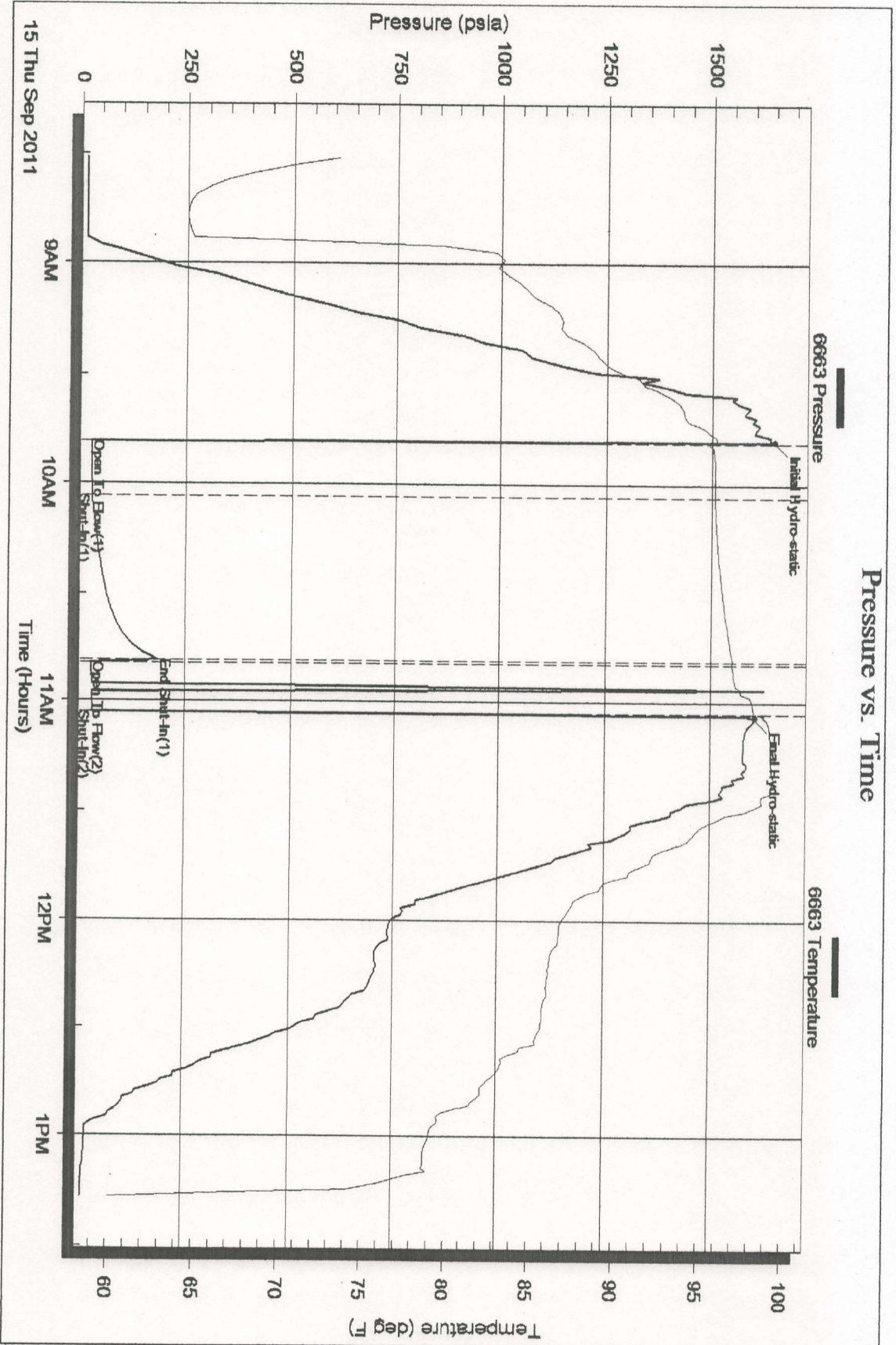
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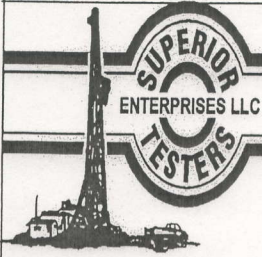
Outside Carrie Exploration & Development

34-19s-11w

DST Test Number: 3

Pressure vs. Time





DRILL STEM TEST REPORT

Carrie Exploration & Development

John Roth #C-2

210 West 2nd Street
Hays, Kansas 67601

34-19s-11w

Job Ticket: 17215

DST#: 4

ATTN: Herb Deines

Test Start: 2011.09.15 @ 05:00:00

GENERAL INFORMATION:

Formation: **Kansas City "F"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 06:59:00
 Time Test Ended: 10:12:00

Test Type: Conventional Bottom Hole (Initial)
 Tester: Gene Budig
 Unit No: 3335-30

Interval: **3098.00 ft (KB) To 3126.00 ft (KB) (TVD)**
 Total Depth: 3399.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1780.00 ft (KB)
 1772.00 ft (CF)
 KB to GR/CF: 8.00 ft

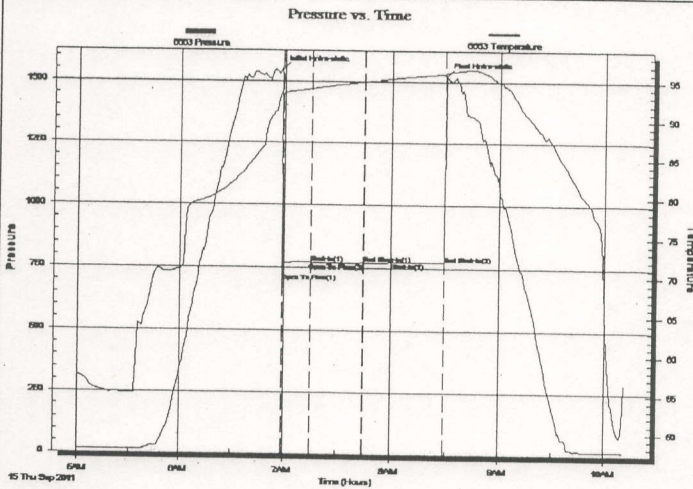
Serial #: 6663

Outside

Press@RunDepth: 770.34 psia @ 3127.00 ft (KB)
 Start Date: 2011.09.15 End Date: 2011.09.15
 Start Time: 05:00:00 End Time: 10:12:00

Capacity: 5000.00 psia
 Last Calib.: 2011.09.15
 Time On Btm: 2011.09.15 @ 06:58:30
 Time Off Btm: 2011.09.15 @ 08:29:30

TEST COMMENT: 1st Opening 15 Minutes Weak blow for 10 minutes and died
 1st Shut-In 30 Minutes-No blow back
 2nd Opening 15 Minutes-No blow
 2nd Shut-In 30 Minutes- No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1546.50	93.65	Initial Hydro-static
1	690.51	93.17	Open To Flow (1)
17	770.57	94.00	Shut-In(1)
46	770.50	94.95	End Shut-In(1)
47	769.03	94.96	Open To Flow (2)
62	770.34	95.36	Shut-In(2)
91	770.37	96.02	End Shut-In(2)
91	1523.85	96.18	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
110.00	drilling mud	1.54

Gas Rates

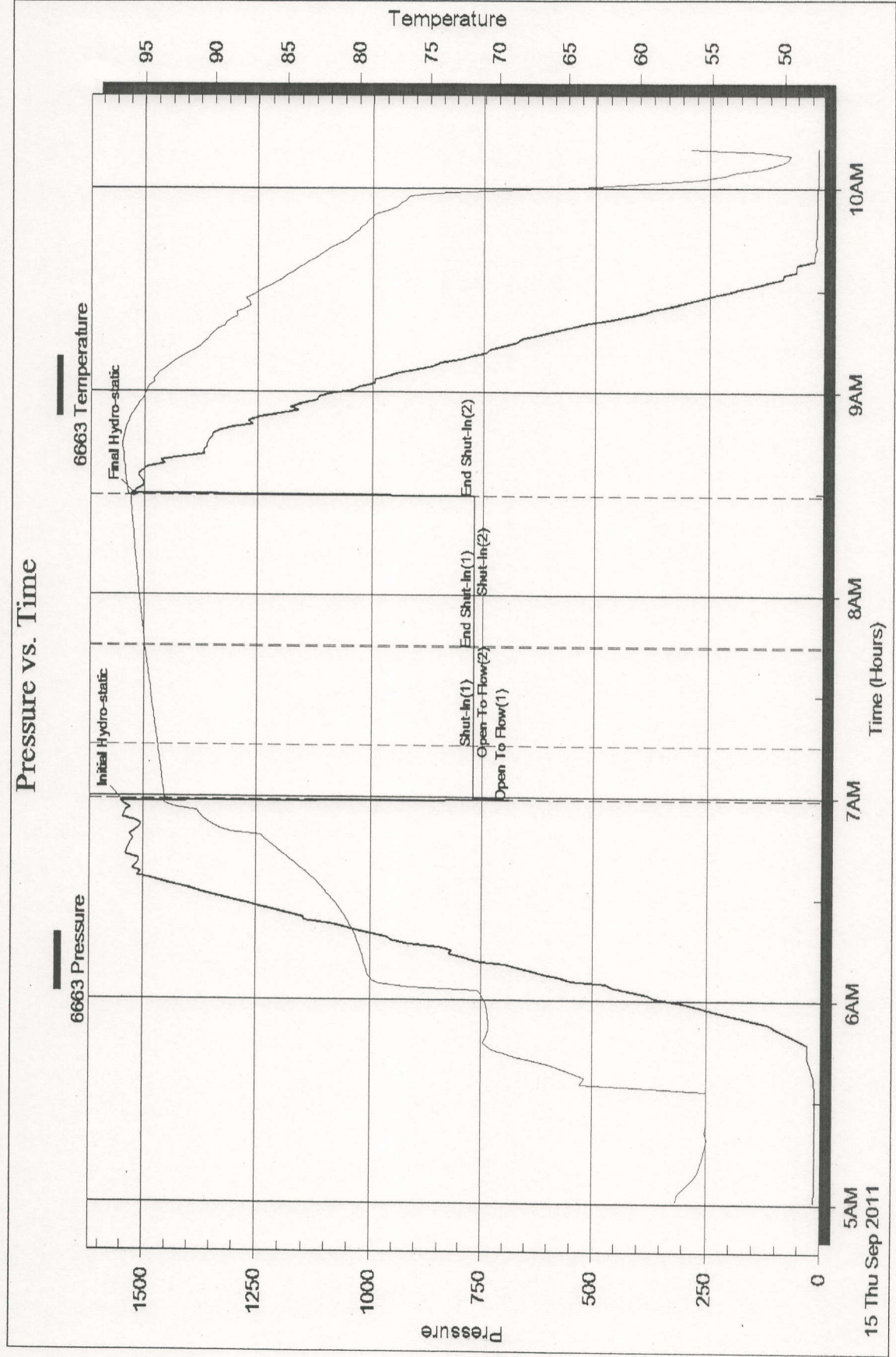
Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)

Serial #: 6663

Outside Carrie Exploration & Development

34-19s-11w

DST Test Number: 4



Printed: 2011.09.15 @ 23:50:47

Ref. No: 17215

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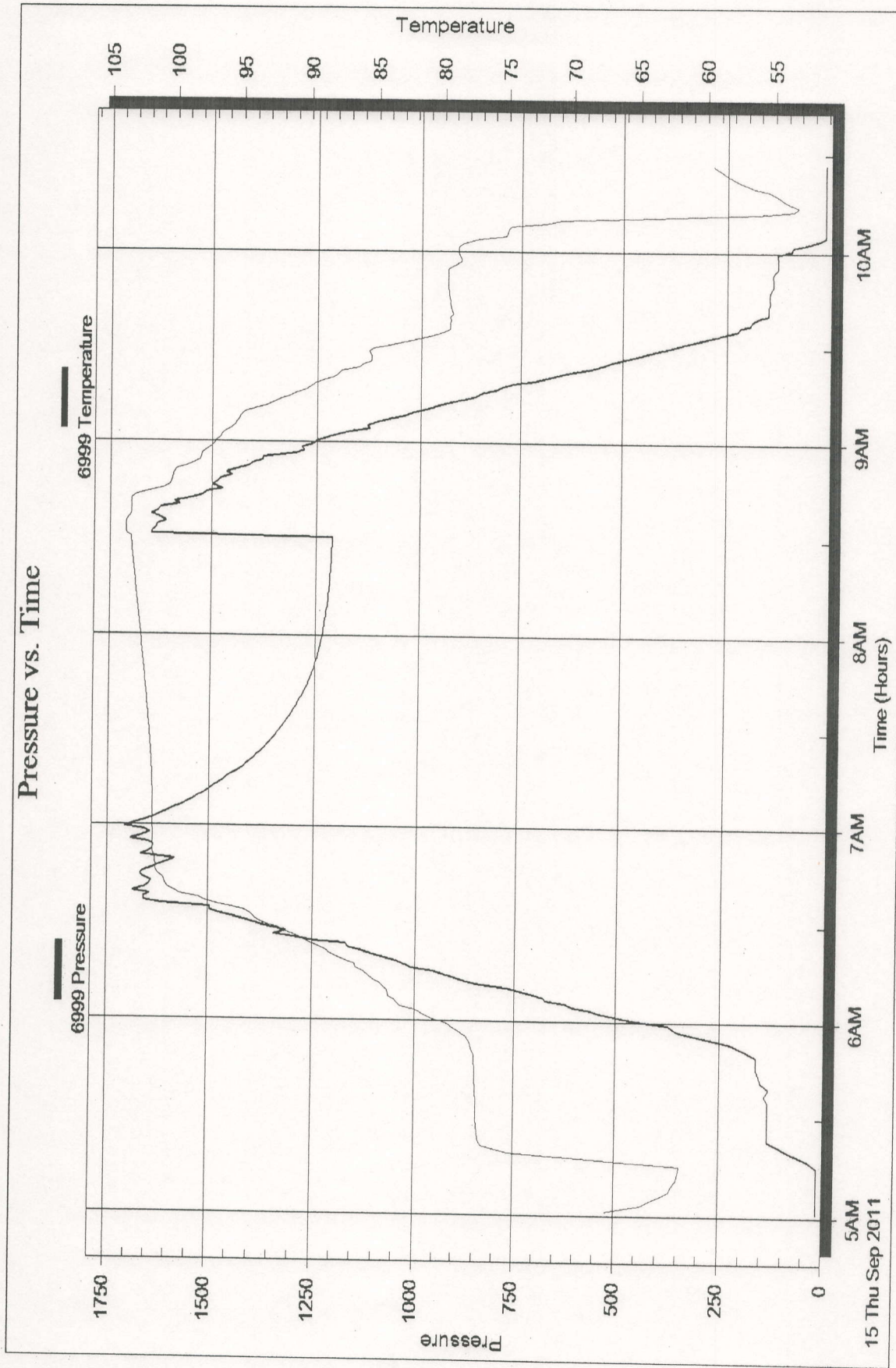
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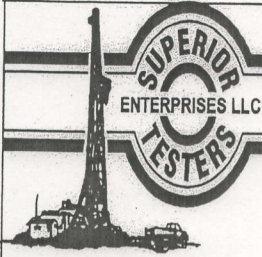
Inside

Carrie Exploration & Development

34-19s-11w

DST Test Number: 4





DRILL STEM TEST REPORT

Carrie Exploration & Development

John Roth #C-2

210 West 2nd Street
Hays, Kansas 67601

34-19s-11w

Job Ticket: 17216

DST#: 5

ATTN: Herb Deines

Test Start: 2011.09.16 @ 10:45:00

GENERAL INFORMATION:

Formation: **Kansas City "F"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:00:00
 Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)
 Tester: Gene Budig
 Unit No: 3335-30

Interval: **3090.00 ft (KB) To 3126.00 ft (KB) (TVD)**
 Total Depth: 3399.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1780.00 ft (KB)
 1772.00 ft (CF)
 KB to GR/CF: 8.00 ft

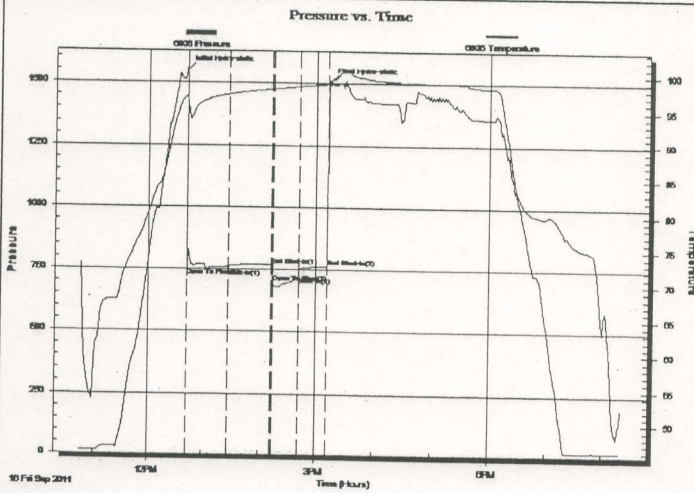
Serial #: 6806

Inside

Press@RunDepth: 761.70 psia @ 3119.00 ft (KB)
 Start Date: 2011.09.16 End Date: 2011.09.16
 Start Time: 10:45:00 End Time: 20:21:00

Capacity: 5000.00 psia
 Last Calib.: 2011.09.16
 Time On Btm: 2011.09.16 @ 12:42:00
 Time Off Btm: 2011.09.16 @ 15:14:00

TEST COMMENT: 1st Opening 45 Minutes-Strong blow w ith gas to surface in 24 minutes
 1st Shut-In 45 Minutes-Fair blow back
 2nd Opening 30 Minutes-Strong blow see gas report
 2nd Shut-In 30 Minutes-Fair blow back



PRESSURE SUMMARY

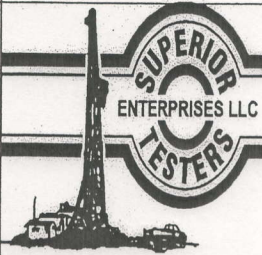
Time (Mn.)	Pressure (psia)	Temp (deg F)	Annotation
0	1548.89	96.94	Initial Hydro-static
1	720.52	96.77	Open To Flow (1)
46	749.09	97.22	Shut-In(1)
91	767.64	97.98	End Shut-In(1)
93	696.38	97.98	Open To Flow (2)
120	718.24	98.35	Shut-In(2)
151	761.70	98.72	End Shut-In(2)
152	1506.17	98.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2925.00	Clean Gassy Oil Gravity 41 Corrected	41.03
0.00	20% Gas 80% Oil	0.00

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	0.50	4.15	28.00
Last Gas Rate	0.75	5.90	92.16
Max. Gas Rate	0.75	5.90	92.16



DRILL STEM TEST REPORT

GAS RATES

Carrie Exploration & Development

John Roth #C-2

210 West 2nd Street
Hays ,Kansas 67601

34-19s-11w

Job Ticket: 17216

DST#: 5

ATTN: Herb Deines

Test Start: 2011.09.16 @ 10:45:00

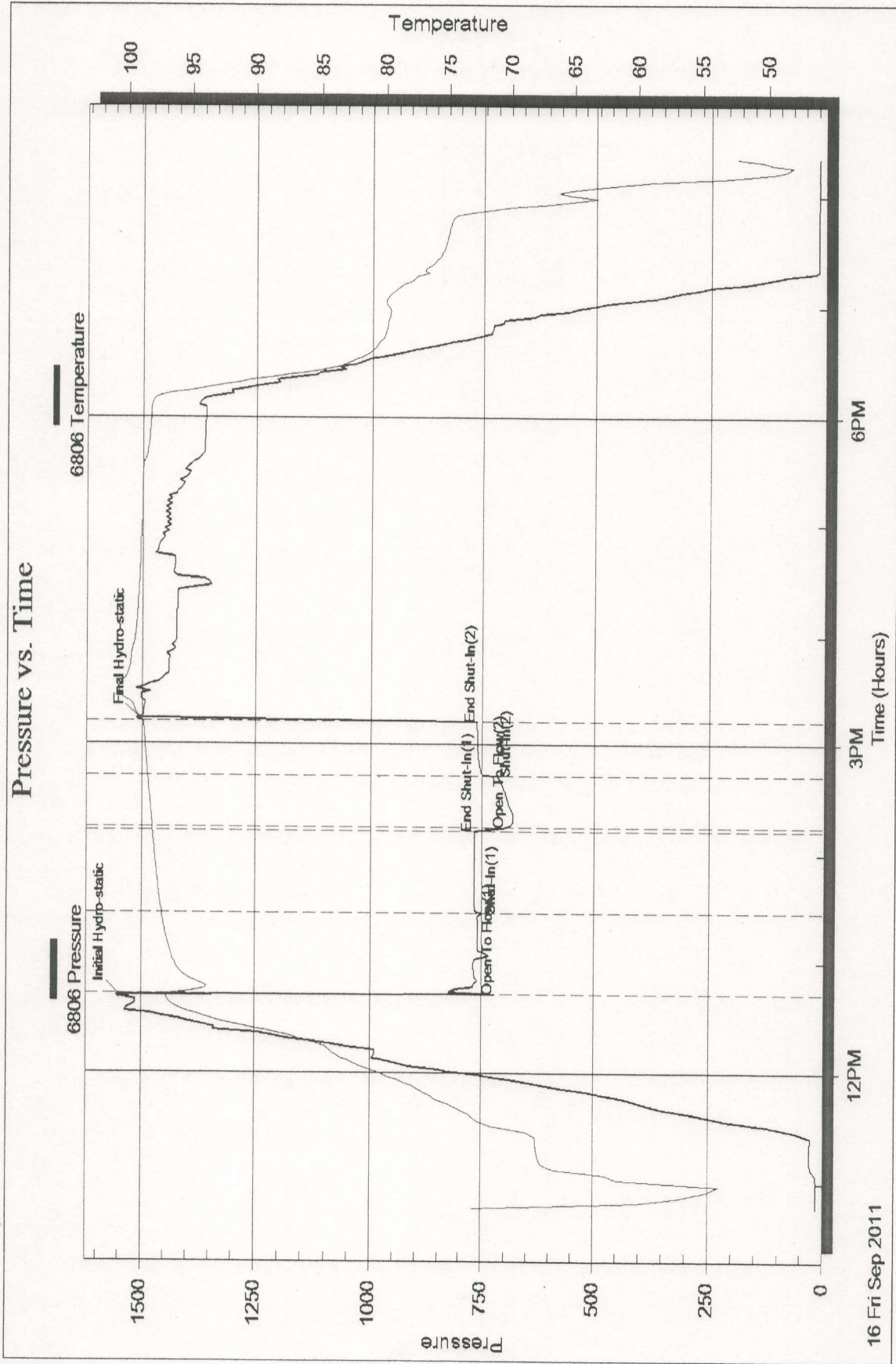
Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
1	35	0.50	4.15	28.00
1	40	0.50	5.35	36.09
1	45	0.50	5.35	36.09
2	10	0.75	4.75	74.19
2	20	0.75	5.00	78.10
2	30	0.75	5.90	92.16

Pressure vs. Time



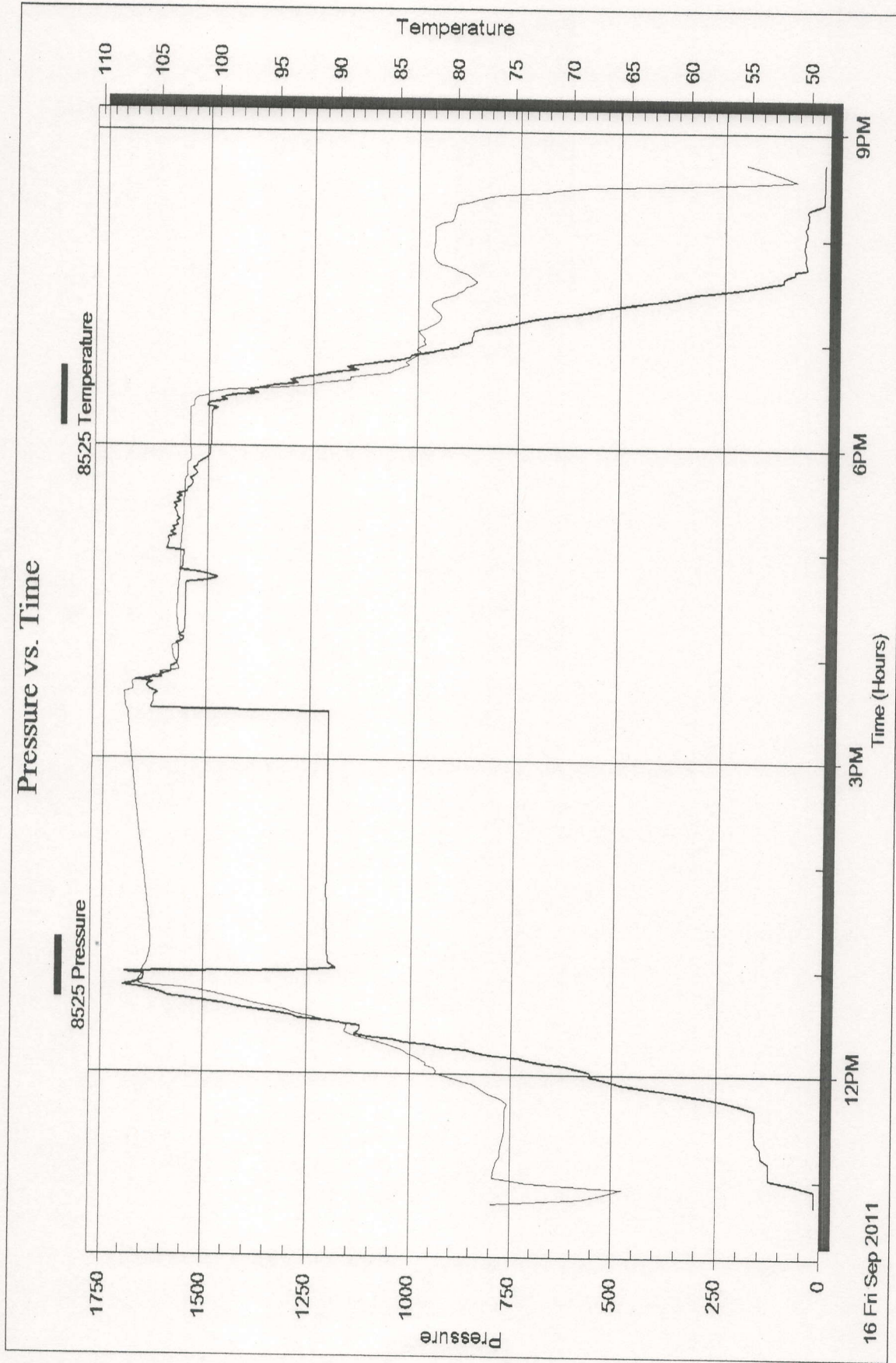
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Inside

Carrie Exploration & Development

34-19s-11w

DST Test Number: 5



Superior Testers Enterprises LLC

Ref. No: 17216

Printed: 2011.09.16 @ 08:42:45