



**TRILOBITE  
TESTING, INC**

Harris Oil & Gas Com

Brennan D #1-24

24-29-33

DST #: 1

Pawnee

2001.04.09

### DRILL STEM TEST REPORT

Prepared For: **Harris Oil & Gas Com**

1125 17th street, Ste 2290 Denver Co 80202

**CONFIDENTIAL ORIGINAL  
KCC**

ATTN: Harold Frauli

24-29-33 JUL 03 2001

**CONFIDENTIAL**  
Brennan D #1-24

**ACO-1 COPY**

Start Date: 2001.04.09 @ 13:15:00

End Date: 2001.04.09 @ 22:59:44

Job Ticket #: 13482 DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Harris Oil & Gas Com  
 1125 17th street, Ste 2290 Denver Co 80202  
 ATTN: Harold Frauli

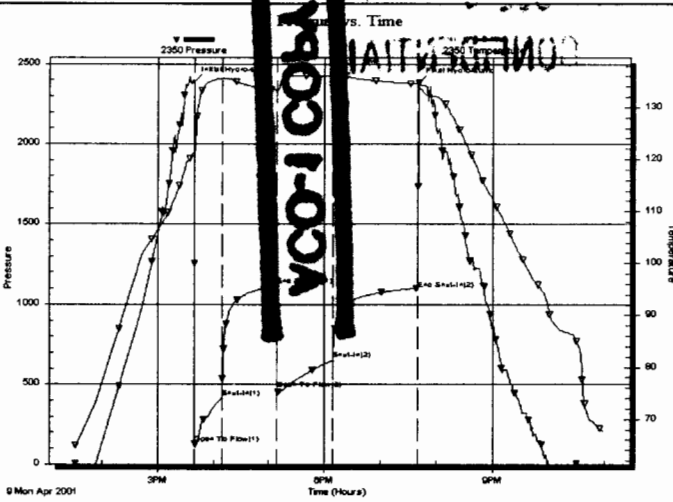
**Brennan D #1-24**  
**24-29-33**  
 Job Ticket: 13482      **DST#: 1**  
 Test Start: 2001.04.09 @ 13:15:00

## GENERAL INFORMATION:

Formation: **Pawnee**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 15:39:29  
 Time Test Ended: 22:59:44  
 Interval: **4884.00 ft (KB) To 4905.00 ft (KB) (TVD)**  
 Total Depth: 4905.00 ft (KB)  
 Hole Diameter: 7.78 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole  
 Tester: Blake Wallace  
 Unit No: 17  
 Reference Elevations: 2940.00 ft (KB)  
 2927.00 ft (CF)  
 KB to GR/CF: 13.00 ft

Serial #: **2350** Inside  
 Press@RunDepth: 650.38 psig @ 4888.00 ft (KB) Capacity: 7000.00 psig  
 Start Date: 2001.04.09 End Date: 2001.04.09 Last Calib.: 2001.04.08  
 Start Time: 13:31:00 End Time: 22:59:44 Time On Btm: 2001.04.09 @ 15:39:14  
 Time Off Btm: 2001.04.09 @ 19:40:44

TEST COMMENT: RW= 1.7 @ 60 deg chlorides =4200 1st opening- strong blow B.O.B in 2 min  
 IS- no blow back  
 2nd opening- strong blow B.O.B 9 min  
 FS- no blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
129	2389.18	121.26	Initial Hydro-static
129	121.72	121.03	Open To Flow (1)
159	412.65	135.62	Shut-In(1)
218	1114.57	133.34	End Shut-In(1)
218	464.42	133.09	Open To Flow (2)
278	650.38	136.04	Shut-In(2)
370	1090.89	134.56	End Shut-In(2)
370	2381.51	134.74	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
651.00	GW 10%g 90%w	3.33
186.00	gwm 5%g 90%w 5%w	2.61
186.00	gwm 15%g 15%w 70%w	2.61
1302.00	gas in pipe	18.26

## Gas Rates

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



**TRILOBITE TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Harris Oil & Gas Com  
 1125 17th street, Ste 2290 Denver Co 80202  
 ATTN: Harold Frauli

**Brennan D #1-24**  
**24-29-33**  
 Job Ticket: 13482      **DST#: 1**  
 Test Start: 2001.04.09 @ 13:15:00

**Tool Information**

Drill Pipe:	Length: 4245.00 ft	Diameter: 3.80 inches	Volume: 59.55 bbl	Tool Weight: 1800.00 lb
Drill Collar:	Length: 637.00 ft	Diameter: 2.25 inches	Volume: 3.13 bbl	Weight set on Packer: 30000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 140000.0 lb
Drill Pipe Above KB:	25.00 ft			Tool Chased 0.00 ft
Depth to Top Packer:	4880.00 ft			String Weight: Initial 98000.00 lb
Depth to Bottom Packer:	ft			Final 102000.0 lb
Interval between Packers:	ft			
Tool Length:	48.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

**KCC**

**JUL 03 2001**  
**CONFIDENTIAL**

**Tool Comments**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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C.O. Sub	1.00			4858.00	
S.I. Tool	5.00			4863.00	
HMV	5.00			4868.00	
Jars	5.00			4873.00	
Safety Joint	2.00			4875.00	
Packer	5.00			4880.00	23.00      Bottom Of Top Packer
Packer	4.00			4884.00	
Stubb	1.00			4885.00	
Perforations	3.00			4888.00	
Recorder	0.00	2350	Inside	4888.00	
P.O. Sub	5.00			4893.00	
Perforations	10.00			4903.00	
Recorder	0.00	13277	Outside	4903.00	
Bullnose	2.00			4905.00	25.00      Bottom Packers & Anchor

**Total Tool Length: 48.00**

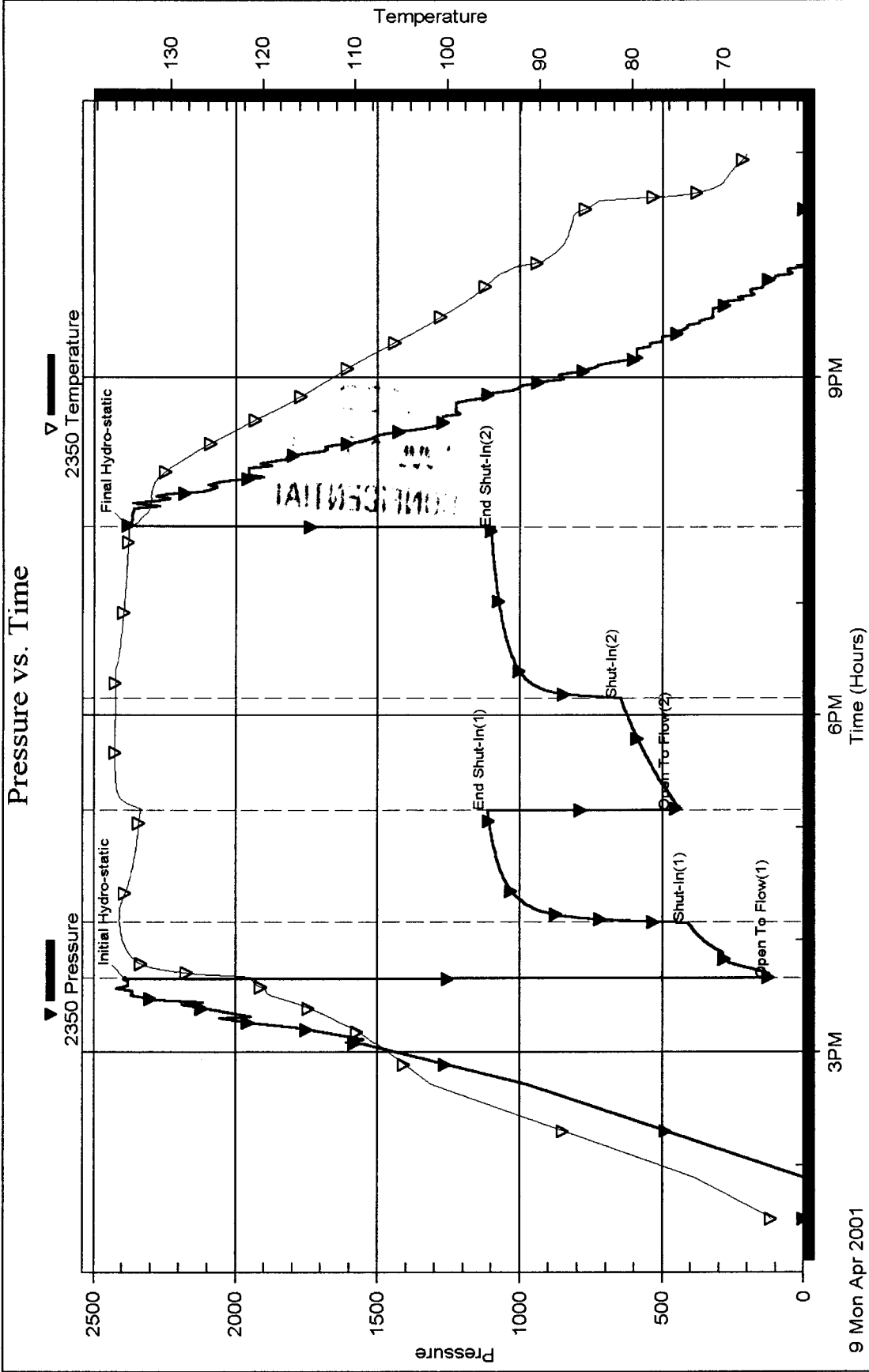
Serial #: 2350

Inside

Harris Oil & Gas Com

24-29-33

### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Harris Oil & Gas Com**

1125 17th street, Ste 2290 Denver Co 80202

ATTN: Harold Frauli

**24-29-33**

**Brennan D #1-24**

Start Date: 2001.04.11 @ 07:15:00

End Date: 2001.04.12 @ 19:45:00

Job Ticket #: 13483                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Harris Oil & Gas Com

Brennan D #1-24

24-29-33

DST #: 2

Morrow Sand

2001.04.11



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Harris Oil & Gas Com  
1125 17th street, Ste 2290 Denver Co 80202  
ATTN: Harold Frauli

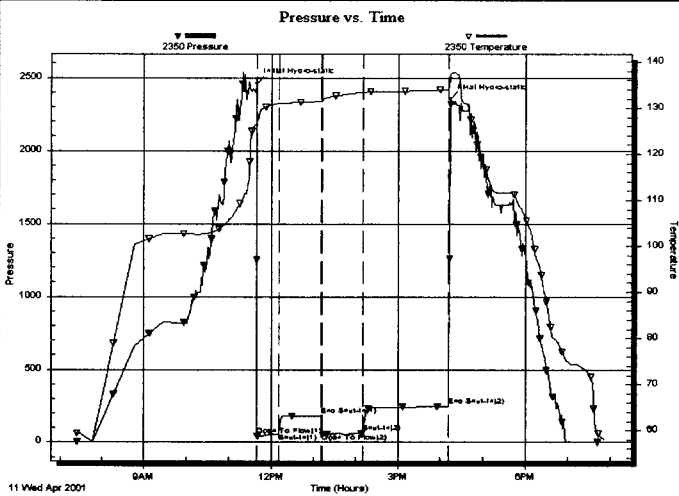
**Brennan D #1-24**  
**24-29-33**  
Job Ticket: 13483      **DST#: 2**  
Test Start: 2001.04.11 @ 07:15:00

## GENERAL INFORMATION:

Formation: **Morrow Sand**  
Deviated: No      Whipstock:      ft (KB)  
Time Tool Opened: 11:39:55  
Time Test Ended: 19:45:00  
Interval: **5215.00 ft (KB) To 5350.00 ft (KB) (TVD)**  
Total Depth: 5350.00 ft (KB)  
Hole Diameter: 7.78 inches      Hole Condition: Fair  
Test Type: Conventional Bottom Hole  
Tester: Blake Wallace  
Unit No: 17  
Reference Elevations: 2940.00 ft (KB)  
2927.00 ft (CF)  
KB to GR/CF: 13.00 ft

Serial #: **2350**      Inside  
Press@RunDepth: 63.70 psig @ 5219.00 ft (KB)      Capacity: 7000.00 psig  
Start Date: 2001.04.11      End Date: 2001.04.11      Last Calib.: 2001.04.10  
Start Time: 07:24:26      End Time: 19:53:55      Time On Btm: 2001.04.11 @ 11:39:10  
Time Off Btm: 2001.04.11 @ 16:14:55

**TEST COMMENT:** 200 psi =.6 cubic feet of gas 1st opening- strong blow B.O.B in 4 min.  
ISI-no blow back  
2nd opening-strong blow B.O.B as soon as open gas to surface in 25 min.  
FSI-no blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
255	2461.18	126.71	Initial Hydro-static
256	41.29	127.01	Open To Flow (1)
287	55.07	131.07	Shut-In(1)
347	183.34	131.45	End Shut-In(1)
347	55.65	131.46	Open To Flow (2)
406	63.70	133.40	Shut-In(2)
527	245.63	133.98	End Shut-In(2)
531	2355.89	137.28	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
93.00	5% gas 95% mud	0.46

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	1.00	24.43
Last Gas Rate	0.25	2.50	26.81
Max. Gas Rate	0.25	2.50	26.81



**TRILOBITE  
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## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Harris Oil & Gas Com  
1125 17th street, Ste 2290 Denver Co 80202  
ATTN: Harold Frauli

**Brennan D #1-24**  
**24-29-33**  
Job Ticket: 13483      **DST#: 2**  
Test Start: 2001.04.11 @ 07:15:00

**Tool Information**

Drill Pipe:	Length: 4587.00 ft	Diameter: 3.80 inches	Volume: 64.34 bbl	Tool Weight: 1800.00 lb
Drill Collar:	Length: 637.00 ft	Diameter: 2.25 inches	Volume: 3.13 bbl	Weight set on Packer: 30000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 130000.0 lb
Drill Pipe Above KB:	36.00 ft			Tool Chased 0.00 ft
Depth to Top Packer:	5211.00 ft			String Weight: Initial 104000.0 lb
Depth to Bottom Packer:	ft			Final 110000.0 lb
Interval between Packers:	ft			
Tool Length:	162.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

**Tool Comments**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			5189.00	
S.I. Tool	5.00			5194.00	
HMV	5.00			5199.00	
Jars	5.00			5204.00	
Safety Joint	2.00			5206.00	
Packer	5.00			5211.00	23.00      Bottom Of Top Packer
Packer	4.00			5215.00	
Stubb	1.00			5216.00	
Perforations	3.00			5219.00	
Recorder	0.00	2350	Inside	5219.00	
P.O. Sub	5.00			5224.00	
Perforations	25.00			5249.00	
C.O. Sub	1.00			5250.00	
Blank Spacing	93.00			5343.00	
C.O. Sub	1.00			5344.00	
Perforations	4.00			5348.00	
Recorder	0.00	13277	Outside	5348.00	
Bullnose	2.00			5350.00	139.00      Bottom Packers & Anchor

**Total Tool Length: 162.00**



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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Harris Oil & Gas Com

**Brennan D #1-24**

1125 17th street, Ste 2290 Denver Co 80202

**24-29-33**

Job Ticket: 13483

**DST#: 2**

ATTN: Harold Frauli

Test Start: 2001.04.11 @ 07:15:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API: -999999 deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: - ppm

Viscosity: 42.00 sec/qt

Cushion Volume: bbl

214748364

Water Loss: 9.36

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
93.00	5% gas 95% mud	0.457

Total Length: 93.00 ft      Total Volume: 0.460 bbl

Num Fluid Samples: 1      Num Gas Bombs: 0      Serial #: 2350

Laboratory Name: Caraway      Laboratory Location: Liberal KS

Recovery Comments: 200 psi = .6 cubic feet of gas

# NATURAL GAS ANALYSIS REPORT

Sampled by:

Trilobite Testing, L. L. C.  
Hays, Kansas  
Scott City, Kansas  
Phone: 800-728-5369  
Fax: 913-625-5620

Analyzed by:

Caraway Analytical, Inc  
P. O. Box 2137  
Liberal, Kansas 67905  
Phone: 316-624-5389  
Fax: 316-626-7108

Lab Number: 20011914

Analyzed: 04/12/01

Sample From: Brennand 1-24 DST 2  
Producer: Harris Oil & Gas

Pressure:  
Temperature:

Date: Location: 24-29-33

Time:  
Sampler:  
Source:

County: Haskell  
State: Kansas  
Formation: Morr Sand

	Mole %	GPM
Helium	He: 0.100	0.000
Hydrogen	H2: 0.045	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 8.720	0.000
Carbon Dioxide	CO2: 0.236	0.000
Methane	C1: 71.576	0.000
Ethane	C2: 8.746	2.339
Propane	C3: 5.720	1.576
Iso Butane	iC4: 0.879	0.288
Normal Butane	nC4: 1.748	0.551
Iso Pentane	iC5: 0.452	0.165
Normal Pentane	nC5: 0.576	0.209
Hexanes Plus	C6+: 1.202	0.524

TOTAL: 100.000 5.652

Z Fact: 0.9965

SP.GR.: 0.7825

BTU (SAT): 1196.0 @ 14.73 psia

BTU (DRY): 1217.2 @ 14.73 psia

**OCTANE RATING: 111.0**

COMMENTS:

0.000



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## DRILL STEM TEST REPORT

**GAS RATES**

Harris Oil & Gas Com

**Brennan D #1-24**

1125 17th street, Ste 2290 Denver Co 80202

**24-29-33**

Job Ticket: 13483

**DST#: 2**

ATTN: Harold Frauli

Test Start: 2001.04.11 @ 07:15:00

### Gas Rates Information

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

Gas Rates Table

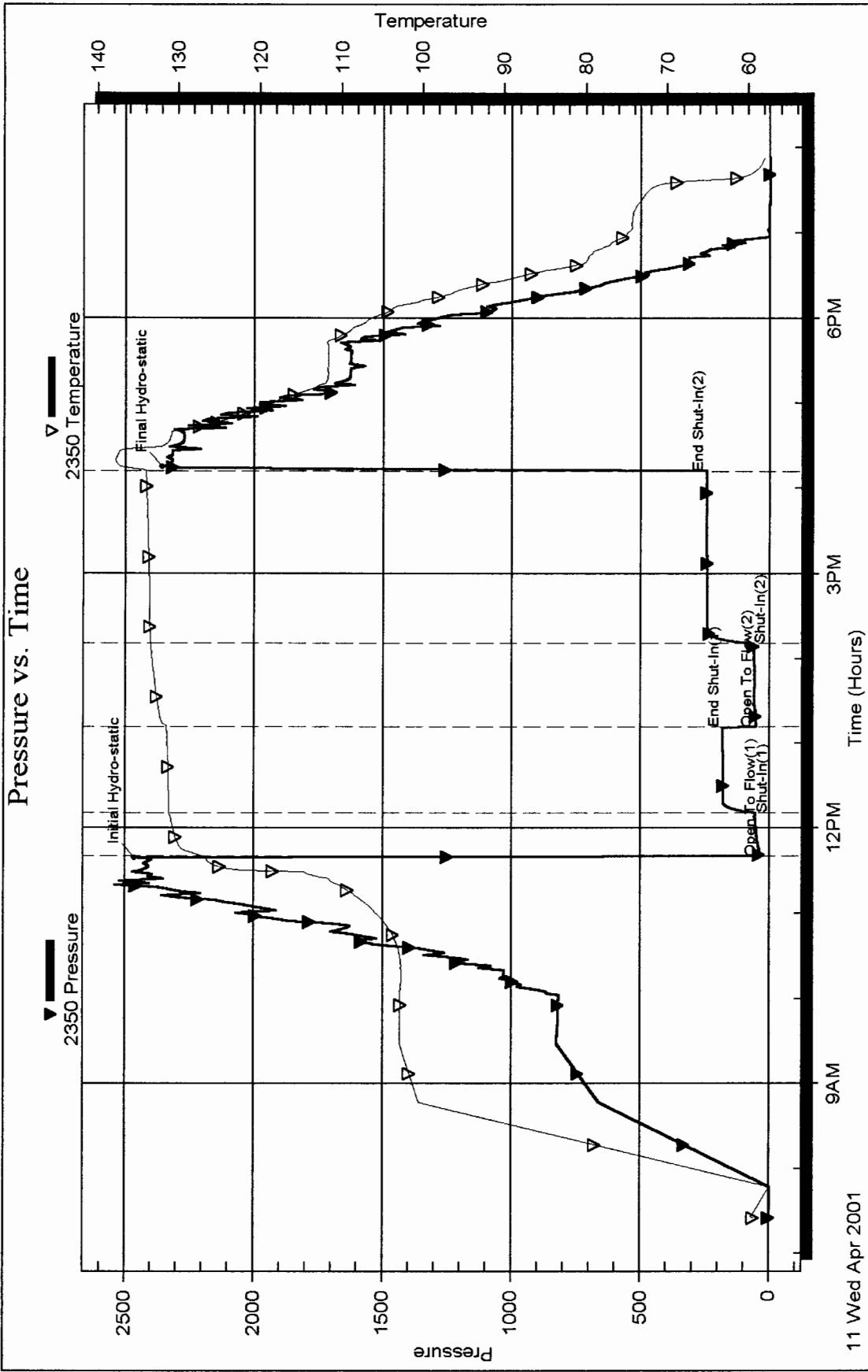
Flow Period	Elapsed Time	Choke (inches)	Pressure (kPaa)	Gas Rate (Mcf/d)
2	30	0.25	1.00	24.43
2	30	0.25	1.00	24.43
2	30	0.25	1.00	24.43
2	40	0.25	2.50	26.81

Serial #: 2350

Inside Harris Oil & Gas Com

24-29-33

### Pressure vs. Time



11 Wed Apr 2001