



DRILL STEM TEST REPORT

Prepared For: **Pioneer Resources**

177 W. Limestone Rd
Phillipsburg, KS 67661

ATTN: Roger Wells

16-8-23 Graham co KS

#1 Jones

Start Date: 2001.01.06 @ 21:37:00

End Date: 2001.01.07 @ 03:53:00

Job Ticket #: 14151 DST #: 1

Trilobite Testing Inc.

Box 362 Hays KS 67601

785.625.4778 trilobite@eaglecom.net



DRILL STEM TEST REPORT

Pioneer Resources

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Phillipsburg, KS 67661

ATTN: Roger Wells

#1 Jones

16-8-23 Graham co KS

Job Ticket: 14151

DST#: 1

Test Start: 2001.01.06 @ 21:37:00

GENERAL INFORMATION:

Formation: "B-C" LKC

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:42:51

Time Test Ended: 03:53:00

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 11

Interval: 3463.00 ft (KB) To 3508.00 ft (KB) (TVD)

Total Depth: 3508.00 ft (KB)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2188.00 ft (KB)

2183.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 3289 Inside

Press@RunDepth: 642.08 psig @ 3469.01 ft (KB)

Start Date: 2001.01.06

End Date: 2001.01.07

Capacity: 7000.00 psig

Last Calib.: 2001.01.06

Start Time: 21:37:53

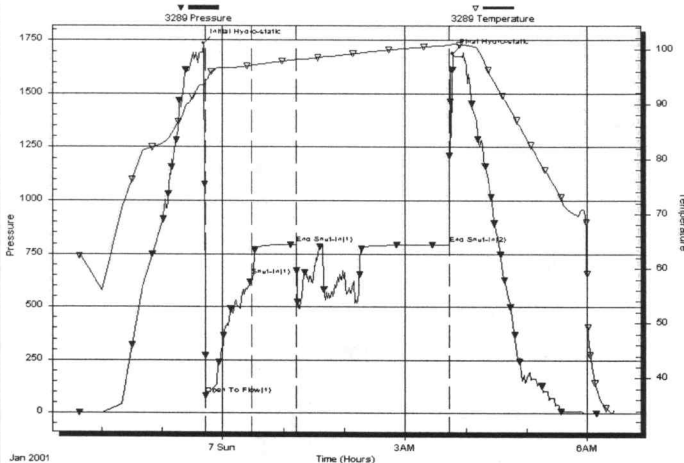
End Time: 06:26:21

Time On Btm: 2001.01.06 @ 23:40:51

Time Off Btm: 2001.01.07 @ 03:47:21

TEST COMMENT: Slid tool 12' to bottom-Times-45-45-60-90 60' Gas in pipe-plugging action on both opens IF-B.O.B. in 7 min
FF- Weak building to 6"

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
123	1734.60	93.54	Initial Hydro-static
125	80.57	94.17	Open To Flow (1)
171	642.08	97.07	Shut-In(1)
215	795.28	98.14	End Shut-In(1)
366	795.02	100.82	End Shut-In(2)
370	1688.98	101.04	Final Hydro-static

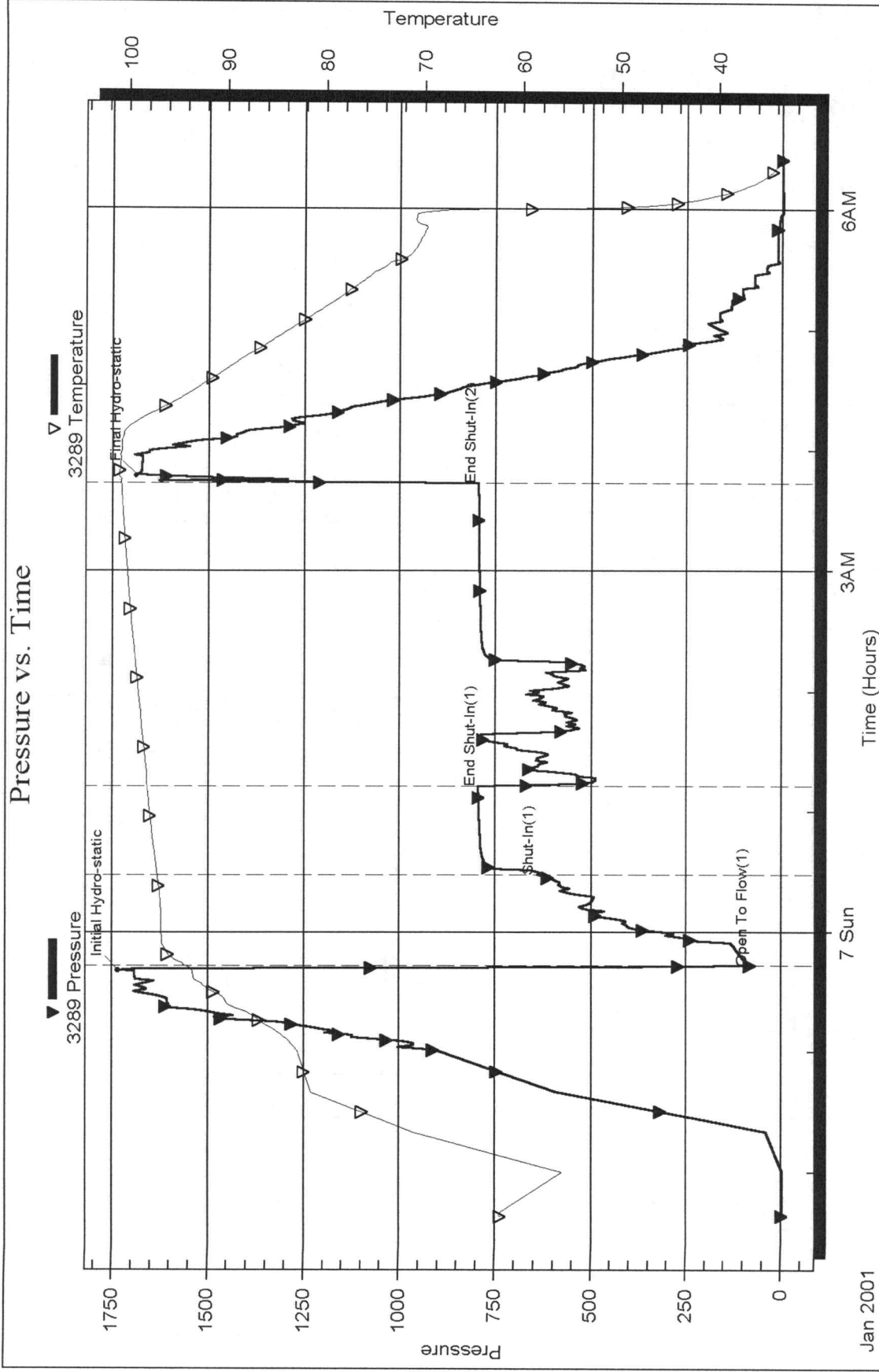
Recovery

Length (ft)	Description	Volume (bbl)
62.00	Frothy Gassy oil	0.87
62.00	Clean gassy oil 10%g 90%o	0.87
278.00	Mud cut gassy oil 10%g 60%o 30%m	3.90

Gas Rates

	Choke(inches)	Pressure (psig)	Gas Rate (Mcf/d)
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Pressure vs. Time



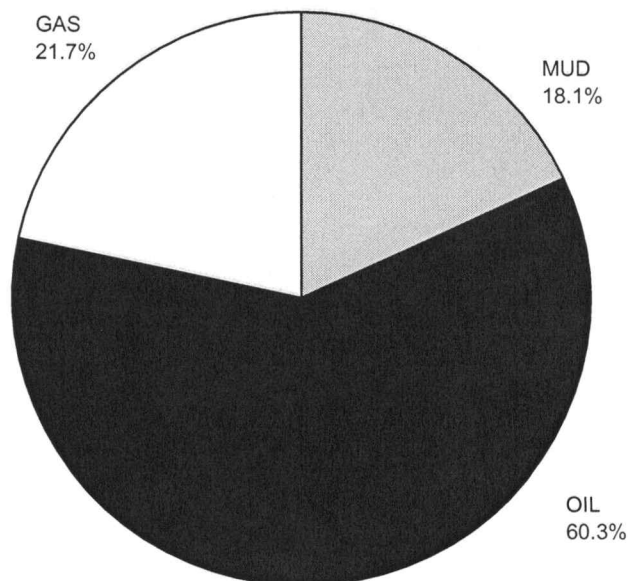
CALCULATED RECOVERY ANALYSIS

DST 1

TICKET 14151

SAMPLE		TOTAL	GAS		OIL		WATER		MUD		
#		FEET	%	FEET	%	FEET	%	FEET	%	FEET	
DRILL	1	60	100	60	0	0	0	0	0	0	
	PIPE	2	278	10	27.8	60	166.8	0	0	30	83.4
		3	62	10	6.2	90	55.8	0	0	0	0
		4	62	10	6.2	90	55.8	0	0	0	0
		5	0	0	0	0	0	0	0	0	0
		6	0	0	0	0	0	0	0	0	0
WEIGHT	1	0	0	0	0	0	0	0	0	0	
	PIPE	2	0	0	0	0	0	0	0	0	0
		3	0	0	0	0	0	0	0	0	0
		4	0	0	0	0	0	0	0	0	0
		5	0	0	0	0	0	0	0	0	0
DRILL	1	0	0	0	0	0	0	0	0	0	
	COLLARS	2	0	0	0	0	0	0	0	0	0
		3	0	0	0	0	0	0	0	0	0
		4	0	0	0	0	0	0	0	0	0
		5	0	0	0	0	0	0	0	0	0
TOTAL		462	0	100.2	0	278.4	0	0	0	83.4	

BBL OIL=	3.958848	*	HRS OPEN	1.75	=	BBL/DAY	54.292773
BBL WATER=	0	*			=		0
BBL MUD=	1.185948						
BBL GAS =	1.424844						





DRILL STEM TEST REPORT

Prepared For: **Pioneer Resources**

177 W. Limestone Rd
Phillipsburg, KS 67661

ATTN: Roger Wells

16-8-23 Graham co KS

#1 Jones

Start Date: 2001.01.07 @ 14:50:00

End Date: 2001.01.07 @ 20:30:00

Job Ticket #: 14152 DST #: 2

Trilobite Testing Inc.
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Pioneer Resources
177 W. Limestone Rd
Phillipsburg, KS 67661
ATTN: Roger Wells

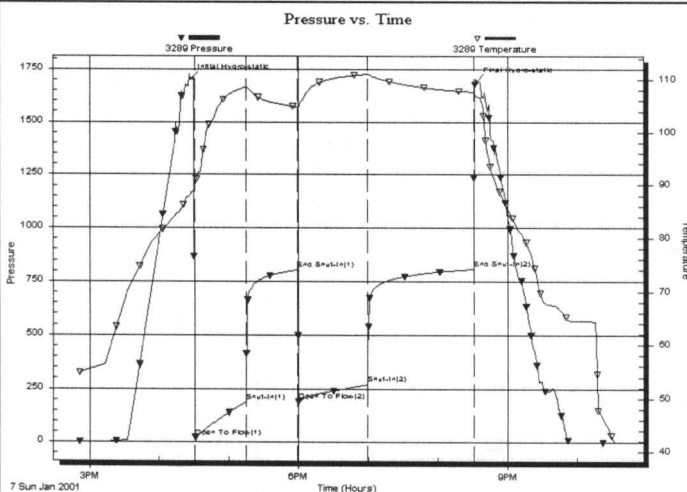
#1 Jones
16-8-23 Graham co KS
Job Ticket: 14152 **DST#: 2**
Test Start: 2001.01.07 @ 14:50:00

GENERAL INFORMATION:

Formation: **70' LKC**
Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole**
Time Tool Opened: **16:30:31** Tester: **Dan Bangle**
Time Test Ended: **20:30:00** Unit No: **11**
Interval: **3510.00 ft (KB) To 3528.00 ft (KB) (TVD)** Reference Elevations: **2188.00 ft (KB)**
Total Depth: **3528.00 ft (KB)** **2183.00 ft (CF)**
Hole Diameter: **7.88 inches** Hole Condition: **Fair** KB to GR/CF: **5.00 ft**

Serial #: **3289** Inside
Press@RunDepth: **268.09 psig @ 3511.00 ft (KB)** Capacity: **7000.00 psig**
Start Date: **2001.01.07** End Date: **2001.01.07** Last Calib.: **2001.01.07**
Start Time: **14:51:03** End Time: **22:34:01** Time On Btm: **2001.01.07 @ 16:27:01**
Time Off Btm: **2001.01.07 @ 20:33:31**

TEST COMMENT: 140 Gas in pipe IF-Strong B.O.B. in 19 min
FF-Strong B.O.B. in 24 min



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
96	1705.42	88.37	Initial Hydro-static
100	17.45	89.84	Open To Flow (1)
144	186.64	108.67	Shut-In(1)
188	804.22	104.78	End Shut-In(1)
189	189.18	104.70	Open To Flow (2)
248	268.09	111.11	Shut-In(2)
340	807.76	107.73	End Shut-In(2)
343	1693.27	106.81	Final Hydro-static

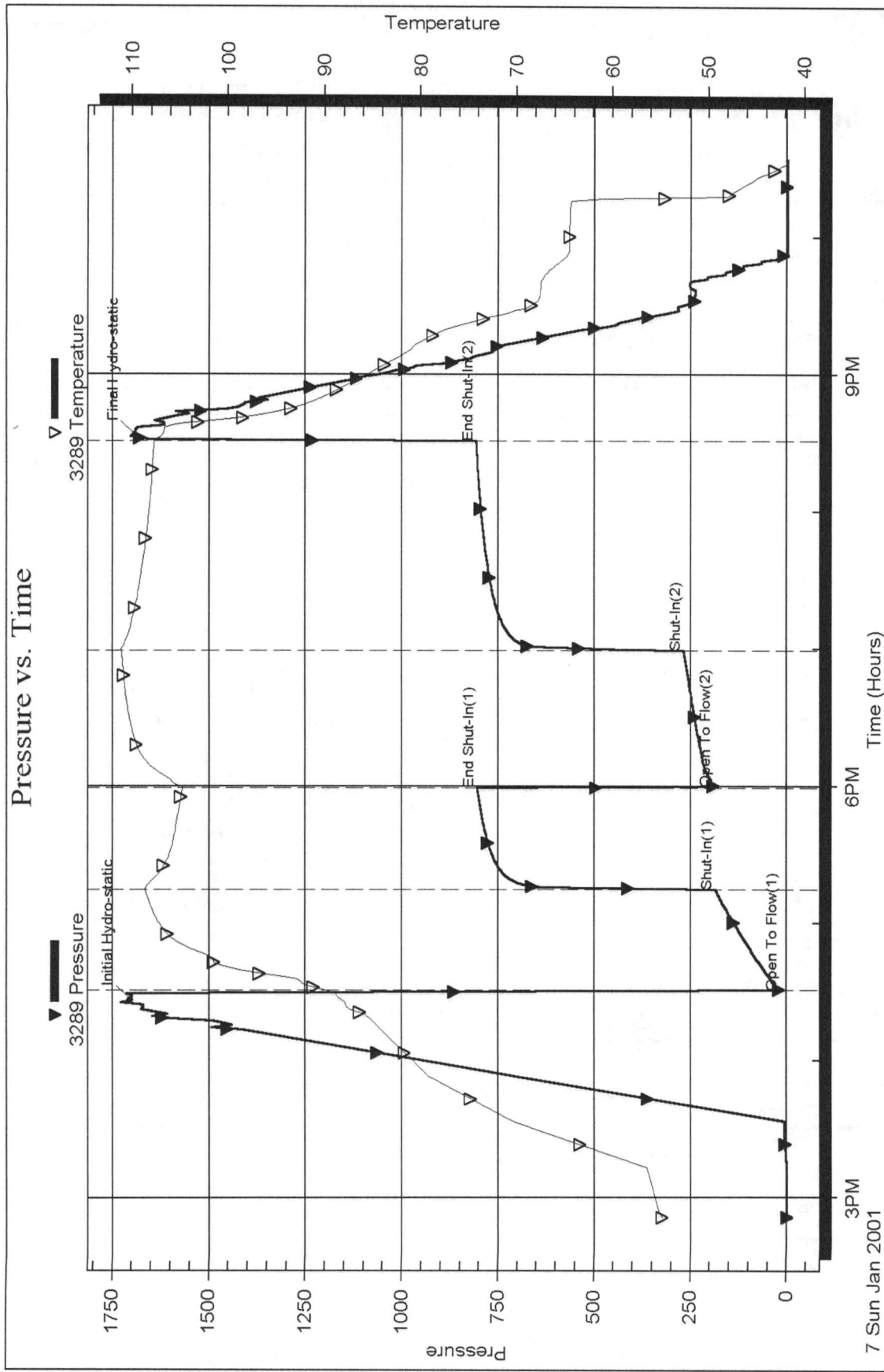
Recovery

Length (ft)	Description	Volume (bbl)
531.00	Muddy water	7.45
10.00	Clean oil	0.14

Gas Rates

	Choke(inches)	Pressure (psig)	Gas Rate (Mcf/d)
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Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Pioneer Resources**

177 W. Limestone Rd
Phillipsburg, KS 67661

ATTN: Roger Wells

16-8-23 Graham co KS

#1 Jones

Start Date: 2001.01.08 @ 09:43:00

End Date: 2001.01.08 @ 15:44:00

Job Ticket #: 14153 DST #: 3

Trilobite Testing Inc.

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DRILL STEM TEST REPORT

Pioneer Resources
177 W. Limestone Rd
Phillipsburg, KS 67661
ATTN: Roger Wells

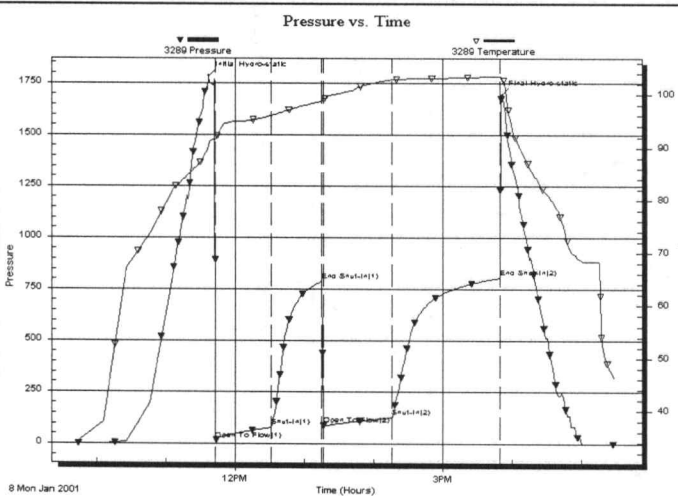
#1 Jones
16-8-23 Graham co KS
Job Ticket: 14153 DST#: 3
Test Start: 2001.01.08 @ 09:43:00

GENERAL INFORMATION:

Formation: 140' LKC
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:42:58
Time Test Ended: 15:44:00
Interval: 3558.00 ft (KB) To 3593.00 ft (KB) (TVD)
Total Depth: 3593.00 ft (KB)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole
Tester: Dan Bangle
Unit No: 11
Reference Elevations: 2188.00 ft (KB)
2183.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 3289 Inside
Press@RunDepth: 125.81 psig @ 3559.00 ft (KB)
Start Date: 2001.01.08 End Date: 2001.01.08
Start Time: 09:43:30 End Time: 17:28:58
Capacity: 7000.00 psig
Last Calib.: 2001.01.08
Time On Btm: 2001.01.08 @ 11:36:58
Time Off Btm: 2001.01.08 @ 15:50:58

TEST COMMENT: 120 Gas in pipe-
Rw .13 @ 80=63000 IF-Weak building to 9" fair
FF-Weak building to 5 1/2"-



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
114	1783.77	90.45	Initial Hydro-static
120	17.17	91.47	Open To Flow (1)
168	79.11	96.09	Shut-In(1)
212	788.90	98.80	End Shut-In(1)
213	87.02	99.08	Open To Flow (2)
272	125.81	102.90	Shut-In(2)
366	806.34	103.50	End Shut-In(2)
368	1693.89	103.19	Final Hydro-static

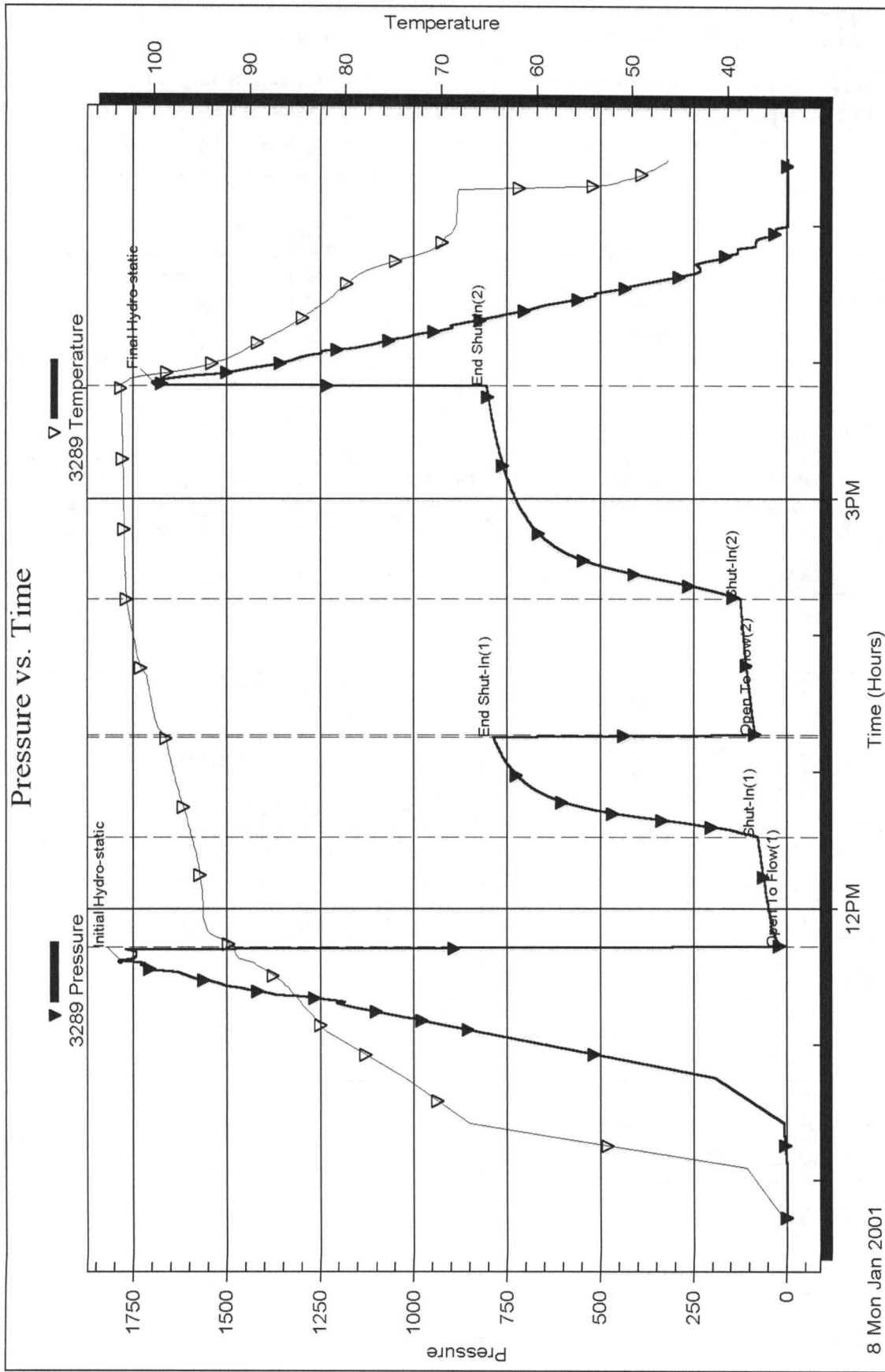
Recovery

Length (ft)	Description	Volume (bbl)
60.00	Muddy water 60% water 40% mud	0.42
60.00	Muddy water 40% water 60% mud	0.42
60.00	Slightly oil cut mud 5% oil 95% mud	0.42
60.00	Clean oil	0.42

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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Pressure vs. Time



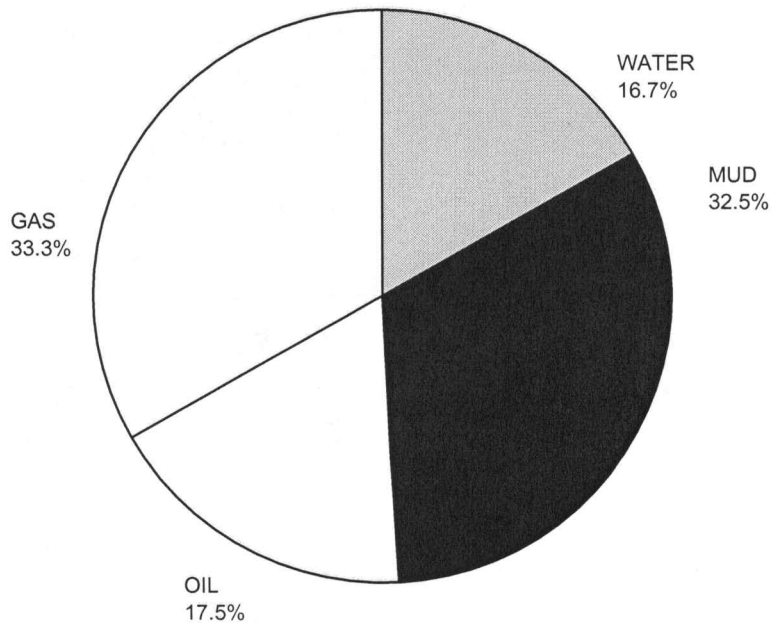
CALCULATED RECOVERY ANALYSIS

DST 3

TICKET 14153

SAMPLE		TOTAL	GAS		OIL		WATER		MUD	
#		FEET	%	FEET	%	FEET	%	FEET	%	FEET
DRILL	1	120	100	120	0	0	0	0	0	0
PIPE	2	60	0	0	100	60	0	0	0	0
	3	60	0	0	5	3	0	0	95	57
	4	60	0	0	0	0	40	24	60	36
	5	60	0	0	0	0	60	36	40	24
	6	0	0	0	0	0	0	0	0	0
WEIGHT	1	0	0	0	0	0	0	0	0	0
PIPE	2	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0
DRILL	1	0	0	0	0	0	0	0	0	0
COLLARS	2	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0
TOTAL		360	0	120	0	63	0	60	0	117

BBL OIL=	0.89586	*	HRS OPEN	1.75	=	BBL/DAY	12.28608
BBL WATER=	0.8532	*			=		11.701029
BBL MUD=	1.66374						
BBL GAS =	1.7064						





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177 W. Limestone Rd
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ATTN: Roger Wells

16-8-23 Graham co KS

#1 Jones

Start Date: 2001.01.09 @ 00:30:00

End Date: 2001.01.09 @ 04:30:00

Job Ticket #: 14154 DST #: 4

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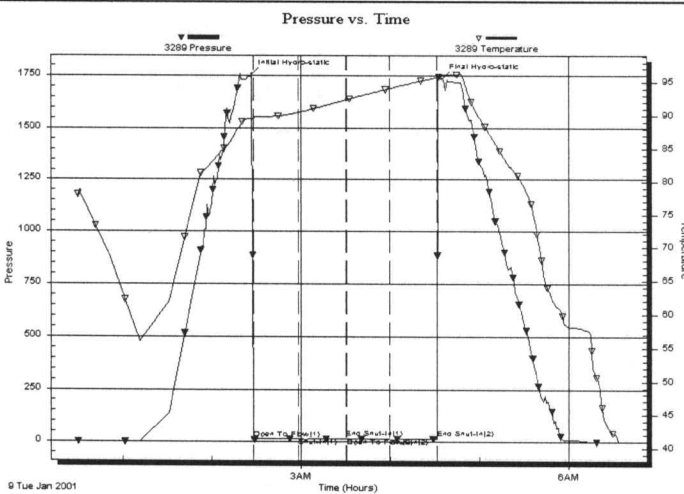
#1 Jones
16-8-23 Graham co KS
Job Ticket: 14154 DST#: 4
Test Start: 2001.01.09 @ 00:30:00

GENERAL INFORMATION:

Formation: 160' LKC
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:27:59
Time Test Ended: 04:30:00
Interval: 3591.00 ft (KB) To 3610.00 ft (KB) (TVD)
Total Depth: 3610.00 ft (KB)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole
Tester: Dan Bangle
Unit No: 11
Reference Elevations: 2188.00 ft (KB)
2183.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 3289 Inside
Press@RunDepth: 13.36 psig @ 3592.00 ft (KB)
Start Date: 2001.01.09 End Date: 2001.01.09
Start Time: 00:29:31 End Time: 06:33:59
Capacity: 7000.00 psig
Last Calib.: 2001.01.09
Time On Btm: 2001.01.09 @ 02:26:59
Time Off Btm: 2001.01.09 @ 04:34:59

TEST COMMENT: IF-Weak died in 5 min
FF-No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
118	1756.05	89.60	Initial Hydro-static
119	12.12	89.67	Open To Flow (1)
149	13.79	90.56	Shut-In(1)
181	16.71	92.42	End Shut-In(1)
181	13.42	92.46	Open To Flow (2)
210	13.36	94.17	Shut-In(2)
242	15.58	95.77	End Shut-In(2)
246	1733.66	96.18	Final Hydro-static

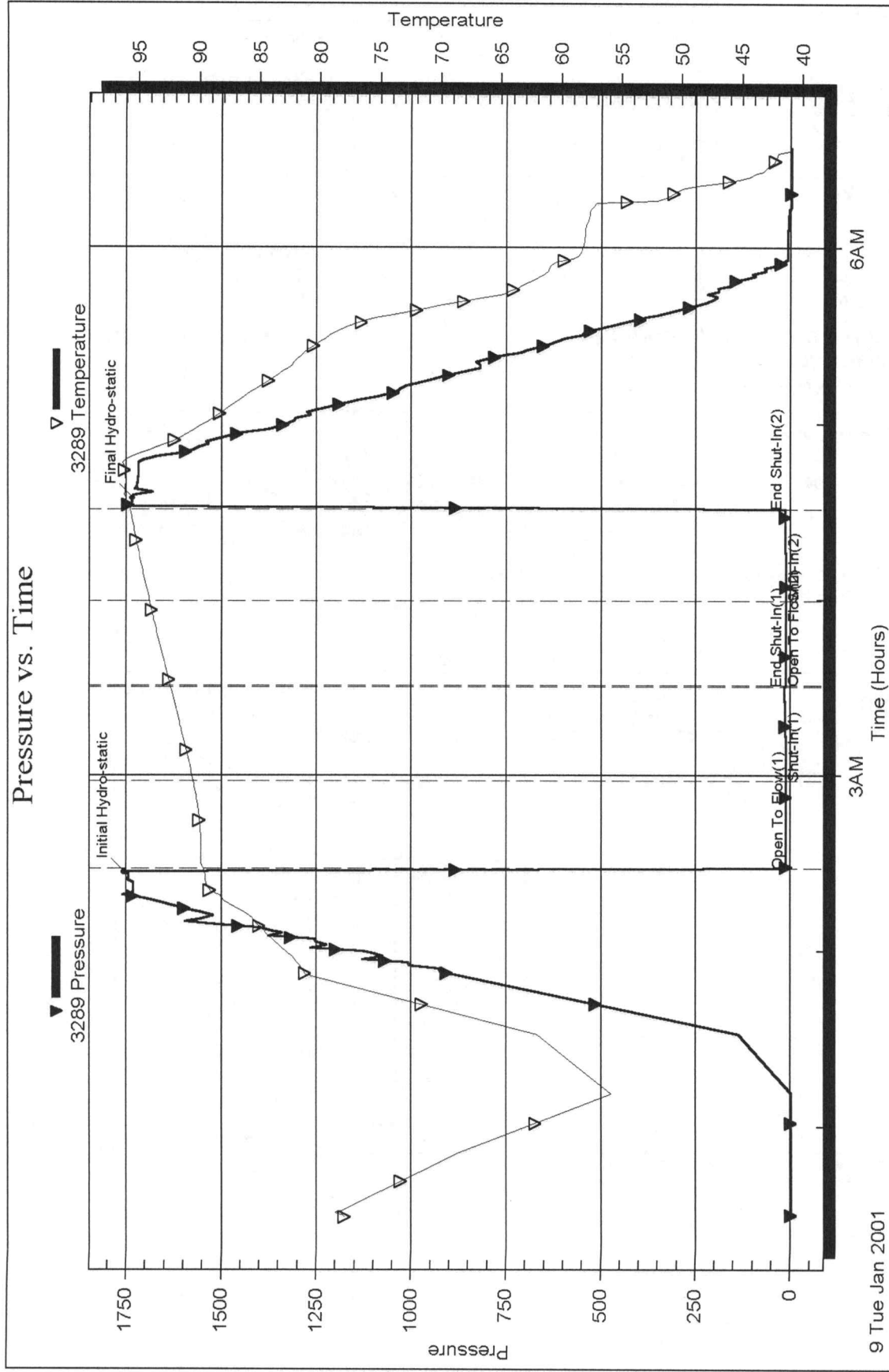
Recovery

Length (ft)	Description	Volume (bbl)
1.00	Drilling mud	0.01

Gas Rates

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

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Pioneer Resources**

177 W. Limestone Rd
Phillipsburg, KS 67661

ATTN: Roger Wells

16-8-23 Graham co KS

#1 Jones

Start Date: 2001.01.09 @ 13:26:00

End Date: 2001.01.09 @ 19:16:00

Job Ticket #: 14155 DST #: 5

Trilobite Testing Inc.

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DRILL STEM TEST REPORT

Pioneer Resources

#1 Jones

177 W. Limestone Rd
Phillipsburg, KS 67661

16-8-23 Graham co KS

Job Ticket: 14155

DST#: 5

ATTN: Roger Wells

Test Start: 2001.01.09 @ 13:26:00

GENERAL INFORMATION:

Formation: 180' LKC

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:15:16

Time Test Ended: 19:16:00

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 11

Interval: 3608.00 ft (KB) To 3630.00 ft (KB) (TVD)

Total Depth: 3630.00 ft (KB)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2188.00 ft (KB)

2183.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 3289 Inside

Press@RunDepth: 254.07 psig @ 3609.01 ft (KB)

Start Date: 2001.01.09

End Date:

2001.01.09

Start Time: 13:26:48

End Time:

21:24:46

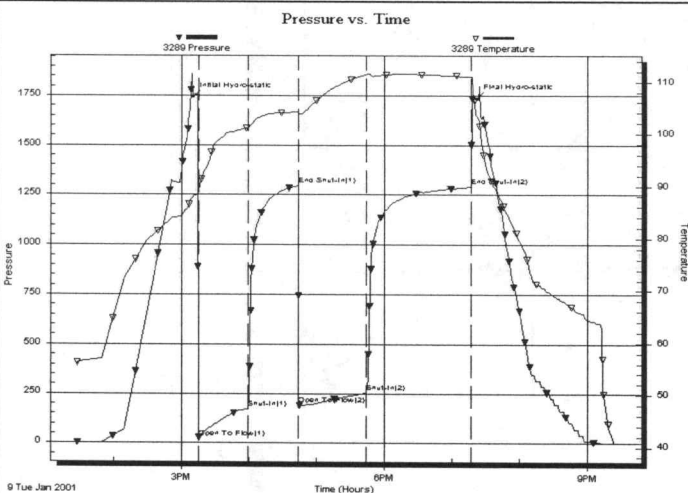
Capacity: 7000.00 psig

Last Calib.: 2001.01.09

Time On Btm: 2001.01.09 @ 15:10:16

Time Off Btm: 2001.01.09 @ 19:21:46

TEST COMMENT: 868 Gas in pipe IF-Strong B.O.B. in 8 min
FF-Strong B.O.B. in 8 min



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
104	1740.45	88.07	Initial Hydro-static
109	22.49	89.15	Open To Flow (1)
153	172.36	101.27	Shut-In(1)
197	1295.52	104.20	End Shut-In(1)
198	189.76	104.13	Open To Flow (2)
258	254.07	111.51	Shut-In(2)
350	1289.40	111.03	End Shut-In(2)
355	1733.60	103.46	Final Hydro-static

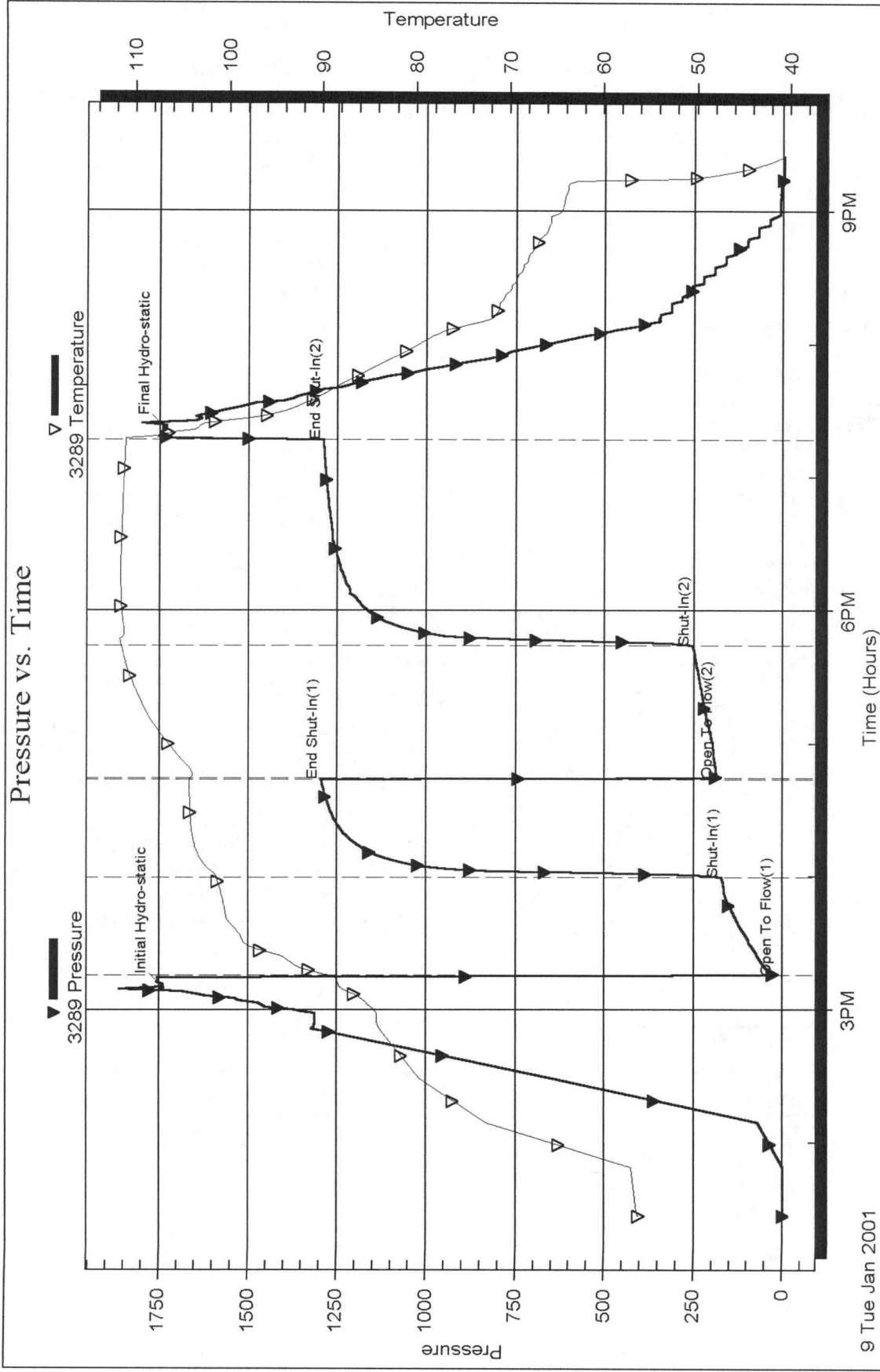
Recovery

Length (ft)	Description	Volume (bbl)
124.00	Mud cut gassy oil 10%g 80%o 10%w	0.88
558.00	Clean gassy oil 20%g 80%o	5.63

Gas Rates

	Choke(inches)	Pressure (psig)	Gas Rate (Mcf/d)
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Pressure vs. Time



CALCULATED RECOVERY ANALYSIS

DST 5

TICKET 14155

SAMPLE		TOTAL	GAS		OIL		WATER		MUD	
#		FEET	%	FEET	%	FEET	%	FEET	%	FEET
DRILL PIPE	1	868	100	868	0	0	0	0	0	0
	2	558	20	111.6	80	446.4	0	0	0	0
	3	124	10	12.4	80	99.2	0	0	10	12.4
	4	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0	0
WEIGHT PIPE	1	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0
DRILL COLLARS	1	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0
TOTAL		1550	0	992	0	545.6	0	0	0	12.4

BBL OIL=	7.758432	*	HRS OPEN	=	BBL/DAY
BBL WATER=	0	*	1.75	=	106.40135
BBL MUD=	0.176328				0
BBL GAS =	14.10624				

