

COMPANY : UMC PETROLEUM CORP.
LEASE : RAINIER
WELL NO. : # 1
FIELD : WILDCAT
COUNTY/STATE : LEA / NEW MEXICO

TEST DATE : 12/01/97
D.S.T. NO. : 3
TEST TKT. NO. : 19875
INVOICE NO. : 18152
ORDER NO. :

FORMATION TEST REPORT



CORPORATE OFFICE:

ABILENE, TEXAS
P.O. BOX 172-79604
915-673-2771

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MIDLAND OFFICE
3218 COMMERCIAL DR. 79701
915-570-0421

GRAHAM OFFICE
P.O. BOX 543-76450
817-549-5681



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FORMATION : DEVONIAN
INTERVAL (ft) : 11634 TO 11716
TOTAL DEPTH (ft): 11716
ELEVATION (ft) :

HOLE SIZE (in) : 7.875
DRILL PIPE ID (in) : 3.75
DRILL COLLAR ID(in): 2.25
DRILL COLLAR feet : 683

ANCHOR LENGTH (ft): 82
TOOL LENGTH (ft) : 67
TOOL O.D. (in) : 5
PACKER SIZE (in) : 7.000

RECORDER DATA
86973

TOP RECORDER: IN
RECORDER NO. : 6232
CAPACITY (psi): 6975
DEPTH (ft) : 11615
CLOCK NO. : 12709
DURATION (hrs): 24

BOTTOM RECORDER: OUT
RECORDER NO. : 86973
CAPACITY (psi): 10000
DEPTH (ft) : 11626
CLOCK NO. : 86973
DURATION (hrs): 96

MUD PROPERTIES

MUD TYPE : SALT CHEM-GEL
MUD WT. (#/gal) : 9.90

WATER LOSS (cc) : 6.00
FILTER CAKE (in) : 2/32
VISCOSITY (sec) : 46

CHLORIDE PPM : 114000
RESISTIVITY(ohm-m): .050

EQUIPMENT DATA

CONVENTIONAL : YES
STRADDLE : NO
SELECTIVE ZONE : NO
SAMPLE CHAMBER : YES
GAS ANALYSIS : NO

ROTARY JARS : YES
NO. OF PACKERS : 2
SAFETY JOINT : YES
CIRCULATING SUB : YES
REVERSED OUT : YES

MULTIFLOW : NO
MILEAGE : NO
OPERATOR TIME : NO
OTHER : YES
AMERADA ELECTRONIC

SUCCESSFUL : YES

PACKER FAILURE : NO
TOOL PLUG : NO

DECIDED NOT TO TEST : NO

FAIL TO REACH BOTTOM : NO

TIME INTERVAL DATA (min)

TOOL OPENED : 9:35 AM

TOTAL TEST TIME: 319

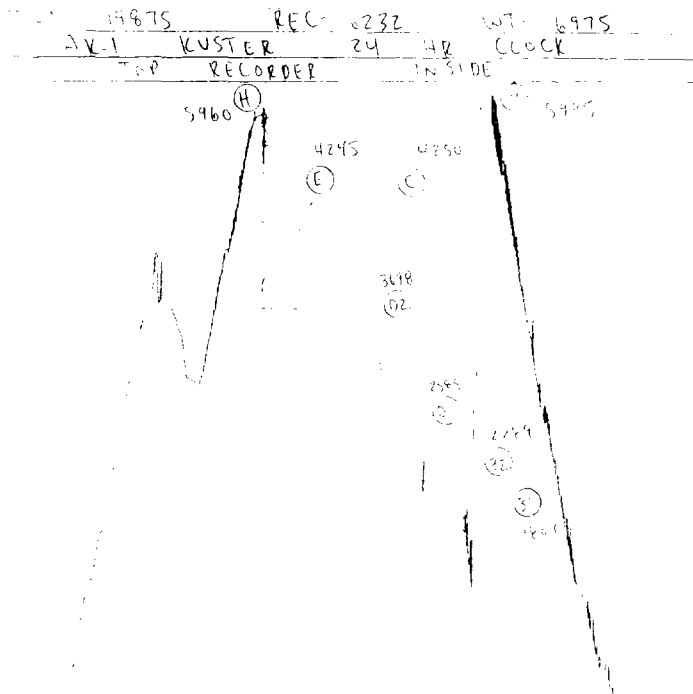
INITIAL FLOW : 13
SECOND FLOW : 67
THIRD FLOW :

INITIAL SHUT-IN: 60
SECOND SHUT-IN : 180
THIRD SHUT IN :

TEST TOOL OPERATOR: RANDY MYERS



		CORRECTED READING	FIELD READING
A	INITIAL HYDROSTATIC:	5995 PSI	5983 PSI
B-1	INITIAL FIRST FLOW :	1801 PSI	1472 PSI
B-2	FINAL FIRST FLOW :	2289 PSI	2211 PSI
C	FIRST SHUT-IN :	4250 PSI	4222 PSI
D-1	INITIAL SECOND FLOW:	2585 PSI	2473 PSI
D-2	FINAL SECOND FLOW :	3698 PSI	3664 PSI
E	SECOND SHUT-IN :	4245 PSI	4222 PSI
H	FINAL HYDROSTATIC :	5960 PSI	5914 PSI



RECOVERY DATA

PIPE RECOVERY

B.H. TEMP. (deg F) : 186

SAMPLE CHAMBER

700 FT. OF GAS IN PIPE
PULLED TO FLUID @ 8575 FT. & REV. IN TANK & PIT EST;
118 BBLS. OF TOTAL FLUID
70 BBLS. OF OIL & GAS CUT MUD (70% OIL)
12 BBLS. OF FREE OIL (43.5 GRAVITY @ 60 DEGREES)
36 BBLS. OF SULPHUR WATER
68,000 PPM CHLORIDES- .091 OHMS @ 85 DEGREES

3200 LBS. OF PRESSURE
3.1 CU. FT. OF GAS
900 CC'S FREE OIL
43.5 GRAVITY @ 60 DEGREES
300 CC'S SULPHUR WATER
68,000 PPM CHLORIDES
.091 OHMS @ 85 DEGREES

TEST REMARKS

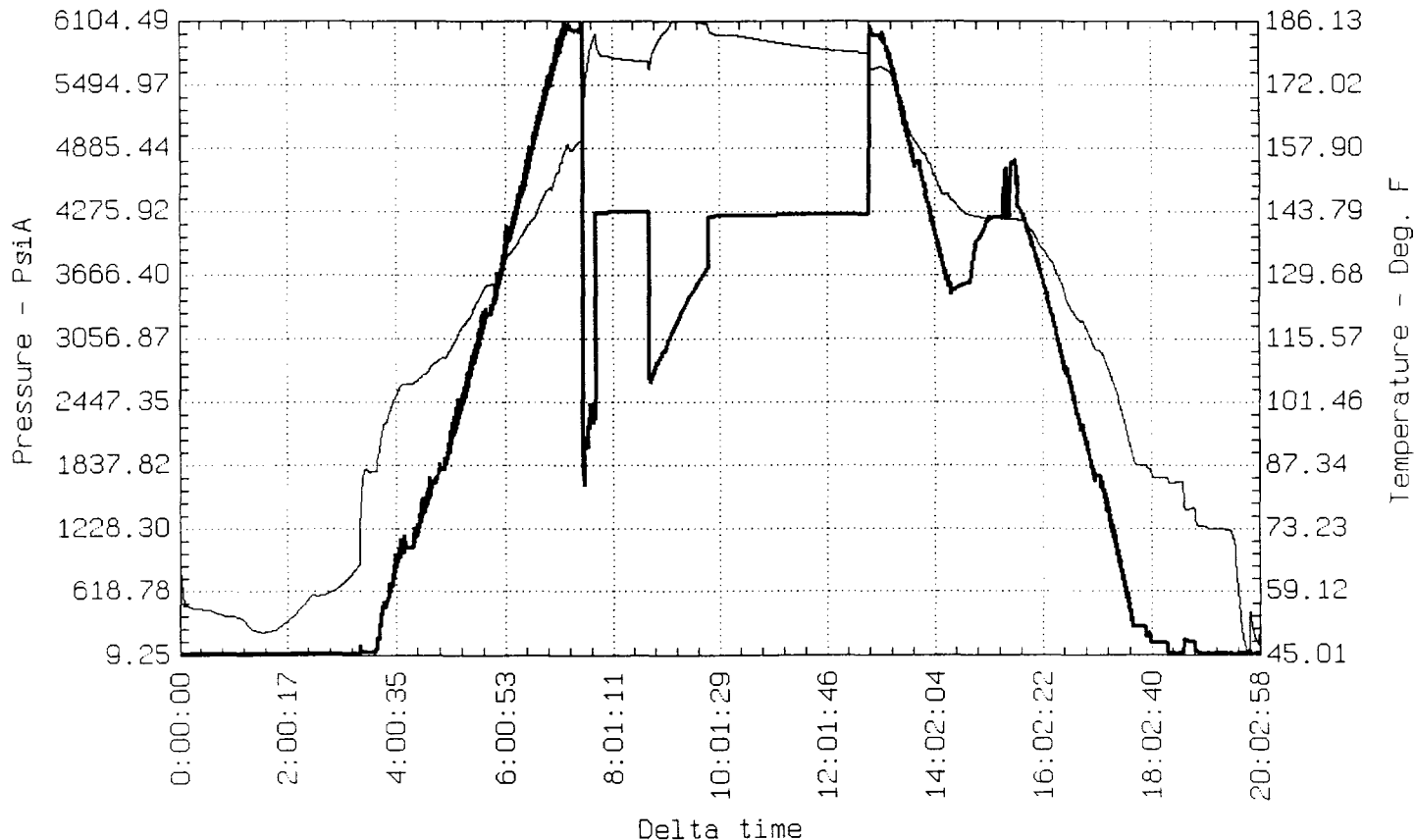
TOOL OPENED WITH VERY WEAK BLOW WHICH INCREASED TO 5 OZS. IN 3 MIN., 11 OZS. IN 5 MIN., 15 OZS. IN 10 MIN. & 17 OZS. AT END OF THE 15 MIN. FIRST FLOW. REOPENED TOOL WITH WEAK BLOW WHICH INCREASED TO 2.25 LBS. ON 1/8" CHOKE IN 15 MIN., 1.5 LBS. ON 1/4" IN 30 MIN., DECREASED TO .25 LBS. ON 1/4" IN 45 MIN. & .125 LBS. ON 3/16" AT END OF THE 65 MIN. FINAL FLOW.

LOGGED PRESSURE / TEMPERATURE DATA

File name: UMC PET3

Company : UMC PETROLEUM CORP.
Client : DAVID RICE
Gauge number : 86973
Well name : RAINIER STATE
Well number : 1
Test number : 3
Field name : WILDCAT
Test operator: RANDY MYERS
Comments : 11,634 - 11,716 FT. DEVONIAN
:
:

Starting date: 12/01/97
time: 09:35:00





INCREMENTAL PRESSURE DATA

RECORDER NO : 86973

RECORDER CAPACITY : 10000 psi

RECORDER DEPTH : 11626 ft

ELAPSED TIME ---MIN----	TOTAL FLOW TIME, T ---MIN----	INCREMENTAL SHUT-IN TIME, DT ---MIN----	(T+DT)/DT (HORNER) -----	PRESSURE ---PSIG---	DELTA P ---PSIG---
FIRST FLOW					
.0	.0			1955.00	.00
2.0	2.0			2043.88	88.88
4.0	4.0			2050.83	95.83
6.0	6.0			2231.73	276.73
8.0	8.0			2305.17	350.17
10.0	10.0			2310.89	355.89
12.0	12.0			2319.15	364.15
13.3	13.3			2324.40	369.40
FIRST SHUT-IN					
13.3	13.3	.00	.000	2324.40	.00
13.8	13.3	.50	27.520	4256.61	1932.21
14.3	13.3	1.00	14.260	4253.93	1929.53
14.8	13.3	1.50	9.840	4255.53	1931.13
15.3	13.3	2.00	7.630	4258.18	1933.78
15.8	13.3	2.50	6.304	4259.97	1935.57
16.3	13.3	3.00	5.420	4261.33	1936.93
16.8	13.3	3.50	4.789	4262.42	1938.02
17.3	13.3	4.00	4.315	4263.23	1938.83
17.8	13.3	4.50	3.947	4263.65	1939.25
18.3	13.3	5.00	3.652	4264.03	1939.63
19.3	13.3	6.00	3.210	4264.73	1940.33
20.3	13.3	7.00	2.894	4265.20	1940.80
21.3	13.3	8.00	2.658	4265.61	1941.21
22.3	13.3	9.00	2.473	4266.15	1941.75
23.3	13.3	10.00	2.326	4266.47	1942.07
25.3	13.3	12.00	2.105	4266.92	1942.52
27.3	13.3	14.00	1.947	4267.30	1942.90
29.3	13.3	16.00	1.829	4267.70	1943.30
31.3	13.3	18.00	1.737	4267.90	1943.50
33.3	13.3	20.00	1.663	4268.26	1943.86
36.3	13.3	23.00	1.577	4268.80	1944.40
39.3	13.3	26.00	1.510	4269.13	1944.73
42.3	13.3	29.00	1.457	4269.40	1945.00
45.3	13.3	32.00	1.414	4269.61	1945.21
48.3	13.3	35.00	1.379	4269.88	1945.48
51.3	13.3	38.00	1.349	4270.00	1945.60
54.3	13.3	41.00	1.323	4270.16	1945.76
57.3	13.3	44.00	1.301	4270.40	1946.00
60.3	13.3	47.00	1.282	4270.50	1946.10
63.3	13.3	50.00	1.265	4270.60	1946.20
66.3	13.3	53.00	1.250	4270.70	1946.30
69.3	13.3	56.00	1.237	4270.80	1946.40
72.3	13.3	59.00	1.225	4270.90	1946.50
72.8	13.3	59.52	1.223	4271.00	1946.60



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RECORDER NO : 86973

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RECORDER DEPTH : 11626 ft

ELAPSED TIME ---MIN----	TOTAL FLOW TIME, T ---MIN----	INCREMENTAL SHUT-IN TIME, DT ---MIN----	(T+DT)/DT (HORNER) -----	PRESSURE ---PSIG---	DELTA P ---PSIG---
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SECOND FLOW

73.9	14.4			2667.10	.00
78.9	19.4			2737.87	70.77
83.9	24.4			2839.30	172.20
88.9	29.4			2927.65	260.55
93.9	34.4			2986.91	319.81
98.9	39.4			3095.48	428.38
103.9	44.4			3186.25	519.15
108.9	49.4			3276.70	609.60
113.9	54.4			3362.52	695.42
118.9	59.4			3450.60	783.50
123.9	64.4			3522.24	855.14
128.9	69.4			3595.87	928.77
133.9	74.4			3662.50	995.40
138.9	79.4			3727.80	1060.70
140.7	81.2			3747.00	1079.90

SECOND SHUT-IN

140.7	81.2	.00	.000	3747.00	.00
141.7	81.2	1.00	82.180	4224.98	477.98
142.7	81.2	2.00	41.590	4227.58	480.58
143.7	81.2	3.00	28.060	4228.70	481.70
144.7	81.2	4.00	21.295	4229.23	482.23
145.7	81.2	5.00	17.236	4229.76	482.76
146.7	81.2	6.00	14.530	4230.28	483.28
147.7	81.2	7.00	12.597	4230.72	483.72
148.7	81.2	8.00	11.148	4231.13	484.13
149.7	81.2	9.00	10.020	4231.58	484.58
150.7	81.2	10.00	9.118	4231.99	484.99
152.7	81.2	12.00	7.765	4232.85	485.85
154.7	81.2	14.00	6.799	4233.60	486.60
156.7	81.2	16.00	6.074	4234.17	487.17
158.7	81.2	18.00	5.510	4234.60	487.60
160.7	81.2	20.00	5.059	4235.20	488.20
163.7	81.2	23.00	4.530	4235.90	488.90
166.7	81.2	26.00	4.122	4236.56	489.56
169.7	81.2	29.00	3.799	4237.03	490.03
172.7	81.2	32.00	3.537	4237.60	490.60
175.7	81.2	35.00	3.319	4238.11	491.11
178.7	81.2	38.00	3.136	4238.70	491.70
181.7	81.2	41.00	2.980	4239.08	492.08

INCREMENTAL PRESSURE DATA

RECORDER NO : 86973

RECORDER CAPACITY : 10000 psi

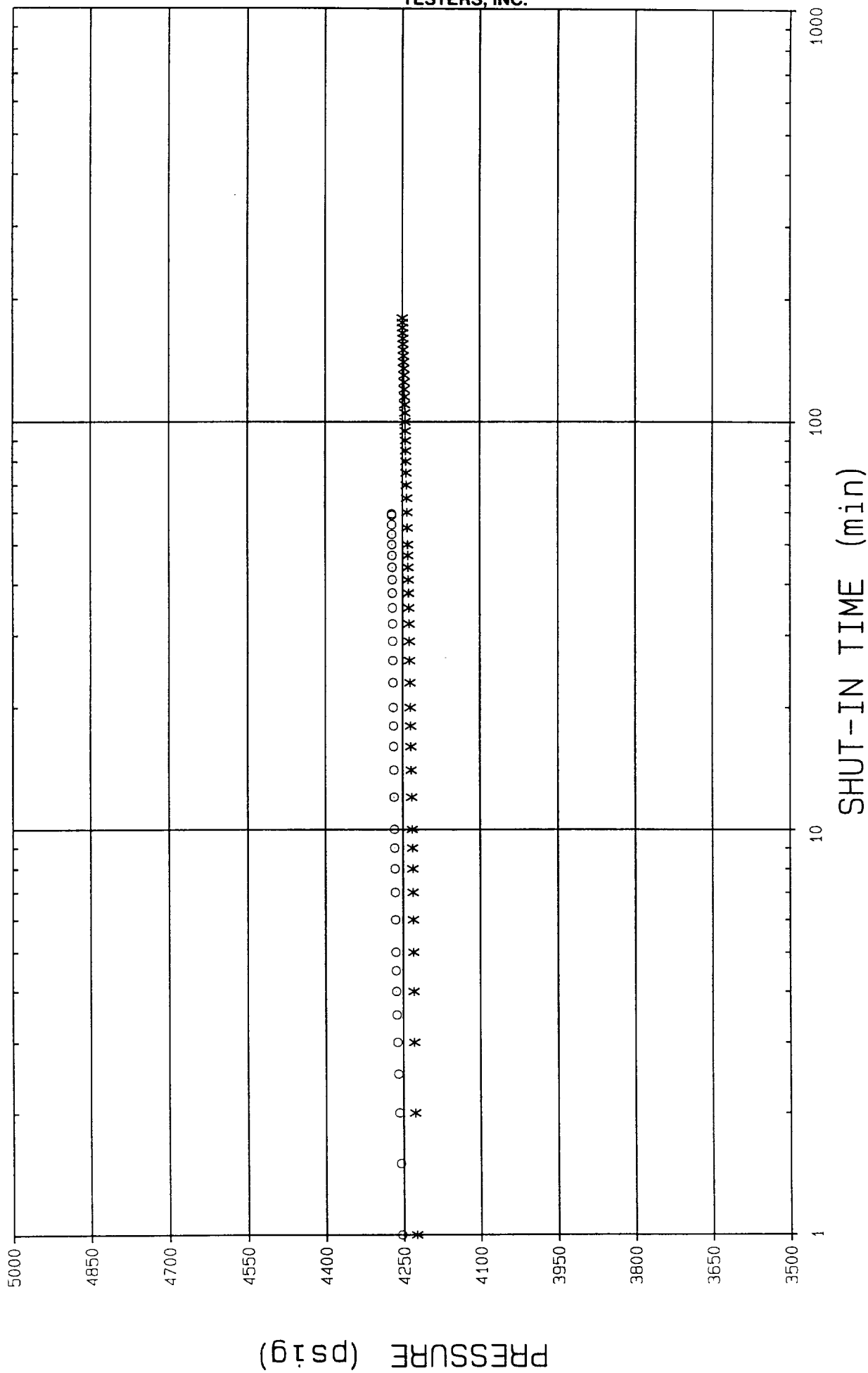
RECORDER DEPTH : 11626 ft

ELAPSED TIME ---MIN----	TOTAL FLOW TIME, T ---MIN----	INCREMENTAL SHUT-IN TIME, DT ---MIN----	(T+DT)/DT (HORNER) -----	PRESSURE ---PSIG---	DELTA P ---PSIG---
		SECOND SHUT-IN			
184.7	81.2	44.00	2.845	4239.50	492.50
187.7	81.2	47.00	2.727	4239.86	492.86
190.7	81.2	50.00	2.624	4240.20	493.20
195.7	81.2	55.00	2.476	4240.70	493.70
200.7	81.2	60.00	2.353	4241.13	494.13
205.7	81.2	65.00	2.249	4241.70	494.70
210.7	81.2	70.00	2.160	4242.40	495.40
215.7	81.2	75.00	2.082	4242.80	495.80
220.7	81.2	80.00	2.015	4243.30	496.30
225.7	81.2	85.00	1.955	4243.80	496.80
230.7	81.2	90.00	1.902	4244.18	497.18
235.7	81.2	95.00	1.855	4244.60	497.60
240.7	81.2	100.00	1.812	4245.00	498.00
245.7	81.2	105.00	1.773	4245.30	498.30
250.7	81.2	110.00	1.738	4245.80	498.80
255.7	81.2	115.00	1.706	4246.20	499.20
260.7	81.2	120.00	1.677	4246.50	499.50
265.7	81.2	125.00	1.649	4246.80	499.80
270.7	81.2	130.00	1.624	4247.10	500.10
275.7	81.2	135.00	1.601	4247.48	500.48
280.7	81.2	140.00	1.580	4247.91	500.91
285.7	81.2	145.00	1.560	4248.20	501.20
290.7	81.2	150.00	1.541	4248.60	501.60
295.7	81.2	155.00	1.524	4248.80	501.80
300.7	81.2	160.00	1.507	4249.20	502.20
305.7	81.2	165.00	1.492	4249.50	502.50
310.7	81.2	170.00	1.478	4249.80	502.80
315.7	81.2	175.00	1.464	4250.02	503.02
320.3	81.2	179.64	1.452	4250.10	503.10

REMARKS

THE INCREMENTAL DATA, PLOTS AND ANALYSIS ARE FROM THE ELECTRONIC RECORDER
PLEASE REFER TO THE DERIVATIVE DIAGNOSTICS FOR FURTHER INFORMATION

PRESSURE TIME



UMC PETROLEUM CORP.
RAINIER # 1

○ FIRST SHUT-IN
* SECOND SHUT-IN



Well Test Report

RigTesters, Inc.
ABILENE - MIDLAND - GRAHAM
UMC PETROLEUM CORP.

1

Well identification

Well ID	RAINER #1	Well location	N.W. BRONCO
County/District	LEA	State, Country	NEW MEXICO
Company	UMC PETROLEUM	Division	DENVER

Fluid properties

Prod/Inj fluid	OIL/WATER	GOR	850
Water cut	25%	Condensate yield	UNKNOWN
API gravity	43.5	Gas spec. grav.	0.67
Viscosity	0.37447 cp	Pseudo-critical T	376 deg R
Pseudo-critical P	666.38 psia	H2S mole fraction	UNKNOWN
CO2 mole fraction	UNKNOWN	N2 mole fraction	UNKNOWN
Compressibility(t)	15.597 e-6/psi	Formation vol factor	1.3624 RB/STB

Reservoir properties

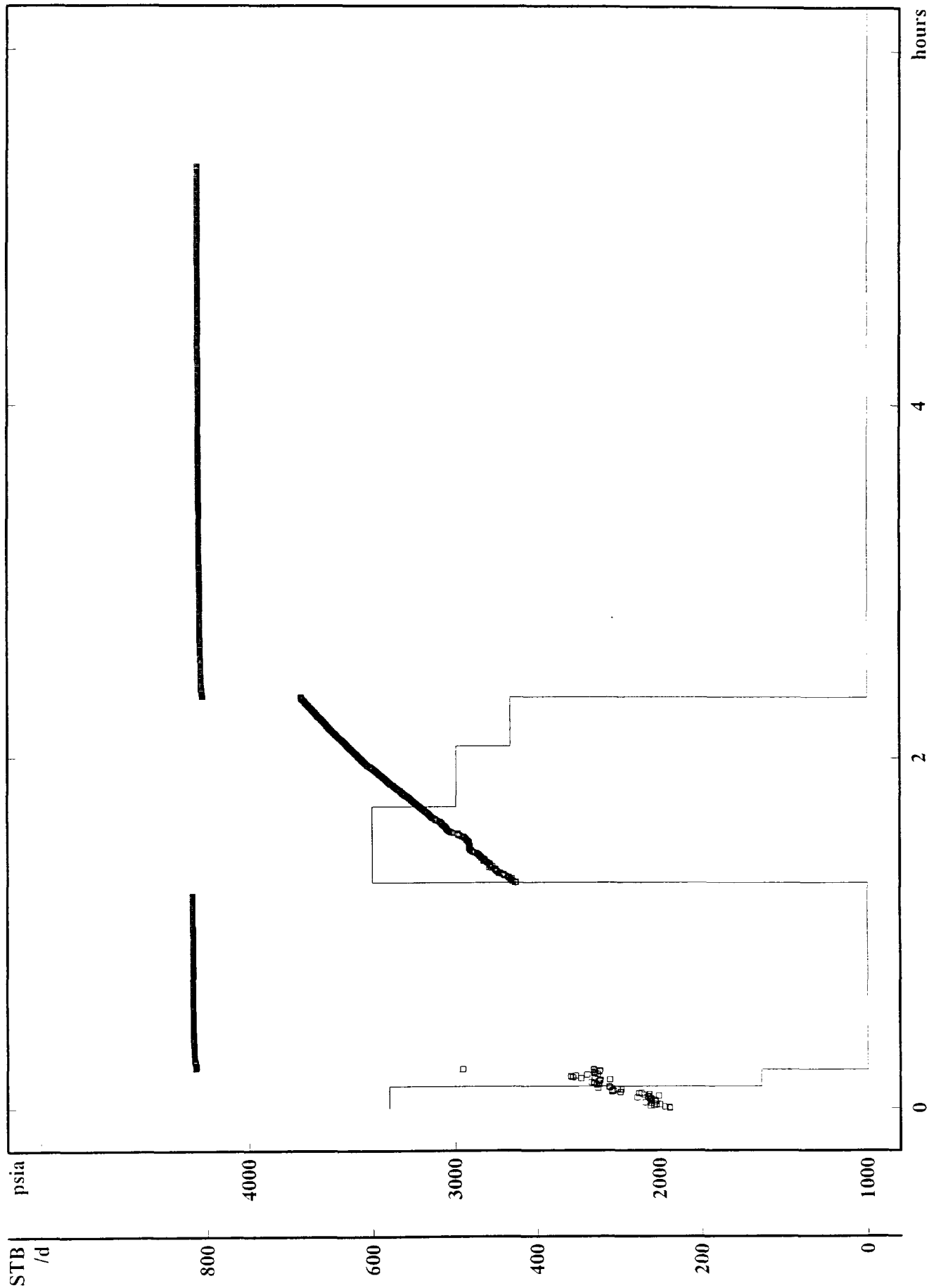
Porosity	0.14 frac	Formation thickness	16 ft
Wellbore radius	0.32813 ft	Prod-observer distance	N/A
Water-Oil Contact	UNKNOWN	Gas-Oil Contact	N/A
Gas-Water Contact	N/A	Rock compressibility	
Reservoir temperature	186 deg F	Pressure for properties	4271 psia

Comments

THE DERIVATIVES INDICATE A MULTIPLE POROSITY RESERVOIR WITH HIGH PERMEABILITY AND IMPROVING SKIN. BOTH SHUT-IN PERIODS HAD ACHIEVED RADIAL FLOW REGIME AS INDICATED. THE FLUCTUATIONS FROM RADIAL FLOW ON THE FINAL SHUT-IN IS INDICATIVE OF A MULTIPLE (PROBABLY FRACTURED/MATRIX & VUGULAR) POROSITY. THE MID & LATE TIME DATA IS EFFECTED BY LINEAR FLOW WHICH IS TYPICAL OF FRACTURED POROSITY. THE FIXED PARAMETERS USED WERE AN EST. 14% POROSITY, 16 FT. OF NET PAY REPORTED AND AN AVERAGE PRODUCTION OF 510 BBLS. OF FLUID (75% OIL - 25% WATER; ACCORDING TO SAMPLE CHAMBER RECOVERY) FOR THE FINAL FLOW PERIOD. THE RATES WERE BASED ON DENSITY OF FLUID RECOVERED VS. FLOWING PRESSURES. RADIUS OF INVESTIGATION CALCULATED TO APPROX. 1042 FT. FROM WELLBORE.

UMC PETROLEUM CORP. RAINIER #1

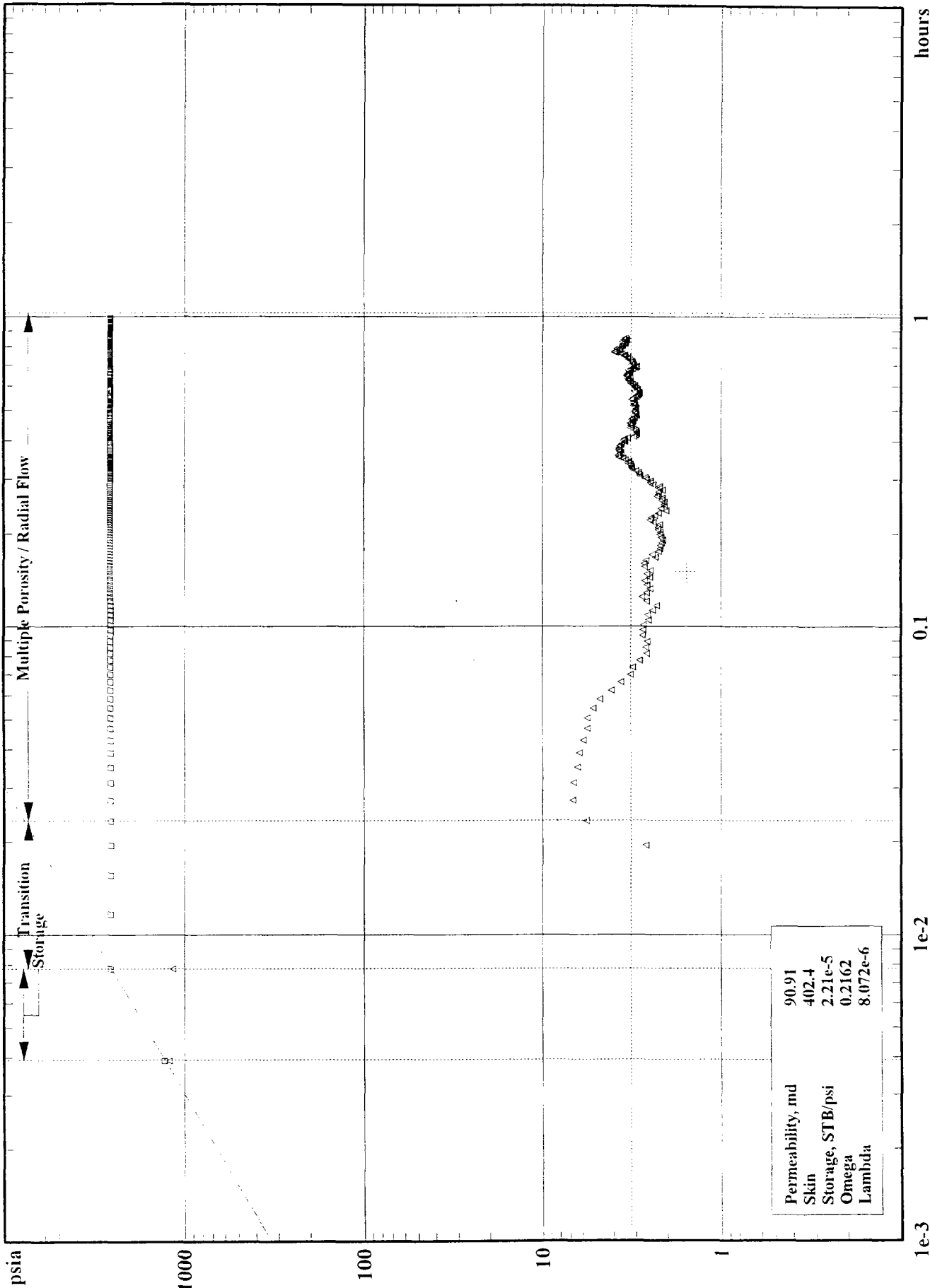
Pressure and flow rate vs time during test sequence



DST #3 11634 - 11716 FT. DEVONIAN

UMC PETROLEUM CORP. RAINIER #1

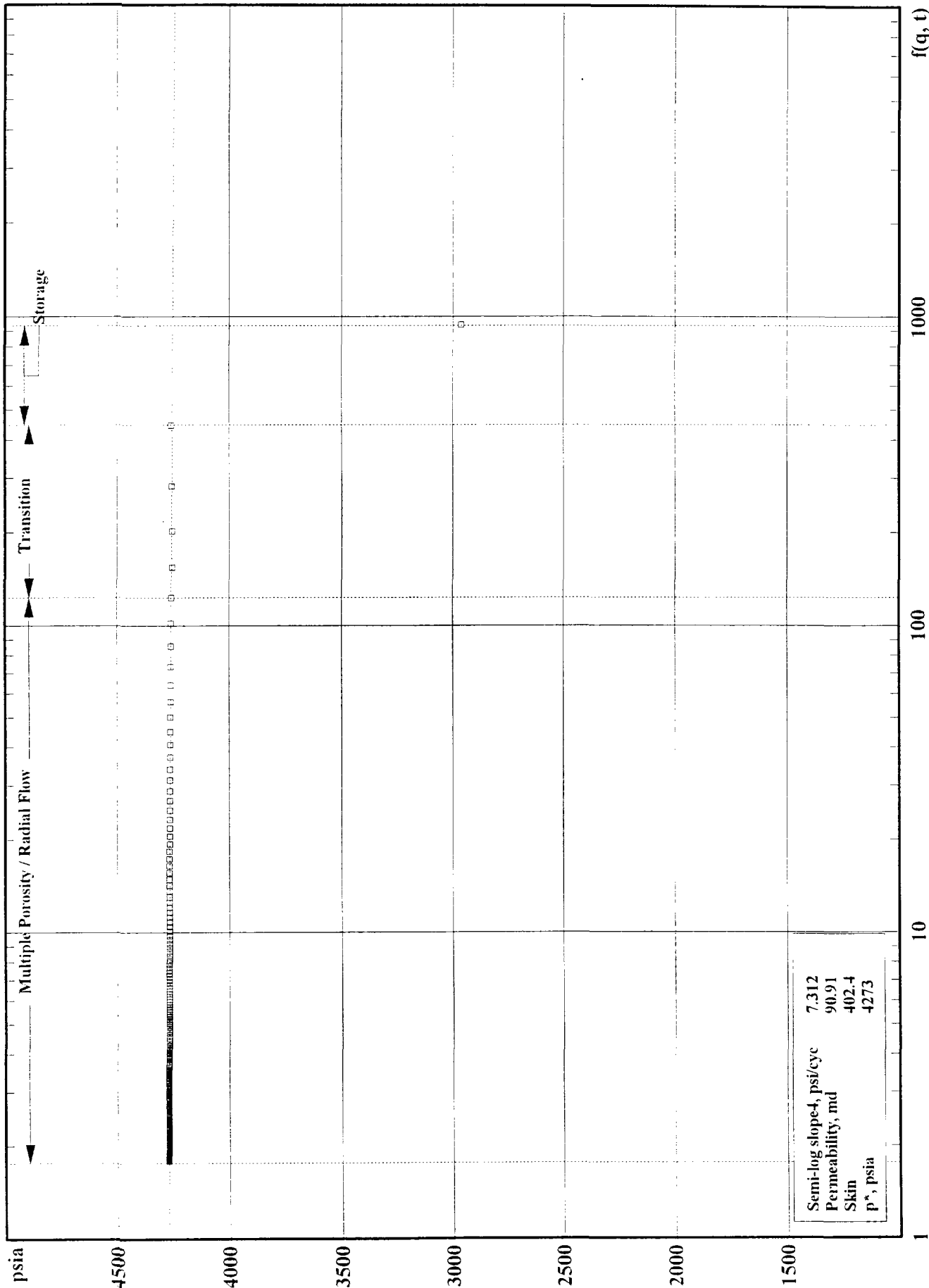
Diagnostic plot (pressure & time)



INITIAL SHUT-IN PERIOD DST#3

UMC PETROLEUM CORP. RAINIER #1

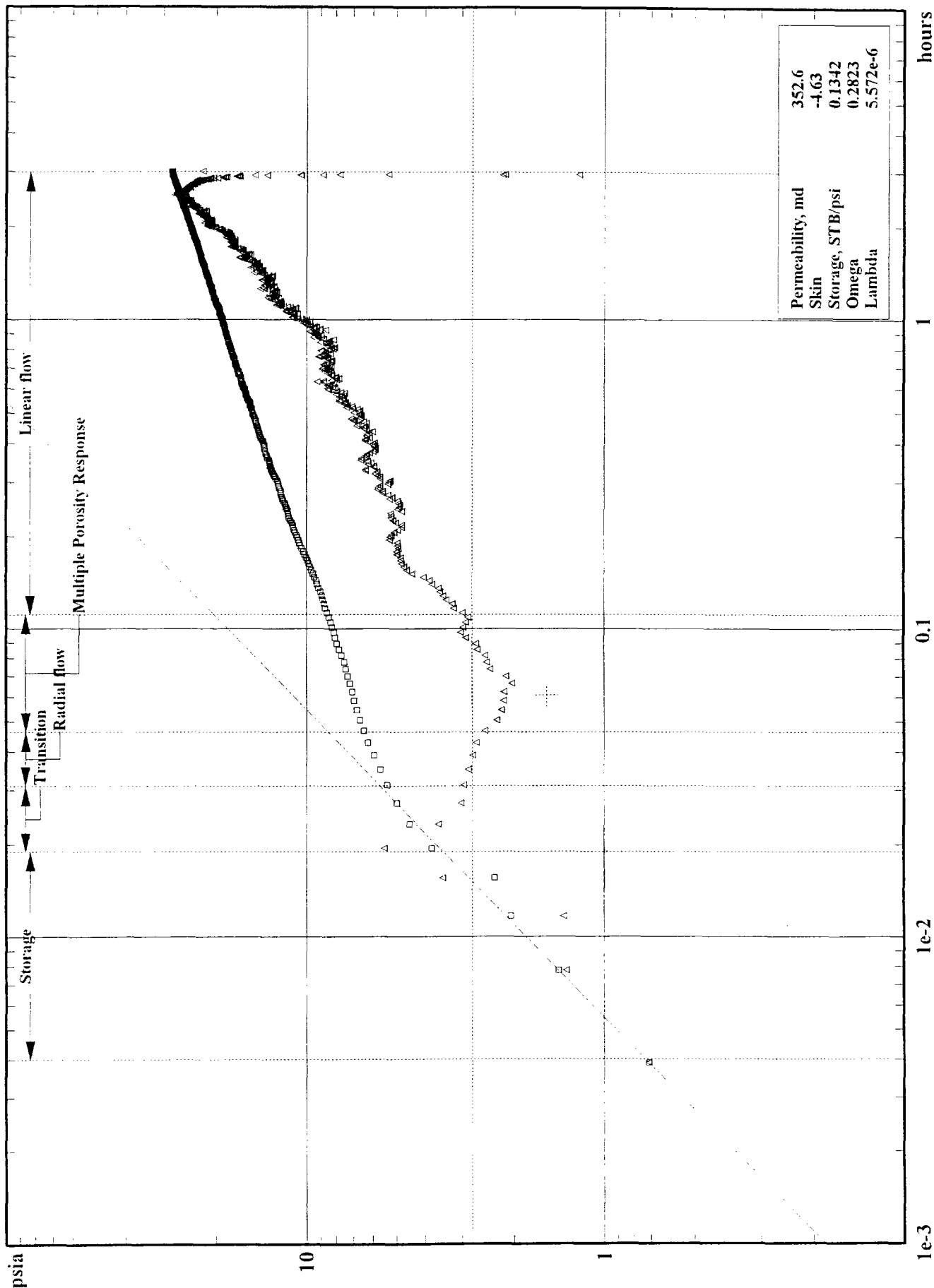
Variable rate Horner plot (pressure & time)



INITIAL SHUT-IN PERIOD DST#3

UMC PETROLEUM CORP. RAINIER #1

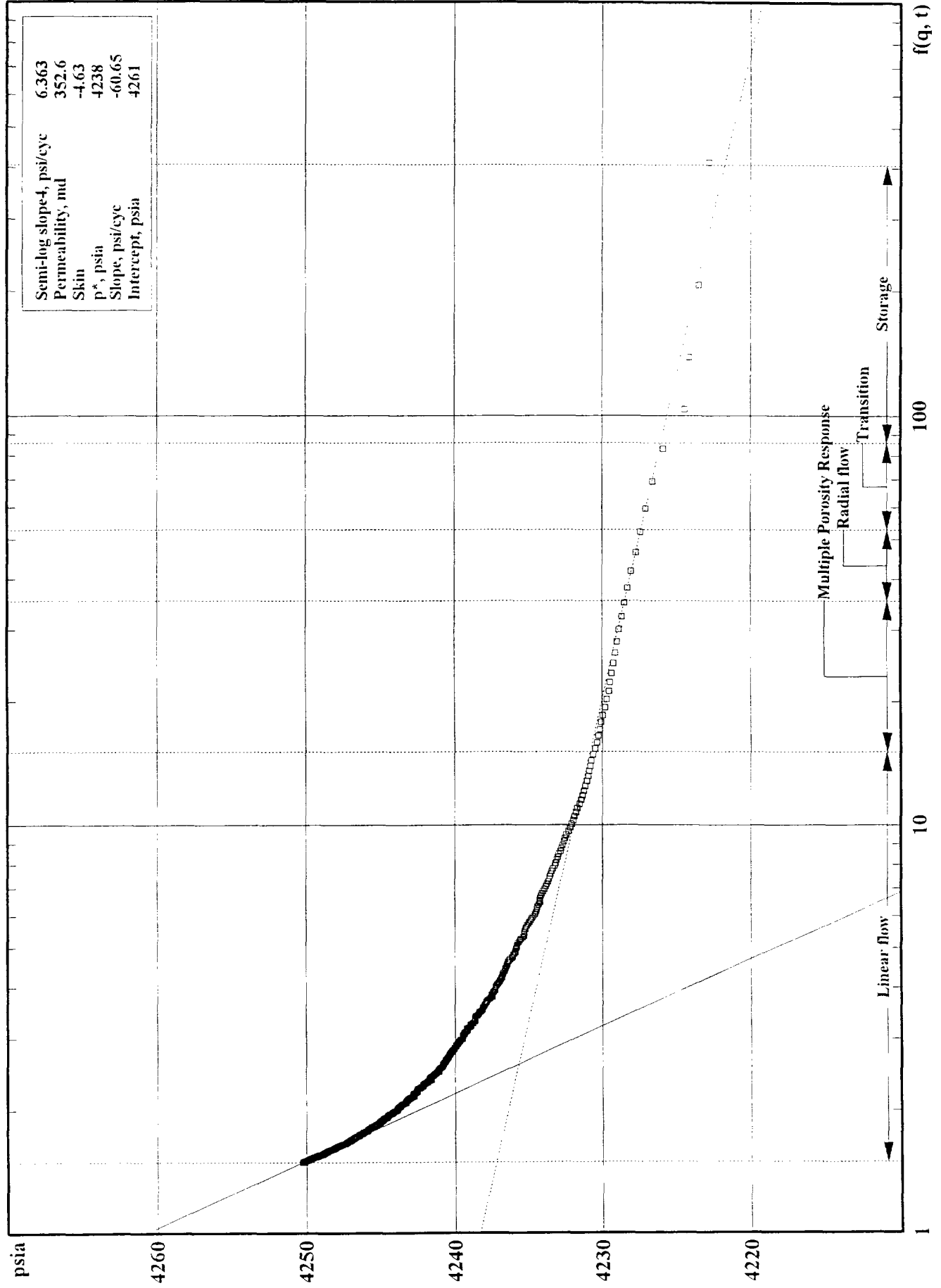
Diagnostic plot (pressure & time)



FINAL SHUT-IN PERIOD DST#3

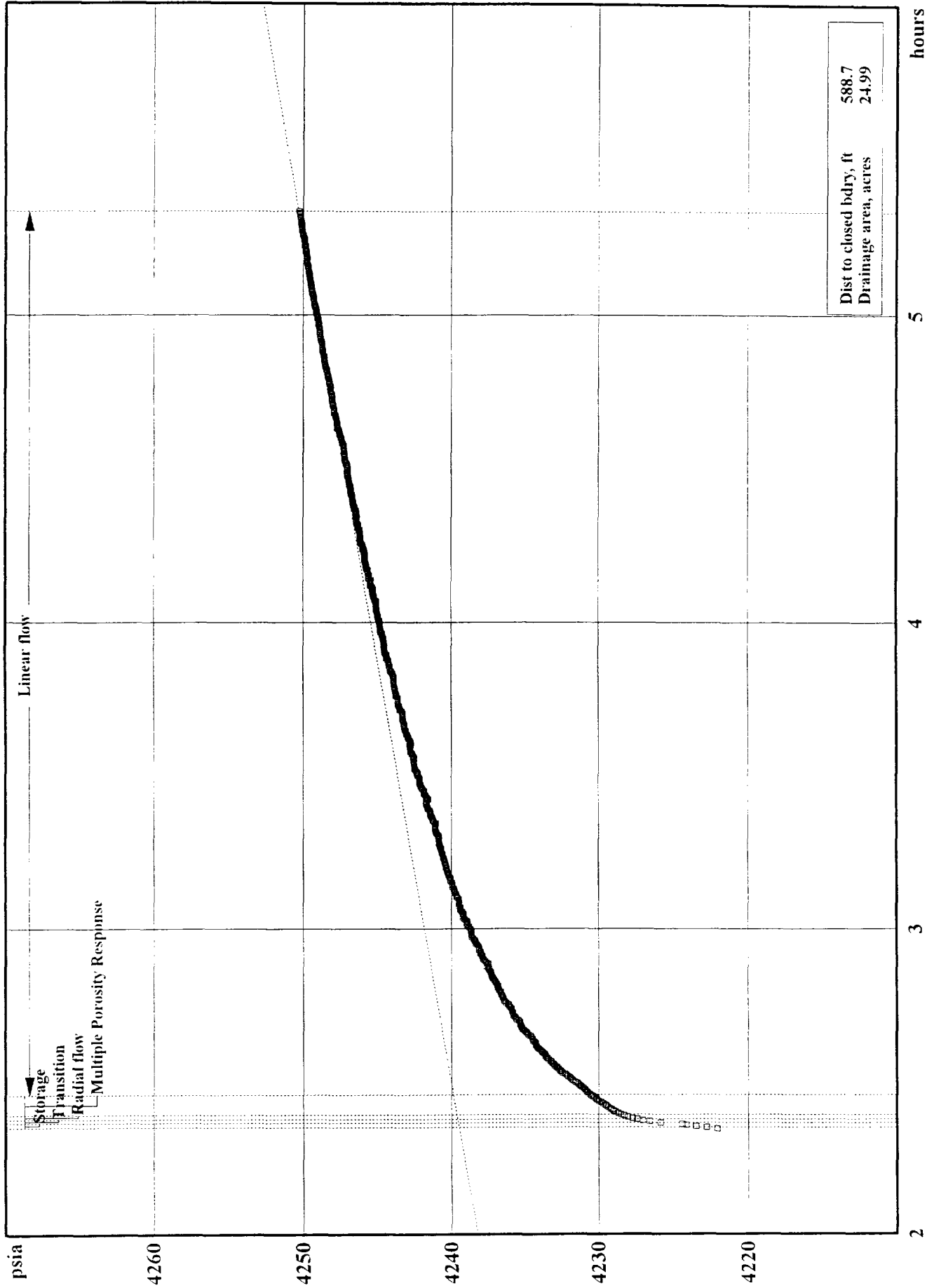
UMC PETROLEUM CORP. RAINIER #1

Variable rate Horner plot (pressure & time)



UMC PETROLEUM CORP. RAINIER #1

Cartesian plot (pressure & time)



FINAL SHUT-IN PERIOD DST#3