



Patterson Petroleum LP
Nathaniel 29 State #1
M-29-17s-34e, 660/S & 990/W
API # 30-025-37291

COMPANY : PATTERSON PETROLEUM L.P.
LEASE : NATHANIEL "29" STATE
WELL NO. : # 1
FIELD : VACUUM, MORROW
COUNTY/STATE : LEA / NEW MEXICO

TEST DATE : 08/27/05
D.S.T. NO. : 2
TEST TKT. NO. : 23403
INVOICE NO. : 21401
ORDER NO. :

FORMATION : CISCO
INTERVAL (ft) : 11029 TO 11054
TOTAL DEPTH (ft) : 11092
ELEVATION (ft) : 4085

HOLE SIZE (in) : 8.750
DRILL PIPE ID (in) : 3.64
DRILL COLLAR ID(in) : 2.25
DRILL COLLAR feet : 869
ANCHOR LENGTH (ft): 25
TOOL LENGTH (ft) : 71
TOOL O.D. (in) : 5
PACKER SIZE (in) : 7.50

RECORDER DATA
AK- IKUSTER / ZIPROBE

TOP RECORDER: IN
RECORDER NO. : 50014
CAPACITY (psi): 10000
DEPTH (ft) : 11039
CLOCK NO. : 50014
DURATION (hrs): 99

BOTTOM RECORDER: OUT
RECORDER NO. : 9628
CAPACITY (psi): 10000
DEPTH (ft) : 11041
CLOCK NO. : 9628
DURATION (hrs): 99

MUD PROPERTIES

MUD TYPE : S.GEL & STARCH
MUD WT. (#/gal) : 9.40

WATER LOSS (cc) : 4.80
FILTER CAKE (in) : 1/32
VISCOSITY (sec) : 41
CHLORIDE PPM : 117000
RESISTIVITY(ohm-m): .084

EQUIPMENT DATA

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

ROTARY JARS : YES
NO. OF PACKERS : 3
SAFETY JOINT : YES
CIRCULATING SUB : YES
REVERSED OUT : YES
MULTIFLOW : NO
MILEAGE : NO
OPERATOR TIME : YES
OTHER : YES
ELEC.RECORDERS(2)

SUCCESSFUL : YES

PACKER FAILURE : NO
TOOL PLUG : NO

DECIDED NOT TO TEST : NO

FAIL TO REACH BOTTOM : NO

TIME INTERVAL DATA (min)

TOOL OPENED : 11:50 PM

TOTAL TEST TIME: 456

INITIAL FLOW : 29
SECOND FLOW : 54
THIRD FLOW :

INITIAL SHUT-IN: 65
SECOND SHUT-IN : 308
THIRD SHUT IN :

TEST TOOL OPERATOR: TOMMY WILLIAMS

PATTERSON PETROLEUM L.P.



NATHANIEL "29" STATE # 1
D.S.T. NO. : 2

A INITIAL HYDROSTATIC:
B-1 INITIAL FIRST FLOW :
B-2 FINAL FIRST FLOW :
C FIRST SHUT-IN :
D-1 INITIAL SECOND FLOW:
D-2 FINAL SECOND FLOW :
E SECOND SHUT-IN :
H FINAL HYDROSTATIC :

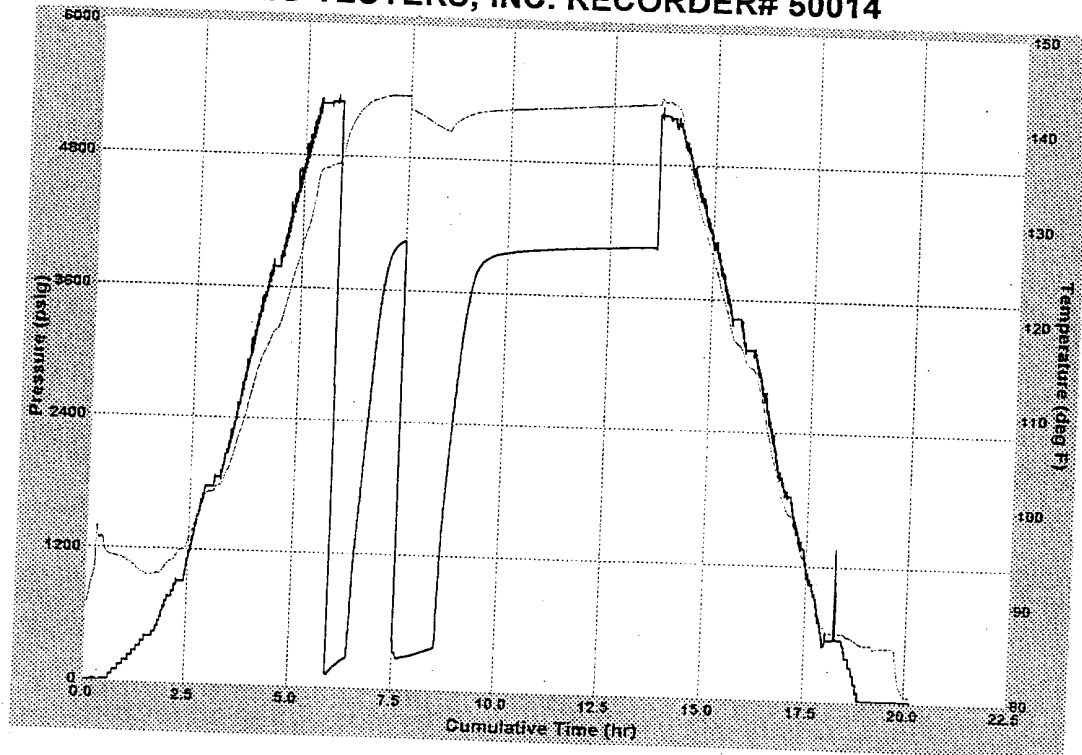
CORRECTED READING

5330 PSI
119 PSI
276 PSI
4064 PSI
283 PSI
388 PSI
4069 PSI
5262 PSI

FIELD READING

5330 PSI
118 PSI
276 PSI
4063 PSI
279 PSI
379 PSI
4069 PSI
5270 PSI

RIG TESTERS, INC. RECORDER# 50014



RECOVERY DATA

PIPE RECOVERY

B.H. TEMP. (deg F) : 143

SAMPLE CHAMBER

GAS TO SURFACE 50 MIN. INTO FINAL FLOW PERIOD
PULLED TO FLUID @ 1150 FT. & REVERSED IN PIT AN EST;
900 FT. OF FREE OIL (45 GRAVITY @ 81 DEGREES)
80 FT. OF OIL & GAS CUT MUD (25% OIL)
80 FT. OF FILTRATE WATER
87,000 MG/L CHLORIDES- .108 OHMS @ 85 DEGREES
90 FT. OF OIL CUT MUD (10% OIL)-BELOW CIRC SUB

375 LBS. OF PRESSURE
5.00 CU. FT. OF GAS
600 CC'S OF FREE OIL
43.2 GRAVITY @ 60 DEGREES

TEST REMARKS

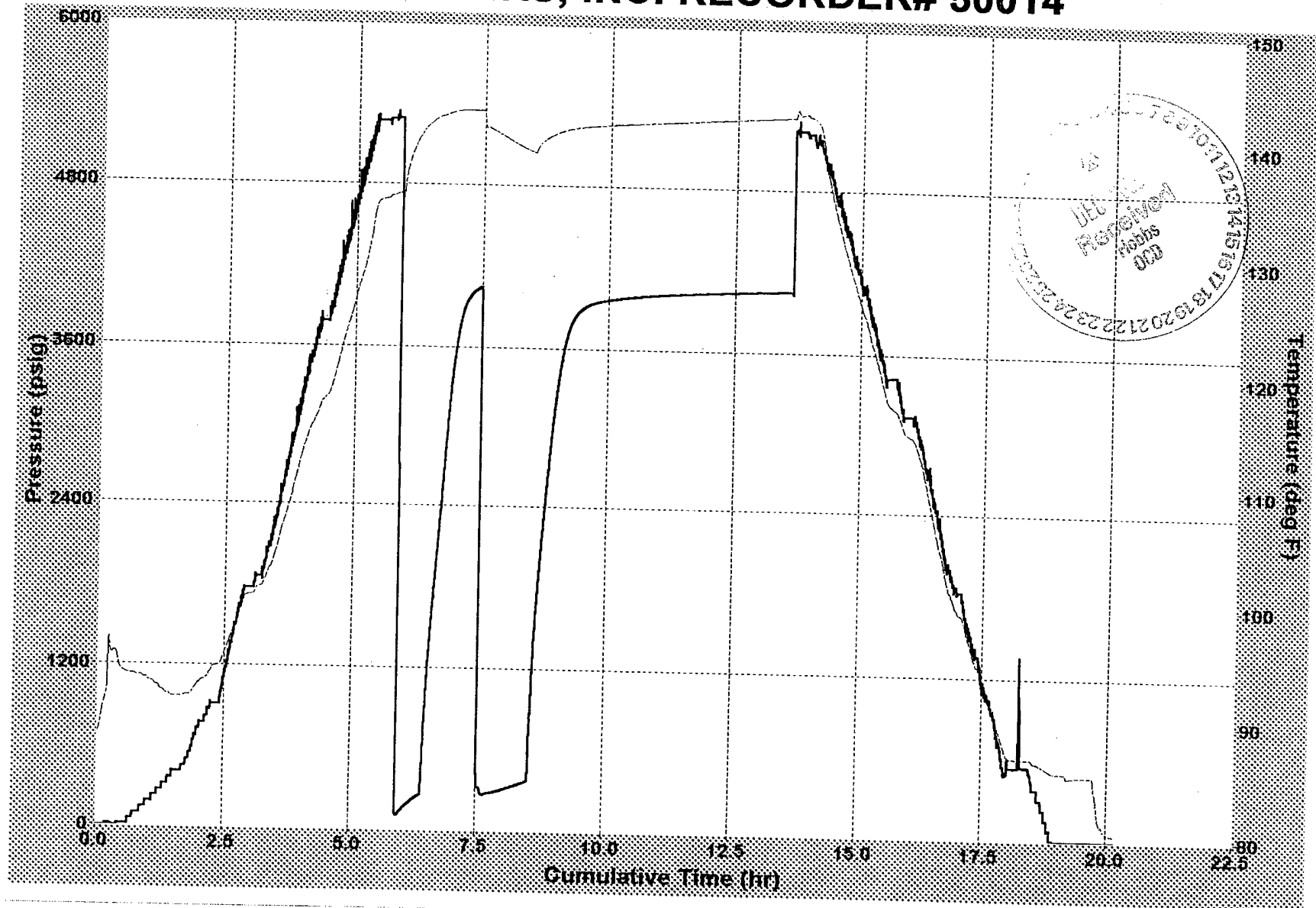
TOOL OPENED WITH GOOD BLOW ON 1/4" CHOKE IN 3.5 MIN. WITH 10 OZS. & THEN
BEGAN DECREASING IN 8 MIN. TO 5 OZS. AT END OF THE 30 MIN. FIRST FLOW. RE-
OPENED TOOL WITH VERY WEAK BLOW (3" IN WATER) ON 1/4" CHOKE, 5 LBS. IN 20
MIN., 13 LBS. IN 40 MIN., GAS TO SURFACE IN 50 MIN. WITH 15 LBS. (43 MCFPD)
ON 1/4" CHOKE & 16 LBS. (45 MCFPD) AT END OF THE 60 MIN. FINAL FLOW PERIOD.



Company Name PATTERSON PETROLEUM L.P.
Well Name NATHANIEL "29" STATE #1
Type of Test DST #2 (11029-11054 FT.) CISCO
Date(s) of Test 8-27-05



RIG TESTERS, INC. RECORDER# 50014



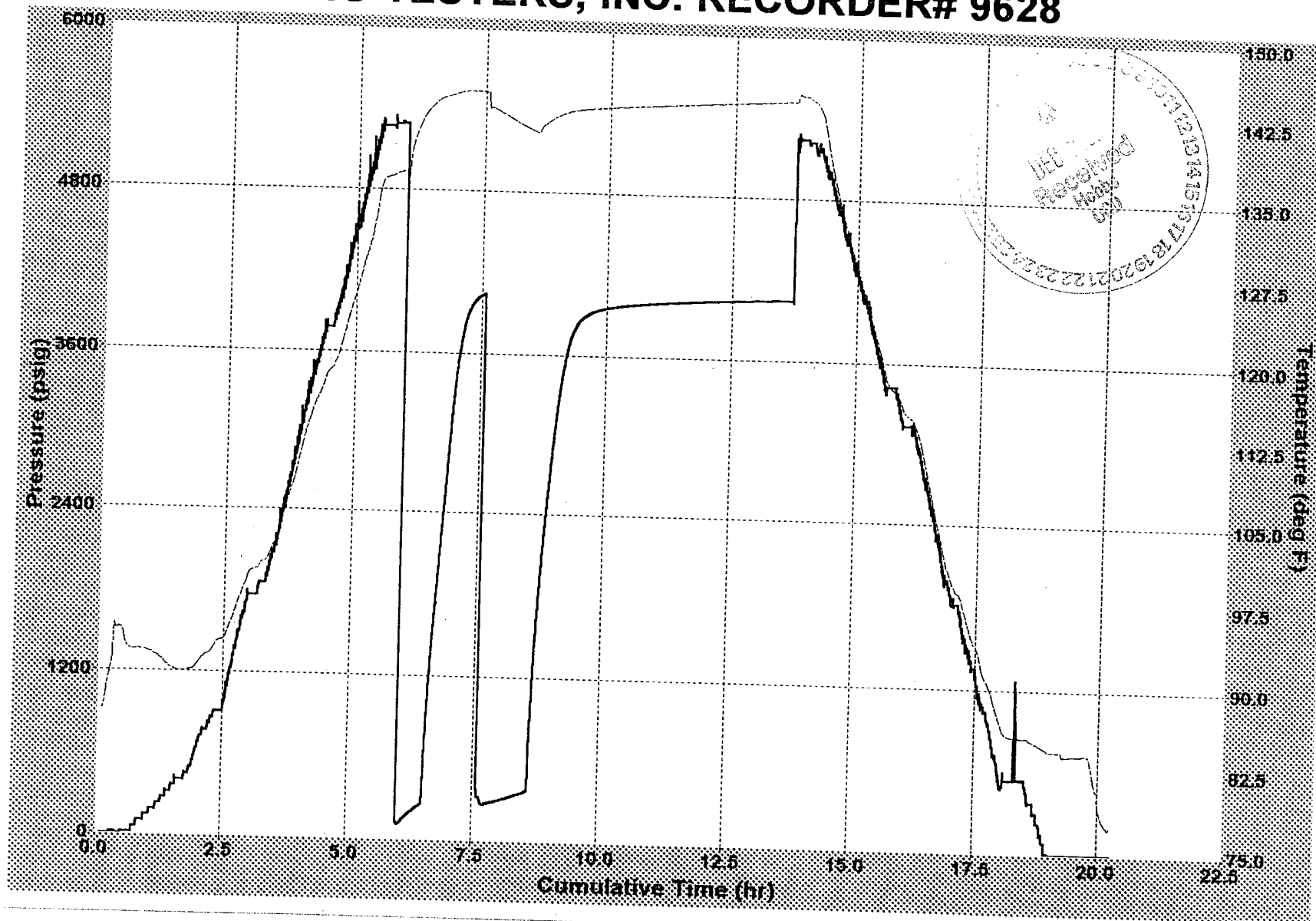


Company Name
Well Name
Type of Test
Date(s) of Test

PATTERSON PETROLEUM L.P.
NATHANIEL "29" STATE #1
DST #2 (11029-11054 FT.) CISCO
8-27-05



RIG TESTERS, INC. RECORDER# 9628





INCREMENTAL PRESSURE DATA

RECORDER NO : 50014

RECORDER CAPACITY : 10000 psi

RECORDER DEPTH : 11039 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			119.30	.00
2.0	2.0			127.27	7.97
4.0	4.0			143.10	23.80
6.0	6.0			157.70	38.40
8.0	8.0			171.26	51.96
10.0	10.0			184.48	65.18
12.0	12.0			196.70	77.40
14.0	14.0			207.80	88.50
16.0	16.0			218.50	99.20
18.0	18.0			229.60	110.30
20.0	20.0			239.96	120.66
22.0	22.0			249.02	129.72
24.0	24.0			257.20	137.90
26.0	26.0			265.39	146.09
28.0	28.0			273.93	154.63
28.5	28.5			276.30	157.00
FIRST SHUT-IN					
28.5	28.5	.00	.000	276.30	.00
29.0	28.5	.50	58.000	328.22	51.92
29.5	28.5	1.00	29.500	428.73	152.43
30.0	28.5	1.50	20.000	530.80	254.50
30.5	28.5	2.00	15.250	617.88	341.58
31.0	28.5	2.50	12.400	711.74	435.44
31.5	28.5	3.00	10.500	798.40	522.10
32.0	28.5	3.50	9.143	870.16	593.86
32.5	28.5	4.00	8.125	943.59	667.29
33.0	28.5	4.50	7.333	1014.00	737.70
33.5	28.5	5.00	6.700	1073.02	796.72
34.5	28.5	6.00	5.750	1198.50	922.20
35.5	28.5	7.00	5.071	1307.46	1031.16
36.5	28.5	8.00	4.563	1407.58	1131.28
37.5	28.5	9.00	4.167	1506.00	1229.70
38.5	28.5	10.00	3.850	1593.06	1316.76
40.5	28.5	12.00	3.375	1763.30	1487.00
42.5	28.5	14.00	3.036	1924.38	1648.08
44.5	28.5	16.00	2.781	2092.35	1816.05
46.5	28.5	18.00	2.583	2264.60	1988.30
48.5	28.5	20.00	2.425	2435.60	2159.30
51.5	28.5	23.00	2.239	2706.07	2429.77
54.5	28.5	26.00	2.096	2976.83	2700.53
57.5	28.5	29.00	1.983	3223.23	2946.93
60.5	28.5	32.00	1.891	3427.45	3151.15
63.5	28.5	35.00	1.814	3587.80	3311.50
66.5	28.5	38.00	1.750	3716.28	3439.98



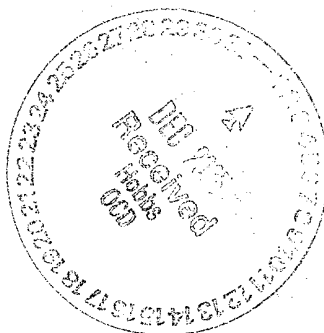
INCREMENTAL PRESSURE DATA

RECORDER NO : 50014

RECORDER CAPACITY : 10000 psi

RECORDER DEPTH : 11039 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 SHUT-IN					
69.5	28.5	41.00	1.695	3819.65	3543.35
72.5	28.5	44.00	1.648	3893.85	3617.55
75.5	28.5	47.00	1.606	3945.50	3669.20
78.5	28.5	50.00	1.570	3982.07	3705.77
81.5	28.5	53.00	1.538	4008.58	3732.28
84.5	28.5	56.00	1.509	4028.15	3751.85
87.5	28.5	59.00	1.483	4042.95	3766.65
90.5	28.5	62.00	1.460	4054.65	3778.35
93.5	28.5	65.04	1.438	4064.00	3787.70
SECOND FLOW					
100.3	35.2			283.30	.00
103.3	38.2			283.60	.30
106.3	41.2			290.00	6.70
109.3	44.2			294.00	10.70
112.3	47.2			297.80	14.50
115.3	50.2			301.80	18.50
118.3	53.2			306.80	23.50
121.3	56.2			312.90	29.60
124.3	59.2			319.40	36.10
127.3	62.2			324.50	41.20
130.3	65.2			332.70	49.40
133.3	68.2			337.80	54.50
136.3	71.2			345.80	62.50
139.3	74.2			350.40	67.10
142.3	77.2			358.30	75.00
145.3	80.2			364.40	81.10
148.3	83.2			369.50	86.20
151.3	86.2			376.50	93.20
154.3	89.2			388.60	105.30
154.7	89.7			388.90	105.60
SECOND SHUT-IN					
154.7	89.7	.00	.000	388.90	.00
156.7	89.7	2.00	45.850	860.33	471.43
158.7	89.7	4.00	23.425	1216.45	827.55
160.7	89.7	6.00	15.950	1485.90	1097.00
162.7	89.7	8.00	12.213	1697.22	1308.32
164.7	89.7	10.00	9.970	1890.88	1501.98
166.7	89.7	12.00	8.475	2071.30	1682.40



PATTERSON PETROLEUM L.P.



NATHANIEL "29" STATE # 1
D.S.T. NO. : 2

INCREMENTAL PRESSURE DATA

RECORDER NO : 50014

RECORDER CAPACITY : 10000 psi

RECORDER DEPTH : 11039 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					
168.7	89.7	14.00	7.407	2234.23	1845.33
170.7	89.7	16.00	6.606	2394.68	2005.78
172.7	89.7	18.00	5.983	2548.60	2159.70
174.7	89.7	20.00	5.485	2692.98	2304.08
177.7	89.7	23.00	4.900	2903.77	2514.87
180.7	89.7	26.00	4.450	3096.77	2707.87
183.7	89.7	29.00	4.093	3269.45	2880.55
186.7	89.7	32.00	3.803	3416.02	3027.12
189.7	89.7	35.00	3.563	3537.27	3148.37
192.7	89.7	38.00	3.361	3637.32	3248.42
199.7	89.7	45.00	2.993	3794.10	3405.20
204.7	89.7	50.00	2.794	3854.70	3465.80
209.7	89.7	55.00	2.631	3893.47	3504.57
214.7	89.7	60.00	2.495	3918.90	3530.00
219.7	89.7	65.00	2.380	3936.87	3547.97
224.7	89.7	70.00	2.281	3950.35	3561.45
229.7	89.7	75.00	2.196	3960.90	3572.00
234.7	89.7	80.00	2.121	3969.13	3580.23
239.7	89.7	85.00	2.055	3976.28	3587.38
244.7	89.7	90.00	1.997	3982.40	3593.50
249.7	89.7	95.00	1.944	3987.57	3598.67
254.7	89.7	100.00	1.897	3992.18	3603.28
259.7	89.7	105.00	1.854	3996.50	3607.60
264.7	89.7	110.00	1.815	4000.38	3611.48
269.7	89.7	115.00	1.780	4004.08	3615.18
274.7	89.7	120.00	1.748	4007.30	3618.40
284.7	89.7	130.00	1.690	4013.28	3624.38
294.7	89.7	140.00	1.641	4018.57	3629.67
304.7	89.7	150.00	1.598	4023.50	3634.60
314.7	89.7	160.00	1.561	4027.89	3638.99
324.7	89.7	170.00	1.528	4031.88	3642.98
334.7	89.7	180.00	1.498	4035.60	3646.70
344.7	89.7	190.00	1.472	4039.19	3650.29
354.7	89.7	200.00	1.449	4042.40	3653.50
364.7	89.7	210.00	1.427	4045.50	3656.60
374.7	89.7	220.00	1.408	4048.50	3659.60
384.7	89.7	230.00	1.390	4051.30	3662.40
394.7	89.7	240.00	1.374	4054.00	3665.10
404.7	89.7	250.00	1.359	4056.59	3667.69
414.7	89.7	260.00	1.345	4058.98	3670.08



INCREMENTAL PRESSURE DATA

RECORDER NO : 50014

RECORDER CAPACITY : 10000 psi

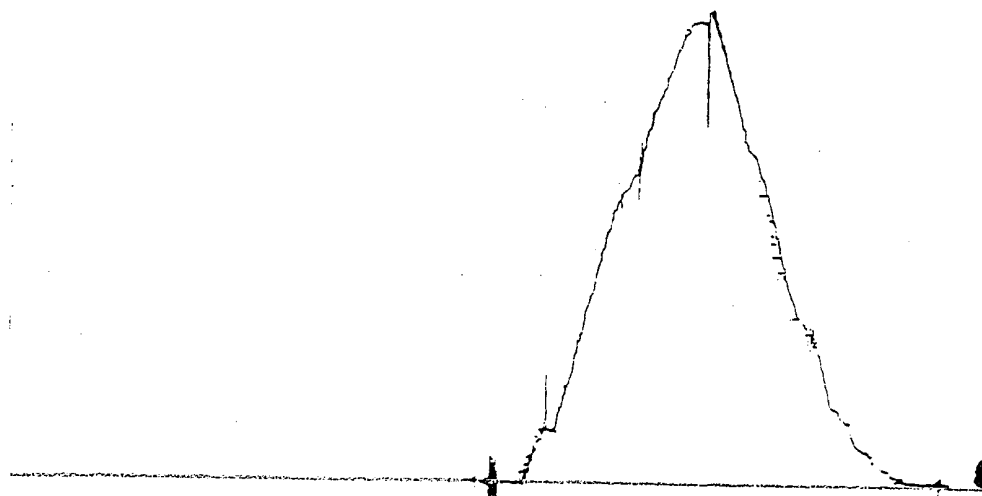
RECORDER DEPTH : 11039 ft

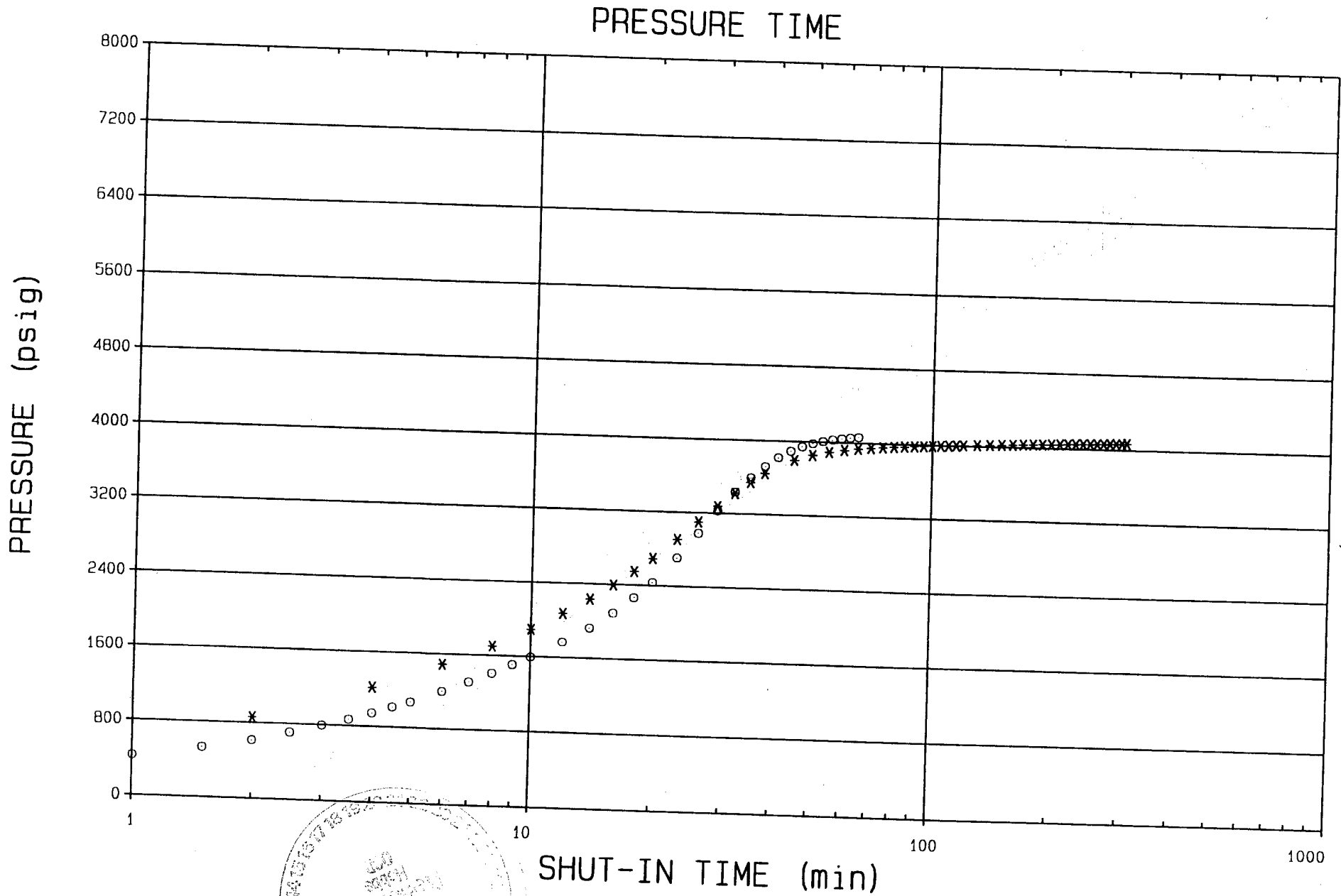
ELAPSED TIME ---MIN---	TOTAL FLOW TIME, T ---MIN---	INCREMENTAL SHUT-IN TIME, DT ---MIN---	(T+DT)/DT (HORNER) -----	PRESSURE ---PSIG---	DELTA P ---PSIG---
SECOND SHUT-IN					
424.7	89.7	270.00	1.332	4061.30	3672.40
434.7	89.7	280.00	1.320	4063.50	3674.60
444.7	89.7	290.00	1.309	4065.68	3676.78
454.7	89.7	300.00	1.299	4067.80	3678.90
463.0	89.7	308.28	1.291	4069.40	3680.50

REMARKS

THE INCREMENTAL DATA, PLOTS AND ANALYSIS ARE FROM THE ELECTRONIC RECORDER
PLEASE REFER TO DERIVATIVE DIAGNOSTICS ANALYSIS FOR FURTHER INFORMATION
(DST PRESSURE ASCII FILES ARE AVAILABLE ON DISKETTE UPON REQUEST)

TKT- 23403 DEC-1985 WT- 8275
AK-1 KUTER 24 HB. LOCK
STANDARD TEST: PLANE-SEA CHART





ATTERSON PETROLEUM L.P.
ATHANIEL "29" STATE #1

○ FIRST SHUT-IN
* SECOND SHUT-IN



Well Test Report

RigTesters, Inc.
ABILENE - MIDLAND - GRAHAM

PATTERSON PETROLEUM L.P. NATHANIEL "29" STATE #1

Well identification

Well ID	NATHANIEL "29" #1	Well location	N.W. HOBBS
County/District	LEA	State, Country	NEW MEXICO
Company	PATTERSON PETR.	Division	SNYDER

Fluid properties

Prod/Inj fluid	OIL	GOR	500:1
Water cut	0%	Condensate yield	UNKNOWN
API gravity	43.2	Gas spec. grav.	0.7
Viscosity	0.76678 cp	Pseudo-critical T	382.97 deg R
Pseudo-critical P	664.37 psia	H2S mole fraction	UNKNOWN
CO2 mole fraction	UNKNOWN	N2 mole fraction	UNKNOWN
Compressibility(t)	13.359 e-6/psi	Formation vol factor	1.2696 RB/STB

Reservoir properties

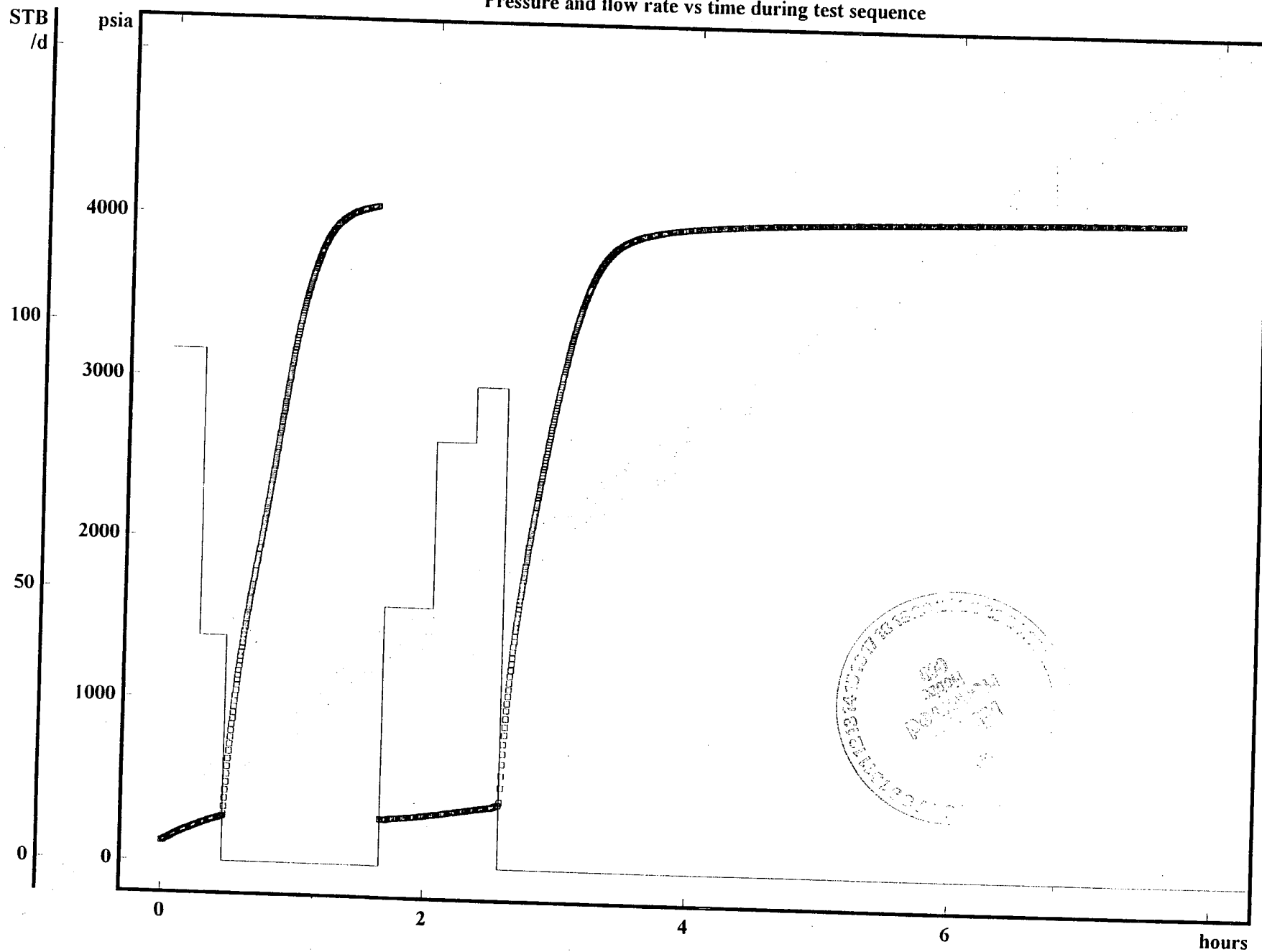
Porosity	0.12 frac	Formation thickness	18 ft
Wellbore radius	0.36458 ft	Prod-observer distance	N/A
Water-Oil Contact	UNKNOWN	Gas-Oil Contact	N/A
Gas-Water Contact	N/A	Rock compressibility	
Reservoir temperature	143 deg F	Pressure for properties	4137 psia

Comments

THE DERIVATIVES INDICATE A RESERVOIR WITH LOW PERMEABILITY AND FAIRLY HIGH BUT IMPROVING SKIN. THE INITIAL SHUT-IN PERIOD WAS IN TRANSITION TOWARDS BUT HAD NOT ACHIEVED RADIAL FLOW WHICH WOULD MAKE ITS CALCULATIONS (EXTRAPOLATION, PERMEABILITY AND SKIN) UNRELIABLE. THE FINAL SHUT-IN PERIOD INDICATES DURING MID & LATE TIME DATA A DUAL (FRACTURED) POROSITY RESPONSE WITH-IN INTERVAL TESTED. A REGRESSION VERIFIED MODEL ANALYSIS WAS PERFORMED TO BETTER DETERMINE FORMATION PARAMETERS AND IS REPRESENTED BY A SOLID LINE PLOTTED OVER ACTUAL DATA WITH CONFIDENCE INTERVALS (MARGIN OF ERROR) SHOWN NEXT TO MAJOR PARAMETERS. THE FIXED PARAMETERS USED WERE AN EST. 12% POROSITY, 18 FT. OF NET PAY REPORTED & AN AVERAGE (TIME WEIGHTED) PRODUCTION OF 71 BBLs. OF OIL FOR THE FINAL FLOW PERIOD. THE RATES WERE BASED ON DENSITY OF FLUID RECOVERED VS. FLOWING PRESSURES. THE TOTAL RADIUS OF INVESTIGATION CALCULATED TO APPROX. 62 FT. FROM WELLBORE. * THE WATER RECOVERED IN PIPE WAS OMITTED FROM THE ANALYSIS BASED ON THE ASSUMPTION OF BEING FILTRATE.

PATTERSON PETROLEUM L.P. NATHANIEL "29" STATE #1

Pressure and flow rate vs time during test sequence

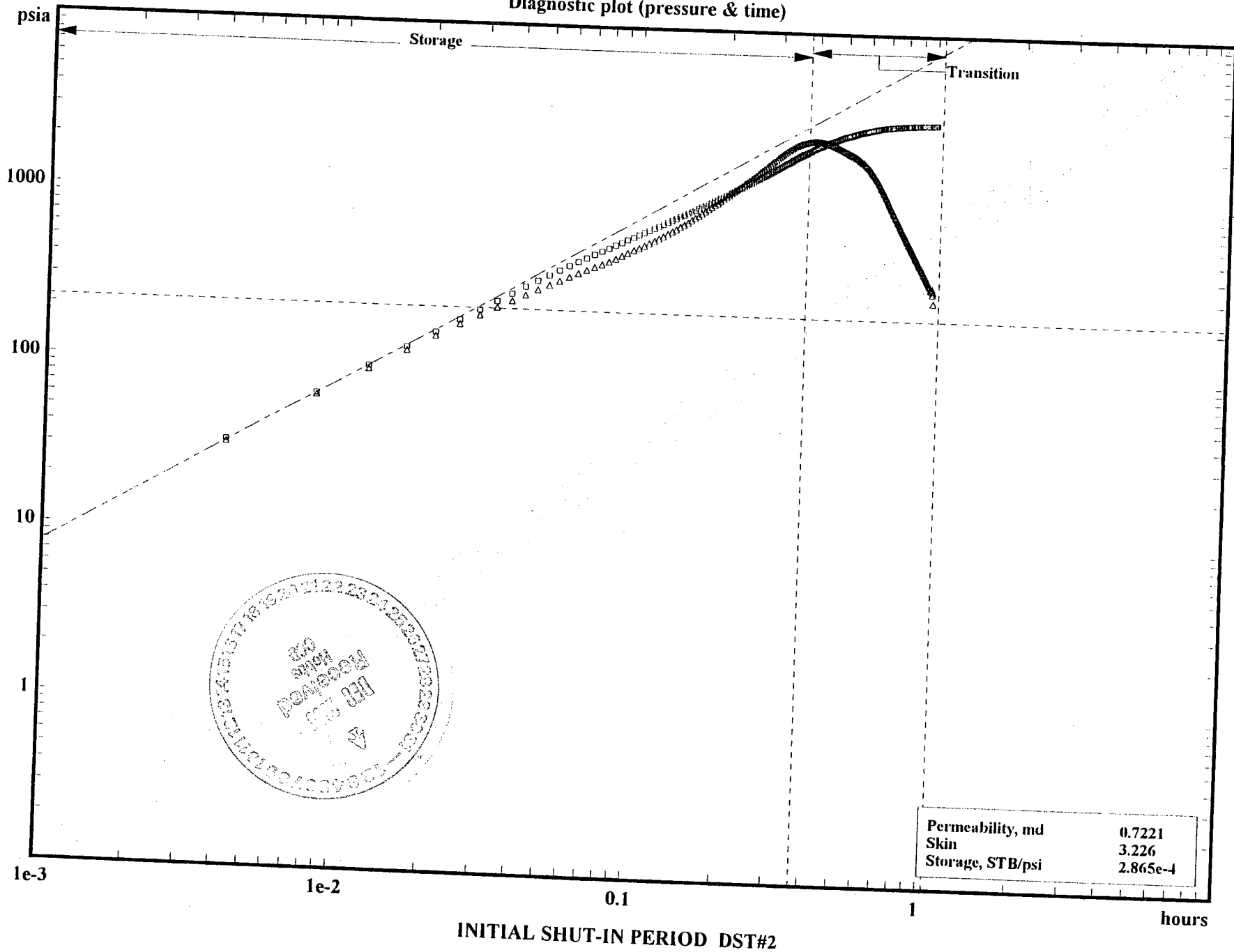


DST #2 11029 - 11054 FT. CISCO LIME



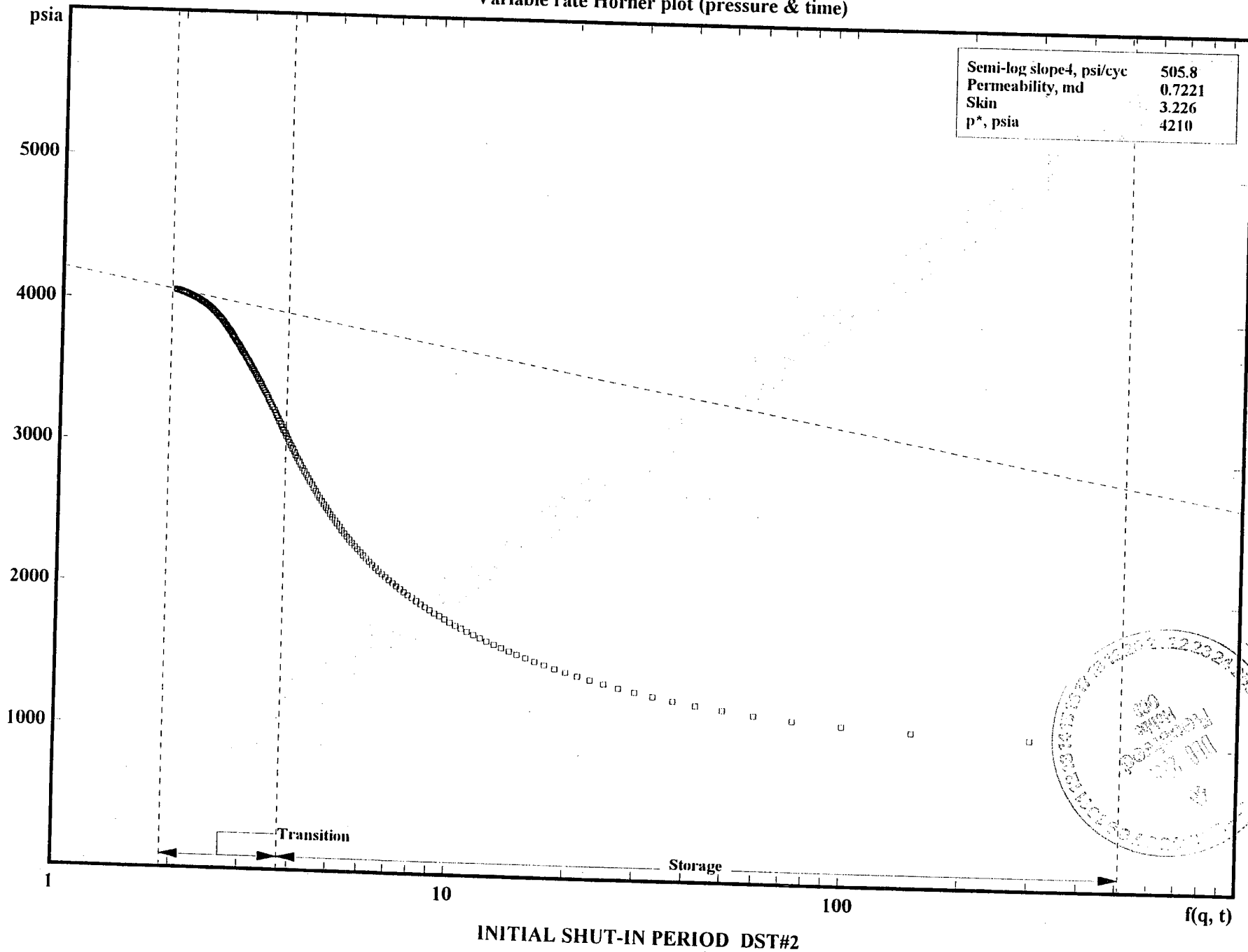
PATTERSON PETROLEUM L.P. NATHANIEL "29" STATE #1

Diagnostic plot (pressure & time)



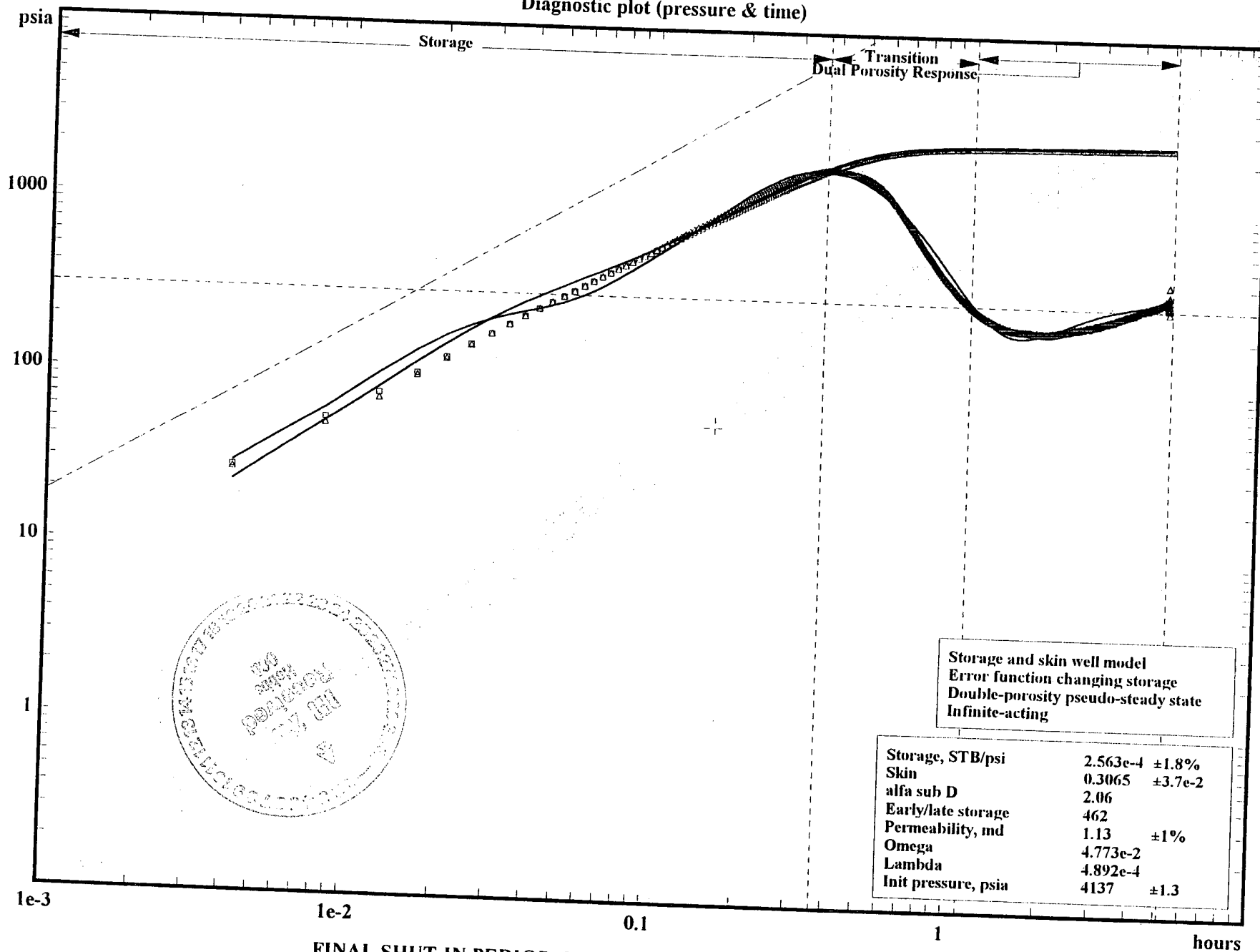
PATTERSON PETROLEUM L.P. NATHANIEL "29" STATE #1

Variable rate Horner plot (pressure & time)



PATTERSON PETROLEUM L.P. NATHANIEL "29" STATE #1

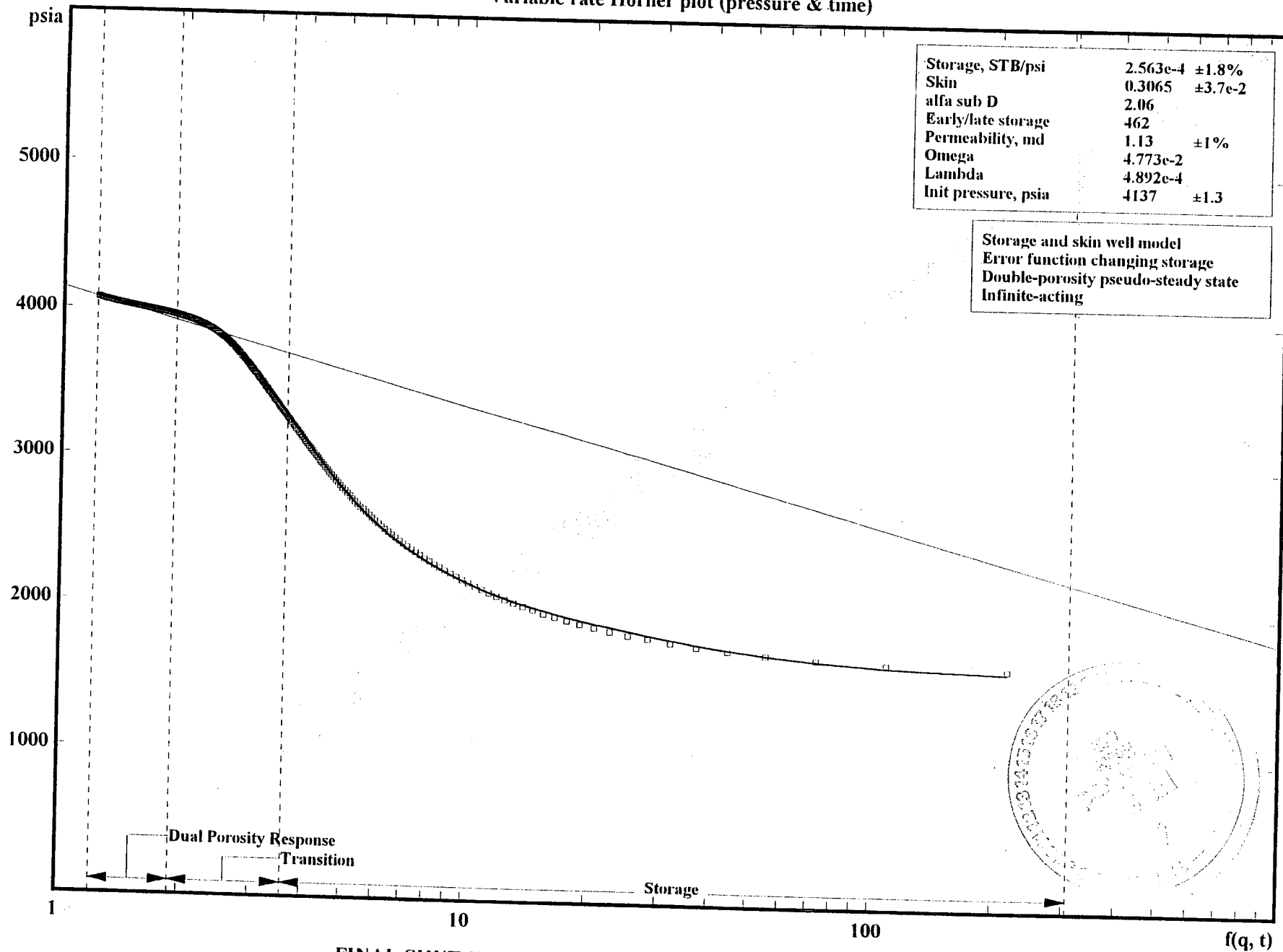
Diagnostic plot (pressure & time)



FINAL SHUT-IN PERIOD DST#2 REGRESSION VERIFIED MODEL

PATTERSON PETROLEUM L.P. NATHANIEL "29" STATE #1

Variable rate Horner plot (pressure & time)

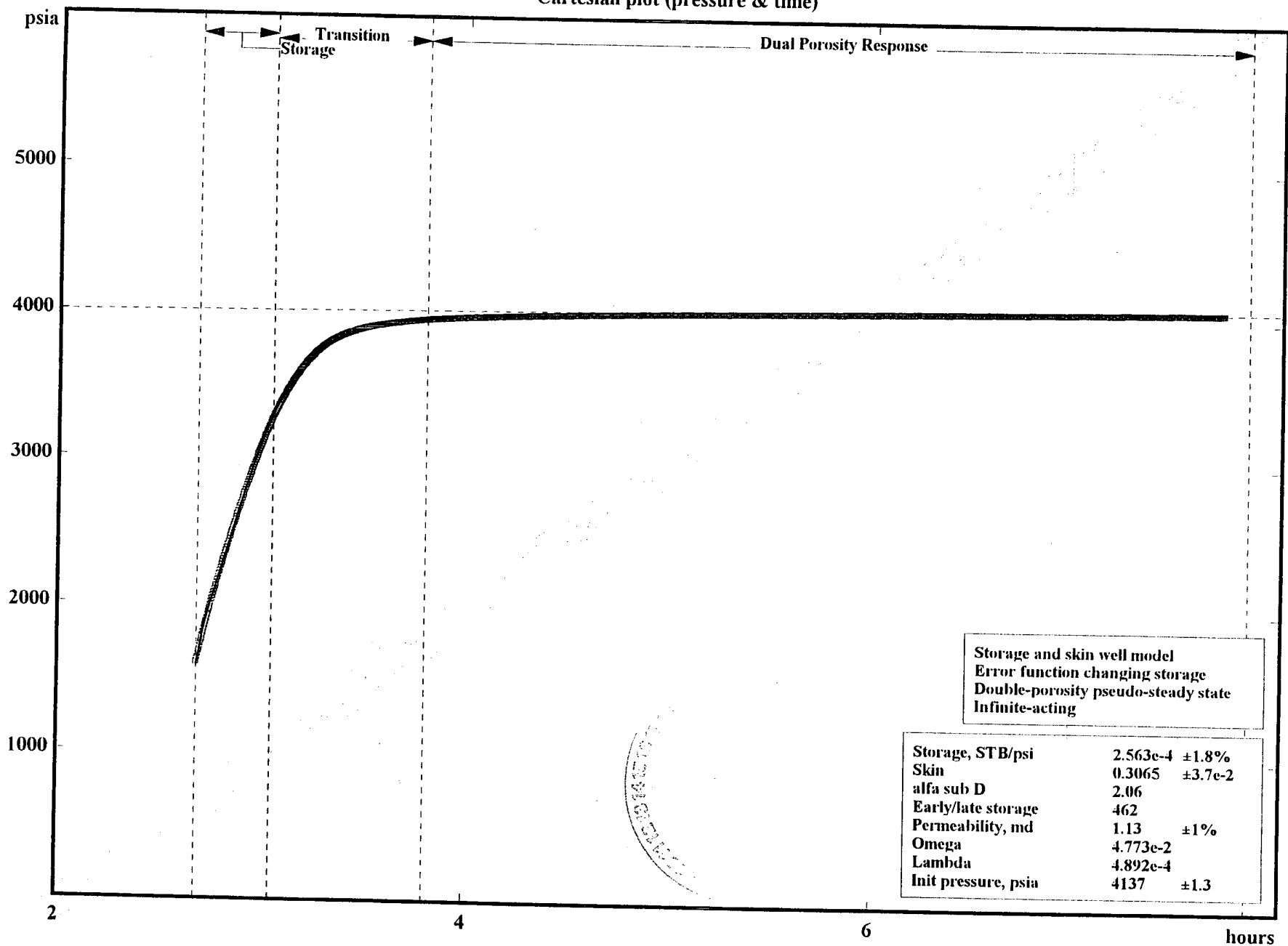


FINAL SHUT-IN PERIOD DST#2 REGRESSION VERIFIED MODEL



PATTERSON PETROLEUM L.P. NATHANIEL "29" STATE #1

Cartesian plot (pressure & time)



FINAL SHUT-IN PERIOD DST#2 REGRESSION VERIFIED MODEL

