



COMPANY : PECOS PRODUCTION COMPANY
 LEASE : QUERECHO PLAINS
 WELL NO. : # 3
 FIELD : NORTH LUSK (MORROW)
 COUNTY/STATE : LEA / NEW MEXICO

TEST DATE : 07-24-04
 D.S.T. NO. : 1
 TEST TKT. NO. : 22835
 INVOICE NO. : 20905
 ORDER NO. :

FORMATION : STRAWN LIME
 INTERVAL (ft) : 11585 TO 11900
 TOTAL DEPTH (ft) : 11900
 ELEVATION (ft) : 3757
 HOLE SIZE (in) : 7.875
 DRILL PIPE ID (in) : 3.82
 DRILL COLLAR ID(in) : 2.25
 DRILL COLLAR feet : 459
 ANCHOR LENGTH (ft): 315
 TOOL LENGTH (ft) : 56
 TOOL O.D. (in) : 5
 PACKER SIZE (in) : 7.00

RECORDER DATA
 AKI-KUSTER/ZIPROBE

TOP RECORDER: IN
 RECORDER NO. : 22027
 CAPACITY (psi): 10000
 DEPTH (ft) : 11590
 CLOCK NO. : 22027
 DURATION (hrs): 99

BOTTOM RECORDER: OUT
 RECORDER NO. : 22028
 CAPACITY (psi): 10000
 DEPTH (ft) : 11592
 CLOCK NO. : 22028
 DURATION (hrs): 99

MUD PROPERTIES

MUD TYPE : SALT GEL/STARCH
 MUD WT. (#/gal) : 9.10
 WATER LOSS (cc) : 11.80
 FILTER CAKE (in) : 1/32
 VISCOSITY (sec) : 34
 CHLORIDE PPM : 43000
 RESISTIVITY(ohm-m): .200

EQUIPMENT DATA

CONVENTIONAL : YES
 STRADDLE : NO
 SELECTIVE ZONE : NO
 SAMPLE CHAMBER : YES
 GAS ANALYSIS : NO
 SUCCESSFUL : YES
 DECIDED NOT TO TEST : NO
 ROTARY JARS : YES
 NO. OF PACKERS : 2
 SAFETY JOINT : YES
 CIRCULATING SUB : YES
 REVERSED OUT : NO
 PACKER FAILURE : NO
 MULTIFLOW : NO
 MILEAGE : NO
 OPERATOR TIME : NO
 OTHER : YES
 Z.I. ELECTRONICS (2)
 TOOL PLUG : NO
 FAIL TO REACH BOTTOM : NO

TIME INTERVAL DATA (min)

TOOL OPENED : 11:13 PM
 INITIAL FLOW : 30
 SECOND FLOW : 64
 THIRD FLOW :
 TOTAL TEST TIME : 449
 INITIAL SHUT-IN: 59
 SECOND SHUT-IN : 296
 THIRD SHUT IN :

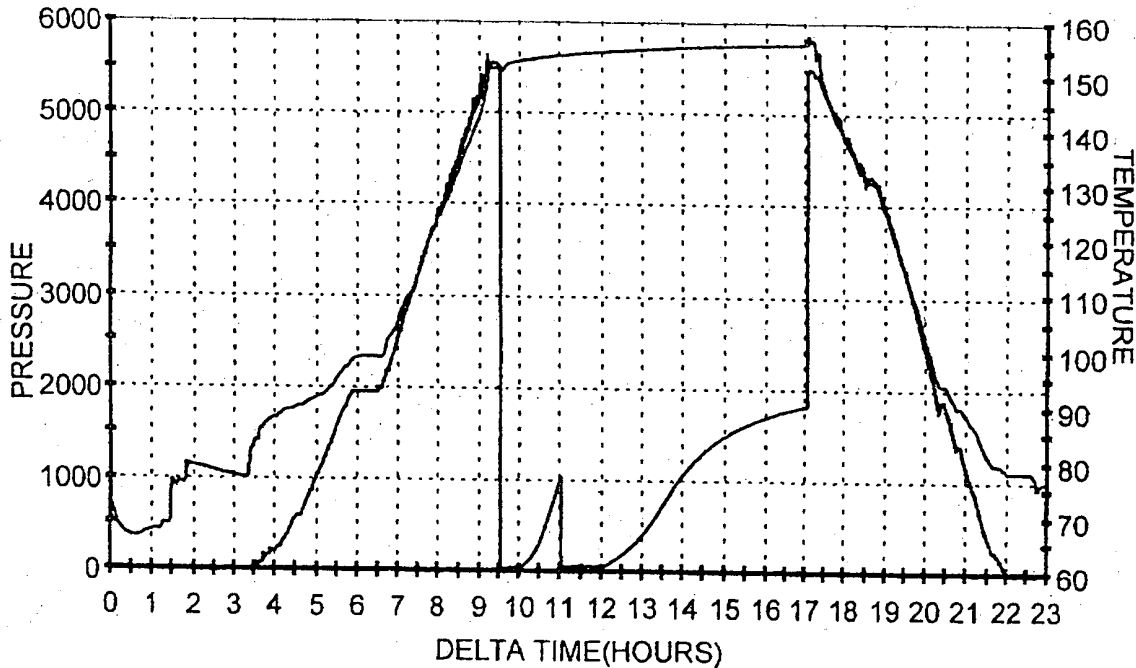
TEST TOOL OPERATOR: DON TERHUNE



PECOS PRODUCTION COMPANY

QUERECHO PLAINS # 3
D.S.T. NO. : 1

	CORRECTED READING	FIELD READING
A INITIAL HYDROSTATIC :	5489 PSI	5489 PSI
B-1 INITIAL FIRST FLOW :	49 PSI	49 PSI
B-2 FINAL FIRST FLOW :	65 PSI	63 PSI
C FIRST SHUT-IN :	1063 PSI	1063 PSI
D-1 INITIAL SECOND FLOW :	71 PSI	76 PSI
D-2 FINAL SECOND FLOW :	93 PSI	85 PSI
E SECOND SHUT-IN :	1833 PSI	1833 PSI
H FINAL HYDROSTATIC :	5482 PSI	5487 PSI



RECOVERY DATA

PIPE RECOVERY

B.H. TEMP. (deg F) : 157

SAMPLE CHAMBER

700 FT. OF GAS IN PIPE & COLLARS
 80 FT. OF GAS CUT DRLG. MUD (TRACE OF OIL)
 40,000 MG/L CHLORIDES - .190 OHMS @ 85 DEGREES

90 LBS. OF PRESSURE
 .02 CU. FT. OF GAS
 100 CC'S OF FREE OIL
 1800 CC'S OF GAS CUT MUD
 40,000 MG/L CHLORIDES
 .190 OHMS @ 85 DEGREES

TEST REMARKS

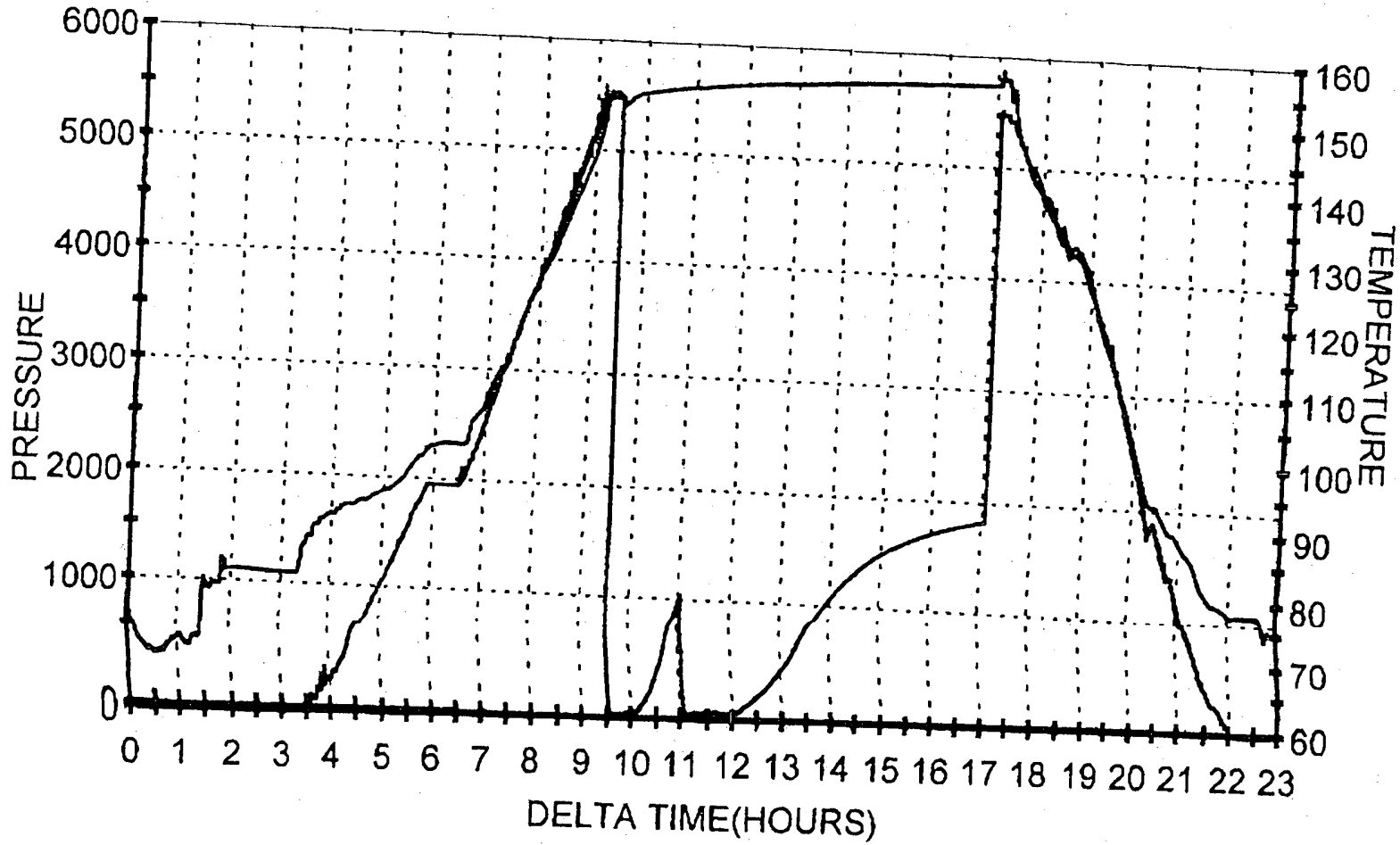
TOOL OPENED WITH A WEAK BLOW (1/4" IN WATER) WHICH INCREASED TO 1.5" IN WATER AT END OF THE 30 MIN. FIRST FLOW PERIOD. REOPENED TOOL WITH A WEAK BLOW (1/4" IN WATER) WHICH INCREASED TO 1.25" IN WATER IN 25 MIN., 1.25" IN WATER IN 40 MIN., SLOWLY DECREASED AND DIED IN 100 MIN. OF THE 120 MIN. FINAL FLOW PERIOD.

(ELECTRONIC RECORDERS INDICATE TOOL PLUGGED 64 MIN. INTO FINAL FLOW)

PRESSURE AND TEMPERATURE VS DELTA TIME

Company: Pecos Production Company
Location: Querecho Plains Unit 3 DST 1
Date: July 24, 2004
Serial# 22028

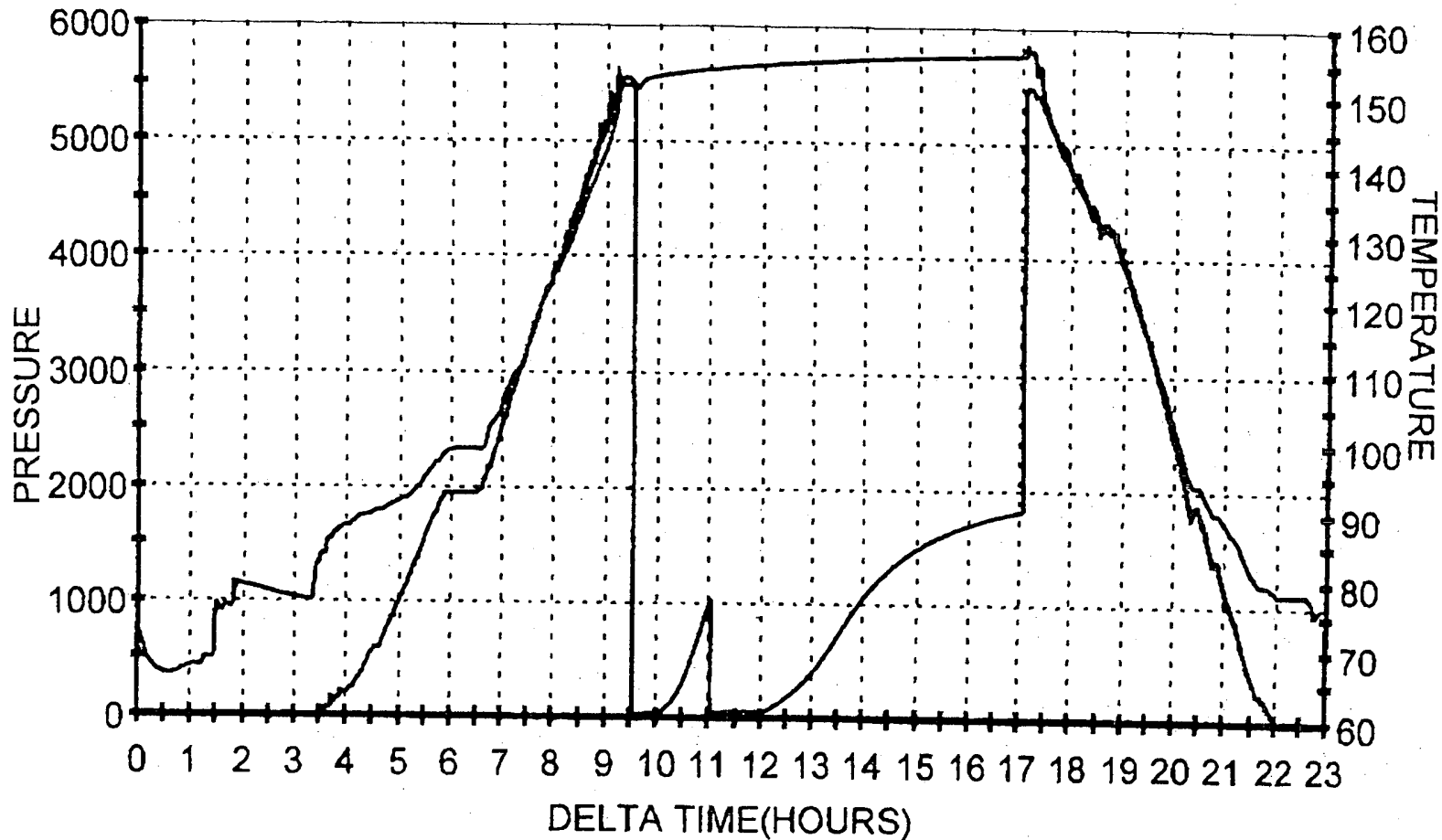
Max. Pressure: 5603.840 psia Max. Temperature: 157.865 F



PRESSURE AND TEMPERATURE VS DELTA TIME

Company: Pecos Production Company
Location: Querecho Plains Unit 3 DST 1
Date: July 24, 2004
Serial# 22027

Max. Pressure: 5631.826 psia Max. Temperature: 157.786 F





INCREMENTAL PRESSURE DATA

RECORDER NO : 22028

RECORDER CAPACITY : 10000 psi

RECORDER DEPTH : 11592 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			49.40	.00
1.0	1.0			52.40	3.00
2.0	2.0			54.65	5.25
3.0	3.0			56.40	7.00
4.0	4.0			56.00	6.60
5.0	5.0			56.12	6.72
6.0	6.0			56.60	7.20
7.0	7.0			57.10	7.70
8.0	8.0			57.41	8.01
9.0	9.0			57.70	8.30
10.0	10.0			58.03	8.63
11.0	11.0			58.61	9.21
12.0	12.0			58.90	9.50
13.0	13.0			59.30	9.90
14.0	14.0			59.71	10.31
15.0	15.0			60.10	10.70
16.0	16.0			60.52	11.12
17.0	17.0			60.91	11.51
18.0	18.0			61.30	11.90
19.0	19.0			61.50	12.10
20.0	20.0			62.01	12.61
21.0	21.0			62.40	13.00
22.0	22.0			62.62	13.22
23.0	23.0			62.92	13.52
24.0	24.0			63.30	13.90
25.0	25.0			63.62	14.22
26.0	26.0			63.82	14.42
27.0	27.0			64.40	15.00
28.0	28.0			64.60	15.20
29.0	29.0			64.73	15.33
30.0	30.0			65.50	16.10
FIRST SHUT-IN					
30.0	30.0	.00	.000	65.50	.00
30.5	30.0	.50	61.000	68.89	3.39
31.0	30.0	1.00	31.000	71.18	5.68
31.5	30.0	1.50	21.000	73.36	7.86
32.0	30.0	2.00	16.000	74.95	9.45
32.5	30.0	2.50	13.000	76.75	11.25
33.0	30.0	3.00	11.000	80.30	14.80
33.5	30.0	3.50	9.571	84.13	18.63
34.0	30.0	4.00	8.500	87.00	21.50
34.5	30.0	4.50	7.667	90.74	25.24
35.0	30.0	5.00	7.000	94.05	28.55
36.0	30.0	6.00	6.000	101.20	35.70

INCREMENTAL PRESSURE DATA

RECORDER NO : 22028

RECORDER CAPACITY : 10000 psi

RECORDER DEPTH : 11592 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					
37.0	30.0	7.00	5.286	109.10	43.60
38.0	30.0	8.00	4.750	116.35	50.85
39.0	30.0	9.00	4.333	123.90	58.40
40.0	30.0	10.00	4.000	132.37	66.87
42.0	30.0	12.00	3.500	149.20	83.70
44.0	30.0	14.00	3.143	167.50	102.00
46.0	30.0	16.00	2.875	187.53	122.03
48.0	30.0	18.00	2.667	208.60	143.10
50.0	30.0	20.00	2.500	232.28	166.78
52.0	30.0	22.00	2.364	258.57	193.07
54.0	30.0	24.00	2.250	286.10	220.60
56.0	30.0	26.00	2.154	317.03	251.53
58.0	30.0	28.00	2.071	350.63	285.13
60.0	30.0	30.00	2.000	385.70	320.20
63.0	30.0	33.00	1.909	444.40	378.90
66.0	30.0	36.00	1.833	508.50	443.00
69.0	30.0	39.00	1.769	576.90	511.40
72.0	30.0	42.00	1.714	648.70	583.20
75.0	30.0	45.00	1.667	722.60	657.10
78.0	30.0	48.00	1.625	798.20	732.70
81.0	30.0	51.00	1.588	871.10	805.60
84.0	30.0	54.00	1.556	942.00	876.50
87.0	30.0	57.00	1.526	1010.10	944.60
89.5	30.0	59.46	1.505	1063.00	997.50
SECOND FLOW					
90.0	30.5			71.60	.00
92.0	32.5			73.80	2.20
94.0	34.5			74.70	3.10
96.0	36.5			75.30	3.70
98.0	38.5			75.81	4.21
100.0	40.5			76.63	5.03
102.0	42.5			77.10	5.50
104.0	44.5			77.80	6.20
106.0	46.5			78.15	6.55
108.0	48.5			78.40	6.80
110.0	50.5			78.79	7.19
112.0	52.5			79.47	7.87
114.0	54.5			79.50	7.90
116.0	56.5			79.98	8.38
118.0	58.5			80.17	8.57
120.0	60.5			80.40	8.80
122.0	62.5			80.72	9.12
124.0	64.5			80.98	9.38
126.0	66.5			81.10	9.50



INCREMENTAL PRESSURE DATA

RECORDER NO : 22028

RECORDER CAPACITY : 10000 psi

RECORDER DEPTH : 11592 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 FLOW					
128.0	68.5			81.70	10.10
130.0	70.5			81.92	10.32
132.0	72.5			82.20	10.60
134.0	74.5			82.09	10.49
136.0	76.5			82.60	11.00
138.0	78.5			82.80	11.20
140.0	80.5			83.33	11.73
142.0	82.5			83.67	12.07
144.0	84.5			83.90	12.30
146.0	86.5			84.10	12.50
148.0	88.5			86.85	15.25
150.0	90.5			83.80	12.20
152.0	92.5			86.86	15.26
154.0	94.5			93.90	22.30
SECOND SHUT-IN					
154.0	94.5	.00	.000	93.90	.00
154.5	94.5	.50	190.000	95.39	1.49
155.0	94.5	1.00	95.500	97.61	3.71
155.5	94.5	1.50	64.000	99.50	5.60
156.0	94.5	2.00	48.250	101.54	7.64
156.5	94.5	2.50	38.800	103.98	10.08
157.0	94.5	3.00	32.500	106.10	12.20
157.5	94.5	3.50	28.000	108.56	14.66
158.0	94.5	4.00	24.625	110.13	16.23
158.5	94.5	4.50	22.000	112.70	18.80
159.0	94.5	5.00	19.900	114.74	20.84
160.0	94.5	6.00	16.750	119.30	25.40
161.0	94.5	7.00	14.500	123.70	29.80
162.0	94.5	8.00	12.813	127.97	34.07
163.0	94.5	9.00	11.500	132.60	38.70
164.0	94.5	10.00	10.450	136.93	43.03
166.0	94.5	12.00	8.875	146.50	52.60
168.0	94.5	14.00	7.750	155.44	61.54
170.0	94.5	16.00	6.906	165.71	71.81
172.0	94.5	18.00	6.250	176.70	82.80
174.0	94.5	20.00	5.725	187.51	93.61
176.0	94.5	22.00	5.295	198.57	104.67
178.0	94.5	24.00	4.938	209.90	116.00

INCREMENTAL PRESSURE DATA

RECORDER NO : 22028

RECORDER CAPACITY : 10000 psi

RECORDER DEPTH : 11592 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			
180.0	94.5	26.00	4.635	221.21	127.31
182.0	94.5	28.00	4.375	233.46	139.56
184.0	94.5	30.00	4.150	245.80	151.90
187.0	94.5	33.00	3.864	265.00	171.10
190.0	94.5	36.00	3.625	285.40	191.50
193.0	94.5	39.00	3.423	306.90	213.00
196.0	94.5	42.00	3.250	327.70	233.80
199.0	94.5	45.00	3.100	350.70	256.80
202.0	94.5	48.00	2.969	375.70	281.80
205.0	94.5	51.00	2.853	401.80	307.90
208.0	94.5	54.00	2.750	428.80	334.90
211.0	94.5	57.00	2.658	450.80	356.90
214.0	94.5	60.00	2.575	481.80	387.90
217.0	94.5	63.00	2.500	513.70	419.80
220.0	94.5	66.00	2.432	546.70	452.80
223.0	94.5	69.00	2.370	580.50	486.60
226.0	94.5	72.00	2.313	615.10	521.20
229.0	94.5	75.00	2.260	650.00	556.10
232.0	94.5	78.00	2.212	685.30	591.40
235.0	94.5	81.00	2.167	720.70	626.80
238.0	94.5	84.00	2.125	756.20	662.30
241.0	94.5	87.00	2.086	791.60	697.70
244.0	94.5	90.00	2.050	826.60	732.70
249.0	94.5	95.00	1.995	883.64	789.74
254.0	94.5	100.00	1.945	939.78	845.88
259.0	94.5	105.00	1.900	993.90	900.00
264.0	94.5	110.00	1.859	1045.25	951.35
269.0	94.5	115.00	1.822	1094.50	1000.60
274.0	94.5	120.00	1.788	1141.60	1047.70
279.0	94.5	125.00	1.756	1185.41	1091.51
284.0	94.5	130.00	1.727	1227.04	1133.14
289.0	94.5	135.00	1.700	1266.70	1172.80
294.0	94.5	140.00	1.675	1303.25	1209.35
299.0	94.5	145.00	1.652	1337.87	1243.97
304.0	94.5	150.00	1.630	1370.90	1277.00
314.0	94.5	160.00	1.591	1430.29	1336.39
324.0	94.5	170.00	1.556	1483.04	1389.14
334.0	94.5	180.00	1.525	1530.30	1436.40
344.0	94.5	190.00	1.497	1572.31	1478.41
354.0	94.5	200.00	1.473	1609.87	1515.97



INCREMENTAL PRESSURE DATA

RECORDER NO : 22028

RECORDER CAPACITY : 10000 psi

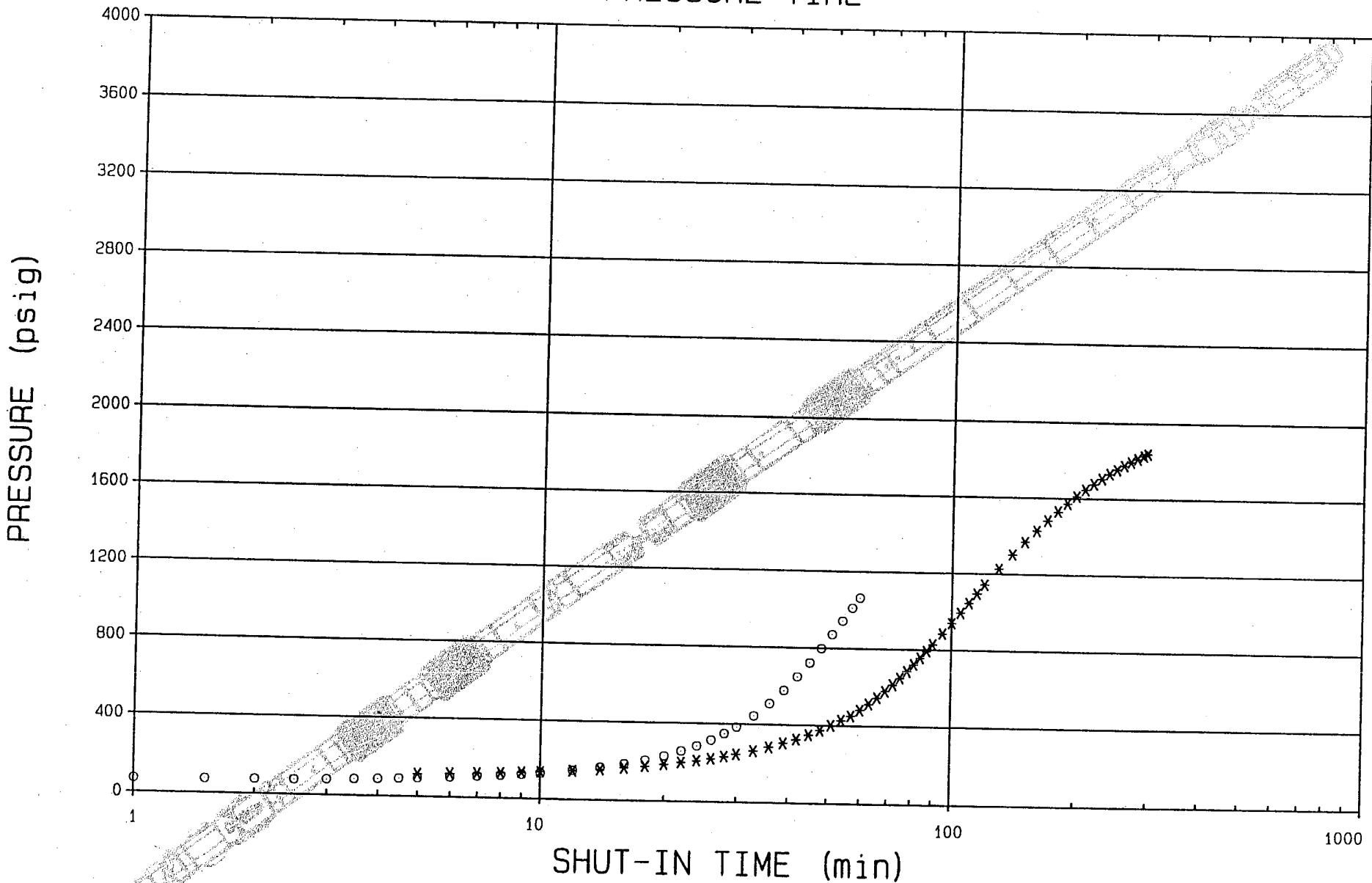
RECORDER DEPTH : 11592 ft

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					
364.0	94.5	210.00	1.450	1643.90	1550.00
374.0	94.5	220.00	1.430	1674.46	1580.56
384.0	94.5	230.00	1.411	1702.41	1608.51
394.0	94.5	240.00	1.394	1727.70	1633.80
404.0	94.5	250.00	1.378	1750.67	1656.77
414.0	94.5	260.00	1.363	1771.91	1678.01
424.0	94.5	270.00	1.350	1791.00	1697.10
434.0	94.5	280.00	1.338	1808.38	1714.48
444.0	94.5	290.00	1.326	1824.35	1730.45
450.0	94.5	296.04	1.319	1833.70	1739.80

REMARKS

THE INCREMENTAL DATA, PLOTS & 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)

PRESSURE TIME



PECOS PRODUCTION COMPANY
QUERECHO PLAINS # 3

○ FIRST SHUT-IN
* SECOND SHUT-IN





**Well Test
Report**

RigTesters, Inc.
ABILENE - MIDLAND - GRAHAM

PECOS PRODUCTION COMPANY QURECHO PLAINS UNIT #3

Well identification

Well ID	QUERECHO PLAIN	Well location	6 S. MALJAMAR
County/District	LEA	State, Country	NEW MEXICO
Company	PECOS PROD. CO.	Division	MIDLAND

Fluid properties

Prod/Inj fluid	OIL	GOR	600:1
Water cut	0%	Condensate yield	UNKNOWN
API gravity	42.0	Gas spec. grav.	0.675
Viscosity	0.49562 cp	Pseudo-critical T	377.17 deg R
Pseudo-critical P	666.05 psia	H2S mole fraction	UNKNOWN
CO2 mole fraction	UNKNOWN	N2 mole fraction	UNKNOWN
Compressibility(t)	22.268 e-6/psi	Formation vol factor	1.3503 RB/STB

Reservoir properties

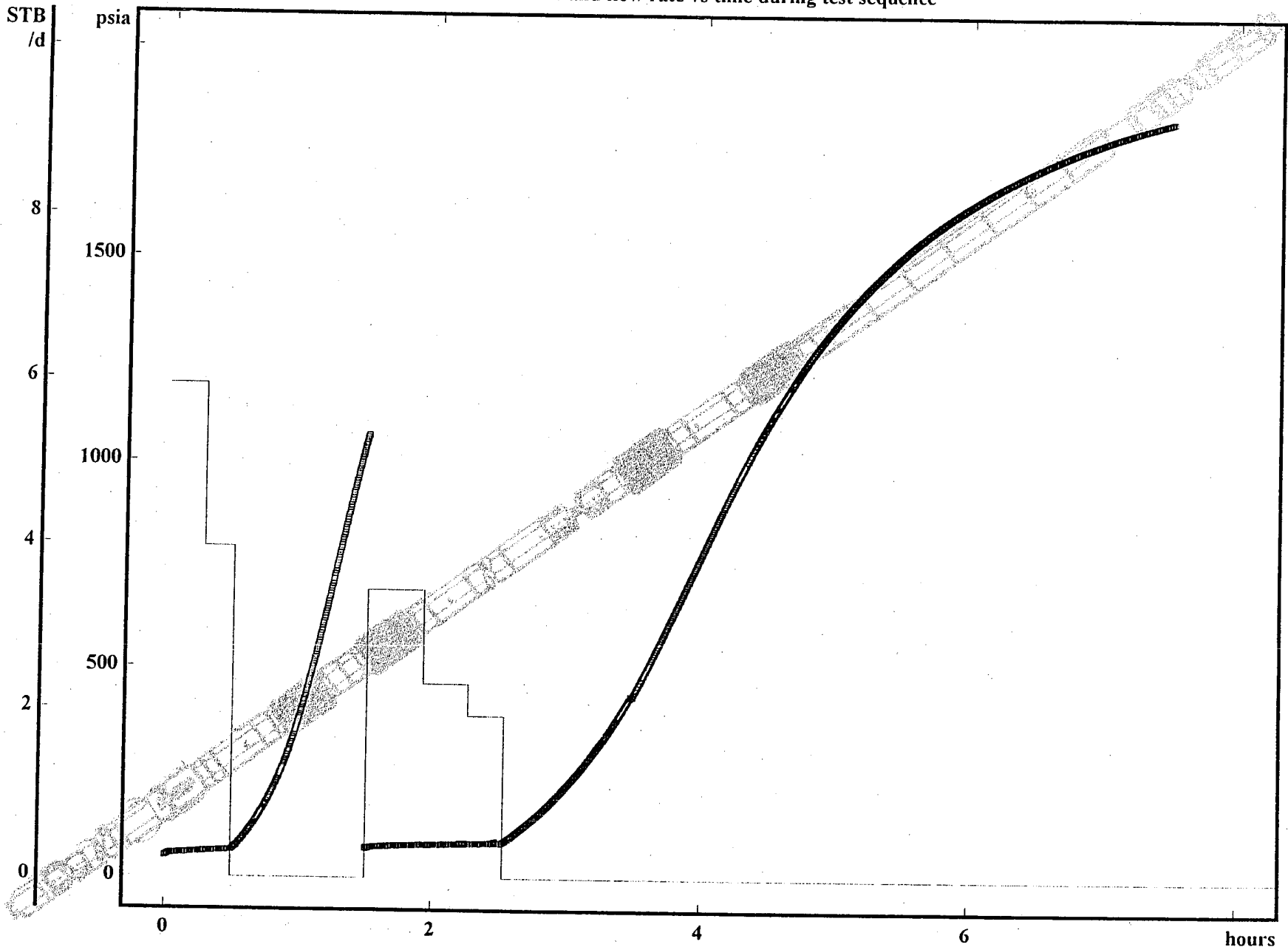
Porosity	0.1 frac	Formation thickness	20 ft
Wellbore radius	0.32813 ft	Prod-observer distance	N/A
Water-Oil Contact	UNKNOWN	Gas-Oil Contact	N/A
Gas-Water Contact	N/A	Rock compressibility	
Reservoir temperature	157 deg F	Pressure for properties	2213.7 psia

Comments

THE DERIVATIVES INDICATE A PARTIALLY DEPLETED RESERVOIR WITH VERY LOW PERMEABILITY & NO (NEGATIVE) SKIN. THE INITIAL SHUT-IN WAS DOMINATED BY WELLBORE STORAGE EFFECT; ANY CALCULATIONS (EXTRAPOLATION, PERMEABILITY, SKIN, ETC.) FROM IT WOULD BE AMBIGUOUS & UNRELIABLE. THE FINAL SHUT-IN PERIOD HAD BEGAN TRANSITION TOWARD RADIAL FLOW; ALLTHOUGH TRUE RADIAL FLOW HAD NOT BEEN ACHIEVED. A REGRESSION PRESSURE MATCH WAS ATTEMPTED AND ALLTHOUGH CALCULATIONS MAY BE SUBJECT TO QUESTION, A GOOD VISUAL FIT WAS ACHIEVED WITH ACCEPTABLE CONFIDENCE INTERVALS. THE MODEL IS REPRESENTED BY SOLID LINE PLOTTED OVER THE ACTUAL DATA WITH CONFIDENCE INTERVALS (MARGIN OF ERROR) SHOWN NEXT TO MAJOR CALCULATIONS. THE FIXED PARAMETERS USED WERE AN EST. 10% POROSITY, 20 FT. OF NET PAY & AN AVERAGE (TIME WEIGHTED) PRODUCTION OF 2.73 BBLs. OF FLUID FOR THE FINAL FLOW PERIOD. THE RATES WERE BASED ON DENSITY OF FLUID RECOVERED VS. FLOWING PRESSURES. THE TOTAL RADIUS OF INVESTIGATION CALCULATED TO ONLY 6.73 FT. FROM THE WELLBORE.

PECOS PRODUCTION COMPANY QURECHO PLAINS UNIT #3

Pressure and flow rate vs time during test sequence

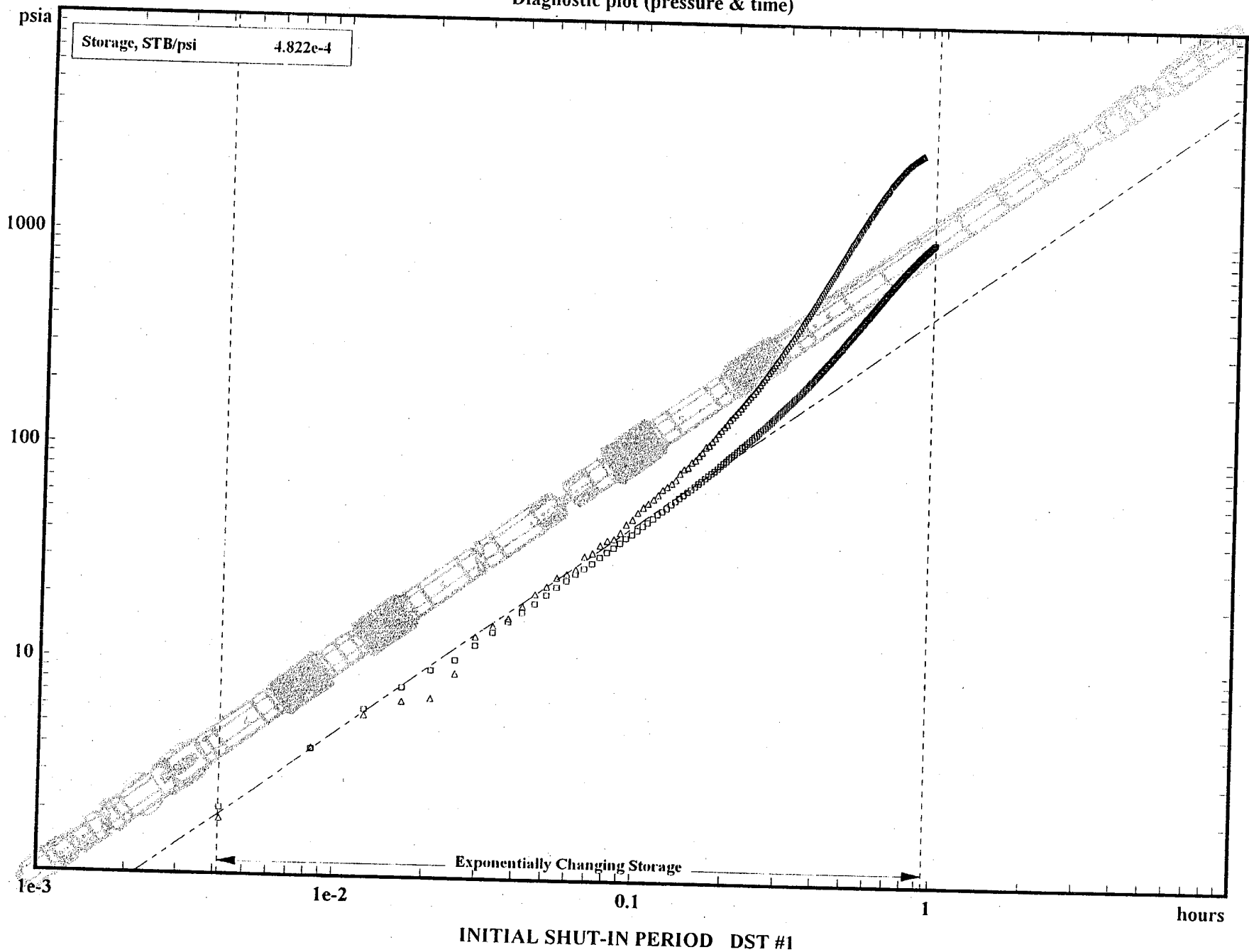


DST #1 11,585 - 11,900 STRAWN LIME



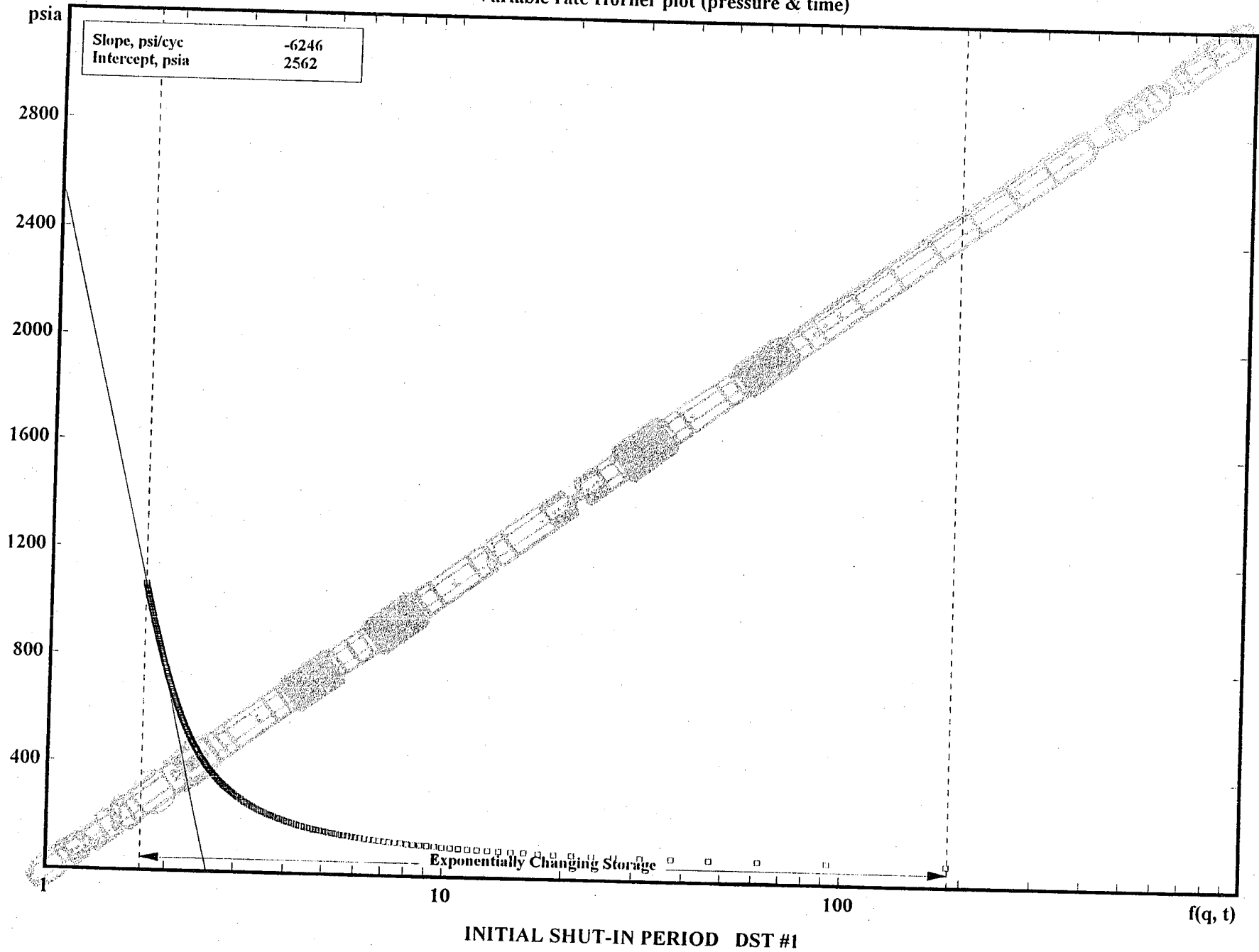
PECOS PRODUCTION COMPANY QURECHO PLAINS UNIT #3

Diagnostic plot (pressure & time)



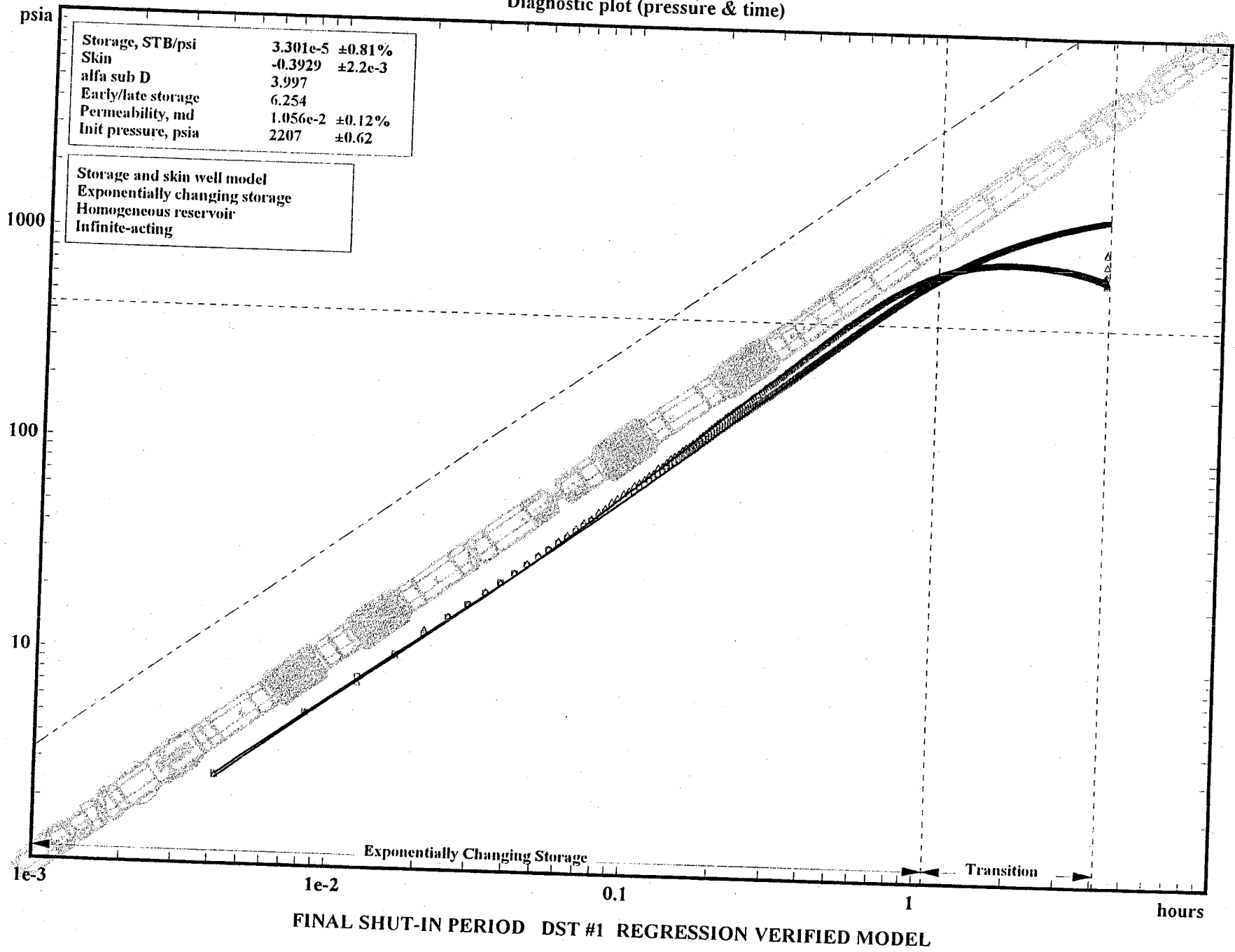
PECOS PRODUCTION COMPANY QURECHO PLAINS UNIT #3

Variable rate Horner plot (pressure & time)



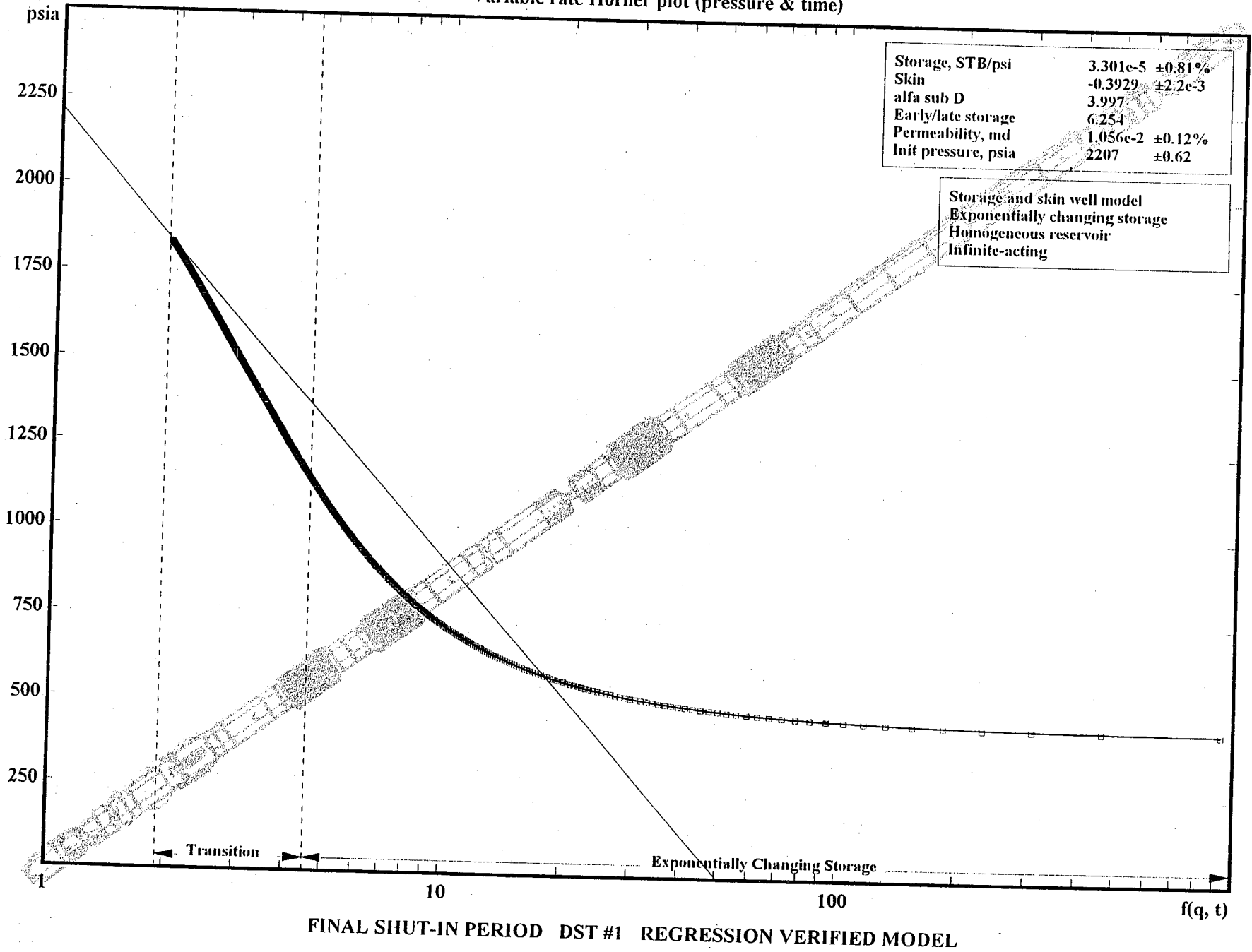
PECOS PRODUCTION COMPANY QURECHO PLAINS UNIT #3

Diagnostic plot (pressure & time)



PECOS PRODUCTION COMPANY QURECHO PLAINS UNIT #3

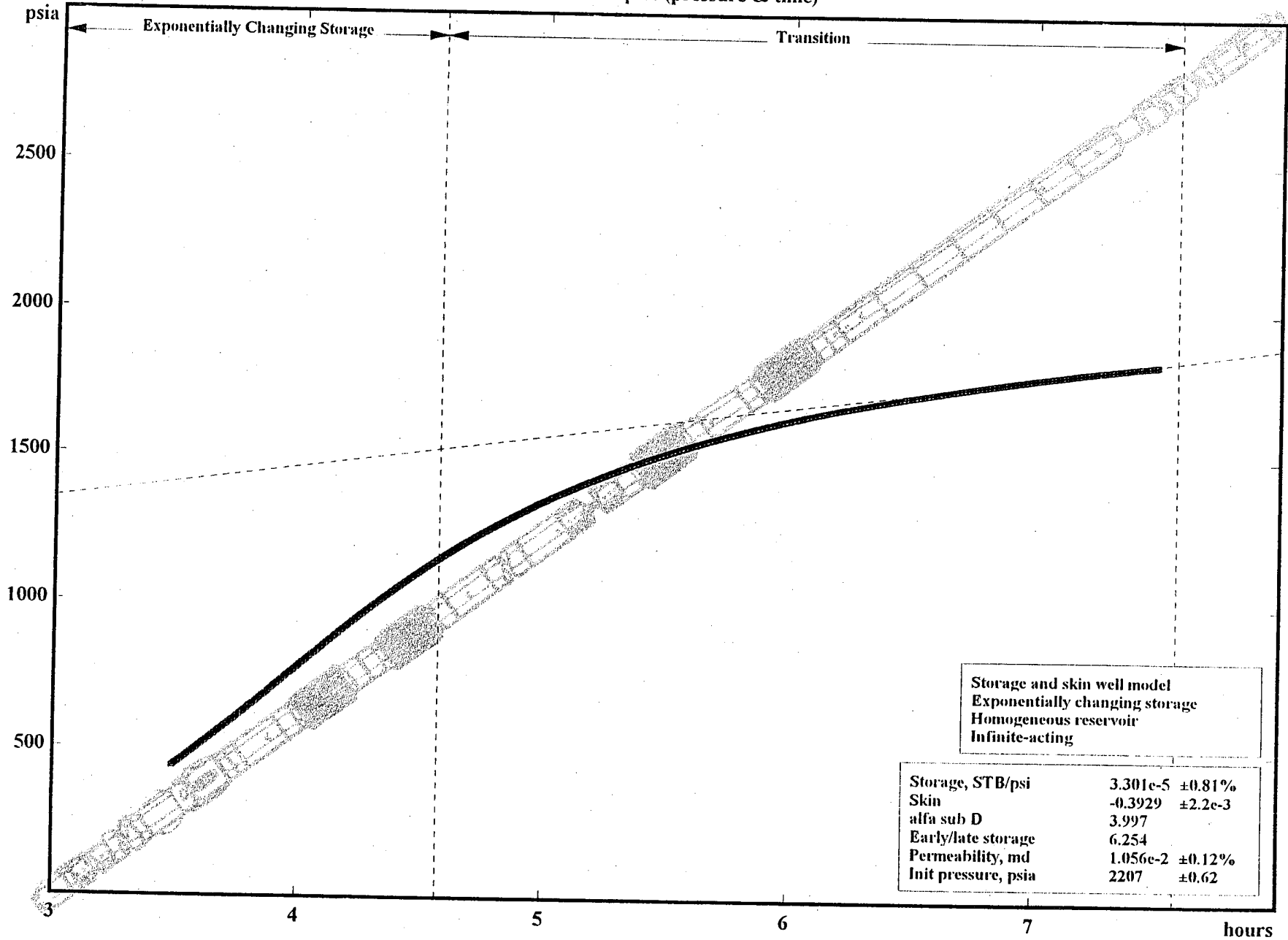
Variable rate Horner plot (pressure & time)



FINAL SHUT-IN PERIOD DST #1 REGRESSION VERIFIED MODEL

PECOS PRODUCTION COMPANY QURECHO PLAINS UNIT #3

Cartesian plot (pressure & time)



FINAL SHUT-IN PERIOD DST #1 REGRESSION VERIFIED MODEL

