Submit to Appropriate
District Office
State Lease - 6 copies
Fee Lease - 5 copies
DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 Pacheco St.
Santa Fe, NM 87505

Form C-105
Revised 1-1-89

WELL API NO. 30-015-33574

5. Indicate Type of Lease STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well: OIL WELL ☐ GAS WELL XX DRY ☐ OTHER

b. Type of Completion: NEW WELL XX WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF RESVR ☐ OTHER

7. Lease Name or Unit Agreement Name: Lake Wood "15"

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2. Name of Operator: Pogo Producing Company CONFIDENTIAL

8. Well No. 1

3. Address of Operator: P.O. Box 10340, Midland, TX 79702-7340

9. Pool name or Wildcat: Four Mile Draw, Morrow

4. Well Location
Unit Letter I : 1750 Feet From The South Line and 660 Feet From The East Line
Section 15 Township 19S Range 26E NMPM Eddy County

10. Date Spudded	11. Date T.D. Reached	12. Date Compl. (Ready to Prod.)	13. Elevations (DF & RKB, RT, GR, etc.)	14. Elev. Casinghead
10/23/04	12/11/04	01/01/05	3313	3314

15. Total Depth	16. Plug Back T.D.	17. If Multiple Compl. How Many Zones?	18. Intervals Drilled By	Rotary Tools	Cable Tools
9900	9840			0-9900	

19. Producing Interval(s), of this completion - Top, Bottom, Name: Morrow 9640-54, 9619-25

20. Was Directional Survey Made: No

21. Type Electric and Other Logs Run

22. Was Well Cored: No

23. **CASING RECORD** (Report all strings set in well)

CASING SIZE	WEIGHT LB/FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8	68	500	17-1/2	450 sks	
8-5/8	32	1082	11	450 sks	
5-1/2	17	7822	7-7/8	1275 sks	

24. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

25. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2-7/8	9873	

26. Perforation record (interval, size, and number)
9640-54, 9619-25 (40 holes)

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED

28. **PRODUCTION**

Date First Production	Production Method (Flowing, gas lift, pumping - Size and type pump)	Well Status (Prod. or Shut-in)
01/01/05	Flowing	Producing

Date of Test	Hours Tested	Choke Size	Prod'n For Test Period	Oil - BbL.	Gas - MCF	Water - BbL.	Gas - Oil Ratio
01/12/05	24	12/64		0	1009	0	---

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - BbL.	Gas - MCF	Water - BbL.	Oil Gravity - API - (Corr.)
1650	---					---

29. Disposition of Gas (Sold, used for fuel, vented, etc.): Sold

Test Witnessed By

30. List Attachments: C-104, C-103, Deviation Survey, Logs

31. *I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief*

Signature Cathy Wright Printed Name Cathy Wright Title Sr Eng Tech Date 1/18/05

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all specific tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy _____	T. Canyon _____	T. Ojo Alamo _____	T. Penn. "B" _____
T. Salt _____	T. Strawn _____	T. Kirtland-Fruitland _____	T. Penn. "C" _____
B. Salt _____	T. Atoka _____	T. Pictured Cliffs _____	T. Penn. "D" _____
T. Yates _____	T. Miss _____	T. Cliff House _____	T. Leadville _____
T. 7 Rivers _____	T. Devonian _____	T. Menefee _____	T. Madison _____
T. Queen _____	T. Silurian _____	T. Point Lookout _____	T. Elbert _____
T. Grayburg _____	T. Montoya _____	T. Mancos _____	T. McCracken _____
T. San Andres _____	T. Simpson _____	T. Gallup _____	T. Ignacio Otzte _____
T. Glorieta _____	T. McKee _____	Base Greenhorn _____	T. Granite _____
T. Paddock _____	T. Ellenburger _____	T. Dakota _____	T. _____
T. Blinebry _____	T. Gr. Wash _____	T. Morrison _____	T. _____
T. Tubb _____	T. Delaware Sand _____	T. Todilto _____	T. _____
T. Drinkard _____	T. Bone Springs _____	T. Entrada _____	T. _____
T. Abo _____	T. _____	T. Wingate _____	T. _____
T. Wolfcamp _____	T. _____	T. Chinle _____	T. _____
T. Penn _____	T. _____	T. Permain _____	T. _____
T. Cisco (Bough C) _____	T. _____	T. Penn. "A" _____	T. _____

OIL OR GAS SANDS OR ZONES

No. 1, from ..... to ..... No. 3, from ..... to .....

No. 2, from ..... to ..... No. 4, from ..... to .....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from ..... to ..... feet .....

No. 2, from ..... to ..... feet .....

No. 3, from ..... to ..... feet .....

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness in Feet	Lithology	From	To	Thickness in Feet	Lithology
Grbg		896					
San Andres		1333					
Glorieta		3085					
Yeso		3220					
3rd BS sd		6780					
WC		7048					
Cisco		7860					
Strawn		8600					
Atoka		9103					
Morrow Lm		9248					
Chester		9860					

OPERATOR POGO PRODUCING
WELL/LEASE LAKE WOOD 15 #1
COUNTY EDDY, NM

RECE[illegible] 078-0027
JAN 0[illegible]
MIDLAND

STATE OF NEW MEXICO
DEVIATION REPORT

231	1/2	6677	2
500	1	6943	2 1/2
776	1	7102	3
1025	3/4	7230	2 1/2
1374	1/2	7294	2
1727	1	7549	3 1/4
2044	1	7677	3 1/2
2364	1	7772	5
2684	1/2		
2876	1/2		
3194	1		
3545	1 1/4		
3865	1 1/4		
4186	1 1/2		
4505	3		
4600	1		
4696	1 1/4		
4855	1/4		
5176	3 1/4		
5301	2 3/4		
5400	3 1/4		
5496	3		
5590	3		
5652	3		
5750	3		
5877	2		
6037	1 1/2		
6325	1 3/4		

CONFIDENTIAL

STATE OF TEXAS
COUNTY OF MIDLAND

BY: [signature]

The foregoing instrument was acknowledged before me on January 5, 2005, by Steve Moore on behalf of Patterson - UTI Drilling Company, LP, LLLP.

[signature]
Notary Public for Midland County, Texas
My Commission Expires: 8/23/07

J ROBERTSON
Notary Public, State of Texas
My Commission Expires:
August 23, 2007

RIG
TESTERS, INC.

COMPANY	: POGO PRODUCING CO.	TEST DATE	: 11-09-04
LEASE	: LAKEWOOD "15"	D.S.T. NO.	: 1
WELL NO.	: # 1	TEST TKT. NO.	: 23022
FIELD	: WILDCAT	INVOICE NO.	: 21052
COUNTY/STATE	: EDDY / NEW MEXICO	ORDER NO.	: 530221

CONFIDENTIAL

FORMATION	: WOLFCAMP	HOLE SIZE (in)	: 7.875	ANCHOR LENGTH (ft)	: 168
INTERVAL (ft)	: 7030 TO 7198	DRILL PIPE ID (in)	: 3.82	TOOL LENGTH (ft)	: 58
TOTAL DEPTH (ft)	: 7198	DRILL COLLAR ID(in)	: 2.25	TOOL O.D. (in)	: 5
ELEVATION (ft)	: 3313	DRILL COLLAR feet	: 805	PACKER SIZE (in)	: 7.00

RECORDER DATA
AK-1KUSTER / ZIPROBE

TOP RECORDER: IN		BOTTOM RECORDER: OUT	
RECORDER NO.	: 9634	RECORDER NO.	: 11026
CAPACITY (psi)	: 10000	CAPACITY (psi)	: 5025
DEPTH (ft)	: 7037	DEPTH (ft)	: 7195
CLOCK NO.	: 9634	CLOCK NO.	: 23019
DURATION (hrs)	: 96	DURATION (hrs)	: 24

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MUD PROPERTIES

MUD TYPE	: FRESH WATER	WATER LOSS (cc)	:	CHLORIDE PPM	: 5000
MUD WT. (#/gal)	: 8.50	FILTER CAKE (in)	:	RESISTIVITY(ohm-m)	: 1.50
		VISCOSITY (sec)	: 28		

EQUIPMENT DATA

CONVENTIONAL	: YES	ROTARY JARS	: YES	MULTIFLOW	: NO
STRADDLE	: NO	NO. OF PACKERS	: 2	MILEAGE	: NO
SELECTIVE ZONE	: NO	SAFETY JOINT	: YES	OPERATOR TIME	: NO
SAMPLE CHAMBER	: YES	CIRCULATING SUB	: YES	OTHER	: YES
GAS ANALYSIS	: YES	REVERSED OUT	: YES	Z.I. ELECTRONICS(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 : 9:31 AM

TOTAL TEST TIME: 627

INITIAL FLOW	: 27	INITIAL SHUT-IN	: 120
SECOND FLOW	: 119	SECOND SHUT-IN	: 360
THIRD FLOW	:	THIRD SHUT IN	:

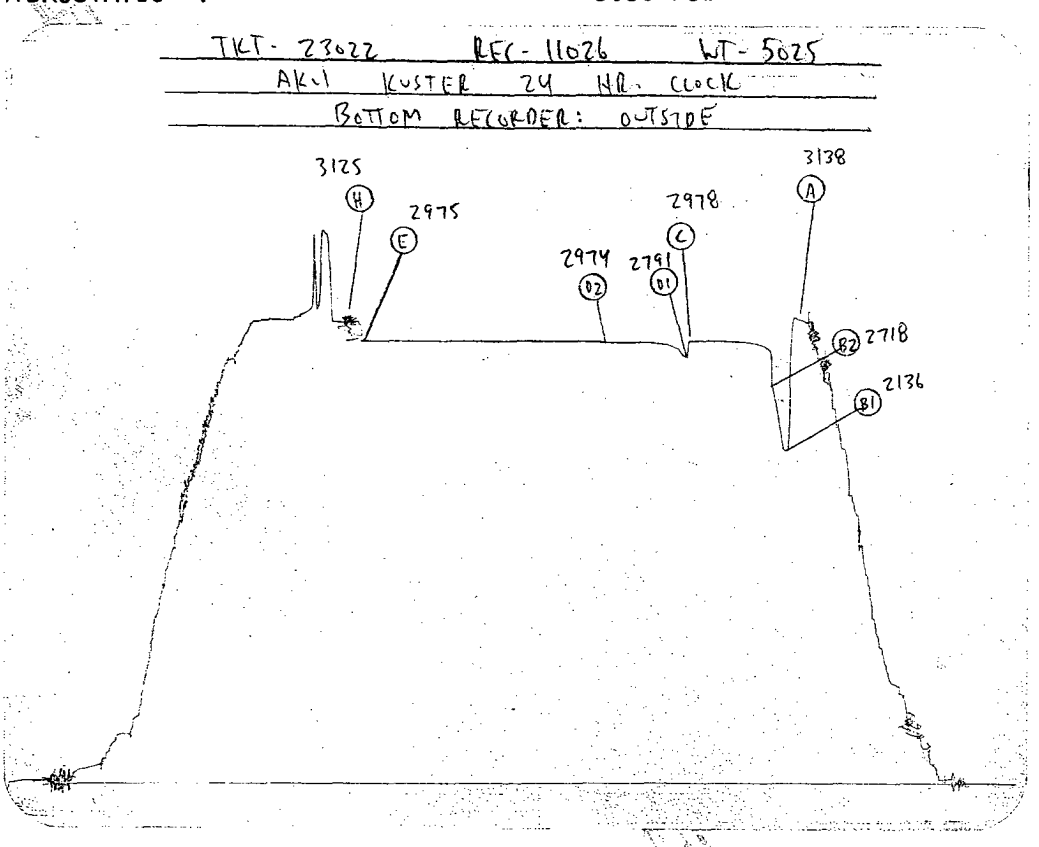
TEST TOOL OPERATOR: DON TERHUNE

RIG TESTERS, INC.

POGO PRODUCING CO.

LAKEWOOD "15" # 1
D.S.T. NO. : 1

		CORRECTED READING	FIELD READING
A	INITIAL HYDROSTATIC:	3069 PSI	3070 PSI
B-1	INITIAL FIRST FLOW :	2066 PSI	2066 PSI
B-2	FINAL FIRST FLOW :	2648 PSI	2647 PSI
C	FIRST SHUT-IN :	2912 PSI	2912 PSI
D-1	INITIAL SECOND FLOW:	2674 PSI	2706 PSI
D-2	FINAL SECOND FLOW :	2905 PSI	2906 PSI
E	SECOND SHUT-IN :	2909 PSI	2909 PSI
H	FINAL HYDROSTATIC :	3056 PSI	3056 PSI



RECOVERY DATA

PIPE RECOVERY — B.H. TEMP. (deg F) : 129 — SAMPLE CHAMBER

GAS TO SURFACE 28 MIN. INTO FIRST FLOW PERIOD
OIL TO SURFACE 5 MIN. INTO FINAL FLOW PERIOD
FLOWED 16.9 BBLS. FREE OIL TO TEST TANK DURING TEST
PULLED 1 STAND & REVERSED OUT TO TANK AN ADDITIONAL;
18.1 BBLS. OF FREE OIL (43.2 GRAVITY @ 60 DEG)-EST
7.9 BBLS. OF FILTRATE/FORMATION WATER- EST.
10,000 MG/L CHLORIDES- .760 OHMS @ 85 DEGREES
120 FT. SULPHUR WATER-BELOW CIRC SUB(10000 MG/L CHL)

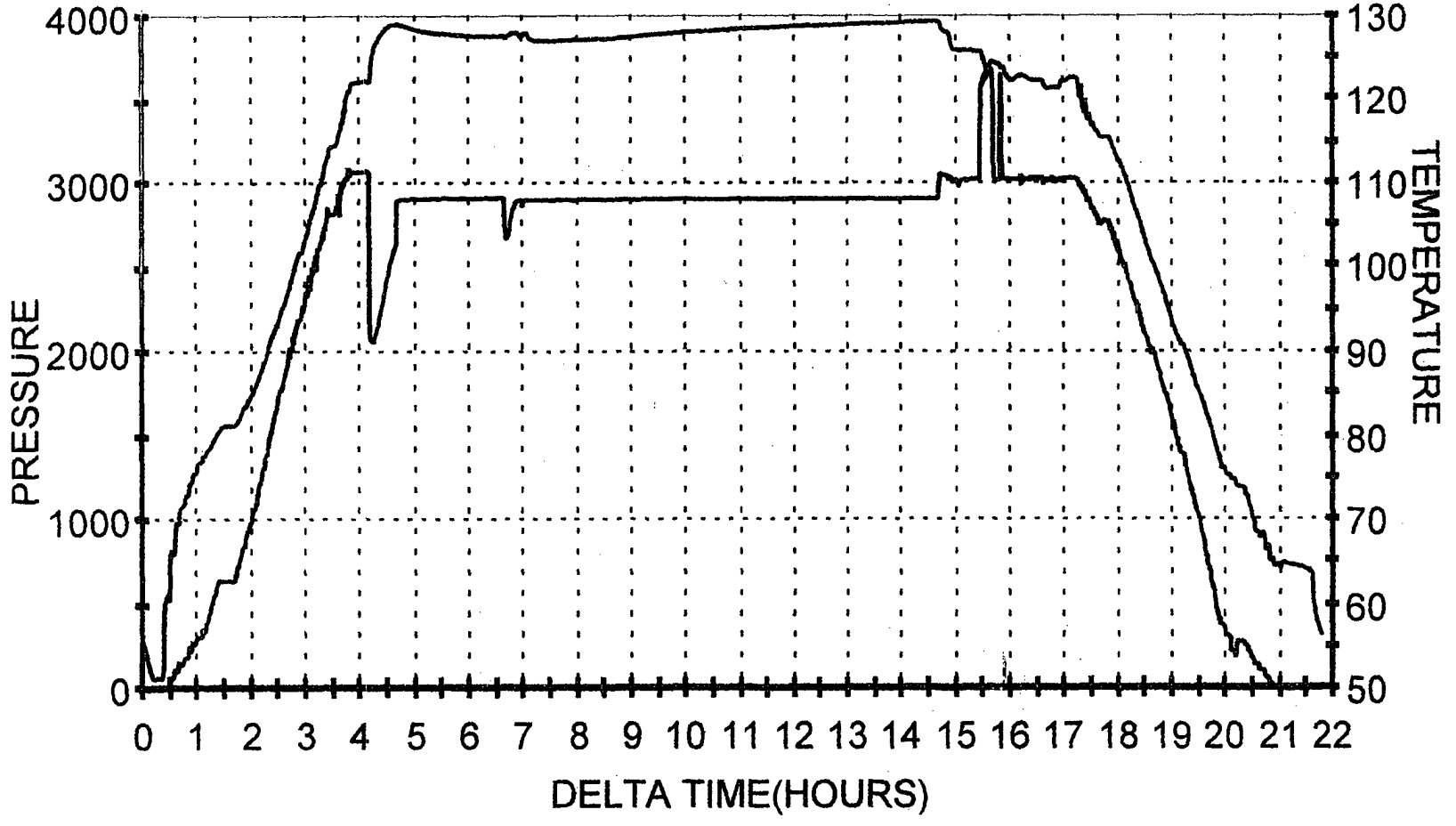
950 LBS. OF PRESSURE
2.06 CU. FT. OF GAS
700 CC'S OF FREE OIL
43.2 GRAVITY @ 60 DEGREES
1100 CC'S FILTRATE/FORMATION WATER
10,000 MG/L CHLORIDES
.760 OHMS @ 85 DEGREES

TEST REMARKS

TOOL OPENED WITH GOOD BLOW, 13 LBS. ON 1/8" CHOKE IN 10 MIN., 27 LBS. ON 1/4" IN 20 MIN., GAS TO SURFACE IN 28 MIN. WITH 24 LBS.(56 MCFPD) ON 1/4" & 18 LBS.(48 MCFPD) AT END OF 30 MIN. FIRST FLOW. REOPENED TOOL ON 1/4" WITH 10 LBS.(36 MCFPD) IN 3 MIN., OIL TO SURFACE IN 5 MIN., 200 LBS.(WITH FLUID) IN 10 MIN., 235 LBS.(FLUID) IN 40 MIN., 255 LBS.(FLUID) IN 70 MIN., 268 LBS.(FLUID) IN 100 MIN. & 270 LBS.(FLUID) AT END OF 120 MIN. FINAL FLOW. (FLOWED 16.9 BBLS. OF FREE OIL TO TEST TANK DURING TEST)

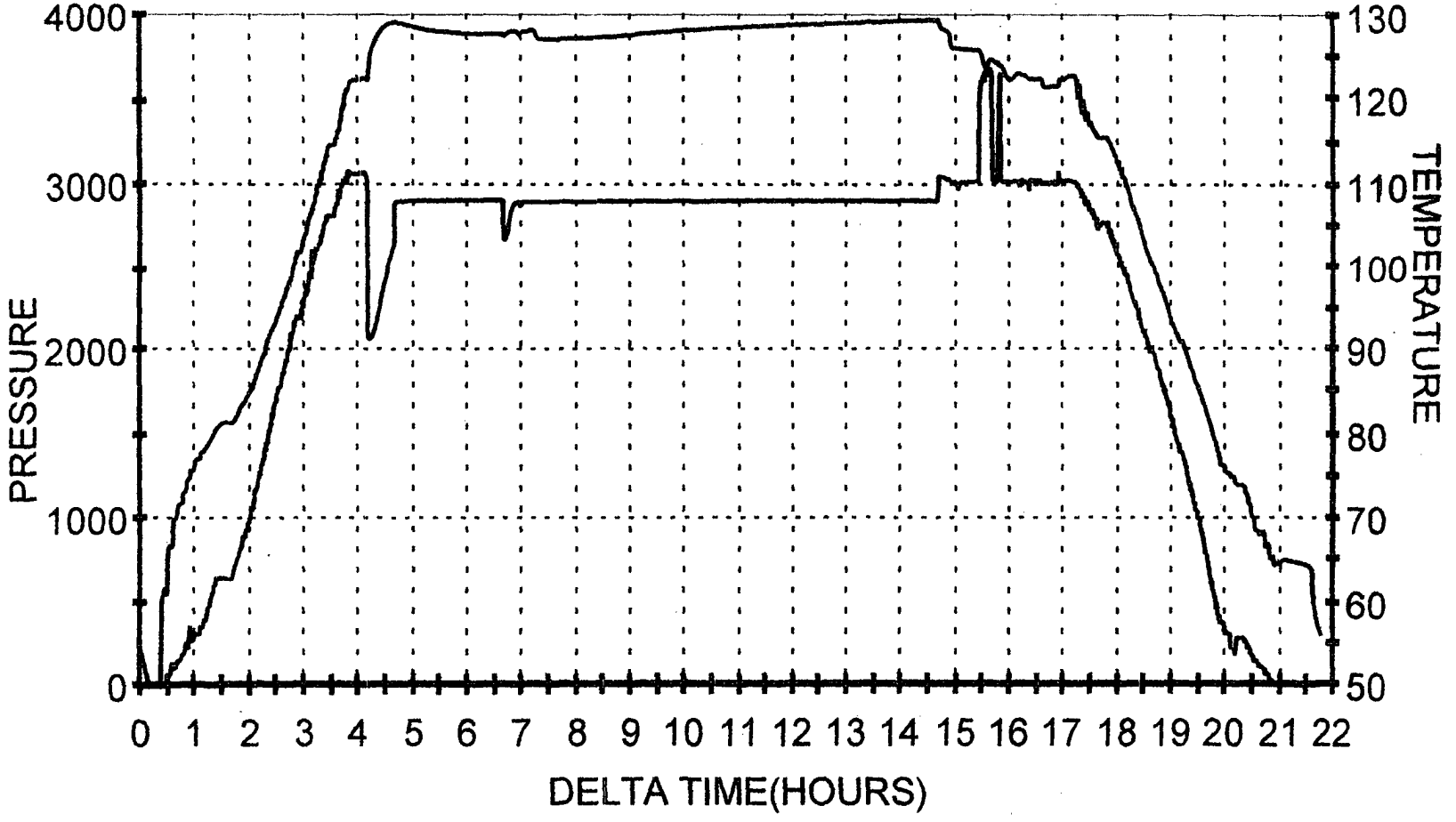
PRESSURE AND TEMPERATURE VS DELTA TIME

Company: Pogo Producing Company
Location: Lakewood 15-1, DST #1
Date: Nov. 9, 2004 TOP
Serial# 9634
Max. Pressure: 3686.516 psia Max. Temperature: 129.348 F



PRESSURE AND TEMPERATURE VS DELTA TIME

Company: Pogo Producing Company
Location: Lakewood 15-1 DST #1
Date: Nov. 9, 2004 Bottom
Serial# 9635
Max. Pressure: 3684.810 psia Max. Temperature: 129.410 F



POGO PRODUCING CO.

RIG TESTERS, INC.

LAKEWOOD "15" # 1
D.S.T. NO. : 1

INCREMENTAL PRESSURE DATA

RECORDER NO : 9634 RECORDER CAPACITY : 10000 psi RECORDER DEPTH : 7037 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			2066.70	.00
2.0	2.0			2068.65	1.95
4.0	4.0			2093.44	26.74
6.0	6.0			2135.70	69.00
8.0	8.0			2181.97	115.27
10.0	10.0			2231.55	164.85
12.0	12.0			2287.70	221.00
14.0	14.0			2343.72	277.02
16.0	16.0			2399.62	332.92
18.0	18.0			2452.50	385.80
20.0	20.0			2499.98	433.28
22.0	22.0			2546.63	479.93
24.0	24.0			2591.60	524.90
26.0	26.0			2628.38	561.68
27.0	27.0			2648.00	581.30
			FIRST SHUT-IN		
27.0	27.0	.00	.000	2648.00	.00
28.0	27.0	1.00	28.000	2896.52	248.52
29.0	27.0	2.00	14.500	2899.40	251.40
30.0	27.0	3.00	10.000	2901.00	253.00
31.0	27.0	4.00	7.750	2902.18	254.18
32.0	27.0	5.00	6.400	2902.97	254.97
33.0	27.0	6.00	5.500	2903.70	255.70
34.0	27.0	7.00	4.857	2904.19	256.19
35.0	27.0	8.00	4.375	2904.68	256.68
36.0	27.0	9.00	4.000	2905.10	257.10
37.0	27.0	10.00	3.700	2905.29	257.29
39.0	27.0	12.00	3.250	2906.00	258.00
41.0	27.0	14.00	2.929	2906.58	258.58
43.0	27.0	16.00	2.688	2906.90	258.90
45.0	27.0	18.00	2.500	2907.30	259.30
47.0	27.0	20.00	2.350	2907.68	259.68
50.0	27.0	23.00	2.174	2908.08	260.08
53.0	27.0	26.00	2.038	2908.50	260.50
56.0	27.0	29.00	1.931	2908.78	260.78
59.0	27.0	32.00	1.844	2909.08	261.08
62.0	27.0	35.00	1.771	2909.30	261.30
65.0	27.0	38.00	1.711	2909.60	261.60
72.0	27.0	45.00	1.600	2910.00	262.00
77.0	27.0	50.00	1.540	2910.30	262.30
82.0	27.0	55.00	1.491	2910.70	262.70
87.0	27.0	60.00	1.450	2910.90	262.90
92.0	27.0	65.00	1.415	2911.20	263.20
97.0	27.0	70.00	1.386	2911.40	263.40

POGO PRODUCING CO.

RIG TESTERS, INC.

LAKEWOOD "15" # 1
D.S.T. NO. : 1

INCREMENTAL PRESSURE DATA

RECORDER NO : 9634 RECORDER CAPACITY : 10000 psi RECORDER DEPTH : 7037 ft

ELAPSED TIME	TOTAL FLOW TIME, T	INCREMENTAL SHUT-IN TIME, DT	(T+DT)/DT (HORNER)	PRESSURE	DELTA P
---MIN----	---MIN----	---MIN----	----------	---PSIG---	---PSIG---
		FIRST SHUT-IN			
102.0	27.0	75.00	1.360	2911.60	263.60
107.0	27.0	80.00	1.338	2911.72	263.72
112.0	27.0	85.00	1.318	2912.00	264.00
117.0	27.0	90.00	1.300	2912.10	264.10
122.0	27.0	95.00	1.284	2912.20	264.20
127.0	27.0	100.00	1.270	2912.40	264.40
132.0	27.0	105.00	1.257	2912.50	264.50
137.0	27.0	110.00	1.245	2912.60	264.60
142.0	27.0	115.00	1.235	2912.70	264.70
147.3	27.0	120.30	1.224	2912.90	264.90
		SECOND FLOW			
148.3	28.0			2674.30	.00
153.3	33.0			2760.90	86.60
158.3	38.0			2880.48	206.18
163.3	43.0			2901.20	226.90
168.3	48.0			2895.83	221.53
173.3	53.0			2901.89	227.59
178.3	58.0			2902.20	227.90
183.3	63.0			2902.21	227.91
188.3	68.0			2902.19	227.89
193.3	73.0			2902.70	228.40
198.3	78.0			2902.89	228.59
203.3	83.0			2903.00	228.70
208.3	88.0			2903.10	228.80
213.3	93.0			2903.50	229.20
218.3	98.0			2903.30	229.00
223.3	103.0			2903.50	229.20
228.3	108.0			2904.00	229.70
233.3	113.0			2904.49	230.19
238.3	118.0			2904.90	230.60
243.3	123.0			2905.00	230.70
248.3	128.0			2905.29	230.99
253.3	133.0			2905.60	231.30
258.3	138.0			2905.90	231.60
263.3	143.0			2906.10	231.80
267.5	147.2			2905.70	231.40
		SECOND SHUT-IN			
267.5	147.2	.00	.000	2905.70	.00

POGO PRODUCING CO.

RIG TESTERS, INC.

LAKEWOOD "15" # 1
D.S.T. NO. : 1

INCREMENTAL PRESSURE DATA

RECORDER NO : 9634 RECORDER CAPACITY : 10000 psi RECORDER DEPTH : 7037 ft

ELAPSED TIME	TOTAL FLOW TIME, T	INCREMENTAL SHUT-IN TIME,DT	(T+DT)/DT (HORNER)	PRESSURE	DELTA P
---MIN----	---MIN----	---MIN----	----------	---PSIG---	---PSIG---
		SECOND SHUT-IN			
269.5	147.2	2.00	74.620	2905.50	-.20
271.5	147.2	4.00	37.810	2905.60	-.10
273.5	147.2	6.00	25.540	2905.70	.00
275.5	147.2	8.00	19.405	2905.80	.10
277.5	147.2	10.00	15.724	2905.90	.20
279.5	147.2	12.00	13.270	2906.00	.30
281.5	147.2	14.00	11.517	2906.10	.40
283.5	147.2	16.00	10.203	2906.19	.49
285.5	147.2	18.00	9.180	2906.20	.50
287.5	147.2	20.00	8.362	2906.30	.60
290.5	147.2	23.00	7.402	2906.40	.70
293.5	147.2	26.00	6.663	2906.51	.81
296.5	147.2	29.00	6.077	2906.60	.90
299.5	147.2	32.00	5.601	2906.70	1.00
302.5	147.2	35.00	5.207	2906.80	1.10
305.5	147.2	38.00	4.875	2906.90	1.20
312.5	147.2	45.00	4.272	2907.10	1.40
317.5	147.2	50.00	3.945	2907.20	1.50
322.5	147.2	55.00	3.677	2907.40	1.70
327.5	147.2	60.00	3.454	2907.40	1.70
332.5	147.2	65.00	3.265	2907.59	1.89
337.5	147.2	70.00	3.103	2907.69	1.99
342.5	147.2	75.00	2.963	2907.70	2.00
347.5	147.2	80.00	2.841	2907.80	2.10
352.5	147.2	85.00	2.732	2907.90	2.20
357.5	147.2	90.00	2.636	2907.90	2.20
362.5	147.2	95.00	2.550	2908.01	2.31
367.5	147.2	100.00	2.472	2908.01	2.31
372.5	147.2	105.00	2.402	2908.10	2.40
377.5	147.2	110.00	2.339	2908.20	2.50
382.5	147.2	115.00	2.280	2908.20	2.50
387.5	147.2	120.00	2.227	2908.30	2.60
397.5	147.2	130.00	2.133	2908.40	2.70
407.5	147.2	140.00	2.052	2908.50	2.80
417.5	147.2	150.00	1.982	2908.60	2.90
427.5	147.2	160.00	1.920	2908.60	2.90
437.5	147.2	170.00	1.866	2908.70	3.00
447.5	147.2	180.00	1.818	2908.70	3.00
462.5	147.2	195.00	1.755	2908.80	3.10
477.5	147.2	210.00	1.701	2908.90	3.20

POGO PRODUCING CO.

RIG TESTERS, INC.

LAKEWOOD "15" # 1
D.S.T. NO. : 1

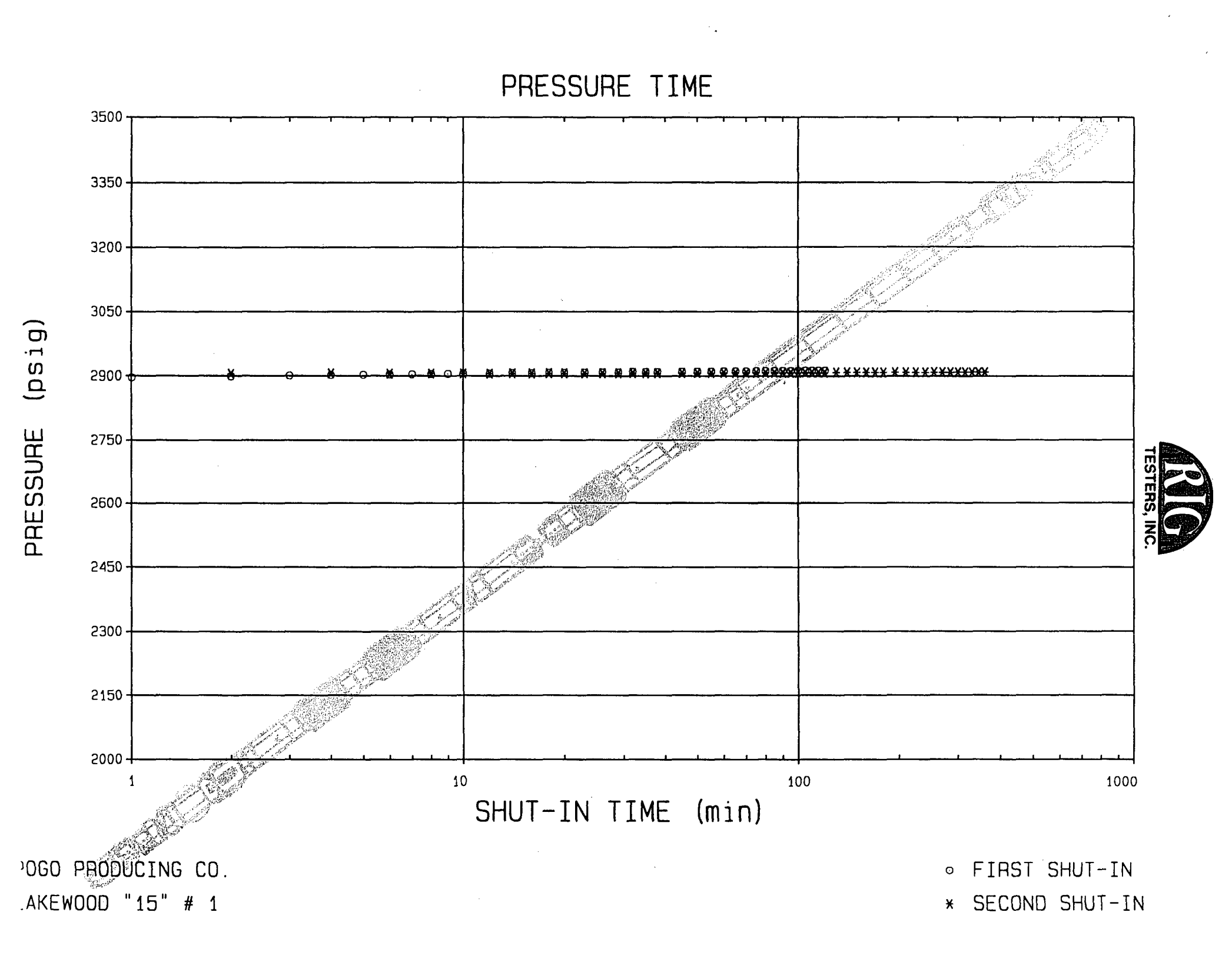
INCREMENTAL PRESSURE DATA

RECORDER NO : 9634 RECORDER CAPACITY : 10000 psi RECORDER DEPTH : 7037 ft

ELAPSED TIME	TOTAL FLOW TIME, T	INCREMENTAL SHUT-IN TIME,DT	(T+DT)/DT (HORNER)	PRESSURE	DELTA P
---MIN----	---MIN----	---MIN----	----------	---PSIG---	---PSIG---
		SECOND SHUT-IN			
492.5	147.2	225.00	1.654	2909.00	3.30
507.5	147.2	240.00	1.614	2909.00	3.30
522.5	147.2	255.00	1.577	2909.10	3.40
537.5	147.2	270.00	1.545	2909.20	3.50
552.5	147.2	285.00	1.517	2909.20	3.50
567.5	147.2	300.00	1.491	2909.30	3.60
582.5	147.2	315.00	1.467	2909.40	3.70
597.5	147.2	330.00	1.446	2909.30	3.60
612.5	147.2	345.00	1.427	2909.30	3.60
627.5	147.2	360.00	1.409	2909.40	3.70

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
PRESSURE (psig)
3500
3350
3200
3050
2900
2750
2600
2450
2300
2150
2000
1
10
100
1000
SHUT-IN TIME (min)
RIG TESTERS, INC.
)OGO PRODUCING CO.
.AKEWOOD "15" # 1
o FIRST SHUT-IN
* SECOND SHUT-IN

RIG TESTERS, INC.

Well Test Report

RigTesters, Inc.
ABILENE - MIDLAND - GRAHAM

POGO PRODUCING CO. LAKEWOOD "15" #1

Well identification

Well ID	LAKEWOOD "15" #	Well location	20 N. CARLSBAD
County/District	EDDY	State, Country	NEW MEXICO
Company	POGO PRODUCTIO	Division	MIDLAND

Fluid properties

Prod/Inj fluid	OIL/WATER	GOR	450:1
Water cut	61%	Condensate yield	UNKNOWN
API gravity	43.2	Gas spec. grav.	0.7
Viscosity	0.63036 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)	19.322 e-6/psi	Formation vol factor	1.1009 RB/STB

Reservoir properties

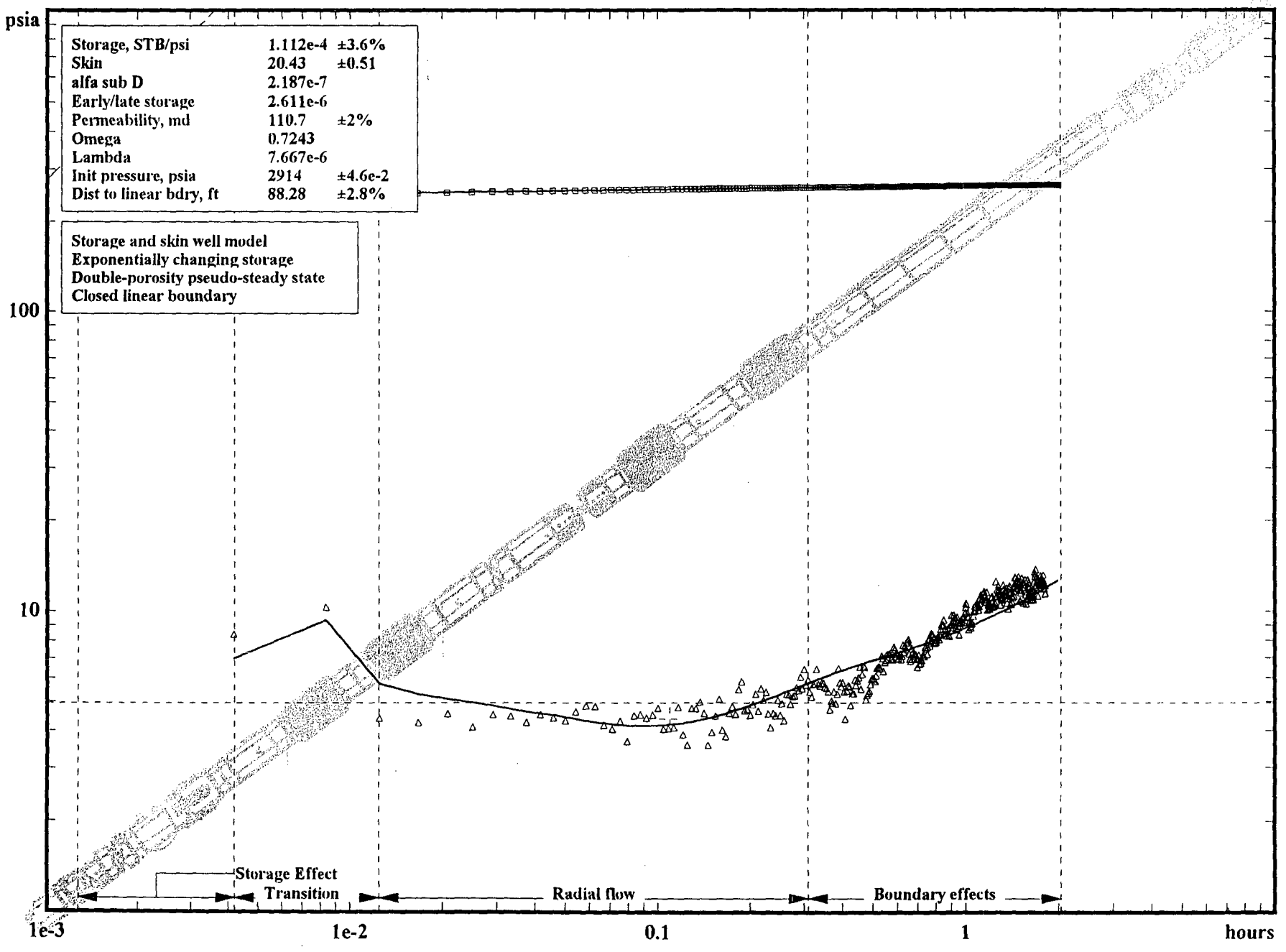
Porosity	8e-2 frac	Formation thickness	60 ft
Wellbore radius	0.32813 ft	Prod-observer distance	N/A
Water-Oil Contact	UNKNOWN	Gas-Oil Contact	N/A
Gas-Water Contact	N/A	Rock compressibility	
Reservoir temperature	129 deg F	Pressure for properties	2913.9 psia

Comments

THE DERIVATIVES INDICATE A HETEROGENEOUS RESERVOIR WITH HIGH PERMEABILITY & INITIALY HIGH (POSITIVE) SKIN. THE INITIAL SHUT-IN PERIOD SHOWS AN INCREASE (DOUBLING IN VALUE) OF SLOPE VALUE WHICH MAY BE INDICATIVE OF A BARRIER OR BOUNDARY WITHIN RADIUS OF INVESTIGATION. THE BARRIER SIGNATURE WAS NOT AS APPARENT ON FINAL SHUT-IN PERIOD BUT THIS WAS PROBABLY DUE TO THE EQUALIZATION OF THE FINAL FLOW & FINAL SHUT-IN. A REGRESSION ANALYSIS WAS PERFORMED ON BOTH SHUT-INS IN AN EFFORT TO DETERMINE FORMATION PARAMETERS & IS REPRESENTED BY A SOLID LINE PLOTTED OVER THE ACTUAL DATA WITH CONFIDENCE INTERVALS (MARGIN OF ERROR) SHOWN NEXT TO THE MAJOR CALCULATIONS. THE PERMEABILITY & SKIN CALCULATIONS OF THE INITIAL SHUT-IN ARE MORE REPRESENTIVE THAN THE FINAL DUE TO THE EQUALIZATION (ONLY 4 LBS. OF BUILDUP) OF FINAL FLOW & FINAL SHUT-IN PERIOD. THE FIXED PARAMETERS USED WERE AN EST. 8% POROSITY, 60 FT. OF NET PAY REPORTED & AVERAGE PRODUCTION RATES OF 709 BFPD (FIRST FLOW) & 124 BFPD ON THE FINAL FLOW (39% OIL & 61% WATER AS INDICATED IN SAMPLE CHAMBER RECOVERY). THE TOTAL RADIUS OF INVESTIGATION CALCULATED TO APPROX. 529 FT. FROM THE WELLBORE.

POGO PRODUCING CO. LAKEWOOD "15" #1

Diagnostic plot (pressure & time)

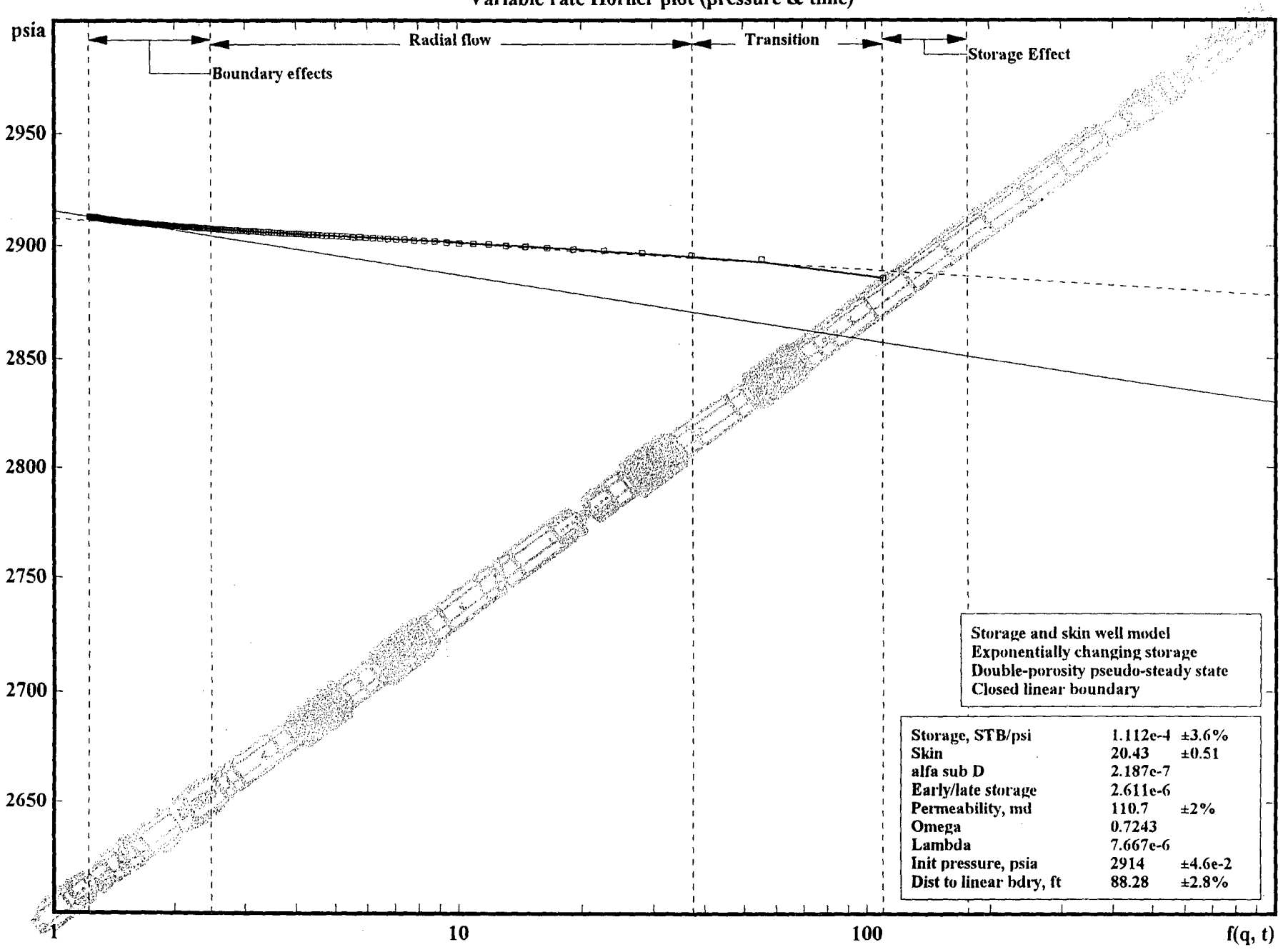


INITIAL SHUT-IN PERIOD DST #1 REGRESSION VERIFIED MODEL

RIG TESTERS, INC.

POGO PRODUCING CO. LAKEWOOD "15" #1

Variable rate Horner plot (pressure & time)

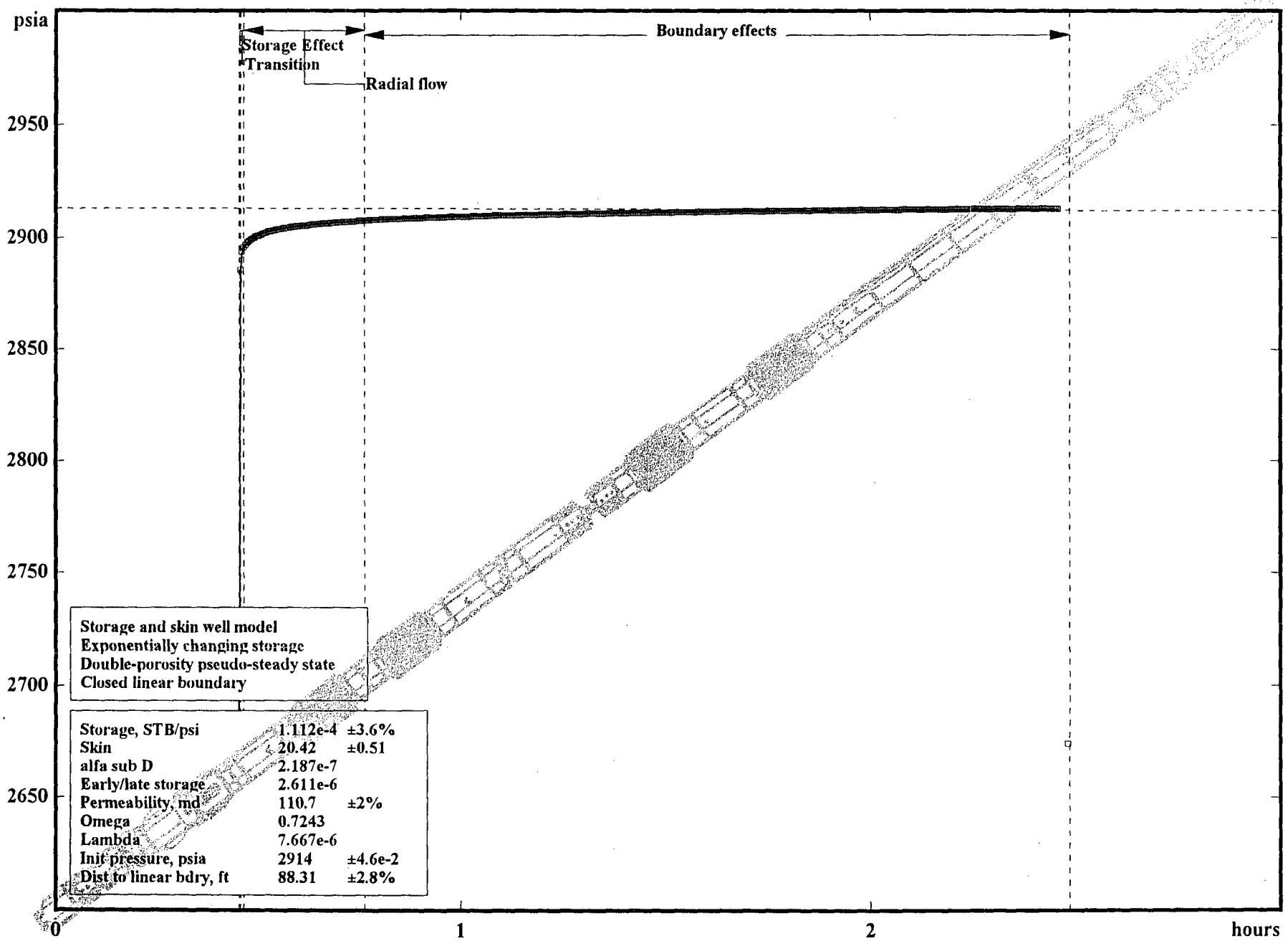


RIG TESTERS, INC.

INITIAL SHUT-IN PERIOD DST #1 REGRESSION VERIFIED MODEL

POGO PRODUCING CO. LAKEWOOD "15" #1

Cartesian plot (pressure & time)

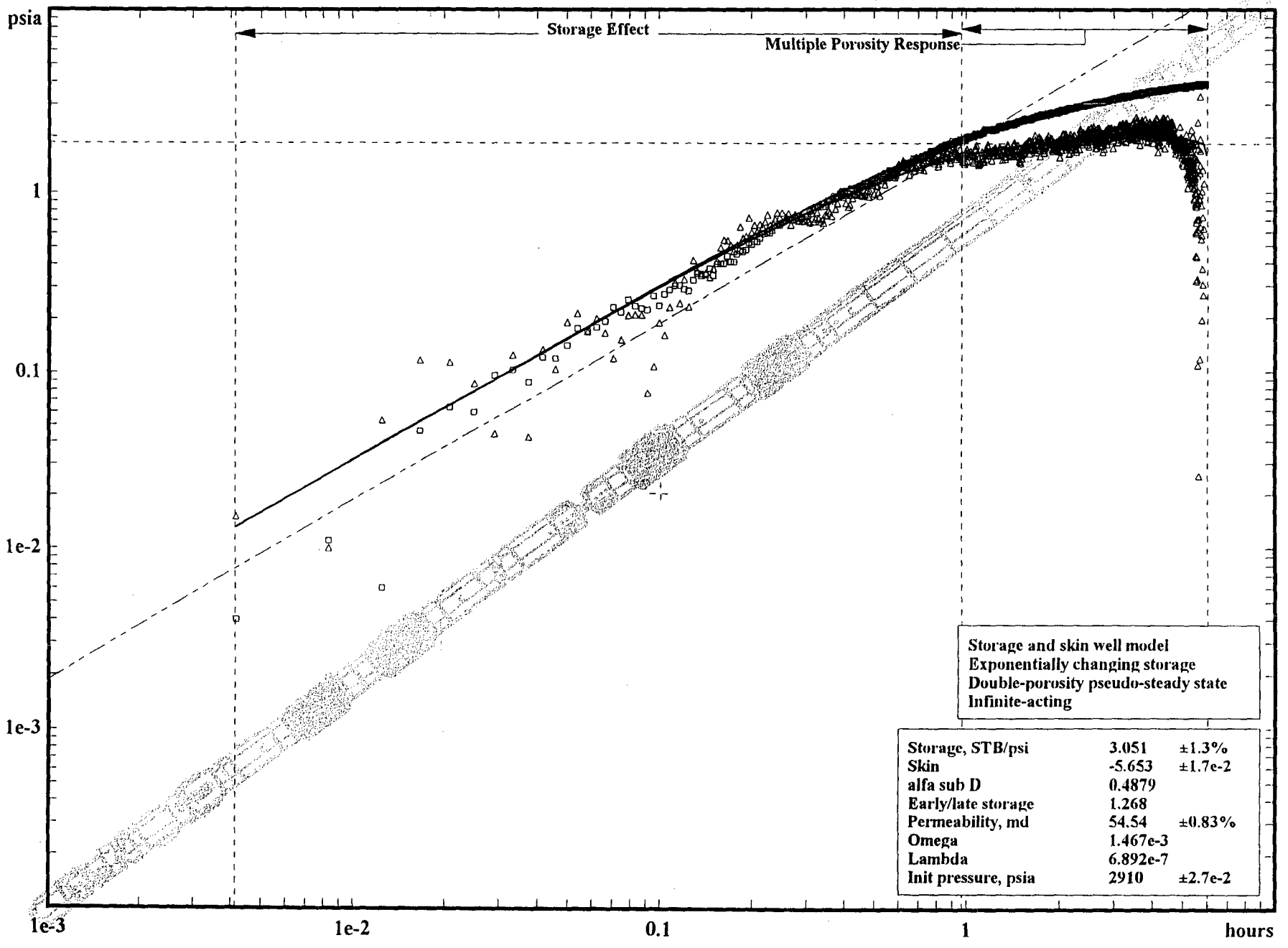


RIG TESTERS, INC.

FINAL SHUT-IN PERIOD DST #1 REGRESSION VERIFIED MODEL

POGO PRODUCING CO. LAKEWOOD "15" #1

Diagnostic plot (pressure & time)

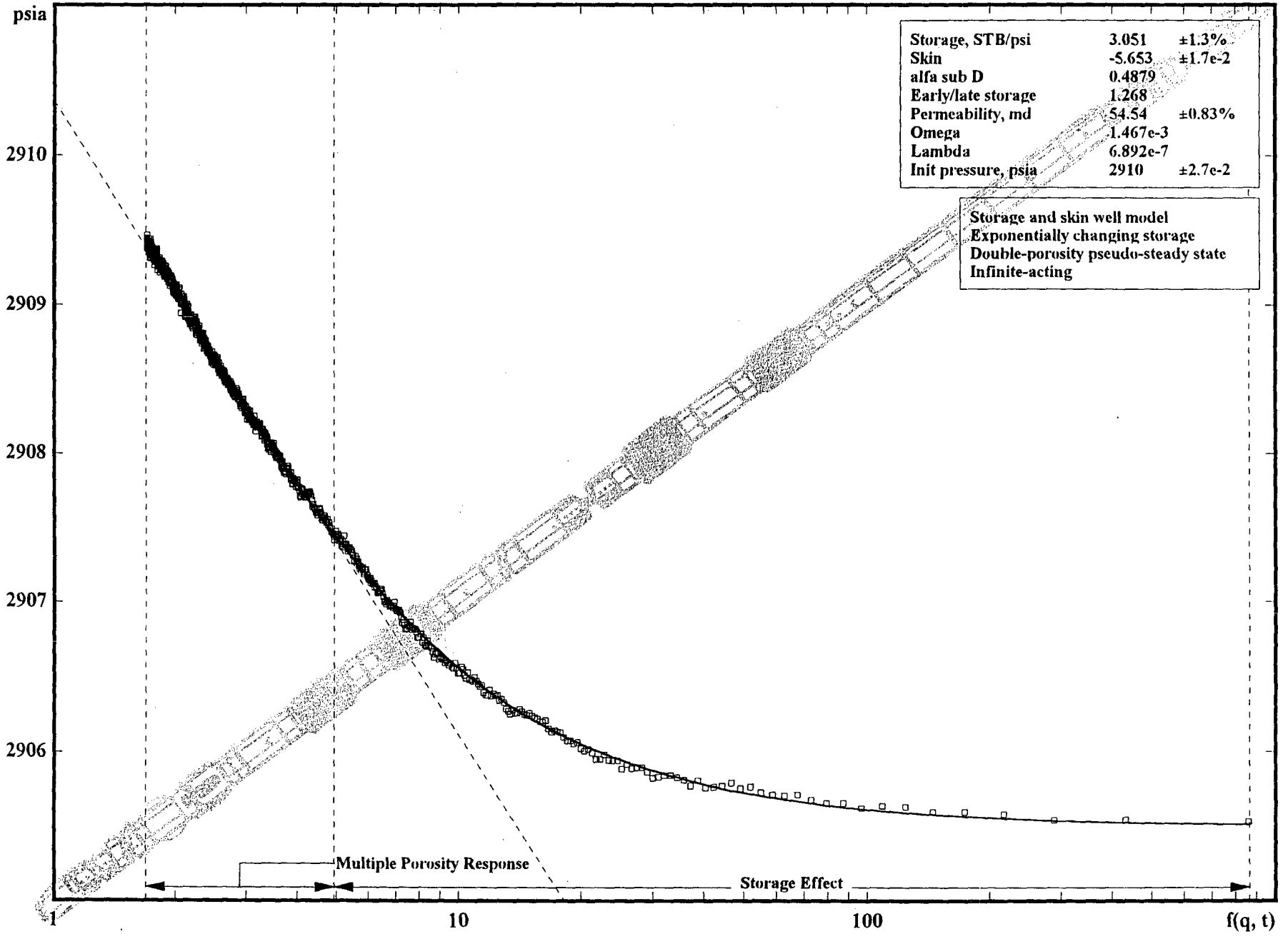


RIG TESTERS, INC.

FINAL SHUT-IN PERIOD DST #1 REGRESSION VERIFIED MODEL

POGO PRODUCING CO. LAKEWOOD "15" #1

Variable rate Horner plot (pressure & time)

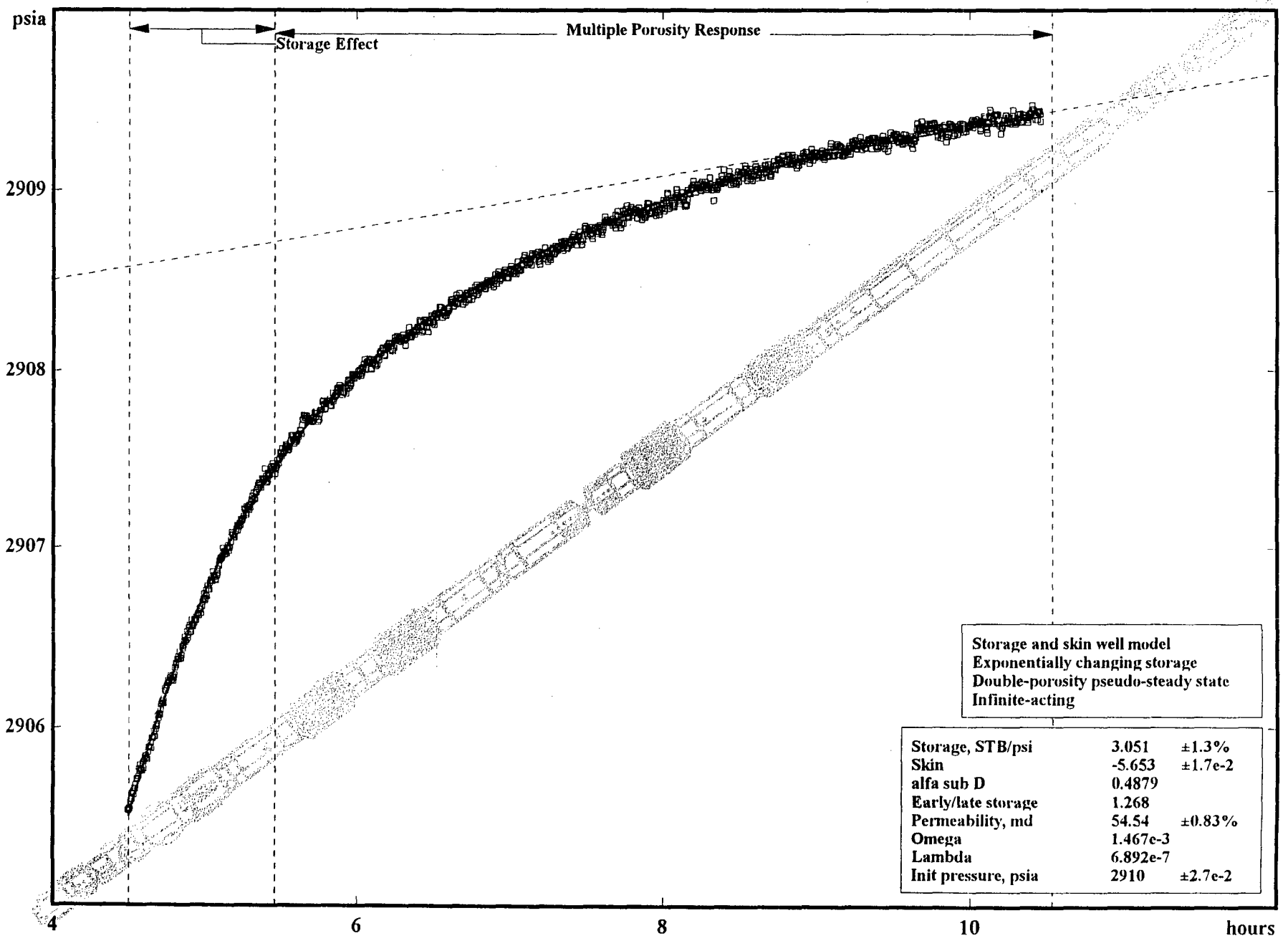


FINAL SHUT-IN PERIOD DST #1 REGRESSION VERIFIED MODEL

RIG TESTERS, INC.

POGO PRODUCING CO. LAKEWOOD "15" #1

Cartesian plot (pressure & time)



RIG TESTERS, INC.

FINAL SHUT-IN PERIOD DST #1 REGRESSION VERIFIED MODEL