FLOW/BUILDUP TEST ANALYSIS Report

HOME PIERSON 102/01-16-02-29W1 HZ
ALIDA (VERT. 1030 - 1034 mKB)
(650 m LATERAL)
DATE : DECEMBER 20 - JANUARY 28, 2000

#01585

Prepared for:
ANDERSON EXPLORATION LTD.

Prepared by:
PETRO MANAGEMENT GROUP LTD.

FEBRUARY 2000

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PMG

P M G Petro Management Group Ltd.

February 19, 2000

ANDERSON EXPLORATION LTD.
1600, 324 - 8 Avenue S.W.
Calgary, Alta., T2P 2Z5

Attn.: Mr. Larry Sopko

HOME PIERSON 102/01-16-02-29W1 HZ
ALIDA (VERT. 1030 - 1034 mKB)
(650 m LATERAL)
FLOW/BUILDUP TEST
TEST DATE: DECEMBER 20 - JANUARY 28, 2000

As requested, a flow/buildup test analysis was performed on the subject horizontal well.

The report marked ORIGINAL contains the test data on a diskette. Three copies of the report are attached.

Should you have any questions, please feel free to contact me at (403) 216-5101.

Yours truly,
Petro Management Group Ltd.
COPY (Original Signed) S. IBRAHIM

Saad Ibrahim, P. Eng.
Principal Engineer

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Summary of Test Data & Results

Case Name : Horizontal Well Model #2

Home Pierson 102/1-16-02-29W1 HZ

Alida (Vert. 1030 - 1034 mKB)

Flow/Buildup Test

Test Date: Dec. 20, 99 - Jan. 28, 2000

Model Parameters

Permeability in X Direction (k_x)	26.132 mD	Effective Horizontal Well Length (L_e)	284.19 m
Permeability in Y Direction (k_y)	18.153 mD	Reservoir Length (X_e)	900.00 m
Permeability in Z Direction (k_z)	3.600 mD	Reservoir Width (Y_e)	500.00 m
Skin (s)	20.457	Reservoir Thickness (Z_e)	4.00 m
Total Mobility $(k/\mu)_t$	1.54 mD/mPa.s	Active Well At (X_w)	550.00 m
Total Transmissivity $(kh/\mu)_t$	6.17 mDm/mPa.s	Active Well At (Y_w)	250.00 m
Wellbore Storage Constant Dim. (C_D)	904830.44	Height of Horizontal Well From Base (Z_w)	2.00 m

Formation Parameters

Net Pay (h)	4.00 m
Total Porosity (ϕ_t)	17.00 %
Oil Saturation (S_o)	60.00 %
Gas Saturation (S_g)	0.00 %
Water Saturation (S_w)	40.00 %
Wellbore Radius (r_w)	0.091 m
Formation Temperature (T)	42.0 °C
Formation Compressibility (c_f)	5.658e-7 kPa^{-1}
Total Compressibility (c_t)	1.518e-6 kPa^{-1}

Fluid Properties

Oil Compressibility (c_o)	1.28183e-6 kPa^{-1}
Gas Compressibility (c_g)	7.90221e-4 kPa^{-1}
Water Compressibility (c_w)	4.58278e-7 kPa^{-1}
Oil Formation Volume Factor (B_o)	1.036
Gas Formation Volume Factor (B_g)	0.082915 m^3/m^3
Water Formation Volume Factor (B_w)	1.007
Oil Viscosity (μ_o)	8.391 mPa.s
Gas Viscosity (μ_g)	11.191 µPa.s
Water Viscosity (μ_w)	0.625 mPa.s
Solution Gas Ratio (R_s)	4 m^3/m^3
Oil Gravity (γ_o)	0.865
Gas Gravity (G)	0.650
PVT Reference Pressure (p_{PVT})	1300.67 kPa
Bubble Point Pressure (P_{bp})	1300.67 kPa

Production and Pressure

Q_tB_t	3.030 m^3/d
Final Oil Rate	2.700 m^3/d
Final Gas Rate	0.000 $10^3m^3/d$
Final Water Rate	0.230 m^3/d
Final Flowing Pressure (p_{wfo})	552.20 kPa
Final Measured Pressure	1300.67 kPa
Initial Pressure (p_i)	1300.67 kPa

Synthesis Results

Average Error	0.86 %
Synthetic Initial Pressure (p_i)	3445.39 kPa
Extrapolated Pressure at Specified Time	1470.22 kPa
Pressure Drop Due To Skin (Δp_s)	315.05 kPa
Flow Efficiency (FE)	0.935
Damage Ratio (DR)	1.069

Forecasts

Specified Flowing Pressure (p_{wfs})	552.20 kPa
3 - Month Constant Rate	1.750 m^3/d
6 - Month Constant Rate	1.233 m^3/d
Specified Forecast Time	12.00 month
Forecast Constant Rate @ Current Skin	0.795 m^3/d
PI / II (Total Liquids - Actual)	3.26e-3 $m^3/d/kPa$
Forecast Constant Rate @ Skin=0	0.886 m^3/d
PI / II (Total Liquids - Ideal)	5.01e-3 $m^3/d/kPa$
Forecast Constant Rate @ Skin=-4	0.911 m^3/d

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SUMMARY

SUMMARY OF RESULTS

1. The average reservoir pressure ($\bar{P}_R$) was determined at 1 470 kPa.

2. The typical flow regimes of a horizontal well (Vertical-Radial and the Horizontal-Linear) were not present, possibly due to the inaccuracy inherited in the use of AWS pressure measurements. Therefore, the results of the test analysis should be taken with caution. The history matching technique of the test pressure data was used to conclude the various reservoir parameters.

3. The effective length of the horizontal well is 284 m, which is much less than the actual length of the horizontal well of approx. 550 m.

4. The horizontal permeability in the Y-X plane (K_x) and (K_y) are 26.1 mD and 18.1 mD, respectively.

5. The skin factor of +20.5 indicates a damaged wellbore.

6. The radius of investigation is 499 m.

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TEST
ANALYSIS

DISCUSSION

1. Test Objectives :

The main objective of the flow/buildup test was to evaluate the deliverability of the well and to determine the various reservoir parameters.

2. Test Overview :

The Home Pierson 102/01-16-02-29W1 HZ is the only horizontal oil well producing from the Alida Formation, in the South Pierson Unit. The well has been on production since the end of 1994. Bottom hole pressures were calculated using automatic surface acoustic measurements. The last oil rate before shutin was 2.7 m^3/d. The average producing water rate was 0.23 m^3/d.

3. Fluid Samples :

The fluid properties were calculated using various P.V.T correlations for a crude API gravity of 36 degrees.

4. Reservoir Parameters :

Reservoir parameters used in the analysis were provided by Anderson Exploration Ltd. as follows:

Net Pay	= 4.0 m
Average Porosity	= 17 %
Average Water Saturation	= 40 %
Actual Length of Horizontal well	= 650 m

5. Data Validation :

The test raw data is shown on Figure 1 in the Section "Data Quality". The primary pressure derivative (PPD) plot should poor quality of the test pressure data. The PPD should be decreasing with time for valid buildup test data.

Bottom hole pressures were calculated from the surface data obtained using automatic surface acoustic measurements. The pressure data were reported in gauge and was corrected to absolute by adding 93 kPa.

TEST INTERPRETATION

1. Pressure Buildup Analysis :

Pressure buildup analysis was performed on the shut-in period (Figure 2). The final oil rate prior to shutting in the well was 2.7 m^3/d. The final pumping sandface pressure was 552.2 kPa. Both the Horner Plot and the pressure derivative analysis were used in the analysis, as discussed below, and results were later fine tuned using the pressure history match techniques of the test pressure data.

Wellbore storage regime was identified by the unit slope straight of the pressure derivative as shown in the Diagnostic Derivative Analysis plot (Figure 3) in the section "Pressure Transient Analysis". The test data during the flattening of the pressure derivative was used to determine the reservoir parameters. The typical flow regimes of a horizontal well (Vertical-Radial and the Horizontal-Linear) were not present, possibly due to the inaccuracy inherited in the use of AWS pressure measurements

Radial flow analysis was performed to determine the reservoir parameters using the semi-log straight line drawn through the late time pressure data, as shown in the Horner plot (Figure 4). The extrapolation of the last data points yielded a P^* of 1 594 kPa. The (P^*) was corrected for the shape, areal extent of the reservoir and the location of the well to determine the average reservoir pressure of 1 395 kPa. The results of the Horner are summarized below:

	Horner Plot
Effective Permeability, mD	41.5
Reservoir Pressure, kPa	1 395
Apparent Skin Factor	-5.4

2. Pressure History Match :

The preliminary results from the Horner plot and the type curve analysis were used as starting parameters for the pressure history matching of the test data. A match of the test data was obtained using the Horizontal Well Model, as shown by the overlay of simulated analysis results on the real test data for the cartesian (Figure 5) plot, the Horner semi-log (Figure 6), and the derivative log-log (Figure 7). The parameters used to achieve the history match are as follows:

	History Match
Effective Permeability in the X-direction, K_X	26.1 mD
Effective Permeability in the Y-direction, K_y	18.2 mD
Apparent Skin Factor, s	+20.5
Effective Length of the Horizontal Well, L_e	284 m
Average Reservoir Pressure, P_r	1470 kPa

3. Inflow Performance Relationship (I.P.R) :

The Inflow Performance Relationship (I.P.R) was constructed using the Vogel equation, as shown in Figure 9, in the Section "I.P.R". The average reservoir pressure of 1 470 kPa and the test oil rate of 2.7 m^3/d at a bottom hole pumping pressure of 552 kPa, were used to generate the I.P.R plot. The well maximum theoretical oil rate is 3.3 m^3/d.

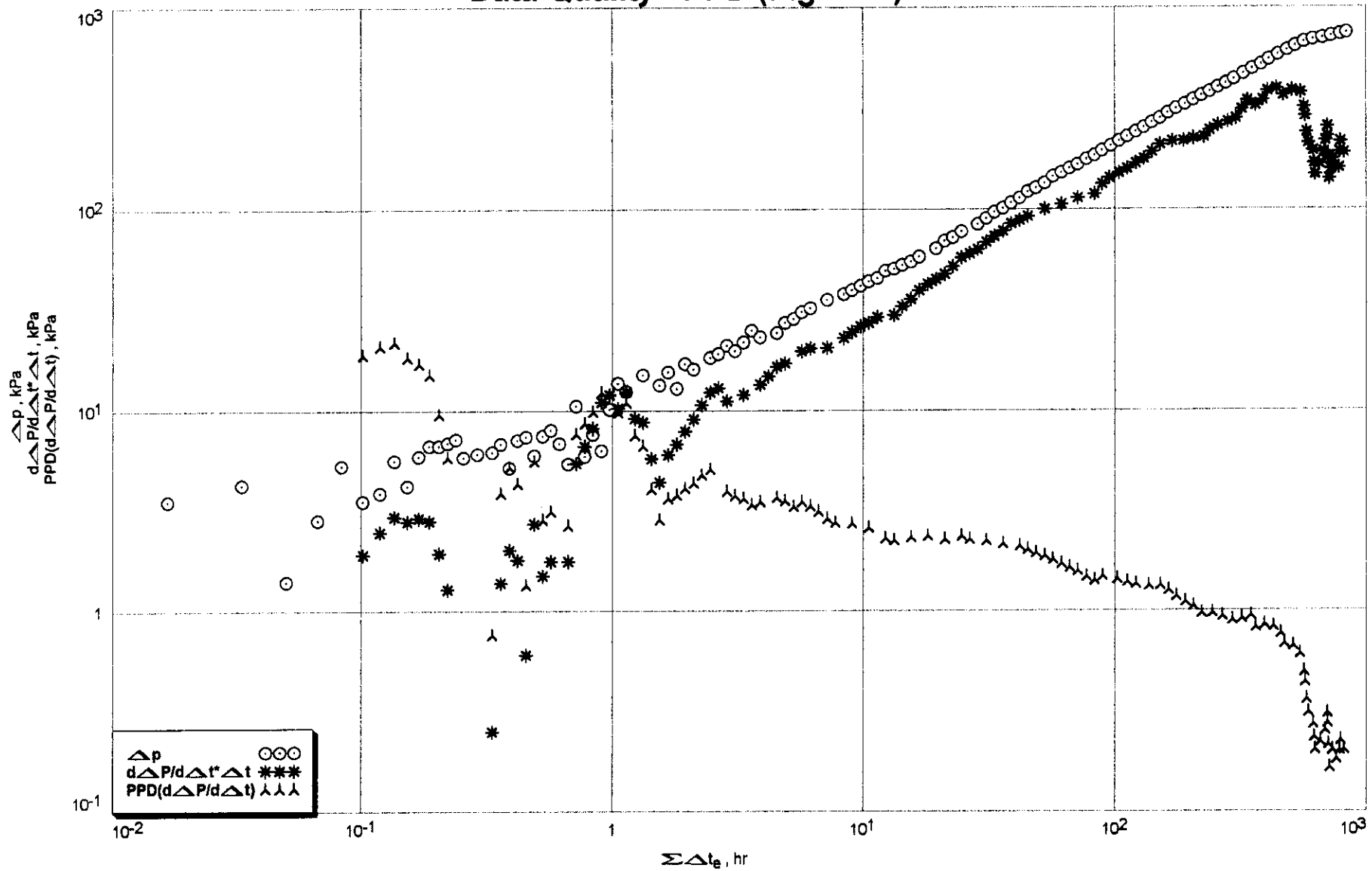
4. Production Forecast Sensitivity Analysis:

Production forecasts were generated for the well using the reservoir parameters obtained from the test history match. Sensitivity analysis was performed in attempt to maximize the oil recovery and to establish a reasonable oil production plateau. The bottom hole flowing pressure (BHFP) was used as a sensitivity parameter, and the various generated production forecasts are shown in Figure 8 in the section "Pressure History Match".

DATA QUALITY

Home Pierson 102/1-16-02-29W1 HZ
Alida (Vert. 1030 - 1034 mKB)
Flow/Buildup Test
Test Date: Dec. 20, 99 - Jan. 28, 2000

Data Quality - PPD (Figure 1)



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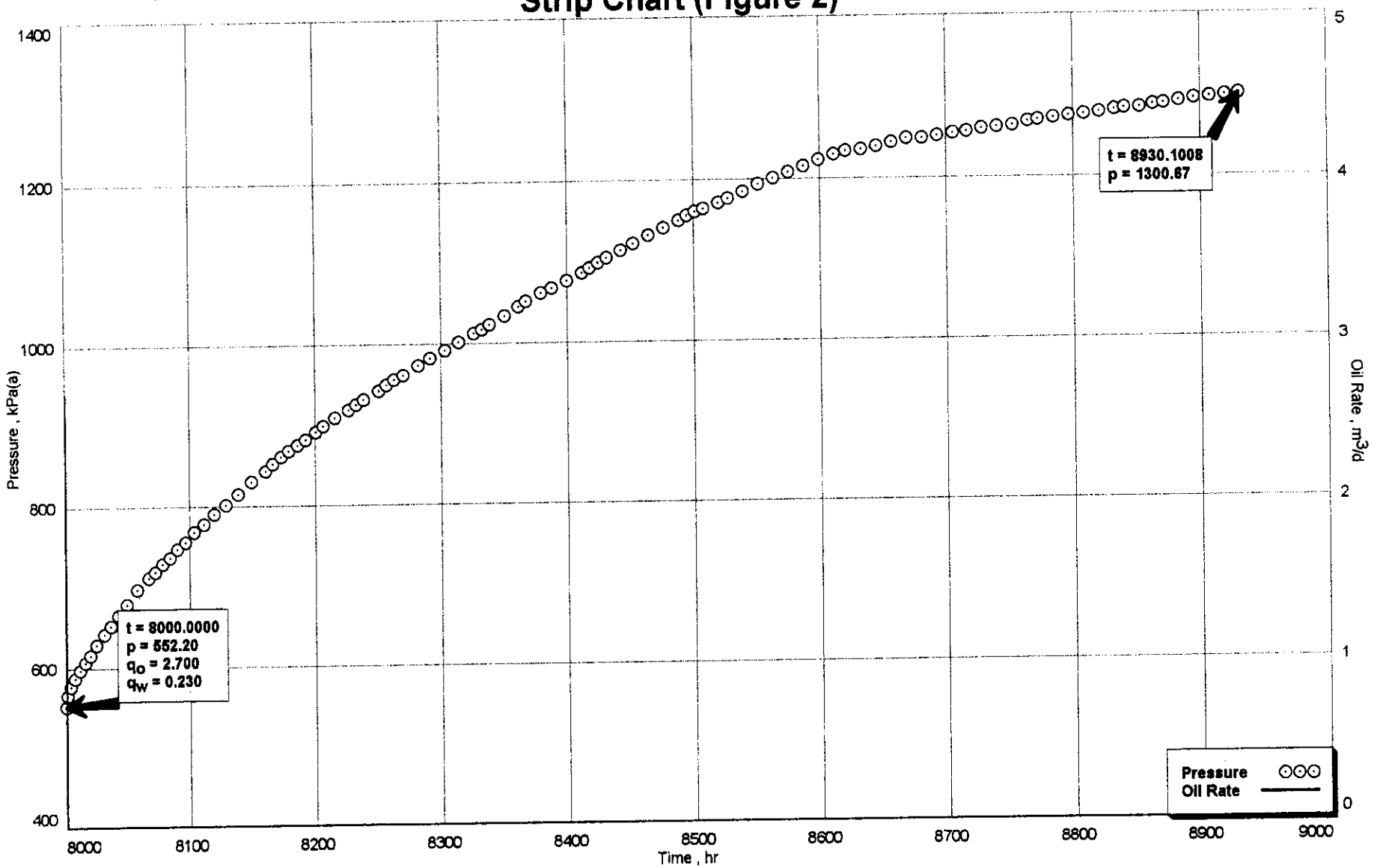
TRANSIENT ANALYSIS

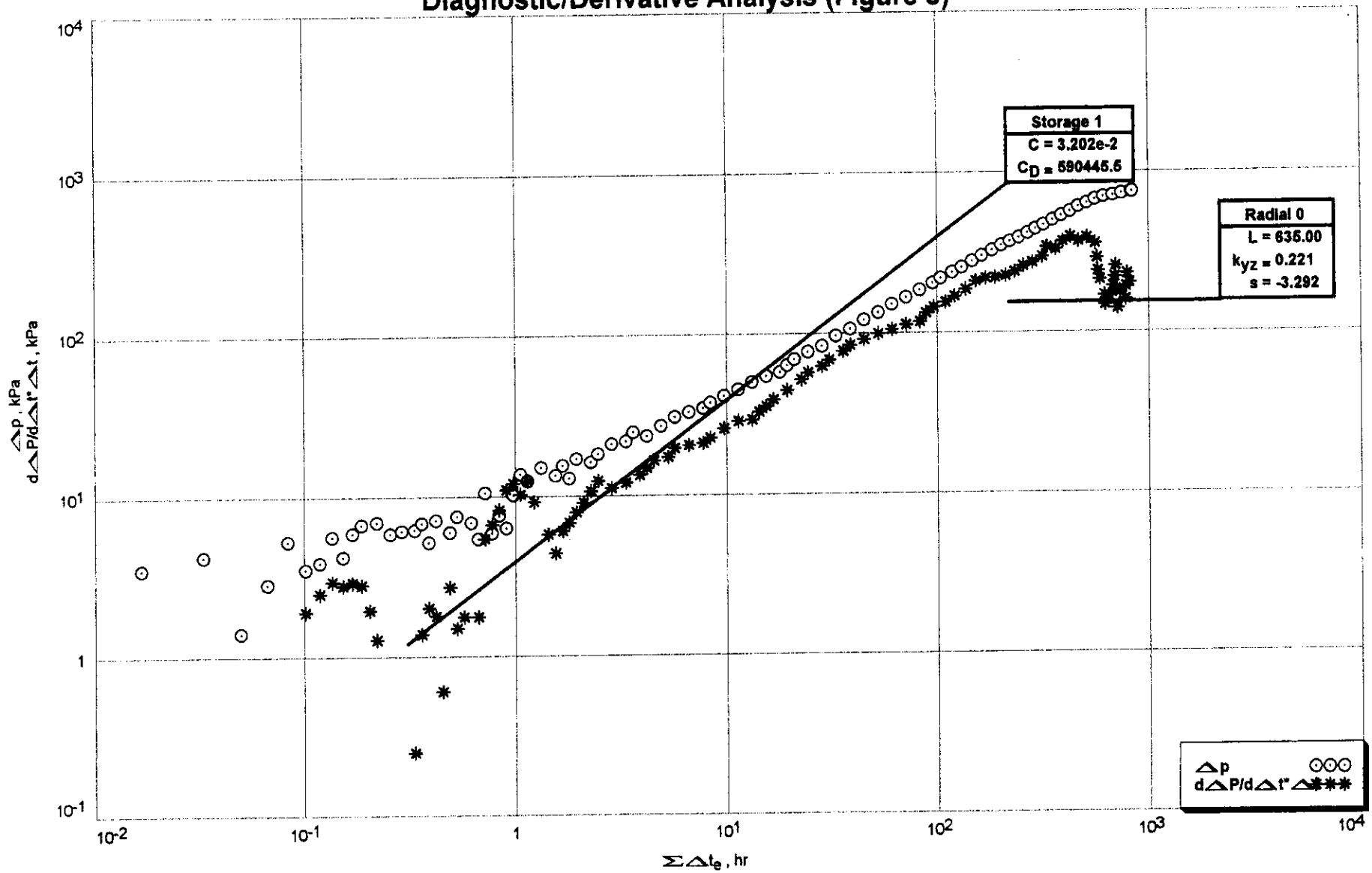
Home Pierson 102/1-16-02-29W1 HZ
Alida (Vert. 1030 - 1034 mKB)
Flow/Buildup Test
Test Date: Dec. 20, 99 - Jan. 28, 2000

Strip Chart (Figure 2)



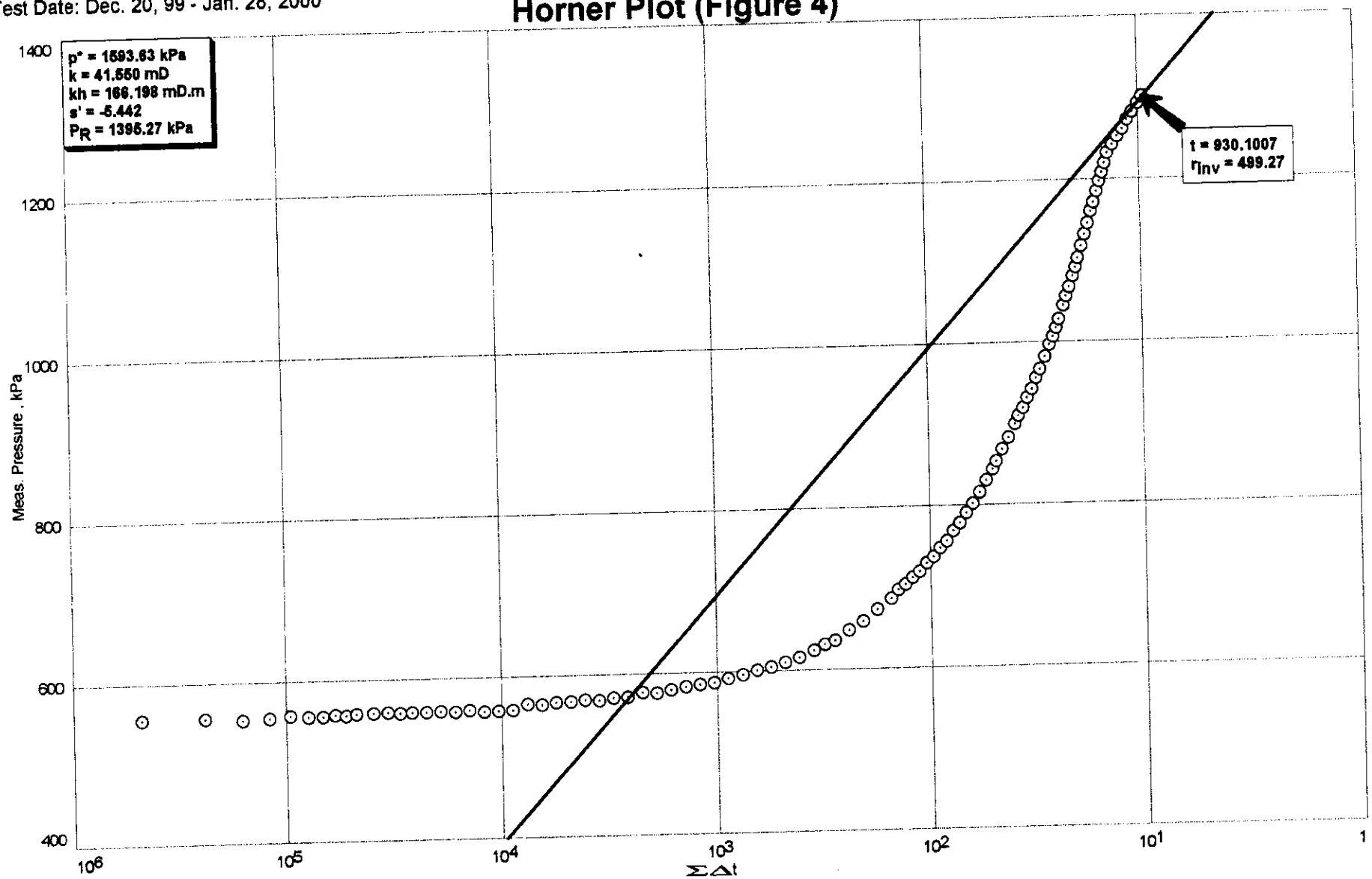
Home Pierson 102/1-16-02-29W1 HZ
Alida (Vert. 1030 - 1034 mKB)
Flow/Buildup Test
Test Date: Dec. 20, 99 - Jan. 28, 2000

Diagnostic/Derivative Analysis (Figure 3)



Home Pierson 102/1-16-02-29W1 HZ
Alida (Vert. 1030 - 1034 mKB)
Flow/Buildup Test
Test Date: Dec. 20, 99 - Jan. 28, 2000

Horner Plot (Figure 4)



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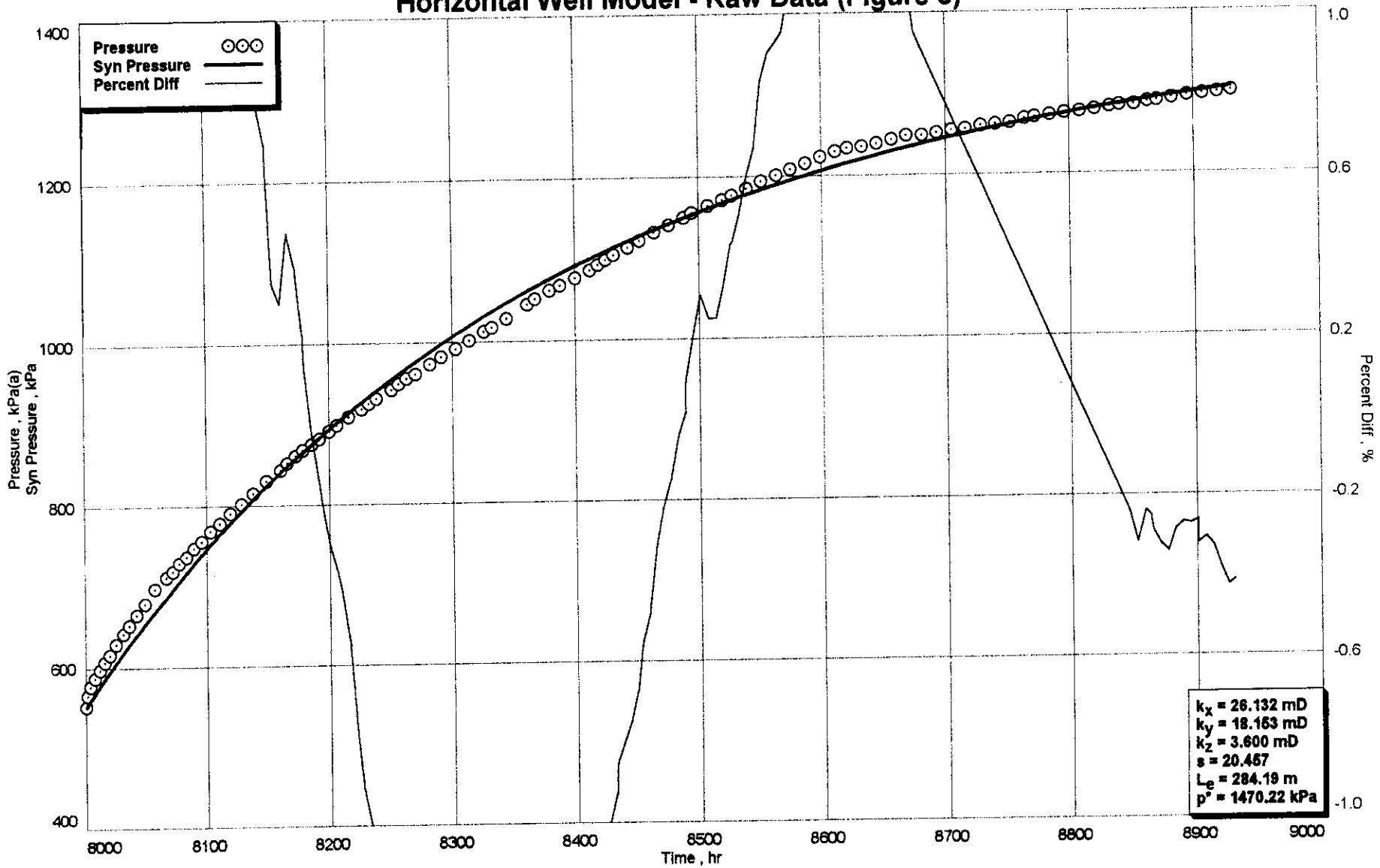
HISTORY
MATCH

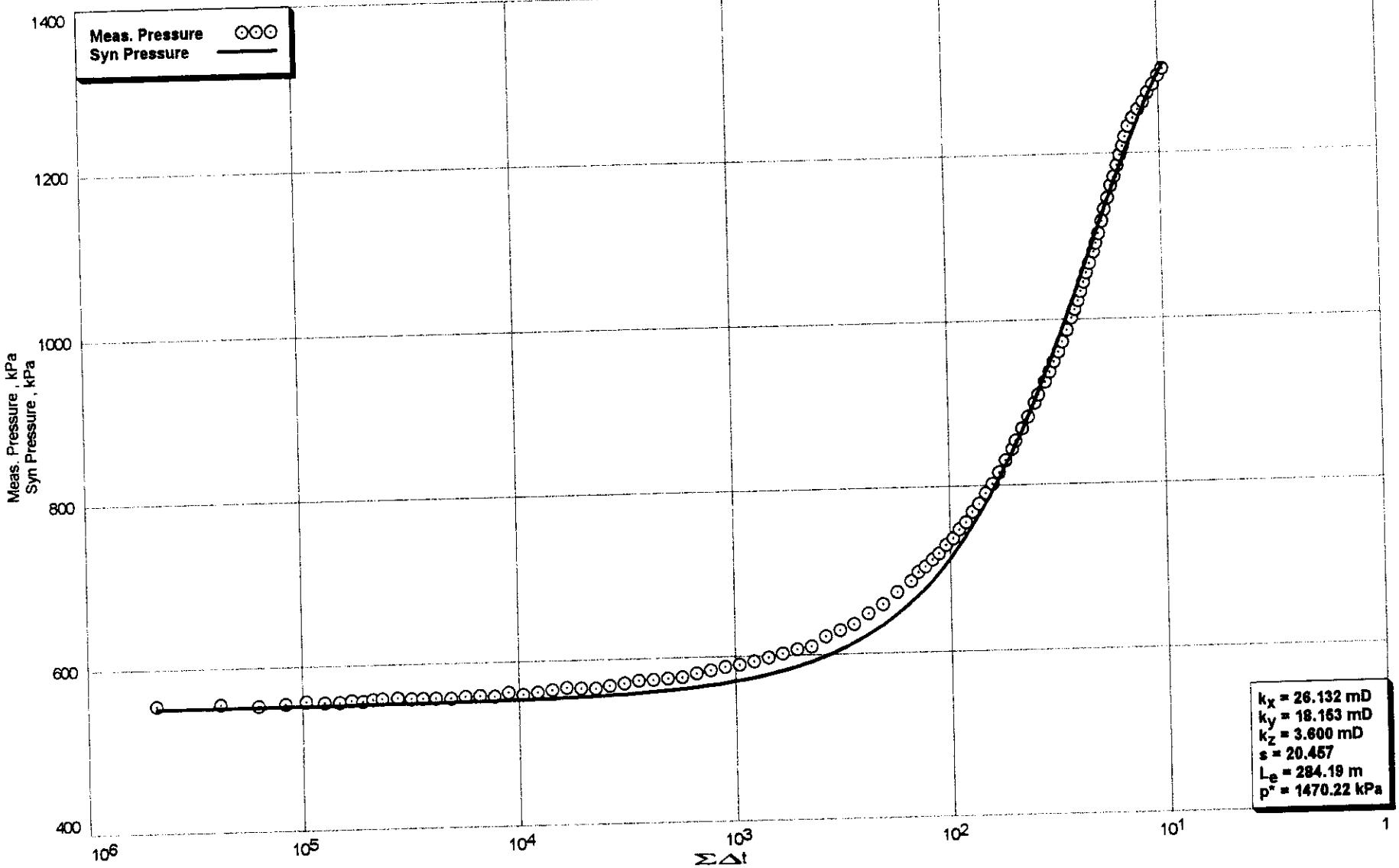
Home Pierson 102/1-16-02-29W1 HZ
Alida (Vert. 1030 - 1034 mKB)
Flow/Buildup Test
Test Date: Dec. 20, 99 - Jan. 28, 2000

Horizontal Well Model - Raw Data (Figure 5)



Home Pierson 102/1-16-02-29W1 HZ
Alida (Vert. 1030 - 1034 mKB)
Flow/Buildup Test
Test Date: Dec. 20, 99 - Jan. 28, 2000

Horizontal Well Model - Horner Plot (Figure 6)



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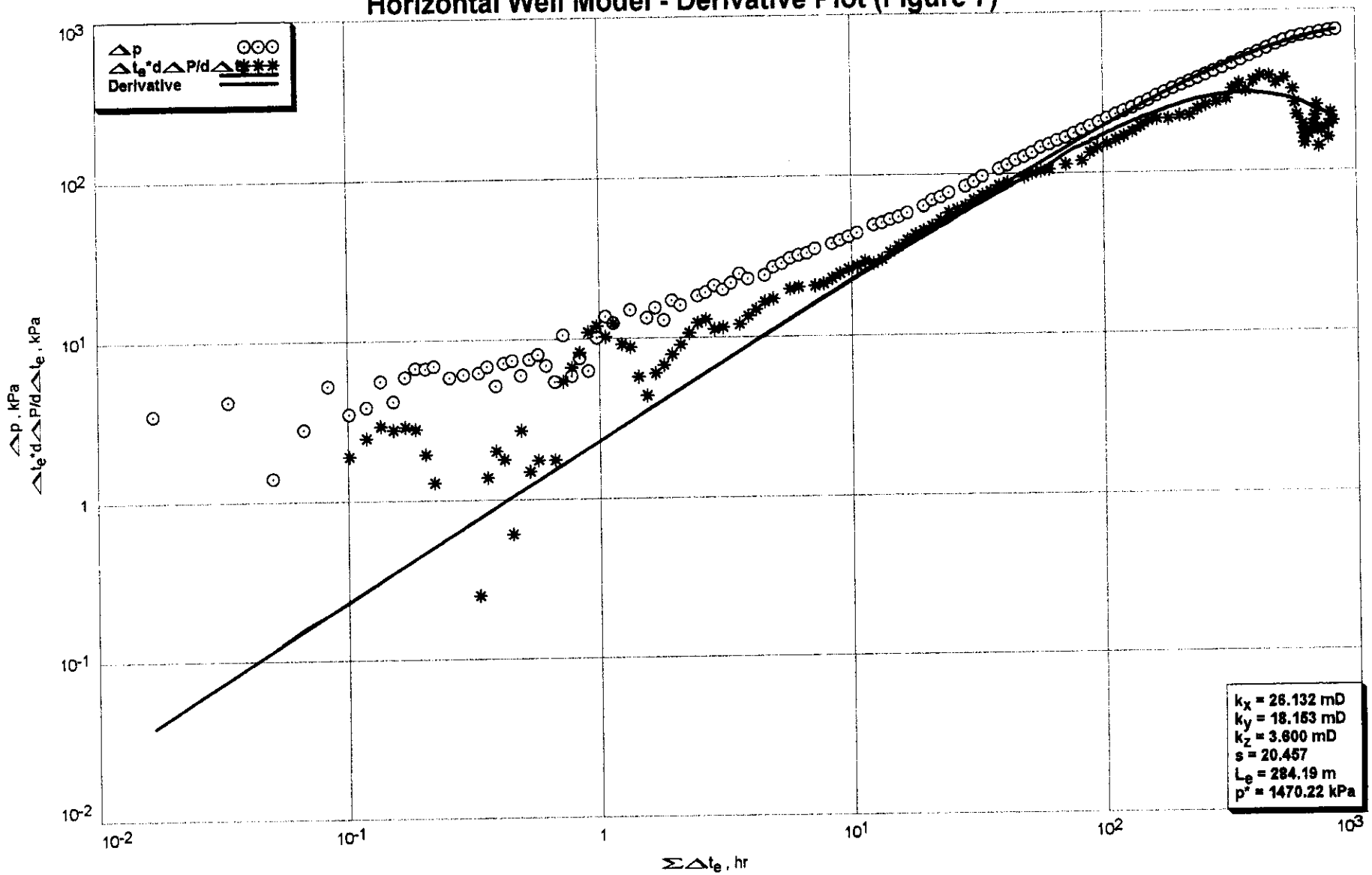
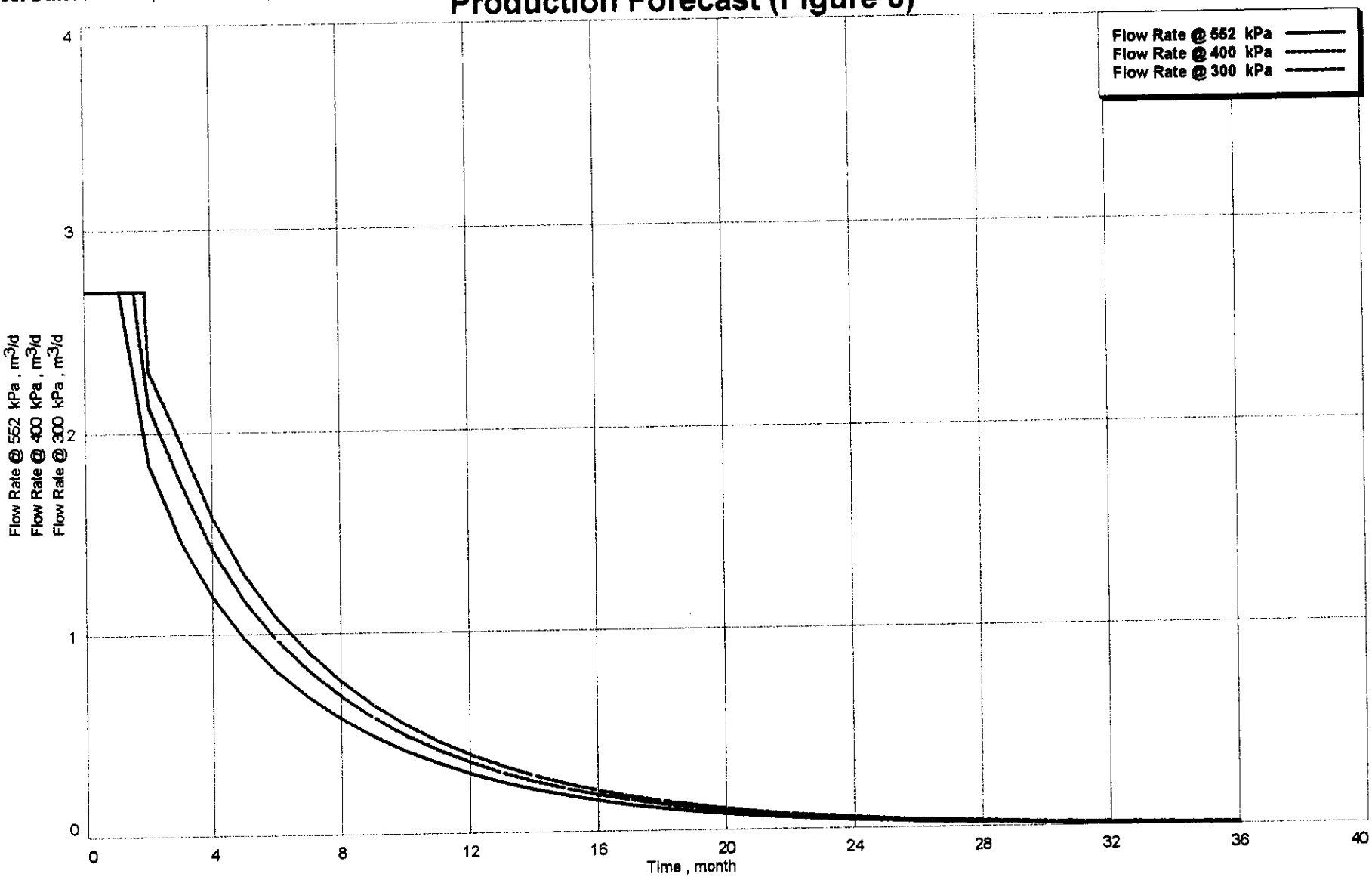
Home Pierson 102/1-16-02-29W1 HZ
Alida (Vert. 1030 - 1034 mKB)
Flow/Buildup Test
Test Date: Dec. 20, 99 - Jan. 28, 2000

Horizontal Well Model - Derivative Plot (Figure 7)



Home Pierson 102/1-16-02-29W1 HZ
Alida (Vert. 1030 - 1034 mKB)
Flow/Buildup Test
Test Date: Dec. 20, 99 - Jan. 28, 2000

Production Forecast (Figure 8)



P M G

I.P.R.

Inflow Performance Relationship
(I.P.R.)

Home Pierson 102/1-16-02-29W1 HZ
Alida (Vert. 1030 - 1034 mKB)

Flow/Buildup Test
Test Date: Dec. 20, 99 - Jan. 28, 2000

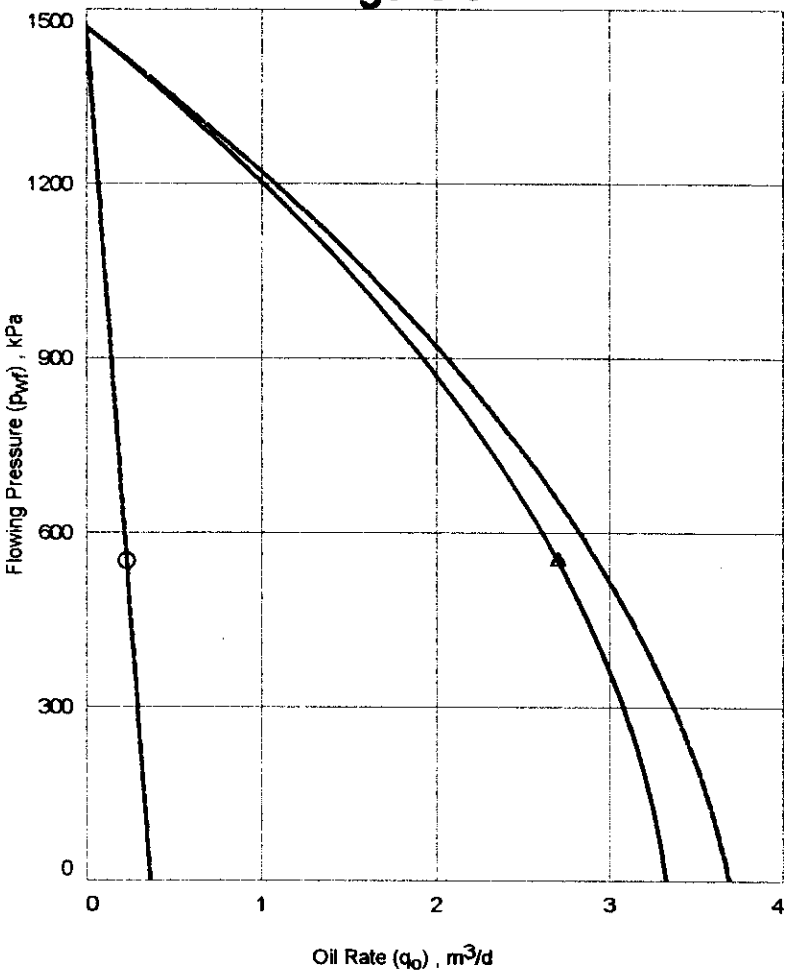
Test Data

Reservoir Pressure (p_R)	1470.00	kPa
Bubble Point Pressure (p_{bp})		kPa
Test Pressure (p_{wf})	552.00	kPa
Oil Test Rate (q_o)	2.700	m^3/d
Water Test Rate (q_w)	0.230	m^3/d

Results

Maximum Oil Rate	3.325	m^3/d
Maximum Water Rate	0.368	m^3/d
Maximum Total Rate	3.693	m^3/d

Figure 9



Flowing Pressure	Oil Rate	Water Rate	Total Rate
kPa	m^3/d	m^3/d	m^3/d
0.00	3.325	0.368	3.693
100.00	3.267	0.343	3.610
200.00	3.185	0.318	3.503
300.00	3.078	0.293	3.371
400.00	2.947	0.268	3.215
500.00	2.791	0.243	3.034
552.00*	2.700	0.230	2.930
600.00	2.610	0.218	2.828
700.00	2.405	0.193	2.598
800.00	2.175	0.168	2.343
900.00	1.921	0.143	2.063
1000.00	1.642	0.118	1.759
1100.00	1.338	0.093	1.431
1200.00	1.009	0.068	1.077
1300.00	0.657	0.043	0.699
1400.00	0.279	0.018	0.296
1470.00	0.000	0.000	0.000

Note : * Test Point
** Bubble Point
Oil IPR based on Vogel's Equation.
(Quadratic Curve Factor=0.2)

PRESSURE DATA

OTATCO INC

ANDERSON EXPLORATION LTD.

ACOUSTIC PRESSURE SURVEY (BUILD-UP)
HOME S. PIERSON UT #1 PROV HZ 1-16-2
102/01-16-002-29 W1/0
FIELD: SOUTH PIERSON
POOL: L AMAR-MISSION CANYON 3B A
DECEMBER, 1999 - JANUARY, 2000

DISTRIBUTION: *GORD PETERS, Calgary - 2 copies*

PREPARED BY: *CHRIS KORCZEWSKI, P. Eng.*

DATE: *2000-01-28*

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ANDERSON EXPLORATION LTD.

ACOUSTIC PRESSURE SURVEY (BUILD-UP)
HOME S. PIERSON UT #1 PROV HZ 1-16-2
102/01-16-002-29 W1/0
FIELD: SOUTH PIERSON
POOL: L AMAR-MISSION CANYON 3B A
DECEMBER, 1999 - JANUARY, 2000

TEST SUMMARY:

- An OTATCO Auto Ranger was installed into the casing on 1999-12-20 at 15:00 hours. The fluid level was at 103.7 (TVD) joints from surface.
- The well was shut-in on 1999-12-20 at 15:16 hours to start the build-up.
- The build-up test was concluded on 2000-01-28 at 09:22 hours.
- A bottomhole pressure of 1301 kPa (absolute) was calculated at the mid-point of the perforations after 930.1 hours of shut-in time.

PRESSURE DATA CALCULATIONS:

- The bottomhole pressures were calculated using the following information:

	Atmospheric Pressure	93.0 kPa
*	Formation Depth	1032.00 m KB
	Oil Gravity	32.00° API
	Water Gravity	1.140
	Gas Gravity	1.107
	Oil Production	2.70 m^3/d
	Water Production	0.23 m^3/d
	Bottomhole Temperature	40.0°C

* Horizontal well; MPP and fluid levels at TVD.

ATTACHMENTS:
ACOUSTIC WELLSOUNDER PRESSURE SURVEY DATA
TYPECURVE PRE-PLOT
BOTTOMHOLE PRESSURE VERSUS TIME
CASING PRESSURE VERSUS TIME
FLUID LEVEL VERSUS TIME
PRESSURE FILE (PAS FORMAT)

OTATCO INC
Acoustic Wellsounder Pressure Survey

COMPANY: ANDERSON EXPLORATION
FIELD: SOUTH PIERSON
POOL NAME: L AMAR-MISSION CANYON 3B A

WELLNAME: HOME S. PIERSON UT #1 PROV HZ 1-16-2
LOCATION: 102/01-16-002-29 W1/0
STATUS: OIL

Tubing

TOTAL JOINTS	=	106.00	
TUBING BOTTOM	=	1032.66	mKB
AVERAGE JOINT LENGTH	=	9.70	m

Elevation

KB	=	478.40	m
CF	=	474.12	m
KB to CF	=	4.28	m

Production

OIL RATE	=	2.70	m3/d
WATER RATE	=	0.23	m3/d

Temperature

SURFACE TEMP	=	0.00	C
RESERVOIR TEMP	=	40.00	C

Fluid Properties

OIL GRAVITY(API)	=	32.00
GAS GRAVITY	=	1.107
WATER GRAVITY	=	1.140

Producing Interval

Top of Interval	=	1123.00	mKB
Bottom of Interval	=	1709.00	mKB
MID-POINT PERFS	=	1032.00	mKB

- Horizontal Well. Fluid levels and MPP at TVD

Shot #	Date	Time	Test Time (hrs)	Joints to Fluid	Column Heights (m)			Gradients (kPa/m)			Pressures (kPag)				
					Gas	Oil	Emul	Gas	Oil	Emul	Csg	Gas	Oil	Emul	MPP
1	99/12/20	15:16:48	0.0000	103.70	1006.07	21.65	0.00	0.047	8.067	8.272	237.2	47.3	174.7	0.0	459.2
2	99/12/20	15:17:48	0.0167	103.66	1005.68	21.65	0.39	0.047	8.067	8.272	237.5	47.4	174.7	3.2	462.7
3	99/12/20	15:18:48	0.0333	103.66	1005.68	21.65	0.39	0.047	8.067	8.287	238.1	47.4	174.7	3.2	463.4
4	99/12/20	15:19:48	0.0500	103.70	1006.07	21.65	0.00	0.047	8.067	8.332	238.4	47.5	174.7	0.0	460.6
5	99/12/20	15:20:48	0.0667	103.68	1005.87	21.65	0.20	0.047	8.068	8.360	238.2	47.5	174.7	1.6	462.0
6	99/12/20	15:21:48	0.0833	103.66	1005.68	21.65	0.39	0.047	8.068	8.290	239.0	47.6	174.7	3.2	464.5
7	99/12/20	15:22:52	0.1011	103.68	1005.87	21.64	0.20	0.047	8.071	8.280	238.8	47.6	174.7	1.7	462.7
8	99/12/20	15:23:54	0.1183	103.68	1005.87	21.64	0.20	0.047	8.071	8.294	239.1	47.6	174.7	1.7	463.1
9	99/12/20	15:24:54	0.1350	103.66	1005.68	21.64	0.40	0.047	8.071	8.279	239.2	47.6	174.7	3.3	464.8
10	99/12/20	15:25:55	0.1519	103.68	1005.87	21.64	0.20	0.047	8.071	8.282	239.4	47.6	174.7	1.7	463.4
11	99/12/20	15:26:57	0.1692	103.66	1005.68	21.64	0.40	0.047	8.071	8.276	239.5	47.7	174.7	3.3	465.1
12	99/12/20	15:27:58	0.1861	103.66	1005.68	21.64	0.40	0.047	8.071	8.289	240.2	47.8	174.7	3.3	465.9
13	99/12/20	15:28:59	0.2031	103.66	1005.68	21.64	0.40	0.047	8.072	8.322	240.1	47.7	174.7	3.3	465.9
14	99/12/20	15:29:59	0.2197	103.66	1005.68	21.64	0.40	0.048	8.072	8.283	240.3	47.8	174.7	3.3	466.1
15	99/12/20	15:31:01	0.2369	103.66	1005.68	21.64	0.40	0.048	8.073	8.308	240.6	47.8	174.7	3.4	466.4
16	99/12/20	15:32:02	0.2539	103.68	1005.87	21.64	0.21	0.048	8.073	8.372	240.8	47.9	174.7	1.8	465.1
17	99/12/20	15:33:03	0.2708	103.68	1005.87	21.63	0.21	0.048	8.074	8.373	241.0	47.9	174.7	1.8	465.3
18	99/12/20	15:34:04	0.2878	103.68	1005.87	21.63	0.22	0.048	8.075	8.364	240.9	47.9	174.7	1.8	465.3
19	99/12/20	15:35:11	0.3064	103.68	1005.87	21.63	0.22	0.048	8.076	8.379	241.1	47.9	174.7	1.8	465.5
20	99/12/20	15:36:38	0.3306	103.68	1005.87	21.63	0.22	0.048	8.077	8.394	241.0	47.9	174.7	1.9	465.4
21	99/12/20	15:38:15	0.3575	103.68	1005.87	21.62	0.23	0.048	8.079	8.426	241.5	48.0	174.7	1.9	466.0
22	99/12/20	15:39:58	0.3861	103.70	1006.07	21.62	0.04	0.048	8.080	8.425	241.4	48.0	174.7	0.3	464.4
23	99/12/20	15:41:49	0.4169	103.68	1005.87	21.61	0.23	0.048	8.082	8.431	241.7	48.0	174.7	2.0	466.3
24	99/12/20	15:43:49	0.4503	103.68	1005.87	21.61	0.24	0.048	8.083	8.439	241.9	48.0	174.7	2.0	466.6
25	99/12/20	15:45:59	0.4864	103.70	1006.07	21.60	0.05	0.048	8.085	8.441	242.0	48.0	174.7	0.4	465.2
26	99/12/20	15:48:20	0.5256	103.68	1005.87	21.60	0.25	0.048	8.087	8.446	241.9	48.0	174.7	2.1	466.7
27	99/12/20	15:50:51	0.5675	103.68	1005.87	21.59	0.25	0.048	8.089	8.469	242.3	48.1	174.7	2.1	467.2
28	99/12/20	15:53:35	0.6131	103.70	1006.07	21.59	0.07	0.048	8.091	8.375	242.7	48.1	174.7	0.5	466.1
29	99/12/20	15:56:31	0.6619	103.72	1006.26	21.45	0.01	0.048	8.093	8.382	242.8	48.2	173.6	0.1	464.6
30	99/12/20	15:59:41	0.7147	103.66	1005.68	21.44	0.60	0.048	8.095	8.389	243.0	48.2	173.6	5.0	469.8
31	99/12/20	16:03:07	0.7719	103.72	1006.26	21.44	0.02	0.048	8.098	8.553	243.1	48.2	173.6	0.2	465.1
32	99/12/20	16:06:49	0.8336	103.70	1006.07	21.43	0.22	0.048	8.100	8.560	243.1	48.2	173.6	1.9	466.8
33	99/12/20	16:10:49	0.9003	103.72	1006.26	21.42	0.04	0.048	8.103	8.459	243.3	48.3	173.6	0.3	465.5
34	99/12/20	16:15:07	0.9719	103.68	1005.87	21.41	0.43	0.048	8.106	8.466	243.8	48.3	173.6	3.7	469.4
35	99/12/20	16:19:47	1.0497	103.68	1005.87	21.41	0.44	0.048	8.275	8.469	243.8	48.3	177.1	3.7	472.9
36	99/12/20	16:24:50	1.1339	103.70	1006.07	21.40	0.26	0.048	8.281	8.605	243.9	48.3	177.2	2.2	471.7
37	99/12/20	16:30:15	1.2242	103.70	1006.07	21.39	0.27	0.048	8.287	8.610	243.9	48.3	177.2	2.3	471.8
38	99/12/20	16:36:07	1.3219	103.68	1005.87	21.38	0.47	0.048	8.294	8.508	244.6	48.4	177.3	4.0	474.3
39	99/12/20	16:42:27	1.4275	103.68	1005.87	21.37	0.48	0.048	8.300	8.508	244.2	48.4	177.4	4.1	474.0
40	99/12/20	16:49:17	1.5414	103.70	1006.07	21.36	0.30	0.048	8.307	8.647	244.3	48.4	177.4	2.6	472.6
41	99/12/20	16:56:43	1.6653	103.68	1005.87	21.34	0.51	0.048	8.313	8.543	244.6	48.4	177.4	4.3	474.7
42	99/12/20	17:04:39	1.7975	103.72	1006.26	21.33	0.13	0.048	8.320	8.570	245.0	48.5	177.5	1.1	472.1
43	99/12/20	17:13:15	1.9408	103.68	1005.87	21.31	0.53	0.048	8.326	8.577	245.7	48.6	177.5	4.6	476.3
44	99/12/20	17:22:32	2.0956	103.70	1006.07	21.30	0.36	0.048	8.333	8.544	246.1	48.7	177.5	3.0	475.3
45	99/12/20	17:32:37	2.2636	103.70	1006.07	21.28	0.37	0.048	8.339	8.551	246.1	48.7	177.5	3.2	475.5
46	99/12/20	17:43:28	2.4444	103.68	1005.87	21.28	0.57	0.048	8.346	8.558	246.4	48.7	177.6	4.9	477.5
47	99/12/20	17:55:09	2.6392	103.68	1005.87	21.28	0.57	0.049	8.346	8.558	247.2	48.8	177.6	4.9	478.4
48	99/12/20	18:07:51	2.8508	103.66	1005.68	21.28	0.76	0.049	8.346	8.558	247.4	48.8	177.6	6.5	480.3
49	99/12/20	18:21:21	3.0758	103.68	1005.87	21.28	0.57	0.049	8.346	8.558	247.7	48.9	177.6	4.9	479.0
50	99/12/20	18:36:04	3.3211	103.66	1005.68	21.28	0.76	0.049	8.346	8.558	248.1	48.9	177.6	6.5	481.2
51	99/12/20	18:51:58	3.5861	103.63	1005.39	21.28	1.05	0.049	8.346	8.558	248.6	49.0	177.6	9.0	484.2
52	99/12/20	19:09:12	3.8733	103.66	1005.68	21.28	0.76	0.049	8.346	8.558	249.1	49.1	177.6	6.5	482.3
53	99/12/20	19:27:45	4.1825	103.66	1005.68	21.28	0.76	0.049	8.346	8.558	249.6	49.2	177.6	6.5	482.9
54	99/12/20	19:47:44	4.5156	103.66	1005.68	21.28	0.76	0.049	8.346	8.558	250.2	49.2	177.6	6.5	483.5
55	99/12/20	20:09:28	4.8776	103.63	1005.39	21.28	1.05	0.049	8.346	8.558	250.6	49.3	177.6	9.0	486.5
56	99/12/20	20:32:48	5.2667	103.63	1005.39	21.28	1.05	0.049	8.346	8.558	251.7	49.5	177.6	9.0	487.8
57	99/12/20	20:58:00	5.6867	103.61	1005.19	21.28	1.25	0.049	8.346	8.558	252.3	49.5	177.6	10.7	490.2
58	99/12/20	21:25:17	6.1414	103.61	1005.19	21.28	1.25	0.049	8.346	8.558	253.5	49.7	177.6	10.7	491.4
59	99/12/20	21:54:41	6.6314	103.61	1005.19	21.28	1.25	0.050	8.346	8.558	254.3	49.8	177.6	10.7	492.4
60	99/12/20	22:26:35	7.1631	103.59	1005.00	21.28	1.44	0.050	8.346	8.558	254.8	49.9	177.6	12.3	494.6
61	99/12/20	23:00:50	7.7339	103.61	1005.19	21.28	1.25	0.050	8.346	8.558	255.9	50.1	177.6	10.7	494.3
62	99/12/20	23:37:48	8.3500	103.59	1005.00	21.28	1.44	0.050	8.346	8.558	256.9	50.2	177.6	12.3	497.0
63	99/12/21	00:17:44	9.0156	103.58	1004.90	21.28	1.54	0.050	8.346	8.557	257.8	50.3	177.6	13.2	498.8
64	99/12/21	01:00:50	9.7339	103.58	1004.90	21.28	1.54	0.050	8.345	8.557	259.6	50.6	177.6	13.2	500.9
65	99/12/21	01:47:24	10.5100	103.56	1004.71	21.28	1.73	0.050	8.346	8.557	260.0	50.6	177.6	14.8	503.1

ANDERSON EXPLORATION 102/01-16-002-29 W1/0 Continued

Shot #	Date	Time	Test Time (hrs)	Joints to Fluid	Column Heights (m)			Gradients (kPa/m)			Pressures (kPag)				
					Gas	Oil	Emul	Gas	Oil	Emul	Csg	Gas	Oil	Emul	MPP
66	99/12/21	02:37:39	11.3475	103.56	1004.71	21.28	1.73	0.051	8.345	8.557	261.5	50.9	177.6	14.8	504.8
67	99/12/21	03:31:43	12.2486	103.54	1004.51	21.28	1.93	0.051	8.345	8.557	263.3	51.1	177.6	16.5	508.5
68	99/12/21	04:30:39	13.2306	103.54	1004.51	21.28	1.93	0.051	8.345	8.557	264.3	51.3	177.6	16.5	509.7
69	99/12/21	05:33:58	14.2861	103.53	1004.42	21.28	2.02	0.051	8.345	8.557	265.8	51.5	177.6	17.3	512.1
70	99/12/21	06:42:13	15.4236	103.53	1004.42	21.28	2.02	0.052	8.345	8.557	267.6	51.8	177.6	17.3	514.2
71	99/12/21	07:56:43	16.6653	103.51	1004.22	21.28	2.22	0.052	8.345	8.557	268.7	51.9	177.6	19.0	517.2
72	99/12/21	09:16:09	17.9892	103.53	1004.42	21.28	2.02	0.052	8.345	8.557	270.3	52.2	177.6	17.3	517.3
73	99/12/21	10:42:09	19.4225	103.50	1004.13	21.28	2.31	0.052	8.345	8.557	273.1	52.5	177.6	19.8	523.0
74	99/12/21	12:15:01	20.9703	103.45	1003.64	21.28	2.80	0.053	8.345	8.556	274.6	52.8	177.6	23.9	528.9
75	99/12/21	13:55:54	22.6517	103.45	1003.64	21.28	2.80	0.053	8.345	8.556	276.9	53.1	177.6	23.9	531.6
76	99/12/21	15:44:35	24.4631	103.43	1003.45	21.28	2.99	0.053	8.345	8.556	279.7	53.5	177.6	25.6	536.4
77	99/12/21	16:45:32	25.4789	103.43	1003.45	21.28	2.99	0.054	8.345	8.556	281.6	53.8	177.6	25.6	538.6
78	99/12/21	17:41:01	26.4036	103.45	1003.64	21.28	2.80	0.054	8.345	8.556	282.1	53.9	177.6	23.9	537.5
79	99/12/21	19:47:16	28.5078	103.42	1003.35	21.28	3.09	0.054	8.344	8.556	284.9	54.3	177.6	26.4	543.2
80	99/12/21	22:03:39	30.7808	103.40	1003.16	21.28	3.28	0.055	8.344	8.556	288.6	54.8	177.6	28.1	549.1
81	99/12/22	00:30:46	33.2328	103.37	1002.86	21.28	3.57	0.055	8.344	8.555	292.3	55.3	177.6	30.6	555.8
82	99/12/22	03:09:46	35.8828	103.37	1002.86	21.28	3.57	0.056	8.344	8.555	295.6	55.9	177.6	30.6	559.8
83	99/12/22	06:01:16	38.7411	103.34	1002.57	21.28	3.87	0.056	8.344	8.555	299.3	56.4	177.6	33.1	566.2
84	99/12/22	09:07:46	41.8494	103.32	1002.38	21.28	4.06	0.057	8.344	8.555	303.3	57.0	177.6	34.7	572.6
85	99/12/22	12:27:54	45.1850	103.29	1002.09	21.28	4.35	0.058	8.343	8.555	308.2	57.7	177.6	37.2	580.6
86	99/12/22	16:03:24	48.7767	103.28	1001.99	21.28	4.45	0.058	8.343	8.554	312.4	58.3	177.6	38.0	586.3
87	99/12/22	19:56:39	52.6642	103.26	1001.80	21.28	4.64	0.059	8.343	8.554	317.5	59.0	177.5	39.7	593.8
88	99/12/23	00:06:24	56.8600	103.21	1001.31	21.28	5.13	0.060	8.343	8.554	323.3	59.9	177.5	43.9	604.6
89	99/12/23	04:42:09	61.4225	103.21	1001.31	21.28	5.13	0.061	8.343	8.553	328.9	60.7	177.5	43.9	611.0
90	99/12/23	09:35:39	66.3142	103.20	1001.22	21.28	5.22	0.062	8.342	8.553	335.1	61.6	177.5	44.7	618.9
91	99/12/23	14:52:54	71.6017	103.19	1001.12	21.28	5.32	0.062	8.342	8.553	340.8	62.5	177.5	45.5	626.3
92	99/12/23	20:37:24	77.3433	103.16	1000.83	21.28	5.61	0.063	8.342	8.552	347.2	63.4	177.5	48.0	636.1
93	99/12/24	02:37:25	83.3436	103.16	1000.83	21.28	5.61	0.064	8.341	8.552	354.2	64.5	177.5	48.0	644.2
94	99/12/24	02:47:09	83.5058	103.15	1000.73	21.28	5.71	0.064	8.341	8.552	354.5	64.5	177.5	48.8	645.4
95	99/12/24	08:47:10	89.5061	103.14	1000.63	21.28	5.81	0.066	8.341	8.552	361.9	65.6	177.5	49.6	654.7
96	99/12/24	09:26:24	90.1600	103.14	1000.63	21.28	5.81	0.066	8.341	8.551	362.6	65.7	177.5	49.6	655.5
97	99/12/24	15:26:25	96.1603	103.14	1000.63	21.28	5.81	0.067	8.341	8.551	369.2	66.7	177.5	49.6	663.1
98	99/12/24	16:36:09	97.3225	103.13	1000.54	21.28	5.90	0.067	8.340	8.551	371.0	67.0	177.5	50.5	666.0
99	99/12/24	22:36:10	103.3228	103.11	1000,34	21.28	6.10	0.068	8.340	8.551	377.8	68.0	177.5	52.1	675.4
100	99/12/25	00:24:39	105.1306	103.11	1000.34	21.28	6.10	0.068	8.340	8.551	379.7	68.3	177.5	52.1	677.6
101	99/12/25	06:24:40	111.1311	103.11	1000.34	21.28	6.10	0.069	8.340	8.550	386.1	69.3	177.5	52.1	684.9
102	99/12/25	08:47:09	113.5058	103.09	1000.15	21.28	6.29	0.070	8.340	8.550	388.7	69.6	177.5	53.8	689.6
103	99/12/25	14:47:10	119.5061	103.08	1000.05	21.28	6.39	0.071	8.339	8.550	394.9	70.6	177.5	54.6	697.5
104	99/12/25	17:50:09	122.5558	103.07	999.95	21.28	6.49	0.071	8.339	8.550	397.7	71.0	177.5	55.4	701.6
105	99/12/25	23:50:10	128.5561	103.06	999.86	21.28	6.58	0.072	8.339	8.549	403.2	71.8	177.5	56.3	708.8
106	99/12/26	03:39:39	132.3808	103.05	999.76	21.28	6.68	0.072	8.339	8.549	406.9	72.4	177.5	57.1	713.9
107	99/12/26	09:39:40	138.3811	103.04	999.66	21.28	6.78	0.073	8.338	8.549	413.6	73.4	177.4	57.9	722.4
108	99/12/26	14:12:39	142.9308	103.04	999.66	21.28	6.78	0.074	8.338	8.548	419.5	74.3	177.4	57.9	729.1
109	99/12/26	20:12:40	148.9311	103.02	999.47	21.28	6.97	0.075	8.338	8.548	425.2	75.1	177.4	59.6	737.4
110	99/12/27	01:36:09	154.3225	103.02	999.47	21.28	6.97	0.076	8.337	8.548	429.6	75.8	177.4	59.6	742.4
111	99/12/27	07:36:10	160.3228	103.00	999.27	21.28	7.16	0.077	8.337	8.547	435.3	76.6	177.4	61.2	750.6
112	99/12/27	13:10:11	165.8897	102.98	999.08	21.28	7.36	0.078	8.337	8.547	441.9	77.6	177.4	62.9	759.8
113	99/12/27	13:36:11	166.3231	102.98	999.08	21.28	7.36	0.078	8.337	8.547	442.4	77.7	177.4	62.9	760.5
114	99/12/27	13:56:09	166.6558	102.98	999.08	21.28	7.36	0.078	8.337	8.547	442.9	77.8	177.4	62.9	761.0
115	99/12/27	19:56:10	172.6561	102.98	999.08	21.28	7.36	0.079	8.336	8.547	449.6	78.8	177.4	62.9	768.7
116	99/12/28	01:56:11	178.6564	102.98	999.08	21.28	7.36	0.080	8.336	8.546	455.4	79.7	177.4	62.9	775.4
117	99/12/28	03:05:09	179.8058	102.98	999.08	21.28	7.36	0.080	8.336	8.546	456.2	79.8	177.4	62.9	776.3
118	99/12/28	09:05:10	185.8061	102.98	999.08	21.28	7.36	0.081	8.336	8.546	461.9	80.7	177.4	62.9	782.9
119	99/12/28	15:05:11	191.8064	102.98	999.08	21.28	7.36	0.082	8.335	8.546	467.6	81.6	177.4	62.9	789.7
120	99/12/28	17:28:09	194.1892	102.98	999.08	21.28	7.36	0.082	8.335	8.545	470.1	82.0	177.4	62.9	792.4
121	99/12/28	23:28:10	200.1894	102.98	999.08	21.28	7.36	0.083	8.335	8.545	476.1	82.9	177.4	62.9	799.2
122	99/12/29	05:28:11	206.1897	102.98	999.08	21.28	7.36	0.084	8.335	8.545	482.1	83.8	177.4	62.9	806.2
123	99/12/29	08:50:09	209.5558	102.98	999.08	21.28	7.36	0.084	8.334	8.545	485.4	84.3	177.4	62.9	809.9
124	99/12/29	14:50:10	215.5561	102.98	999.08	21.28	7.36	0.085	8.334	8.544	490.8	85.1	177.4	62.9	816.2
125	99/12/29	20:50:11	221.5564	102.98	999.08	21.28	7.36	0.086	8.334	8.544	495.4	85.8	177.4	62.9	821.5
126	99/12/30	01:38:09	226.3558	102.98	999.08	21.28	7.36	0.087	8.334	8.544	499.2	86.4	177.3	62.9	825.6
127	99/12/30	07:38:10	232.3561	102.98	999.08	21.28	7.36	0.087	8.333	8.544	504.6	87.3	177.3	62.9	832.1
128	99/12/30	13:38:11	238.3564	102.98	999.08	21.28	7.36	0.088	8.333	8.543	509.9	88.1	177.3	62.9	838.1
129	99/12/30	19:38:12	244.3567	102.98	999.08	21.28	7.36	0.089	8.333	8.543	514.5	88.8	177.3	62.9	843.5
130	99/12/30	19:48:09	244.5225	102.98	999.08	21.28	7.36	0.089	8.333	8.543	514.6	88.8	177.3	62.9	843.6
131	99/12/31	01:48:10	250.5228	102.98	999.08	21.28	7.36	0.090	8.333	8.543	519.2	89.5	177.3	62.9	848.9
132	99/12/31	07:48:11	256.5231	102.98	999.08	21.28	7.36	0.091	8.332	8.542	525.3	90.5	177.3	62.9	856.0
133	99/12/31	13:48:12	262.5233	102.98	999.08	21.28	7.36	0.091	8.332	8.542	531.0	91.4	177.3	62.9	862.6
134	99/12/31	15:09:09	263.8725	102.98	999.08	21.28	7.36	0.092	8.332	8.542	532.1	91.5	177.3	62.9	863.8
135	99/12/31	21:09:10	269.8728	102.98	999.08	21.28	7.36	0.092	8.332	8.542	535.9	92.1	177.3	62.9	868.2
136	00/01/01	03:09:11	275.8731	102.98	999.08	21.28	7.36	0.093	8.331	8.542	540.5	92.8	177.3	62.9	873.5
137	00/01/01	09:09:12	281.8733	102.98	999.08	21.28	7.36	0.094	8.331	8.541	545.9	93.7	177.3	62.8	879.7
138	00/01/01	12:19:09	285.0392	102.98	999.08	21.28	7.36	0.094	8.331	8.541	548.2	94.0	177.3	62.8	882.3
139	00/01/01	18:19:10	291.0394	102.98	999.08	21.28	7.36	0.095	8.331	8.541	553.9	94.9	177.3	62.8	888.9
140	00/01/02	00:19:11	297.0397	102.98	999.08	21.28	7.36	0.096	8.330	8.541	558.4	95.6	177.3	62.8	894.2
141	00/01/02	06:19:12	303.0400	102.98	999.08	21.28	7.36	0.096	8.330	8.540	562.1	96.2	177.3	62.8	898.4
142	00/01/02	11:11:09	307.9058	102.98	999.08	21.28	7.36	0.097	8.330	8.540	566.4	96.9	177.3	62.8	903.4
143	00/01/02	17:11:10	313.9061	102.98	999.08	21.28	7.36	0.098	8.330	8.540	570.9	97.6	177.3	62.8	908.6
144	00/01/02	23:11:11	319.9064	102.98	999.08	21.28	7.36	0.098	8.329	8.540	575.1	98.3	177.3	62.8	913.4
145	00/01/03	05:11:12	325.9067	102.98	999.08	21.28	7.36	0.099	8.329	8.539	580.0	99.0	177.3	62.8	919.1
146	00/01/03	11:11:13	331.9069	102.98	999.08	21.28	7.36	0.100	8.329	8.539	584.4	99.7	177.2	62.8	924.2
147	00/01/03	11:33:09	332.2725	102.98	999.08	21.28	7.36	0.100	8.329	8.539	584.3	99.7	177.2	62.8	924.1
148	00/01/03	17:33:10	338.2728	102.98	999.08	21.28	7.36	0.101	8.329	8.539	589.2	100.5	177.2	62.8	929.7
149	00/01/03	23:33:11	344.2731	102.98	999.08	21.28	7.36	0.101	8.328	8.539	593.5	101.1	177.2	62.8	934.7
150	00/01/04	05:33:12	350.2733	102.98	999.08	21.28	7.36	0.102	8.328	8.538	598.7	102.0	177.2	62.8	940.7
151	00/01/04	16:29:33	361.2125	102.98	999.08	21.28	7.36	0.104	8.328	8.538	608.4	103.5	177.2	62.8	952.0
152	00/01/04	16:30:23	361.2264	102.98	999.08	21.28	7.36	0.104	8.327	8.538	609.1	103.6	177.2	62.8	952.7
153	00/01/04	22:30:27	367.2275	102.98	999.08	21.28	7.36	0.104	8.327	8.537	614.0	104.4	177.2	62.8	958.4
154	00/01/05	04:30:28	373.2278	102.98	999.08	21.28	7.36	0.105	8.327	8.537	618.4	105.1	177.2	62.8	963.5
155	00/01/05	10:30:29	379.2281	102.98	999.08	21.28	7.36	0.106	8.327	8.537	622.7	105.8	177.2	62.8	968.5

ANDERSON EXPLORATION 102/01-16-002-29 W1/0 Continued

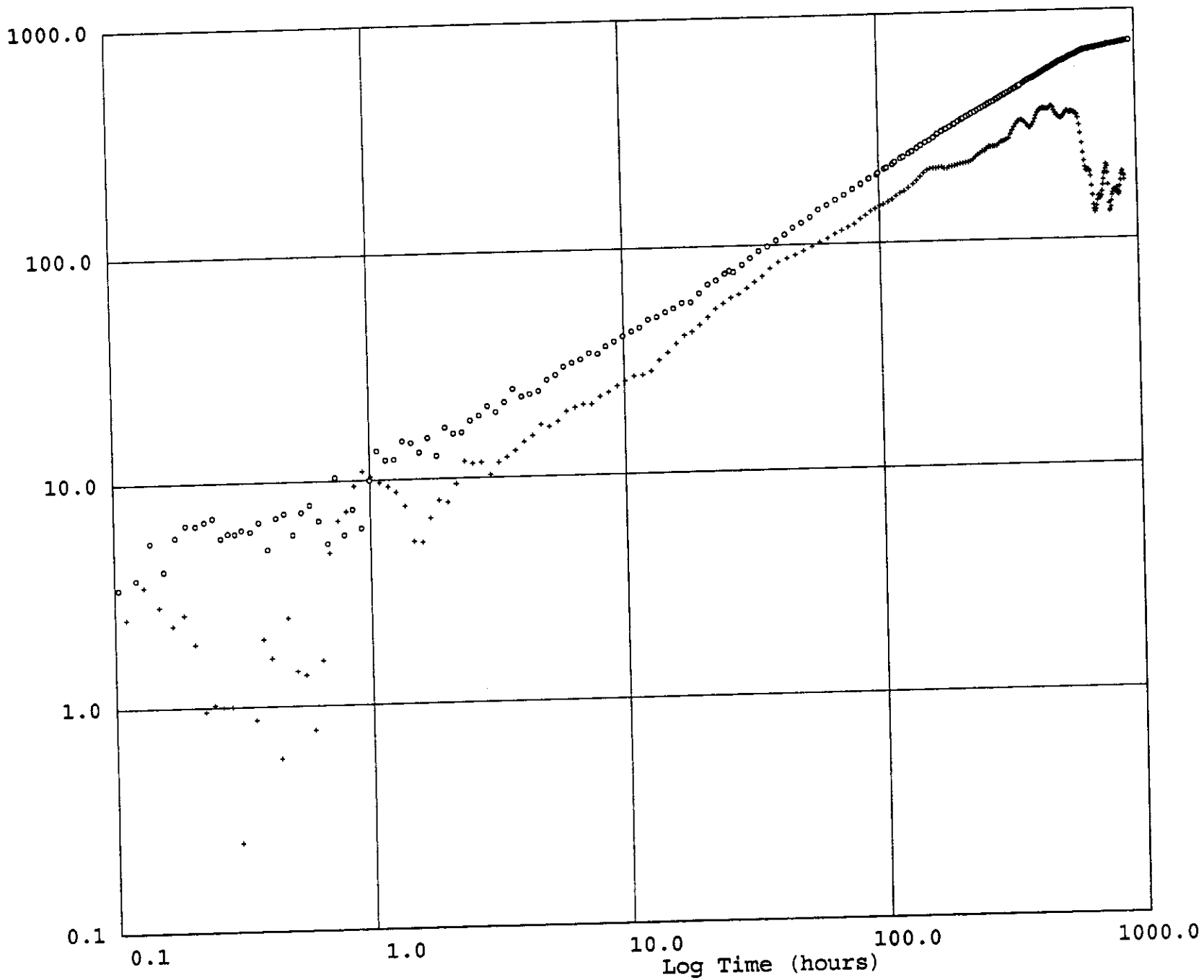
Shot #	Date	Time	Test Time (hrs)	Joints to Fluid	Column Heights (m)			Gradients (kPa/m)			Pressures (kPag)				
					Gas	Oil	Emul	Gas	Oil	Emul	Csg	Gas	Oil	Emul	MPP
156	00/01/05	16:30:30	385.2283	102.98	999.08	21.28	7.36	0.107	8.326	8.537	626.8	106.4	177.2	62.8	973.2
157	00/01/05	19:06:09	387.8225	102.98	999.08	21.28	7.36	0.107	8.326	8.537	628.1	106.6	177.2	62.8	974.7
158	00/01/06	01:06:10	393.8226	102.98	999.08	21.28	7.36	0.107	8.326	8.536	631.6	107.2	177.2	62.8	978.8
159	00/01/06	07:06:11	399.8231	102.98	999.08	21.28	7.36	0.108	8.326	8.536	635.9	107.9	177.2	62.8	983.7
160	00/01/06	13:06:12	405.8233	102.98	999.08	21.28	7.36	0.109	8.326	8.536	639.9	108.5	177.2	62.8	988.4
161	00/01/06	19:06:13	411.8236	102.98	999.08	21.28	7.36	0.109	8.325	8.536	644.1	109.2	177.2	62.8	993.2
162	00/01/07	01:06:14	417.8239	102.98	999.08	21.28	7.36	0.110	8.325	8.535	648.9	109.9	177.2	62.8	998.8
163	00/01/07	01:46:09	418.4892	102.98	999.08	21.28	7.36	0.110	8.325	8.535	649.6	110.0	177.2	62.8	999.6
164	00/01/07	07:46:10	424.4894	102.98	999.08	21.28	7.36	0.111	8.325	8.535	654.8	110.8	177.2	62.8	1005.6
165	00/01/07	13:46:11	430.4897	102.98	999.08	21.28	7.36	0.112	8.325	8.535	659.0	111.5	177.2	62.8	1010.4
166	00/01/07	14:21:06	431.0717	102.98	999.08	21.28	7.36	0.112	8.325	8.535	660.0	111.7	177.2	62.8	1011.7
167	00/01/07	19:46:12	436.4900	102.98	999.08	21.28	7.36	0.112	8.324	8.534	663.6	112.3	177.1	62.8	1015.8
168	00/01/08	01:46:13	442.4903	102.98	999.08	21.28	7.36	0.113	8.324	8.534	667.6	112.9	177.1	62.8	1020.4
169	00/01/08	07:46:14	448.4906	102.98	999.08	21.28	7.36	0.114	8.324	8.534	671.7	113.6	177.1	62.8	1025.1
170	00/01/08	11:20:09	452.0558	102.98	999.08	21.28	7.36	0.114	8.324	8.534	674.7	114.0	177.1	62.8	1028.7
171	00/01/08	17:20:10	458.0561	102.98	999.08	21.28	7.36	0.115	8.323	8.534	678.7	114.7	177.1	62.8	1033.3
172	00/01/08	23:20:11	464.0564	102.98	999.08	21.28	7.36	0.116	8.323	8.533	683.6	115.5	177.1	62.8	1039.0
173	00/01/09	05:20:12	470.0567	102.98	999.08	21.28	7.36	0.116	8.323	8.533	687.7	116.1	177.1	62.8	1043.7
174	00/01/09	11:20:13	476.0569	102.98	999.08	21.28	7.36	0.117	8.323	8.533	691.5	116.7	177.1	62.8	1048.1
175	00/01/09	17:20:14	482.0572	102.98	999.08	21.28	7.36	0.118	8.322	8.533	695.6	117.4	177.1	62.8	1052.9
176	00/01/09	23:20:15	488.0575	102.98	999.08	21.28	7.36	0.118	8.322	8.532	699.3	118.0	177.1	62.8	1057.1
177	00/01/09	23:36:09	488.3225	102.98	999.08	21.28	7.36	0.118	8.322	8.532	700.1	118.1	177.1	62.8	1058.1
178	00/01/10	05:36:10	494.3228	102.98	999.08	21.28	7.36	0.119	8.322	8.532	704.3	118.8	177.1	62.8	1062.9
179	00/01/10	11:58:18	500.6917	102.98	999.08	21.28	7.36	0.120	8.322	8.532	708.4	119.5	177.1	62.8	1067.7
180	99/01/10	18:48:54	507.5350	102.98	999.08	21.28	7.36	0.120	8.322	8.532	711.1	119.9	177.1	62.8	1070.9
181	99/01/11	00:48:55	513.5353	102.98	999.08	21.28	7.36	0.120	8.321	8.532	714.0	120.4	177.1	62.8	1074.2
182	99/01/11	06:48:56	519.5356	102.98	999.08	21.28	7.36	0.121	8.321	8.531	717.6	120.9	177.1	62.8	1078.4
183	99/01/11	12:48:57	525.5358	102.98	999.08	21.28	7.36	0.122	8.321	8.531	721.4	121.6	177.1	62.8	1082.8
184	99/01/11	14:15:09	526.9725	102.98	999.08	21.28	7.36	0.122	8.321	8.531	722.1	121.7	177.1	62.8	1083.7
185	99/01/11	20:15:10	532.9728	102.98	999.08	21.28	7.36	0.122	8.321	8.531	725.5	122.2	177.1	62.8	1087.6
186	99/01/12	02:15:11	538.9731	102.98	999.08	21.28	7.36	0.123	8.320	8.531	729.2	122.8	177.1	62.8	1091.9
187	99/01/12	08:15:12	544.9733	102.98	999.08	21.28	7.36	0.123	8.320	8.530	732.5	123.4	177.1	62.8	1095.7
188	99/01/12	14:15:13	550.9736	102.98	999.08	21.28	7.36	0.124	8.320	8.530	736.8	124.1	177.1	62.8	1100.7
189	99/01/12	20:15:14	556.9739	102.98	999.08	21.28	7.36	0.125	8.320	8.530	740.1	124.6	177.1	62.8	1104.5
190	99/01/13	02:15:15	562.9742	102.98	999.08	21.28	7.36	0.125	8.320	8.530	742.9	125.1	177.1	62.8	1107.8
191	99/01/13	07:57:09	568.6725	102.98	999.08	21.28	7.36	0.126	8.320	8.530	745.5	125.5	177.0	62.8	1110.8
192	99/01/13	13:57:10	574.6728	102.98	999.08	21.28	7.36	0.126	8.319	8.529	749.1	126.1	177.0	62.8	1115.0
193	99/01/13	19:57:11	580.6731	102.98	999.08	21.28	7.36	0.127	8.319	8.529	751.8	126.5	177.0	62.8	1118.1
194	99/01/14	01:57:12	586.6733	102.98	999.08	21.28	7.36	0.127	8.319	8.529	755.5	127.1	177.0	62.8	1122.4
195	99/01/14	07:57:13	592.6736	102.98	999.08	21.28	7.36	0.128	8.319	8.529	758.9	127.7	177.0	62.8	1126.4
196	99/01/14	13:57:14	598.6739	102.98	999.08	21.28	7.36	0.128	8.319	8.529	762.2	128.2	177.0	62.8	1130.2
197	99/01/14	19:57:15	604.6742	102.98	999.08	21.28	7.36	0.129	8.318	8.529	765.0	128.6	177.0	62.8	1133.4
198	99/01/15	01:57:16	610.6744	102.98	999.08	21.28	7.36	0.129	8.318	8.528	767.7	129.1	177.0	62.8	1136.5
199	99/01/15	05:35:09	614.3058	102.98	999.08	21.28	7.36	0.130	8.318	8.528	769.6	129.4	177.0	62.8	1138.8
200	99/01/15	11:35:10	620.3061	102.98	999.08	21.28	7.36	0.130	8.318	8.528	771.3	129.7	177.0	62.8	1140.7
201	99/01/15	17:35:11	626.3064	102.98	999.08	21.28	7.36	0.130	8.318	8.528	772.1	129.8	177.0	62.8	1141.7
202	99/01/15	23:35:12	632.3067	102.98	999.08	21.28	7.36	0.130	8.318	8.528	772.7	129.9	177.0	62.8	1142.4
203	99/01/16	05:35:13	638.3069	102.98	999.08	21.28	7.36	0.130	8.318	8.528	774.4	130.2	177.0	62.8	1144.3
204	99/01/16	11:35:14	644.3072	102.98	999.08	21.28	7.36	0.131	8.318	8.528	775.9	130.4	177.0	62.7	1146.1
205	99/01/16	17:35:15	650.3075	102.98	999.08	21.28	7.36	0.131	8.318	8.528	778.5	130.9	177.0	62.7	1149.1
206	99/01/16	23:35:16	656.3078	102.98	999.08	21.28	7.36	0.131	8.317	8.528	780.0	131.1	177.0	62.7	1150.9
207	99/01/17	05:35:17	662.3081	102.98	999.08	21.28	7.36	0.132	8.317	8.528	781.8	131.4	177.0	62.7	1153.0
208	99/01/17	06:11:09	662.9058	102.98	999.08	21.28	7.36	0.132	8.317	8.528	782.0	131.4	177.0	62.7	1153.2
209	99/01/17	11:37:05	668.3381	102.98	999.08	21.28	7.36	0.132	8.317	8.527	784.0	131.8	177.0	62.7	1155.5
210	99/01/17	12:11:10	668.9061	102.98	999.08	21.28	7.36	0.132	8.317	8.527	783.4	131.7	177.0	62.7	1154.8
211	99/01/17	18:11:11	674.9064	102.98	999.08	21.28	7.36	0.132	8.317	8.527	783.8	131.7	177.0	62.7	1155.3
212	99/01/18	00:11:12	680.9067	102.98	999.08	21.28	7.36	0.132	8.317	8.527	784.3	131.8	177.0	62.7	1155.8
213	99/01/18	06:11:13	686.9069	102.98	999.08	21.28	7.36	0.132	8.317	8.527	785.6	132.0	177.0	62.7	1157.4
214	99/01/18	12:11:14	692.9072	102.98	999.08	21.28	7.36	0.132	8.317	8.527	786.7	132.2	177.0	62.7	1158.7
215	99/01/18	18:11:15	698.9075	102.98	999.08	21.28	7.36	0.133	8.317	8.527	788.2	132.4	177.0	62.7	1160.3
216	99/01/19	00:11:16	704.9078	102.98	999.08	21.28	7.36	0.133	8.317	8.527	789.2	132.6	177.0	62.7	1161.5
217	99/01/19	06:11:17	710.9081	102.98	999.08	21.28	7.36	0.133	8.317	8.527	790.2	132.8	177.0	62.7	1162.7
218	99/01/19	11:21:09	716.0725	102.98	999.08	21.28	7.36	0.133	8.317	8.527	790.9	132.9	177.0	62.7	1163.6
219	99/01/19	17:21:10	722.0728	102.98	999.08	21.28	7.36	0.133	8.317	8.527	792.3	133.1	177.0	62.7	1165.2
220	99/01/19	23:21:11	728.0731	102.98	999.08	21.28	7.36	0.133	8.317	8.527	793.8	133.4	177.0	62.7	1166.8
221	99/01/20	05:21:12	734.0733	102.98	999.08	21.28	7.36	0.134	8.317	8.527	794.4	133.5	177.0	62.7	1167.6
222	99/01/20	11:21:13	740.0736	102.98	999.08	21.28	7.36	0.134	8.317	8.527	795.6	133.7	177.0	62.7	1168.9
223	99/01/20	17:21:14	746.0739	102.98	999.08	21.28	7.36	0.134	8.317	8.527	796.4	133.8	177.0	62.7	1169.9
224	99/01/20	23:21:15	752.0742	102.98	999.08	21.28	7.36	0.134	8.316	8.527	797.1	133.9	177.0	62.7	1170.7
225	99/01/21	05:21:16	758.0744	102.98	999.08	21.28	7.36	0.134	8.316	8.527	799.3	134.3	177.0	62.7	1173.3
226	99/01/21	11:21:17	764.0747	102.98	999.08	21.28	7.36	0.135	8.316	8.526	801.2	134.6	177.0	62.7	1175.5
227	99/01/21	12:41:59	765.4197	102.98	999.08	21.28	7.36	0.135	8.316	8.526	802.1	134.7	177.0	62.7	1176.5
228	99/01/21	13:17:43	766.0153	102.98	999.08	21.28	7.36	0.135	8.316	8.526	802.2	134.8	177.0	62.7	1176.7
229	99/01/21	13:18:27	766.0275	102.98	999.08	21.28	7.36	0.135	8.316	8.526	802.5	134.8	177.0	62.7	1177.0
230	99/01/21	19:18:31	772.0286	102.98	999.08	21.28	7.36	0.135	8.316	8.526	802.8	134.9	177.0	62.7	1177.4
231	99/01/21	19:32:09	772.2558	102.98	999.08	21.28	7.36	0.135	8.316	8.526	802.9	134.9	177.0	62.7	1177.5
232	99/01/22	01:32:10	778.2561	102.98	999.08	21.28	7.36	0.135	8.316	8.526	804.0	135.1	177.0	62.7	1178.8
233	99/01/22	07:32:11	784.2564	102.98	999.08	21.28	7.36	0.135	8.316	8.526	804.7	135.2	177.0	62.7	1179.6
234	99/01/22	13:32:12	790.2567	102.98	999.08	21.28	7.36	0.135	8.316	8.526	805.6	135.3	177.0	62.7	1180.6
235	99/01/22	19:32:13	796.2569	102.98	999.08	21.28	7.36	0.136	8.316	8.526	806.6	135.5	177.0	62.7	1181.8
236	99/01/23	01:32:14	802.2572	102.98	999.08	21.28	7.36	0.136	8.316	8.526	807.1	135.6	177.0	62.7	1182.3
237	99/01/23	07:32:15	808.2575	102.98	999.08	21.28	7.36	0.136	8.316	8.526	808.2	135.7	177.0	62.7	1183.7
238	99/01/23	13:32:16	814.2578	102.98	999.08	21.28	7.36	0.136	8.316	8.526	809.7	136.0	177.0	62.7	1185.3
239	99/01/23	19:32:17	820.2581	102.98	999.08	21.28	7.36	0.136	8.316	8.526	810.5	136.1	177.0	62.7	1186.3
240	99/01/24	01:32:18	826.2583	102.98	999.08	21.28	7.36	0.137	8.316	8.526	812.1	136.4	177.0	62.7	1188.2
241	99/01/24	07:32:19	832.2586	102.98	999.08	21.28	7.36	0.137	8.316	8.526	813.1	136.6	177.0	62.7	1189.3
242	99/01/24	09:28:09	834.1892	102.98	999.08	21.28	7.36	0.137	8.315	8.526	813.4	136.6	177.0	62.7	1189.7
243	99/01/24	15:28:10	840.1894	102.98	999.08	21.28	7.36	0.137	8.315	8.526	814.2	136.7	177.0	62.7	1190.7
244	99/01/24	21:28:11	846.1897	102.98	999.08	21.28	7.36	0.137	8.315	8.526	814.7	136.8	177.0	62.7	1191.2
245	99/01/25	03:28:12	852.1900	102.98	999.08	21.28	7.36	0.137	8.315	8.526	815.1	136.9	177.0	62.7	1191.7

ANDERSON EXPLORATION 102/01-16-002-29 W1/0 Continued

Shot #	Date	Time	Test Time (hrs)	Joints to Fluid	Column Heights (m) Gas	Oil	Emul	Gradients (kPa/m) Gas	Oil	Emul	Pressures (kPag) Csg	Gas	Oil	Emul	MPP
246	99/01/25	09:58:46	858.6994	102.98	999.06	21.28	7.36	0.137	8.315	8.525	817.3	137.2	177.0	62.7	1194.2
247	99/01/25	14:03:36	862.7800	102.98	999.06	21.28	7.36	0.137	8.315	8.525	818.0	137.4	177.0	62.7	1195.0
248	99/01/25	15:58:50	864.7006	102.98	999.06	21.28	7.36	0.137	8.315	8.525	817.9	137.4	177.0	62.7	1195.0
249	99/01/25	21:58:51	870.7008	102.98	999.06	21.28	7.36	0.138	8.315	8.525	818.8	137.5	177.0	62.7	1196.0
250	99/01/26	03:58:52	876.7011	102.98	999.06	21.28	7.36	0.138	8.315	8.525	819.8	137.7	177.0	62.7	1197.1
251	99/01/26	09:58:53	882.7014	102.98	999.06	21.28	7.36	0.138	8.315	8.525	821.5	137.9	177.0	62.7	1199.2
252	99/01/26	15:58:54	888.7017	102.98	999.06	21.28	7.36	0.138	8.315	8.525	822.9	138.2	176.9	62.7	1200.7
253	99/01/26	21:58:55	894.7019	102.98	999.06	21.28	7.36	0.138	8.315	8.525	824.0	138.4	176.9	62.7	1202.0
254	99/01/27	03:58:56	900.7022	102.98	999.06	21.28	7.36	0.139	8.315	8.525	825.2	138.6	176.9	62.7	1203.4
255	99/01/27	04:20:09	901.0556	102.98	999.06	21.28	7.36	0.139	8.315	8.525	824.6	138.5	176.9	62.7	1202.8
256	99/01/27	10:20:10	907.0561	102.98	999.06	21.28	7.36	0.139	8.315	8.525	825.9	138.7	176.9	62.7	1204.3
257	99/01/27	16:20:11	913.0564	102.98	999.06	21.28	7.36	0.139	8.315	8.525	826.8	138.8	176.9	62.7	1205.2
258	99/01/27	22:20:12	919.0567	102.98	999.06	21.28	7.36	0.139	8.315	8.525	827.3	138.9	176.9	62.7	1205.8
259	99/01/28	04:20:13	925.0569	102.98	999.06	21.28	7.36	0.139	8.315	8.525	827.8	139.0	176.9	62.7	1206.5
260	99/01/28	09:22:51	930.1008	102.98	999.06	21.28	7.36	0.139	8.315	8.525	828.8	139.2	176.9	62.7	1207.7

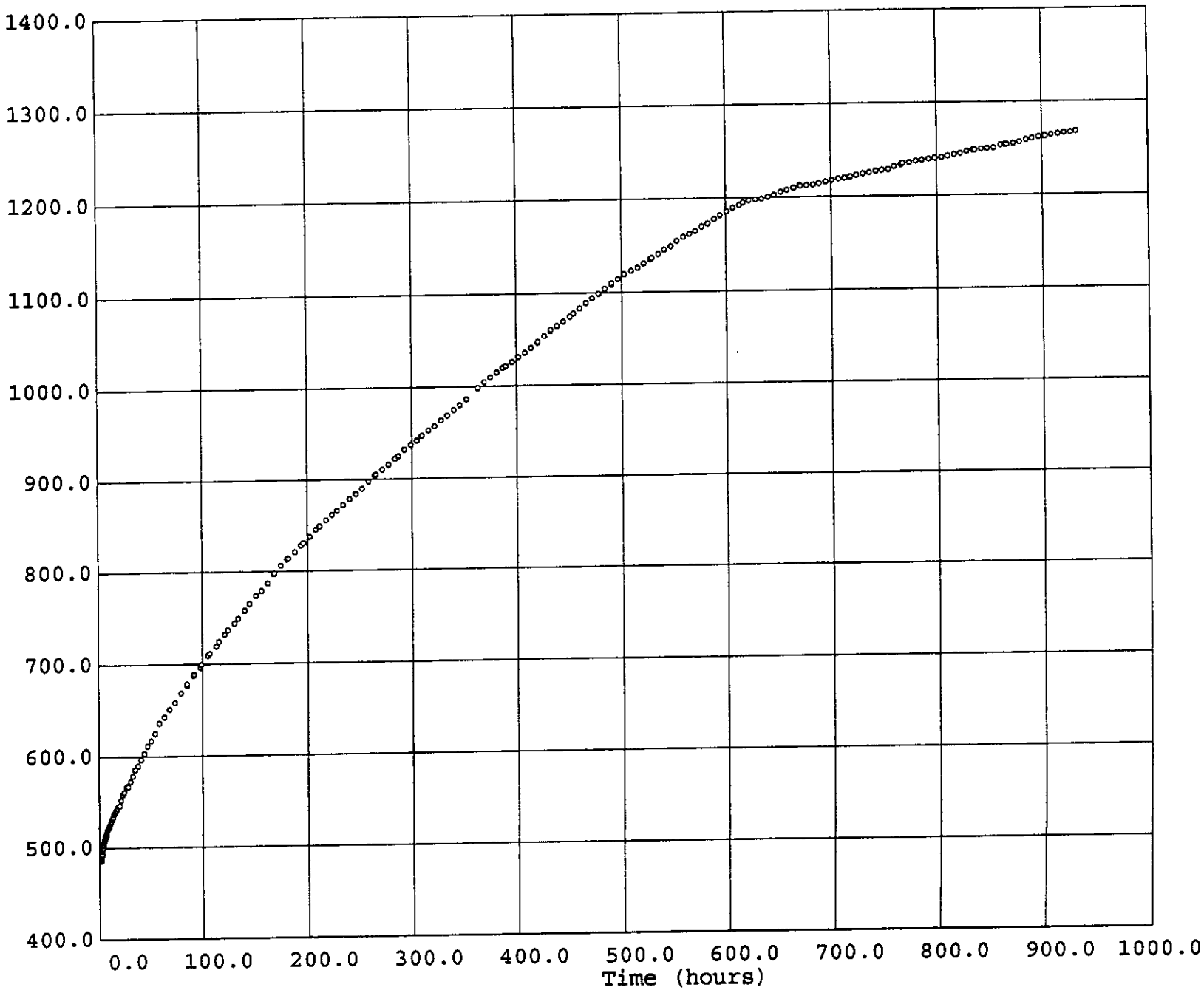
Type Curve Pre-plot (Log(Ps - Pwf) vs Log(Time))

ANDERSON EXPLORATION
102/01-16-002-29 W1/0



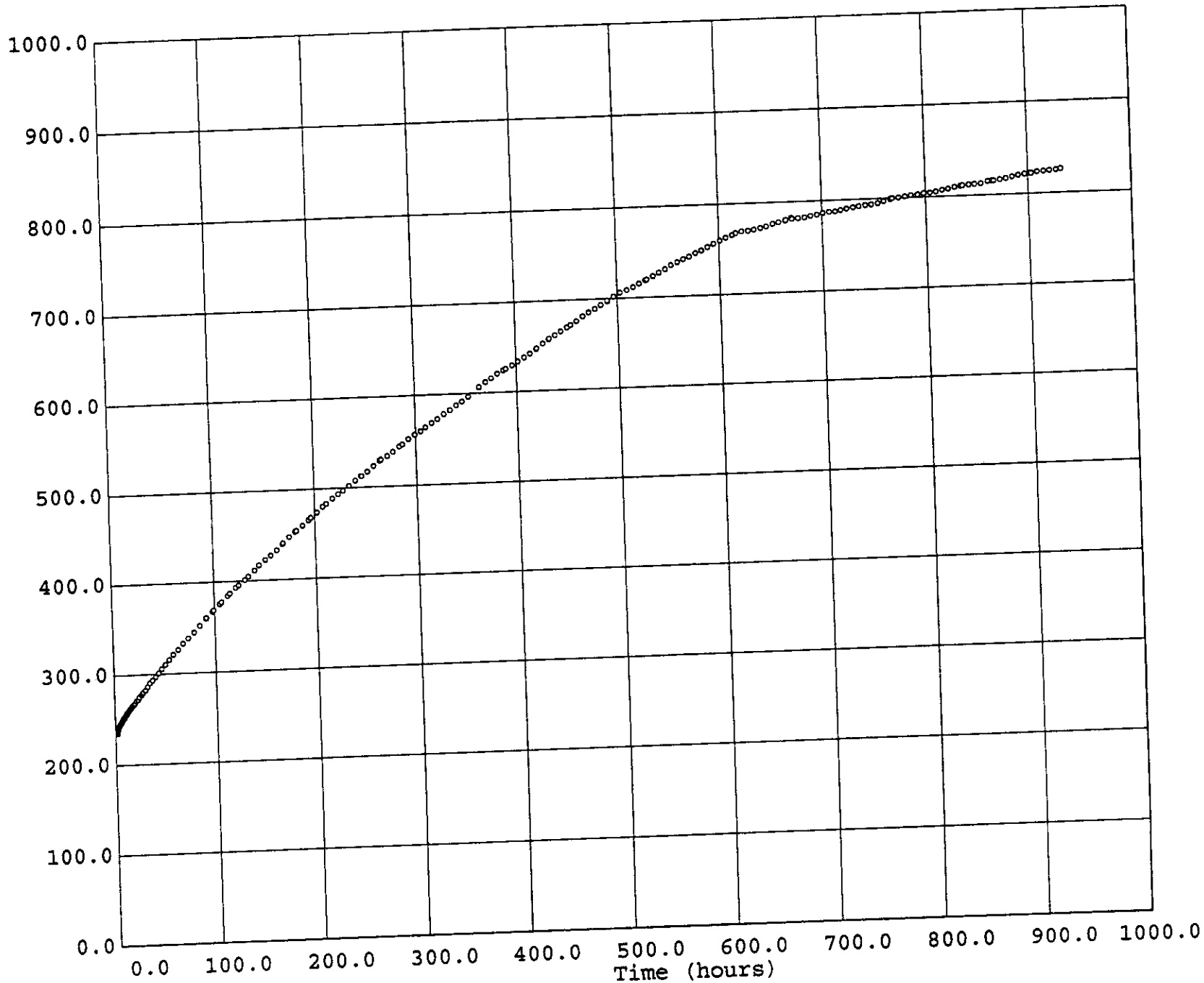
Bottom Hole Pressure vs Time

ANDERSON EXPLORATION
102/01-16-002-29 W1/0



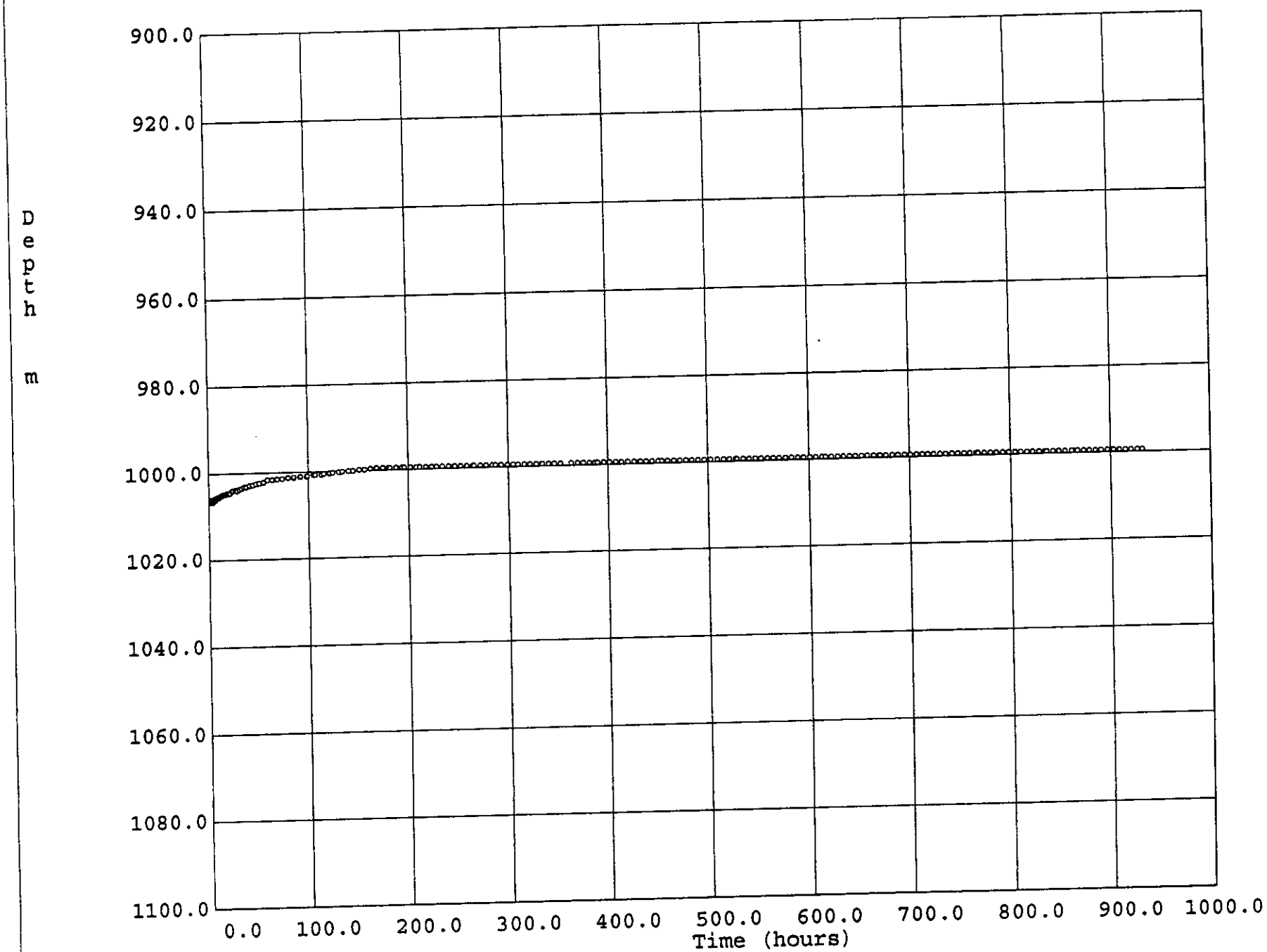
Casing Pressure vs Time

ANDERSON EXPLORATION
102/01-16-002-29 W1/0



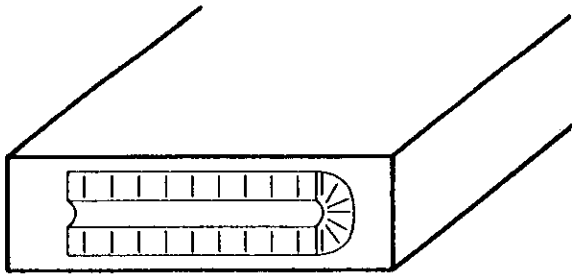
Fluid Level vs Time

ANDERSON EXPLORATION
102/01-16-002-29 W1/0

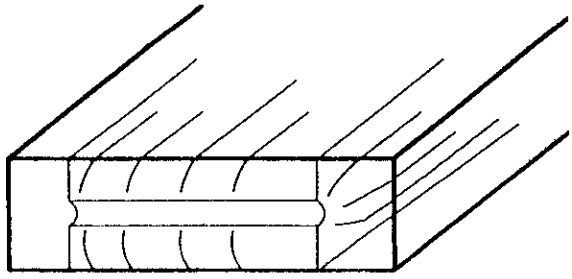


APPENDIX

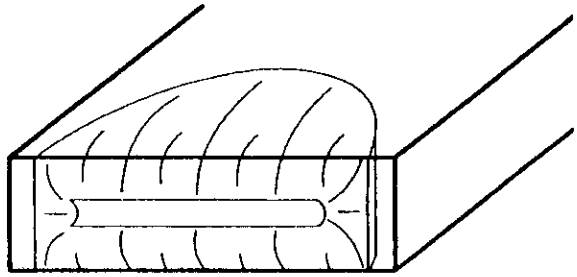
Horizontal Well Flow Regimes



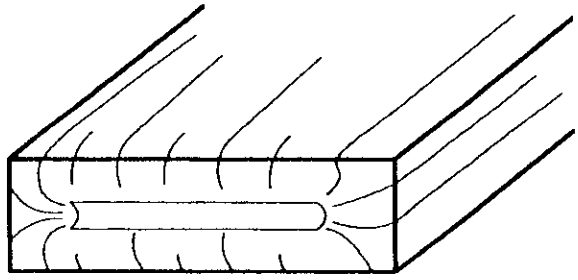
a) Early-time "Vertical Radial" flow regime



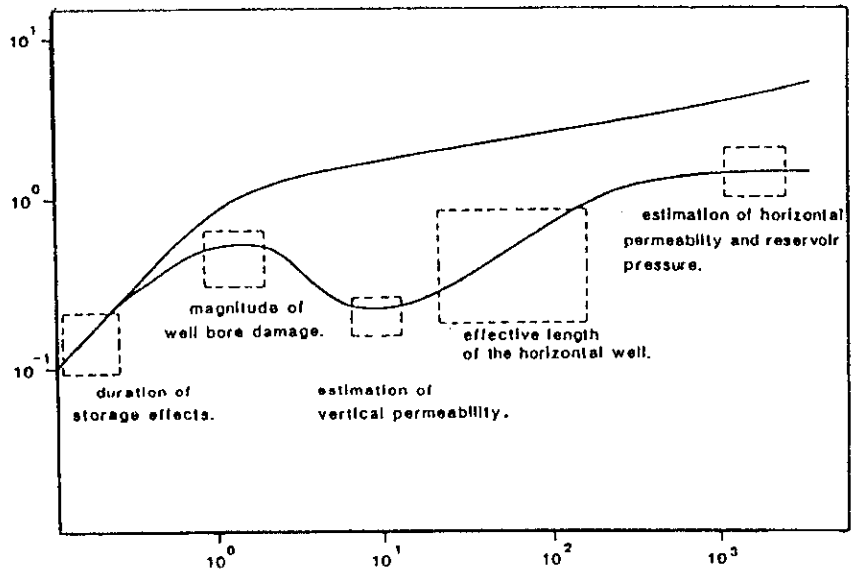
b) "Horizontal-Linear" flow regime



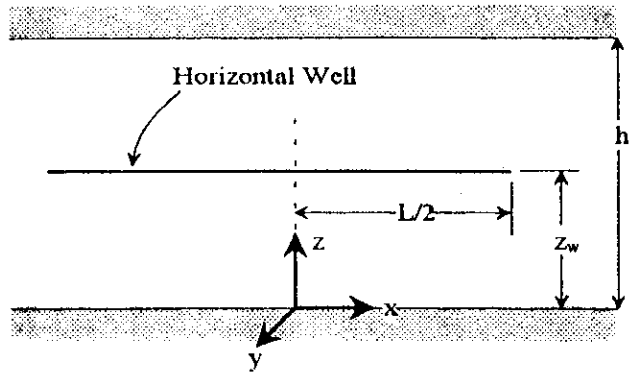
c) Late time "Horizontal-Radial" flow regime



d) Late time "Boundary" dominated flow regime



Reservoir parameters obtained from Log-Log plot



Horizontal well model