

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name VERA #1-19 Test No. 1 Date 2/18/95
Company DLB OIL & GAS INC Zone MISSISSIPPI
Address 1601 NW EXPRESSWAY, #700, OK CITY, OK 73118 Elevation 1607
Co. Rep./Geo. JAY GENTRY/JOE BAKER Cont. WHITE & ELLIS #8 Est. Ft. of Pay _____
Location: Sec. 19 Twp. 23S Rge. 7W Co. RENO State KS

Interval Tested 3564-3626 Drill Pipe Size 4.5" XH
Anchor Length 62 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 3559 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 3564 Mud Wt. 9.2 lb/Gal.
Total Depth 3626 Viscosity 51 Filtrate 7.6

Tool Open @ 10:32AM Initial Blow STRONG BLOW. GAS TO SURFACE IN 1-1/2 MINUTES.
SEE GAS VOLUME REPORT.
Final Blow STRONG BLOW. SEE GAS VOLUME REPORT.

Recovery - Total Feet 115 Flush Tool? NO

Rec. 3520 Feet of GAS IN PIPE
Rec. 115 Feet of DRILLING MUD. 12%WATER; 88%MUD
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 115 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides 6500 ppm Recovery Chlorides 4000 ppm System

(A) Initial Hydrostatic Mud 1745.77 PSI AK1 Recorder No. 2342 Range 4995

(B) First Initial Flow Pressure 337.80 PSI @ (depth) 3569 w / Clock No. _____

(C) First Final Flow Pressure 349.22 PSI AK1 Recorder No. 10248 Range 4400

(D) Initial Shut-in Pressure 1209.73 PSI @ (depth) 3623 w / Clock No. 27665

(E) Second Initial Flow Pressure 332.35 PSI AK1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 343.51 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 1197.98 PSI Initial Opening 15 Final Flow 60

(H) Final Hydrostatic Mud 1673.34 PSI Initial Shut-in 60 Final Shut-in 90

Our Representative GARY PEVOTEAUX

TEST HISTORY

dlb oil and gas vera no 1-19 dst no 1

Flag Points
t(Min.) P(PSig)

R:	0.00	1745.77
B:	0.00	337.80
C:	9.00	349.22
D:	60.00	1209.73
E:	0.00	332.35
F:	57.00	343.51
G:	93.00	1197.98
H:	0.00	1673.34

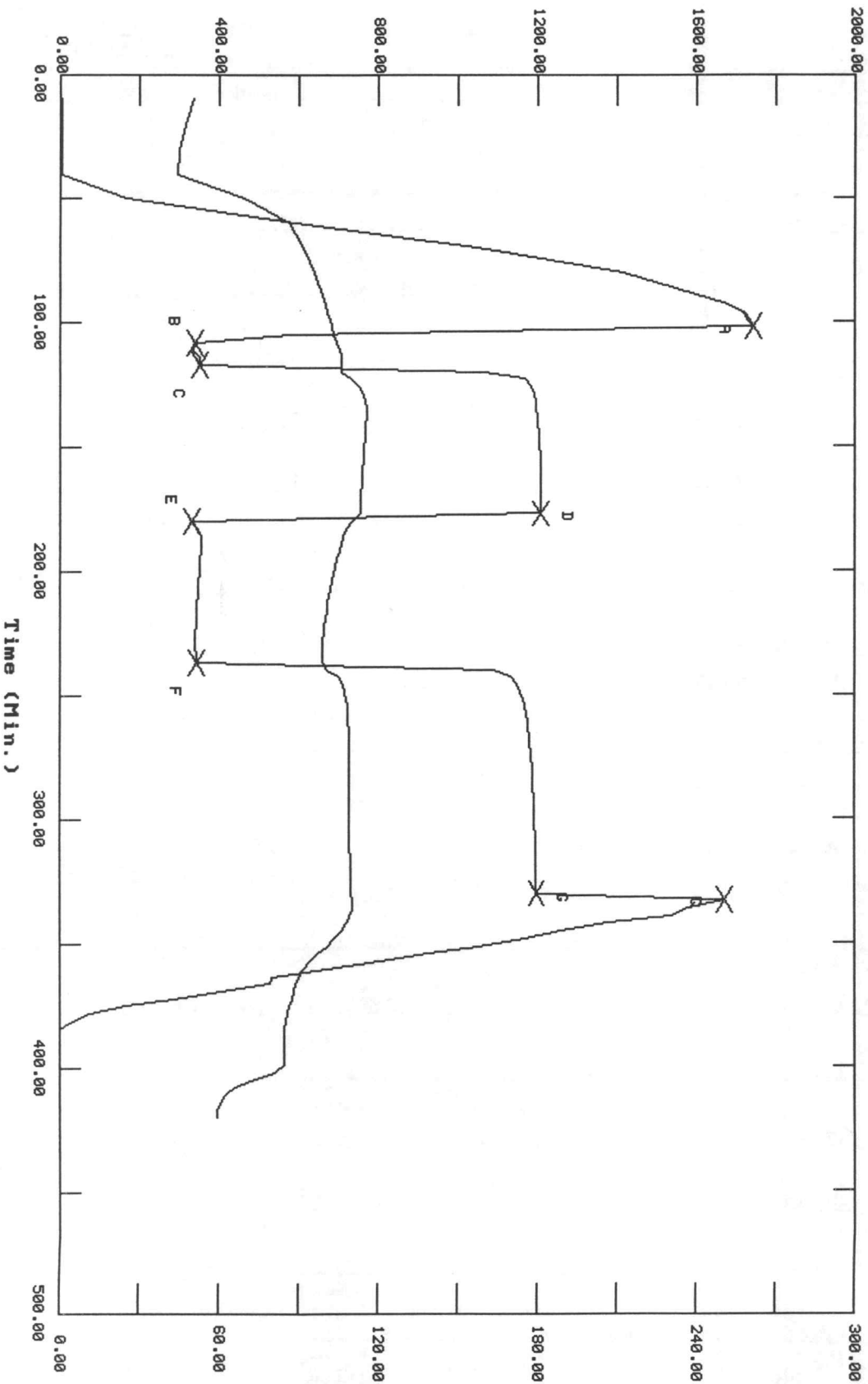
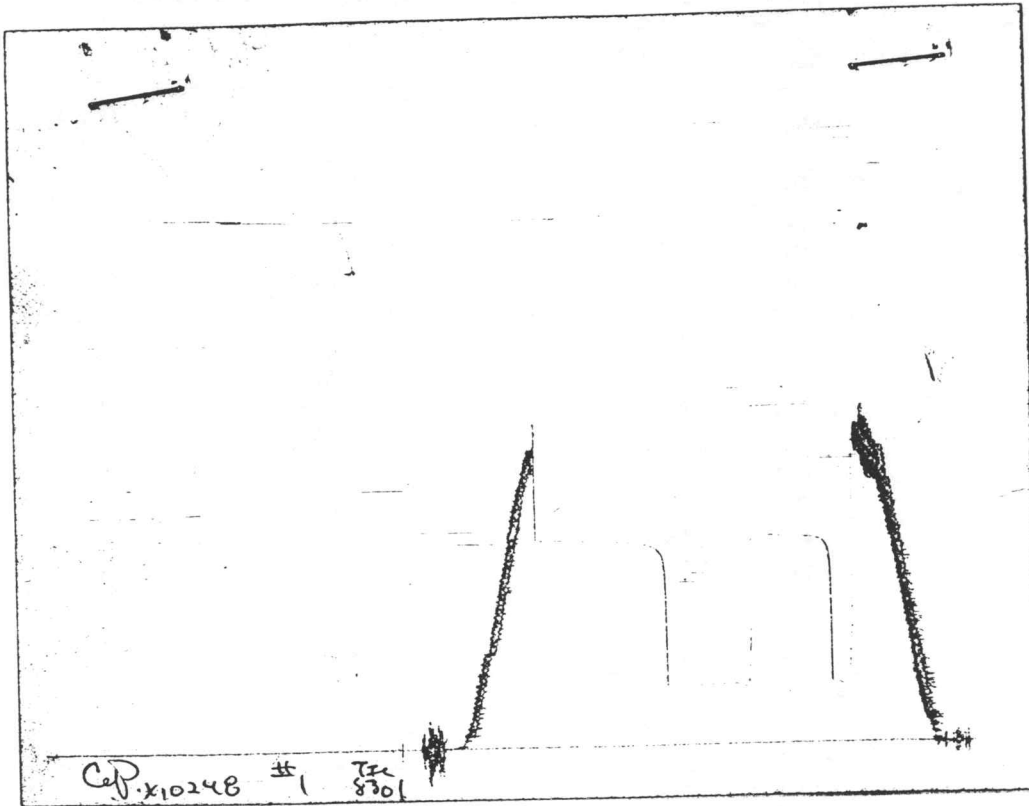


CHART PAGE



This is an actual photograph of an AK1 recorder chart

READINGS ARE FROM ALPINE ELECTRONIC RECORDER

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD		1745.77
(B) FIRST INITIAL FLOW PRESSURE		337.80
(C) FIRST FINAL FLOW PRESSURE		349.22
(D) INITIAL CLOSED-IN PRESSURE		1209.73
(E) SECOND INITIAL FLOW PRESSURE		332.35
(F) SECOND FINAL FLOW PRESSURE		343.51
(G) FINAL CLOSED-IN PRESSURE		1197.98
(H) FINAL HYDROSTATIC MUD		1673.34

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: dlb oil and gas vera no 1-19 dst no 1

DATE: 02/18/95

TIME: 08:47:27

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
***** Initial Hydro.	102.00	1745.8	0.0	102.56		
***** Start Flow 1	0.00	337.8	0.0	104.36		
	3.00	336.5	-1.3	105.44		
	6.00	349.1	11.3	106.16		
***** End Flow 1	9.00	349.2	11.4	106.16		
***** Start Shutin 1	0.00	349.2	0.0	106.16	0.0000	0.122
	3.00	1061.9	712.7	106.34	4.0000	1.128
	6.00	1166.1	816.9	109.76	2.5000	1.360
	9.00	1184.3	835.1	112.64	2.0000	1.403
	12.00	1191.8	842.6	114.26	1.7500	1.420
	15.00	1194.7	845.5	115.16	1.6000	1.427
	18.00	1197.6	848.4	115.52	1.5000	1.434
	21.00	1199.7	850.5	115.52	1.4286	1.439
	24.00	1201.3	852.0	115.34	1.3750	1.443
	27.00	1202.5	853.3	115.16	1.3333	1.446
	30.00	1203.4	854.2	114.98	1.3000	1.448
	33.00	1205.7	856.5	114.62	1.2727	1.454
	36.00	1206.4	857.2	114.44	1.2500	1.455
	39.00	1207.0	857.8	114.26	1.2308	1.457
	42.00	1207.5	858.3	113.90	1.2143	1.458
	45.00	1208.0	858.7	113.72	1.2000	1.459
	48.00	1208.6	859.3	113.72	1.1875	1.461
	51.00	1208.9	859.7	113.54	1.1765	1.461
	54.00	1209.1	859.9	113.36	1.1667	1.462
	57.00	1209.5	860.3	113.18	1.1579	1.463
***** End Shut-in 1	60.00	1209.7	860.5	113.18	1.1500	1.463
***** Start Flow 2	0.00	332.3	0.0	110.48		
	3.00	347.5	15.2	107.78		
	6.00	353.7	21.4	106.70		
	9.00	354.9	22.6	105.98		
	12.00	353.9	21.6	105.26		
	15.00	352.7	20.3	104.36		
	18.00	351.4	19.1	103.64		
	21.00	349.8	17.5	102.92		
	24.00	348.6	16.3	102.20		
	27.00	347.2	14.9	101.66		
	30.00	345.9	13.6	101.30		
	33.00	344.6	12.3	100.76		
	36.00	343.5	11.2	100.40		
	39.00	342.4	10.1	100.04		
	42.00	340.9	8.6	99.68		
	45.00	338.9	6.5	99.50		
	48.00	338.6	6.3	99.14		
	51.00	339.7	7.4	98.96		
	54.00	342.6	10.2	98.78		
***** End Flow 2	57.00	343.5	11.2	98.60		
***** Start Shutin 2	0.00	343.5	0.0	98.60	0.0000	0.118
	3.00	1089.5	746.0	100.94	23.0000	1.187
	6.00	1133.4	789.8	104.72	12.0000	1.284
	9.00	1148.9	805.4	106.52	8.3333	1.320
	12.00	1157.7	814.2	107.60	6.5000	1.340

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: dlb oil and gas vera no 1-19 dst no 1

DATE: 02/18/95

TIME: 08:47:27

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
	15.00	1163.9	820.4	108.14	5.4000	1.355
	18.00	1168.6	825.1	108.50	4.6667	1.366
	21.00	1172.2	828.7	108.68	4.1429	1.374
	24.00	1175.1	831.6	108.68	3.7500	1.381
	27.00	1177.7	834.2	108.86	3.4444	1.387
	30.00	1179.8	836.3	108.86	3.2000	1.392
	33.00	1181.7	838.2	108.86	3.0000	1.396
	36.00	1183.5	839.9	108.86	2.8333	1.401
	39.00	1185.0	841.5	108.86	2.6923	1.404
	42.00	1186.2	842.7	108.86	2.5714	1.407
	45.00	1187.4	843.9	108.86	2.4667	1.410
	48.00	1188.5	845.0	109.04	2.3750	1.413
	51.00	1189.5	846.0	109.04	2.2941	1.415
	54.00	1190.4	846.9	109.04	2.2222	1.417
	57.00	1191.3	847.8	109.04	2.1579	1.419
	60.00	1192.1	848.6	109.04	2.1000	1.421
	63.00	1192.8	849.3	109.22	2.0476	1.423
	66.00	1193.4	849.9	109.22	2.0000	1.424
	69.00	1194.0	850.5	109.22	1.9565	1.426
	72.00	1194.7	851.2	109.40	1.9167	1.427
	75.00	1195.2	851.7	109.40	1.8800	1.429
	78.00	1195.8	852.3	109.58	1.8462	1.430
	81.00	1196.3	852.8	109.58	1.8148	1.431
	84.00	1196.8	853.3	109.58	1.7857	1.432
	87.00	1197.1	853.6	109.76	1.7586	1.433
	90.00	1197.6	854.1	109.76	1.7333	1.434
***** End Shut-in 2	93.00	1198.0	854.5	109.76	1.7097	1.435
***** Final Hydro.	333.00	1673.3	0.0	110.48		

GAS VOLUME REPORT

DLB OIL & GAS INC

VERA #1-19

DST # 1

<u>MIN</u>	<u>INS. WATER</u> <u>PSIG</u>	<u>ORIFICE</u>	<u>MCF/D</u>
1.5		2	GTS
10	37	1.25	1872
15	38	1.25	1911

<u>MIN</u>	<u>INS. WATER</u> <u>PSIG</u>	<u>ORIFICE</u>	<u>MCF/D</u>
10	43	1.25	2085
20	44	1.25	2122
30	44	1.25	2122
40	44	1.25	2122
50	44	1.25	2122
60	46	1.25	2194

Remarks:

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

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	6.00	1166.1	816.9	109.76	2.5000	1.360
	9.00	1184.3	835.1	112.64	2.0000	1.403
	12.00	1191.8	842.6	114.26	1.7500	1.420
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	21.00	1199.7	850.5	115.52	1.4286	1.439
	24.00	1201.3	852.0	115.34	1.3750	1.443
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	18.00	351.4	19.1	103.64		
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	33.00	344.6	12.3	100.76		
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	3.00	1089.5	746.0	100.94	23.0000	1.187
	6.00	1133.4	789.8	104.72	12.0000	1.284

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ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

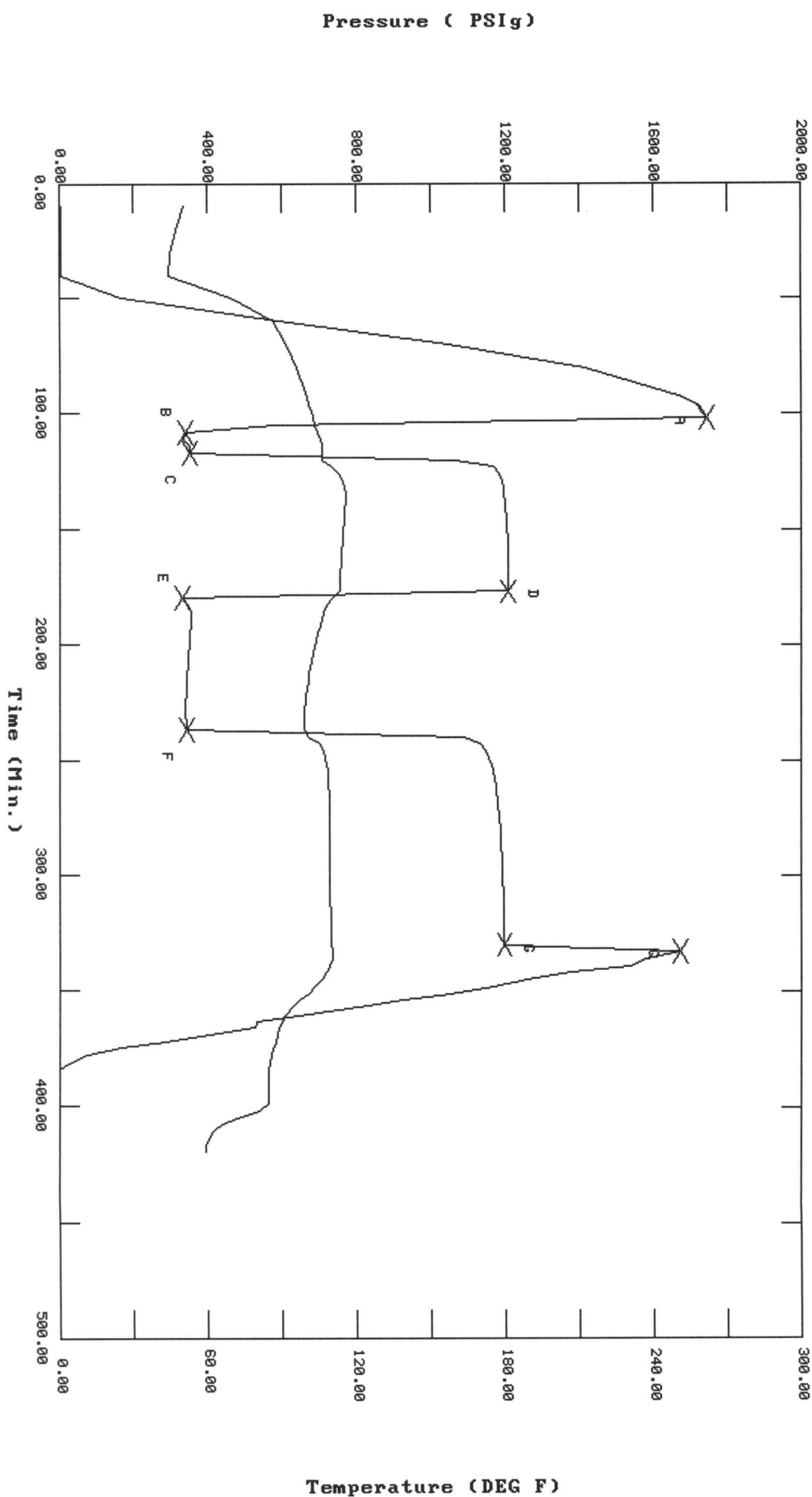
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	87.00	1197.1	853.6	109.76	1.7586	1.433
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***** End Shut-in 2	93.00	1198.0	854.5	109.76	1.7097	1.435
***** Final Hydro.	333.00	1673.3	0.0	110.48		

TEST HISTORY

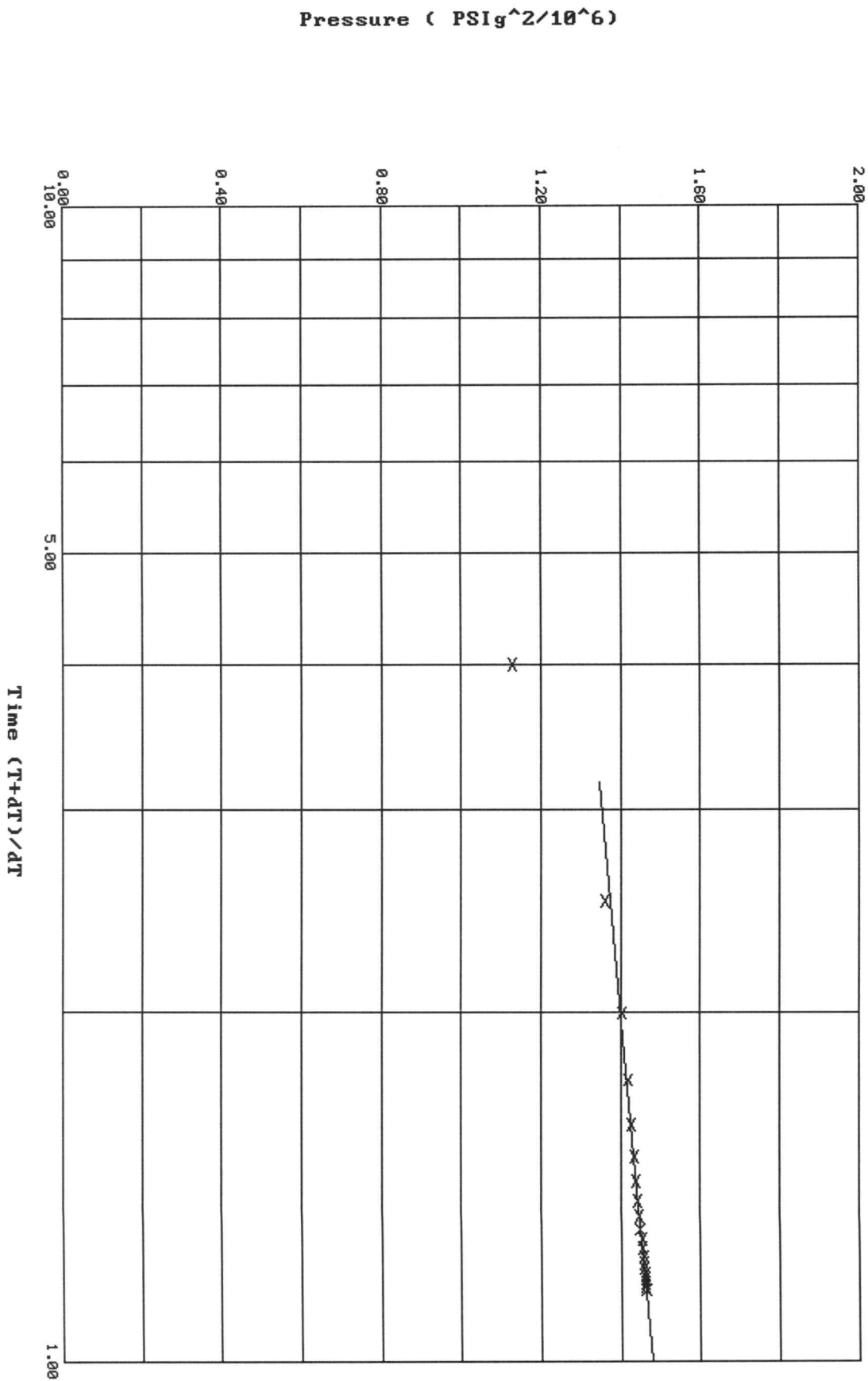
dlb oil and gas vera no 1-19 dst no 1



P^2 Horner Plot: shut-in #1

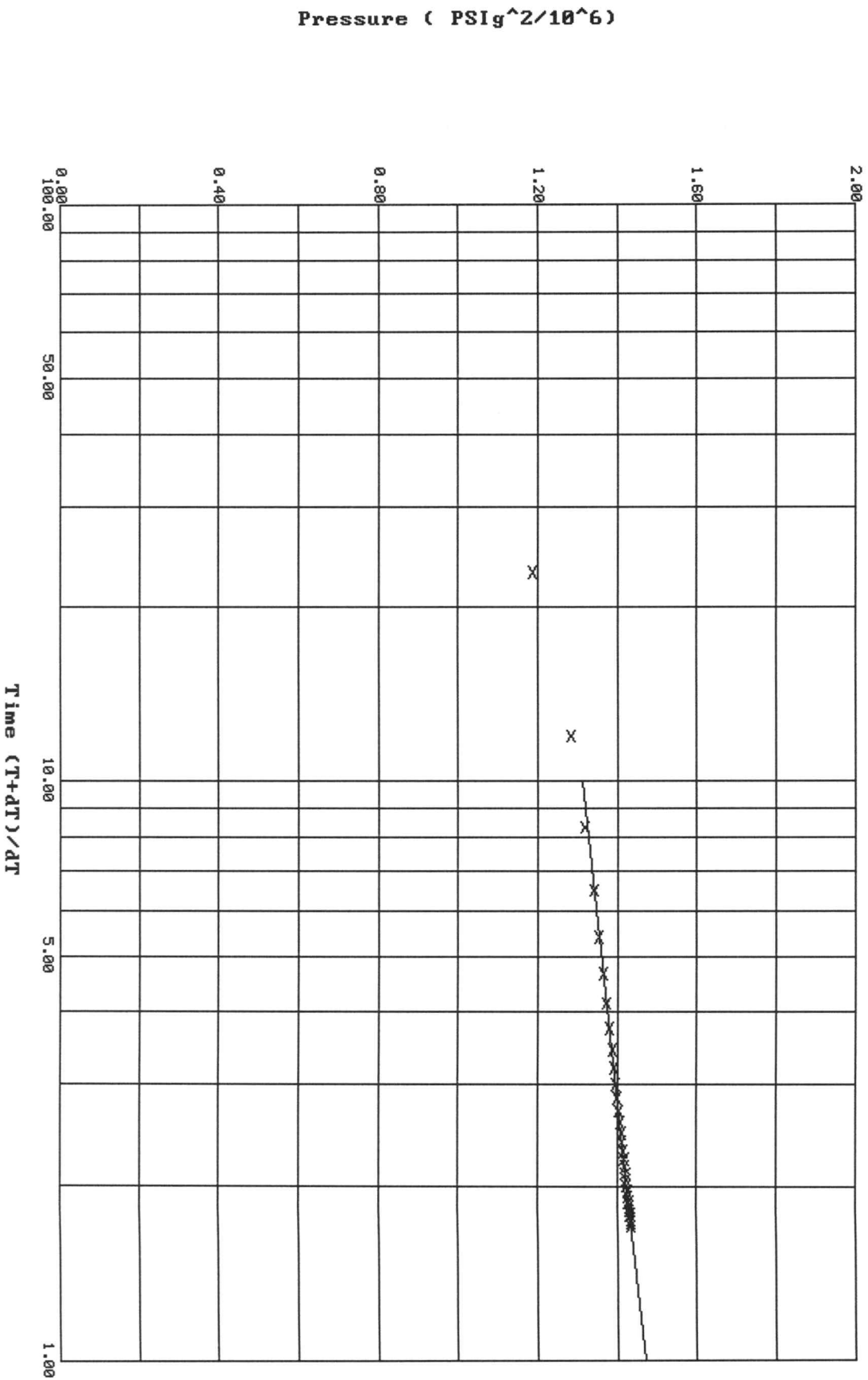
dlb oil and gas vera no 1-19 dst no 1

Slope: 0.2620 $\text{PSig}^2/10^6/\text{cycle}$
 Ext. Pressure: 1216.4861 PSig

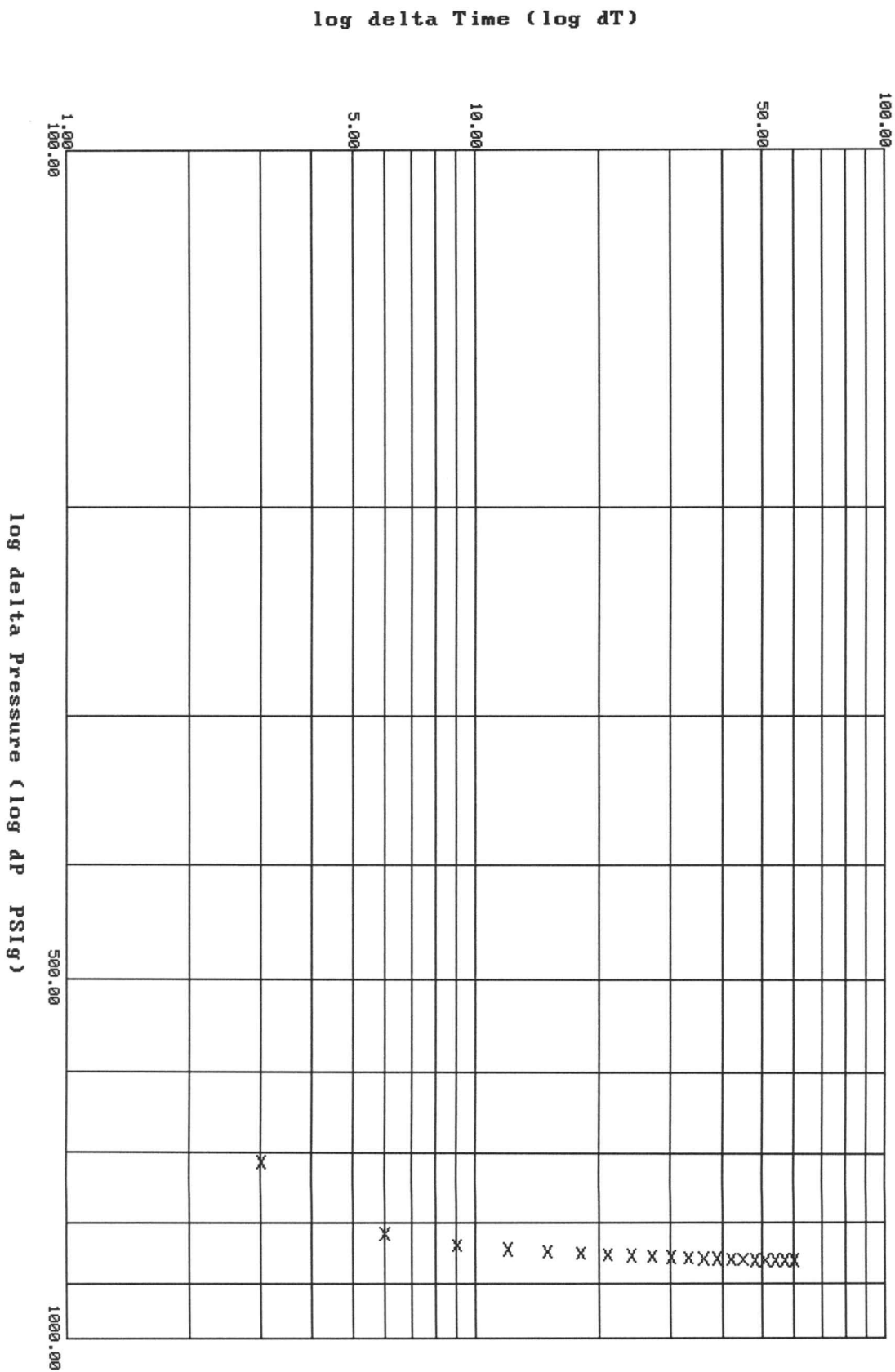


P^2 Horner Plot: shut-in #2 dlb oil and gas vera no 1-19 dst no 1

Slope: 0.1585 $\text{PSig}^2/10^6/\text{cycle}$
 Ext. Pressure: 1213.3055 PSig

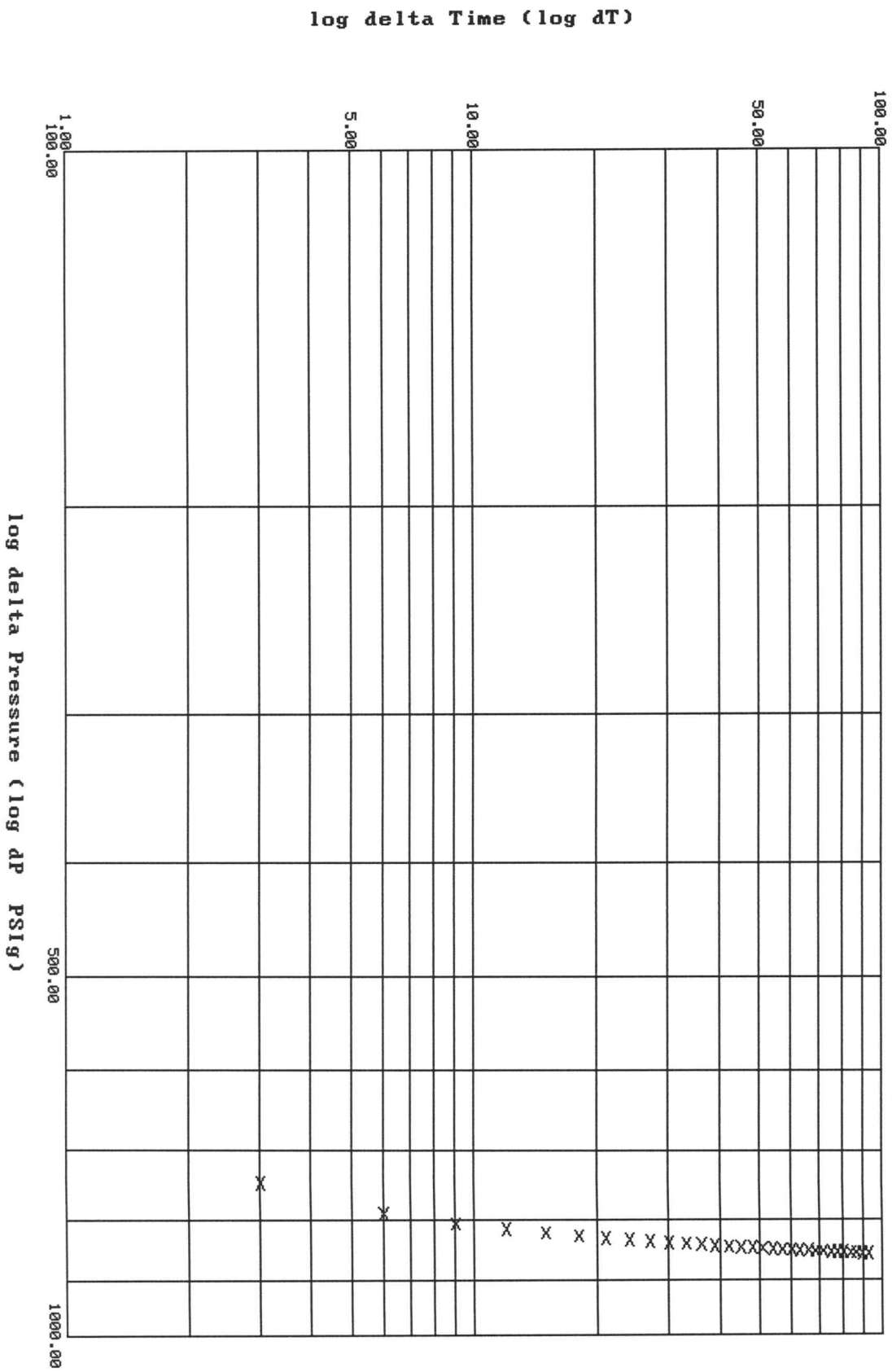


McKinley Plot: shut-in #1 dlb oil and gas vera no 1-19 dst no 1



McKinley Plot: shut-in #2

dlb oil and gas vera no 1-19 dst no 1



Operator.....: DLB Oil & Gas
Well Name.....: Vera #1-19
DST Number.....: 1

Location.: 19-23s-7w Recorder No...: 2342
Test Type: Conventional Recorder Depth: 3569
Formation: Mississippi Test Interval.: 3564-3626

RESERVOIR CALCULATIONS: Gas calculations based on shut-in #2

RESERVOIR PARAMETERS USED:

Net Pay.....: 22.00 ft
Porosity.....: 37.00 %
Bottom Hole Temp.....: 110.00 F
Specific Gravity.....: 0.726
Z factor.....: %7/3f %s
Compressibility.....: 0.000934 /psi
Viscosity.....: 0.0136 cp
Total Flowing Time.....: 75.00 min.
Flow Rate.....: 2194.00
Final Flowing Pressure.....: 343.51 psi
Horner Slope.....: 0.1585 *10⁶ psi²/cycle
Extrapolated Pressure.....: 1213.31 psi
Assumed Drainage Radius.....: 1500.00 ft
Well Bore Radius.....: 3.94 in

RESULTS:

Effective Permeability.....: 6.917694 md
Flow Capacity.....: 152.1893 md.ft
Transmissibility.....: 11190.3872 md.ft/cp
Skin Factor.....: 7.7081
Pressure Drop Across Skin.....: 742.6261 psi
Radius of Investigation.....: 39.3423 ft
Damage Ratio.....: 2.3571
Absolute Open Flow.....: 2384.7788
Absolute Open Flow W/O Damage.: 5621.1304
Estimated Stabilized AOF.....: 1945.5810