A/S NORSKE SHELL

SPECIAL CORE ANALYSIS

WELL: 31/2-7

DATE: NOVEMBER 1982

GECO
GEOPHYSICAL COMPANY
OF NORWAY A·S

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COMMENTS

GENERAL: Special core analyses have been completed on 11 frozen samples from well 31/2-7. The samples were 1 1/2 inch plugs collected in accordance with your sample list. A sample from depth 1614.70 m was impossible to obtain. Air permeability, porosity and confined pressure measurements have been carried out on all obtainable samples. The requested simplified saturation exponent measurements will be presented at a later date, if possible. The technique of measuring resistivity and water saturation on friable samples is presently being developed.

PREPARATION: The samples were drilled and cut in frozen condition using liquid nitrogen as a coolant. Each frozen plug was mounted in a triaxial cell and consolidated with a hydrostatic pressure of 5 bar and allowed to thaw overnight. On the following day, cold solvent cleaning was initiated using methanol and toluene followed by overnight air blow drying. Air permeability, porosit and confined pressure measurements were then collected in that order.

MEASUREMENTS: - AIR PERMEABILITY

Air permeability was measured using N_2-gas at 3 different pressures. These values were the basis for calculating the Klinkenberg corrected permeability. These data have been presented both tabularly and graphically.

- POROSITY

Sample porosities were measured by formation water saturation. The procedure employed was first to evacuate the plug confined in the triaxial cell. A measured volume of water was then drawn into the plug. To ensure complete saturation, a pressure of 15 bar was applied to the injected formation water. A net confined pressure on the plug was kept at a constant level, namely 15 bar, under this operation.

- CONFINED PRESSURE MEASUREMENTS (isostatic condition)

Net overburden pressure was set in the laboratory without any Geerstma-factor correction. Formation Resistivity Factor, Porosity reduction, and Water Permeability were measured simultaneously at increasing pressure levels in the triaxial holder. The "atmospheric" pressure was set to 15 bar to avoid leakage along the sleeve and the plug. The confined pressure levels were as follows: 15 bar - 50 bar - 100 bar - 150 bar and 200 bar.
Pore pressure was kept constantly at one atmosphere.

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* Formation resistivity factor (FRF)

The formation resistivity factor was measured using a frequency of 1 kHz. A platinum screen was placed at each end of the plug to ensure good electrical contact over the end surface of the plug. The parameters "a" and "m" in Archies formula $FF = a \cdot \phi^{-m}$ were calculated both by least squares method forced through (FF = 1.0, ϕ = 1.0) and least squares method (free fit). The forced fit curve is presented grafically.

* Porosity reduction

In these measurements it has been assumed that the water saturation porosities were preserved at a confined pressure of 15 bar ("atmospheric" condition). A graduated pipette (vol. 1.0 ml, grad. 0.01 ml) was used to measure pore volume reduction when increasing the sleeve pressure and to note when stability in the sample occured.

* Liquid permeability

Liquid permeability was measured by flowing degassed simulated formation water through the plugs at a constant rate of 6 ml/min until stability was achieved. Pressure transdusers measured the pressure differance, Δ p.

NOTES

a) Plug from depth 1564.50 is suspected to have collapsed while measuring water saturation porosity. It is for that reason we might attribute the abnormal permeability reduction data. The plug was collapsed when removed from the triaxial holder.

b) Plug from depth 1597.60 has an abnormal permeability reductio at 200 bar. When removed from the triaxial holder, however, collapse was not observable.

c) Plug from depth 1547.50 and depth 1595.40 show a greater water permeability than the Klinkenberg corrected air permeability. There may have been a disturbance during the water porosity injection.

The opposite, i.e. slightly less H_2O perm than Klink perm, is normally observed in the laboratory.

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FORMATION WATER

The formation water was specified to have a resistivity of 0.07 ohm-m at 130°F.

This request was gained by a solution consisting of 63 g sodiumchloride per litre solution.

The used formation water has the following characteristics:

Electrolyte consentration: Na^+ : 23776 ppm

Cl^- : 36724 ppm

Total 60500 ppm

Resistivity (130°F, 54.4°C): r_w = 0.070 ohm-m

Resistivity (20°C) : r_w = 0.121 ohm-m

Density (20°C) : ρ = 1.043 g/cm^3

Viscosity (20°C) : η = 1.106 cP

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PETROGRAPHIC FEATURES

DEPTH (m)	DESCRIPTION
1547.50	Sandstone. grey. fine/medium grained. subrounded. poorly cemented fairly sorted. with/mica, coal laminations, clay, calcite.
1551.50	As above. medium grained. fairly cemented. with fossiles.
1564.40	As above.
1571.60	As above. very poorly cemented. without/fossiles, calcite, coal.
1574.30	As above.
1591.45	Sandstone. grey. fine grained. subrounded. fairly cemented. well sorted. with/mica, clay, coal laminations, calcite.
1595.40	Sandstone. grey. medium grained. subrunded. very poorly cemented. well sorted. grainstone. with/mica, calcite.
1597.60	Sandstone. fine grained. subrounded. fairly cemented. very well sorted with/coal laminations, mica, clay, calcite.
1601.50	As above. very fine grained. with/fossiles.
1607.30	As above. poorly sorted. with/coarse sandgrains.

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PLUG SIZE AND POROSITY

DEPTH (m)	LENGTH (cm)	DIAMETER (cm)	BULK VOLUME (cm^3)	POROSITY (%)
1547.50	6.42	3.73	70.2	28.5
1551.50	6.44	3.77	71.9	29.5
1554.60	6.55	3.81	74.7	27.2
1564.50	6.23	3.79	70.3	34.1
1571.60	6.42	3.40	58.3	32.5
1574.30	5.25	3.49	50.2	32.2
1591.45	7.60	3.79	85.7	24.9
1595.40	4.20	3.70	45.2	32.4
1597.60	7.48	3.81	85.3	28.9
1601.50	7.40	3.80	83.9	28.2
1607.30	7.39	3.81	84.3	21.7

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KLINKENBERG CORRECTED AIR PERMEABILITY

DEPTH (m)	1/Mean Pressure $(atm.abs.)^{-1}$	Air Permeability k_a (mD)	Klinkenberg corr. perm. k.e.l. (mD)
1547.50	0.790	213	182
	0.601	206	
	0.464	200	
1551.50	0.890	2501	2294
	0.660	2456	
	0.450	2408	
1554.40	0.827	282	254
	0.623	275	
	0.477	270	
1564.50	0.906	8869	6669
	0.667	8367	
	0.502	7866	
1571.60	0.909	8966	7149
	0.669	8588	
	0.503	8126	
1574.30	0.908	7171	6179
	0.669	6948	
	0.503	6727	
1591.45	0.868	187	173
	0.647	184	
	0.490	181	
1595.40	0.908	1865	1567
	0.668	1798	
	0.503	1729	
1597.60	0.861	154	139
	0.643	150	
	0.488	148	
1601.50	0.787	58.5	49.7
	0.601	56.4	
	0.463	54.9	
1607.30	0.625	11.3	8.73
	0.502	10.7	
	0.402	10.4	

Klinkenberg corrected Air Permeability

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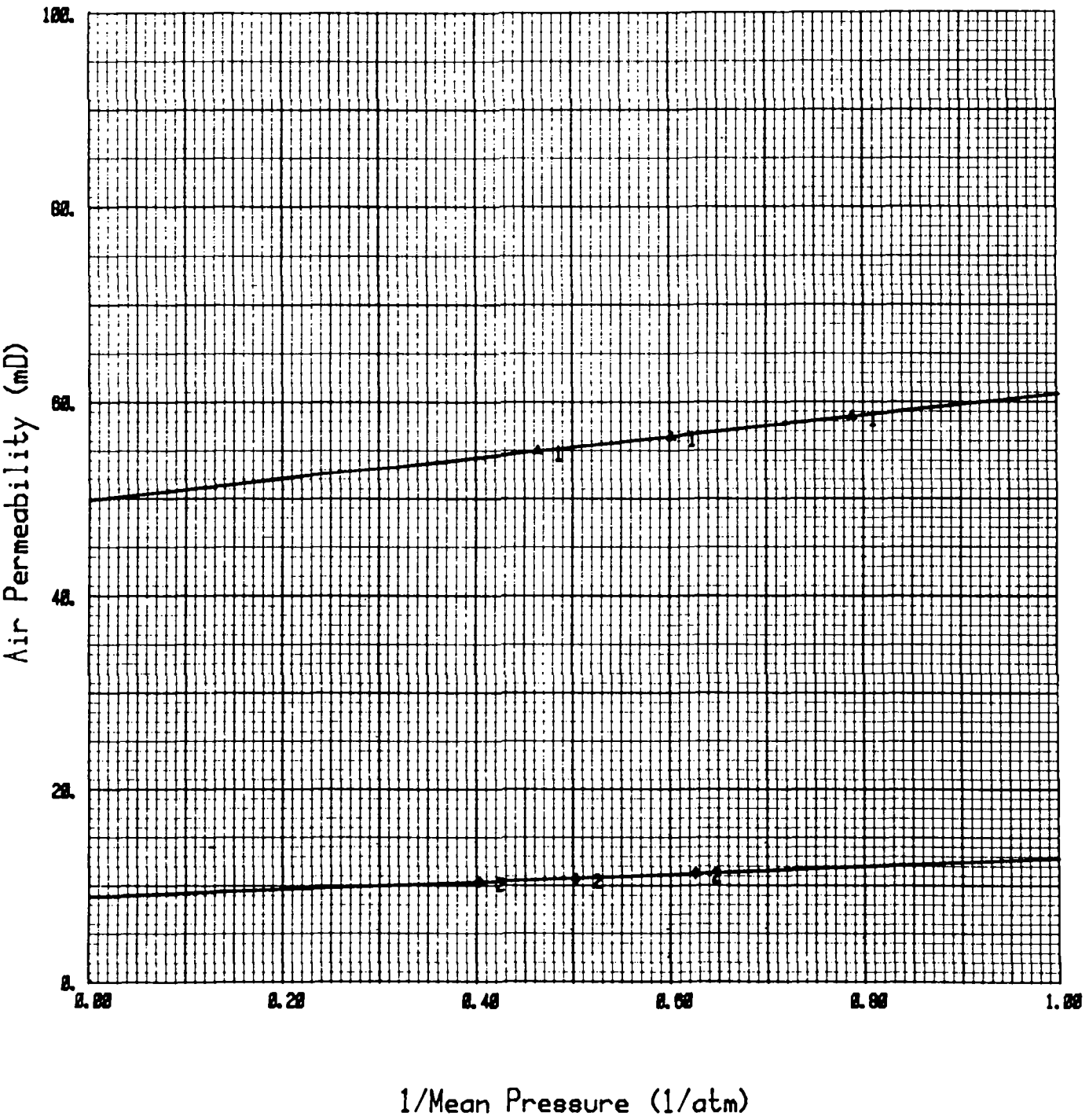
Curve "1" : Klinkenberg perm.: 49.7 mD
depth : 1601.50 m.

Curve "2" : Klinkenberg perm.: 8.73 mD
depth : 1609.30 m.



Klinkenberg corrected Air Permeability

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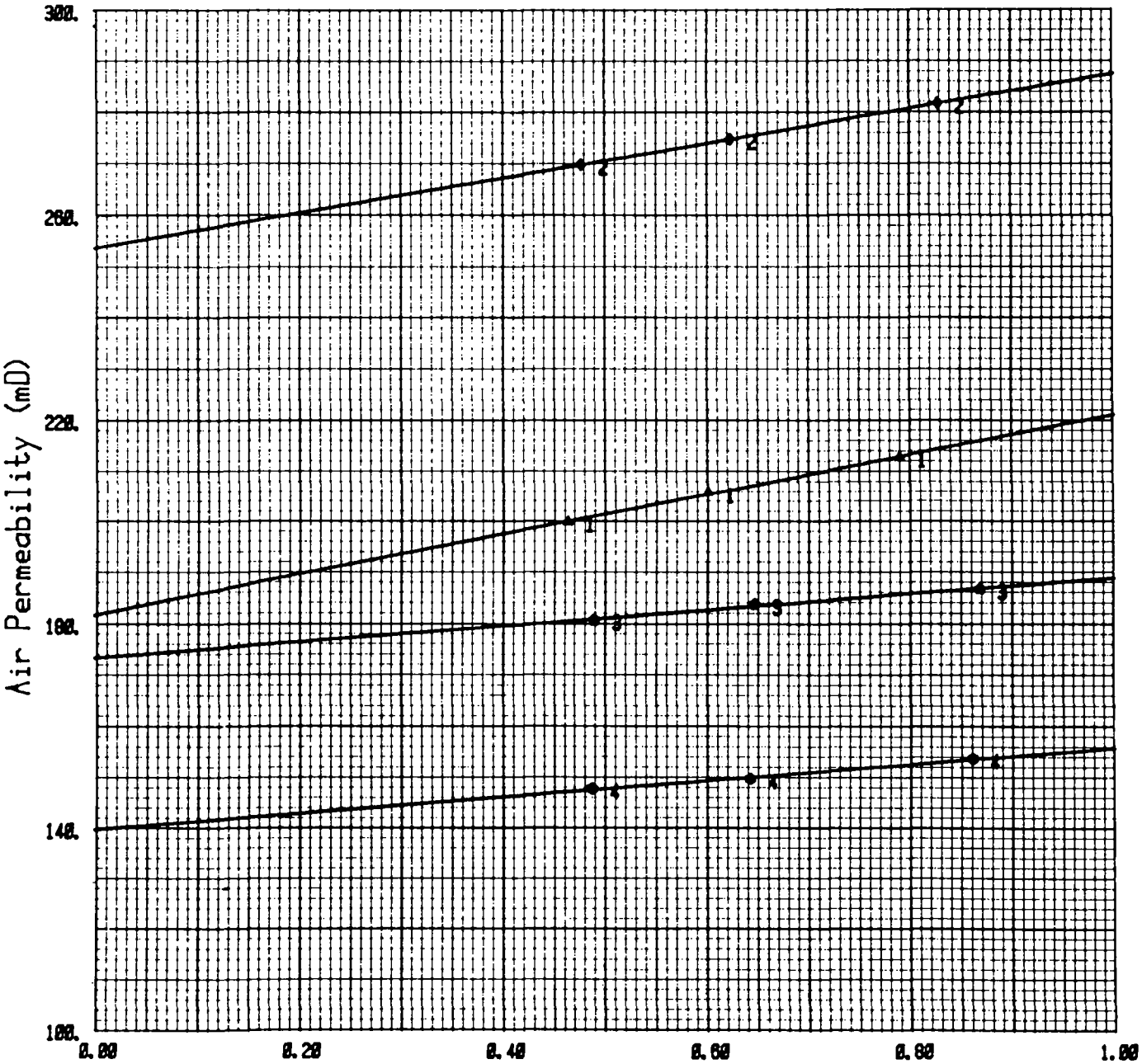
Curve "1" : Klinkenberg perm.: 182 mD
depth : 1547.50 m,

Curve "2" : Klinkenberg perm.: 254 mD
depth : 1554.40 m.

Curve "3" : Klinkenberg perm.: 173 mD
depth : 1591.45 m.

Curve "4" : Klinkenberg perm.: 139 mD
depth : 1597.60 m.



Klinkenberg corrected Air Permeability

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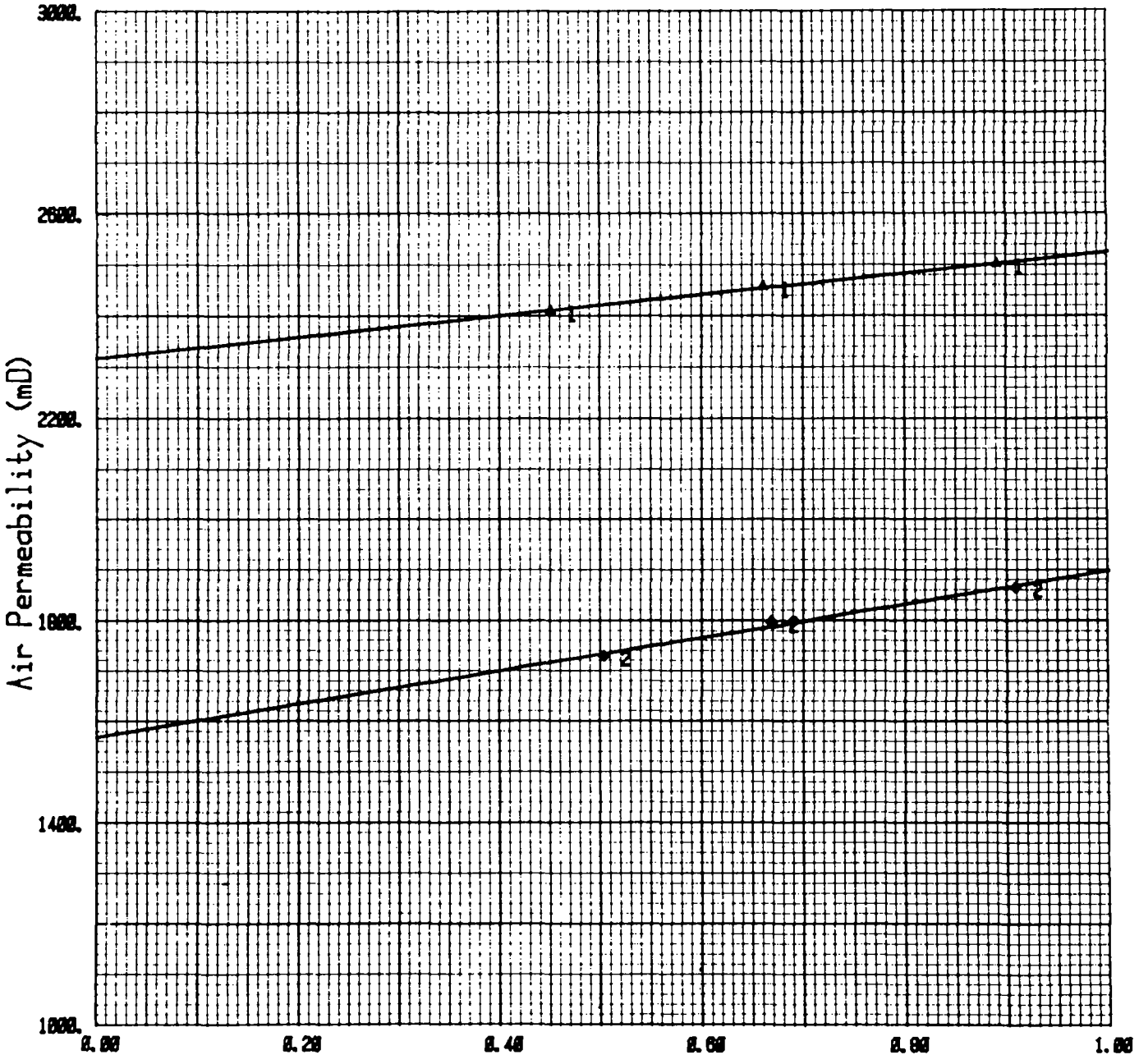
Curve "1" : Klinkenberg perm.: 2294 mD
depth : 1551.50 m.

Curve "2" : Klinkenberg perm.: 1567 mD
depth : 1595.40 m.



Klinkenberg corrected Air Permeability

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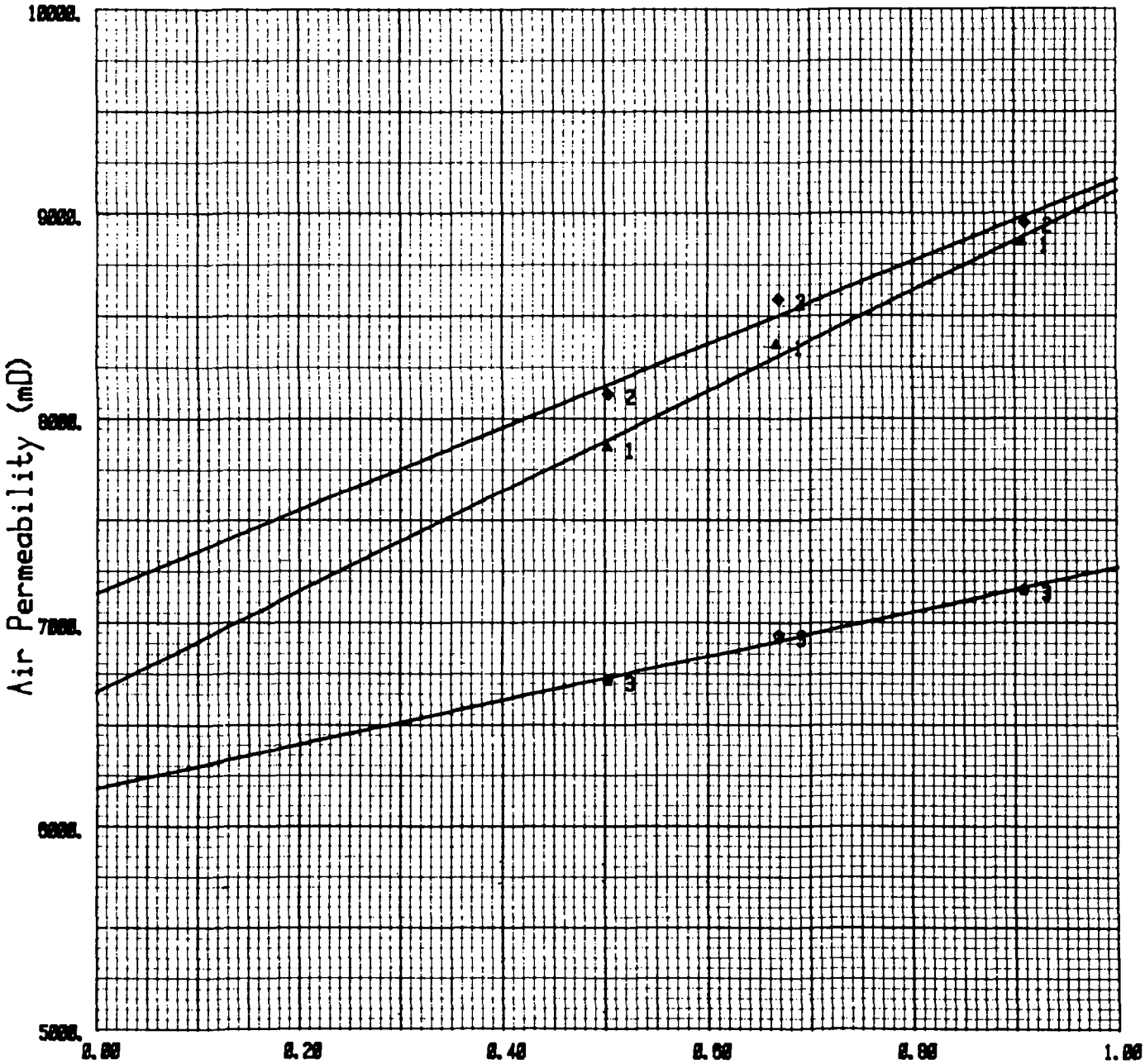
Curve "1" : Klinkenberg perm.: 6669 mD
depth : 1564.50 m.

Curve "2" : Klinkenberg perm.: 7149 mD
depth : 1571.60 m,

Curve "3" : Klinkenberg perm.: 6197 mD
depth : 1574.30 m,



CONFINED PRESSURE MEASUREMENTS (isostatic condition)

DEPTH: 1547.50

MEASUREMENTS	"Atmospheric" Pressure 15 bar	50 bar	100 bar	150 bar	200 bar
Formation resistivity factor (1 kHz)	7.29	8.34	8.55	8.72	8.84
FRF - increment (frac. of original)	1.00	1.14	1.17	1.20	1.21
Porosity (%)	28.5	27.9	27.4	27.1	26.9
Porosity reduction (frac. of original)	1.000	0.980	0.964	0.954	0.946
Pore volume (cm^3)	19.96	19.41	18.98	18.70	18.48
Pore volume reduction (frac. of original) $\frac{\Delta PV}{\text{orig. PV}}$	0.000	0.028	0.049	0.063	0.074
Water permeability (mD)	355	211	141	121	104
Permeability reduction (frac. of original)	1.00	0.59	0.40	0.34	0.29

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CONFINED PRESSURE MEASUREMENTS (isostatic condition)

DEPTH: 1551.50

MEASUREMENTS	"Atmospheric" Pressure 15 bar	50 bar	100 bar	150 bar	200 bar
Formation resistivity factor (1 kHz)	5.43	6.38	6.71	6.78	6.90
FRF - increment (frac. of original)	1.00	1.18	1.24	1.25	1.27
Porosity (%)	29.5	28.8	28.3	28.0	27.8
Porosity reduction (frac. of original)	1.00	0.979	0.962	0.952	0.943
Pore volume (cm^3)	21.18	20.54	20.06	19.76	19.50
Pore volume reduction (frac. of original) $\frac{\Delta PV}{Orig.\ PV}$	0.000	0.030	0.053	0.067	0.079
Water permeability (mD)	2231	2112	1989	1892	1803
Permeability reduction (frac. of original)	1.00	0.95	0.89	0.85	0.81

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CONFINED PRESSURE MEASUREMENTS (isostatic conditions)

DEPTH: 1554.40

MEASUREMENTS	"Atmospheric" Pressure 15 bar	50 bar	100 bar	150 bar	200 bar
Formation resistivity factor (1 kHz)	7.72	8.02	8.22	8.32	8.48
FRF - increment (frac. of original)	1.00	1.04	1.06	1.08	1.10
Porosity (%)	27.2	26.8	26.4	26.1	25.7
Porosity reduction (frac. of original)	1.000	0.984	0.969	0.958	0.945
Pore volume (cm^3)	20.34	19.88	19.47	19.18	18.84
Pore volume reduction (frac. of original) $\frac{\Delta PV}{\text{orig. PV}}$	0.000	0.023	0.043	0.057	0.074
Water permeability (mD)	230	219	200	183	171
Permeability reduction (frac. of original)	1.00	0.95	0.87	0.80	0.74

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CONFINED PRESSURE MEASUREMENTS (isostatic condition)

DEPTH: 1564.50

MEASUREMENTS	"Atmospheric" Pressure 15 bar	50 bar	100 bar	150 bar	200 bar
Formation resistivity factor (1 kHz)	4.38	4.82	5.51	6.04	6.79
FRF - increment (frac. of original)	1.00	1.10	1.26	1.38	1.55
Porosity (%)	34.1	32.3	30.0	28.5	27.0
Porosity reduction (frac. of original)	1.000	0.949	0.882	0.836	0.792
Pore volume (cm^3)	23.93	22.12	19.89	18.45	17.12
Pore volume reduction (frac. of original) $\frac{\Delta PV}{orig.\ PV}$	0.000	0.076	0.169	0.229	0.285
Water permeability (mD)	5471	5149	4112	3294	2157
Permeability reduction (frac. of original)	1.00	0.94	0.75	0.60	0.39

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CONFINED PRESSURE MEASUREMENTS (isostatic condition)

DEPTH: 1571.60

MEASUREMENTS	"Atmospheric" Pressure 15 bar	50 bar	100 bar	150 bar	200 bar
Formation resistivity factor (1 kHz)	4.67	5.21	5.81	6.42	7.12
FRF - increment (frac. of original)	1.00	1.12	1.24	1.38	1.53
Porosity (%)	32.5	30.3	28.4	27.1	26.1
Porosity reduction (frac. of original)	1.000	0.934	0.874	0.833	0.805
Pore volume (cm^3)	18.94	17.13	15.61	14.60	13.93
Pore volume reduction $\frac{\Delta PV}{\text{orig. PV}}$ (frac. of original)	0.000	0.096	0.176	0.229	0.265
Water permeability (mD)	6863	4460	3006	2042	1511
Permeability reduction (frac. of original)	1.00	0.65	0.44	0.30	0.22

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CONFINED PRESSURE MEASUREMENTS (isostatic condition)

DEPTH: 1574.30

MEASUREMENTS	"Atmospheric" Pressure 15 bar	50 bar	100 bar	150 bar	200 bar
Formation resistivity factor (1 kHz)	5.42	5.80	6.01	6.22	6.37
FRF - increment (frac. of original)	1.00	1.07	1.11	1.15	1.18
Porosity (%)	32.2	31.1	30.4	29.7	29.3
Porosity reduction (frac. of original)	1.000	0.965	0.941	0.922	0.910
Pore volume (cm^3)	16.19	15.37	14.83	14.39	14.13
Pore volume reduction $\frac{\Delta PV}{orig.\ PV}$ (frac. of original)	0.000	0.051	0.084	0.111	0.127
Water permeability (mD)	6040	5115	4301	3443	2906
Permeability reduction (frac. of original)	1.00	0.85	0.71	0.57	0.48

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CONFINED PRESSURE MEASUREMENTS (isostatic condition)

DEPTH: 1591.45

MEASUREMENTS	"Atmospheric" Pressure	15 bar	50 bar	100 bar	150 bar	200 bar
Formation resistivity factor (1 kHz)		9.43	10.20	11.00	11.30	11.60
FRF - increment (frac. of original)		1.00	1.08	1.17	1.20	1.23
Porosity (%)		24.9	24.1	23.4	23.0	22.6
Porosity reduction (frac. of original)		1.000	0.966	0.941	0.924	0.909
Pore volume (cm^3)		21.35	20.39	19.70	19.24	18.85
Pore volume reduction (frac. of original)	$\frac{\Delta \text{ PV}}{\text{orig. PV}}$	0.000	0.045	0.077	0.099	0.117
Water permeability (mD)		144	115	79.10	58.00	43.00
Permeability reduction (frac. of original)		1.00	0.80	0.55	0.40	0.30

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CONFINED PRESSURE MEASUREMENTS (isostatic condition)

DEPTH: 1595.40

MEASUREMENTS	"Atmospheric" Pressure 15 bar	50 bar	100 bar	150 bar	200 bar
Formation resistivity factor (1 kHz)	5.13	5.47	5.78	6.00	6.21
FRF - increment (frac. of original)	1.00	1.07	1.13	1.17	1.21
Porosity (%)	32.4	31.0	30.1	29.5	29.0
Porosity reduction (frac. of original)	1.000	0.959	0.931	0.912	0.897
Pore volume (cm^3)	14.61	13.74	13.16	12.78	12.49
Pore volume reduction (frac. of original) $\frac{\Delta PV}{\text{orig. PV}}$	0.000	0.060	0.099	0.125	0.145
Water permeability (mD)	1628	807	339	192	139
Permeability reduction (frac. of original)	1.00	0.50	0.21	0.12	0.09

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CONFINED PRESSURE MEASUREMENTS (isostatic condition)

DEPTH: 1597.60

MEASUREMENTS	"Atmospheric" Pressure	15 bar	50 bar	100 bar	150 bar	200 bar
Formation resistivity factor (1 kHz)		8.84	9.46	9.79	9.91	10.10
FRF - increment (frac. of original)		1.00	1.07	1.11	1.12	1.14
Porosity (%)		28.9	28.4	28.0	27.7	27.5
Porosity reduction (frac. of original)		1.000	0.982	0.969	0.960	0.952
Pore volume (cm^3)		24.63	24.00	23.57	23.27	23.01
Pore volume reduction (frac. of original)	$\frac{\Delta \text{ PV}}{\text{orig. PV}}$	0.000	0.026	0.043	0.055	0.066
Water permeability (mD)		115	106	97	91	46
Permeability reduction (frac. of original)		1.00	0.92	0.84	0.79	0.40

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CONFINED PRESSURE MEASUREMENTS (isostatic condition)

DEPTH: 1601.50

MEASUREMENTS	"Atmospheric" Pressure 15 bar	50 bar	100 bar	150 bar	200 bar
Formation resistivity factor (1 kHz)	10.0	10.6	11.1	11.3	11.5
FRF - increment (frac. of original)	1.00	1.06	1.11	1.13	1.15
Porosity (%)	28.2	27.6	27.3	27.0	26.8
Porosity reduction (frac. of original)	1.000	0.981	0.969	0.960	0.953
Pore volume (cm^3)	23.63	23.01	22.61	22.34	22.09
Pore volume reduction (frac. of original) $\frac{\Delta PV}{\text{orig. PV}}$	0.000	0.026	0.043	0.055	0.065
Water permeability (mD)	37.5	33.7	31.8	29.9	27.3
Permeability reduction (frac. of original)	1.00	0.90	0.85	0.80	0.73

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CONFINED PRESSURE MEASUREMENTS (isostatic condition)

DEPTH: 1607.30

MEASUREMENTS	"Atmospheric" Pressure 15 bar	50 bar	100 bar	150 bar	200 bar
Formation resistivity factor (1 kHz)	15.2	16.0	16.5	16.9	17.4
FRF - increment (frac. of original)	1.00	1.05	1.09	1.11	1.15
Porosity (%)	21.7	21.2	20.7	20.4	20.2
Porosity reduction (frac. of original)	1.000	0.975	0.955	0.941	0.928
Pore volume (cm^3)	18.30	17.70	17.25	16.93	16.65
Pore volume reduction (frac. of original) $\frac{\Delta PV}{\text{orig. PV}}$	0.000	0.033	0.057	0.075	0.090
Water permeability (mD)	5.49	5.05	4.53	4.21	3.78
Permeability reduction (frac. of original)	1.00	0.92	0.83	0.77	0.69

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Permeability & Porosity vs. hydrostatic sleeve pressure

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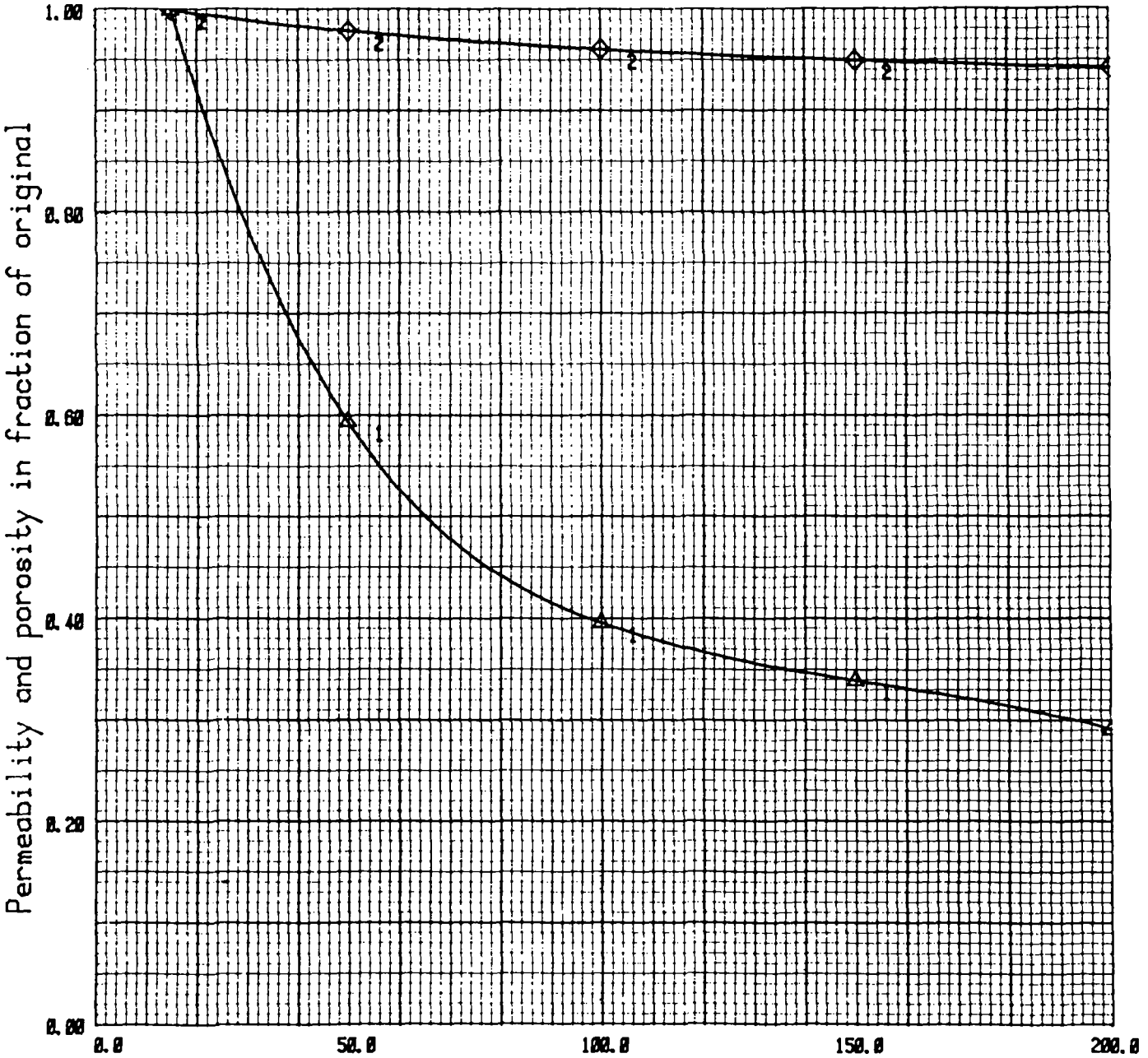
Depth (m): 1547.50

Original permeability (curve "1"): 355 mD

Original porosity (curve "2"): 28.5 %



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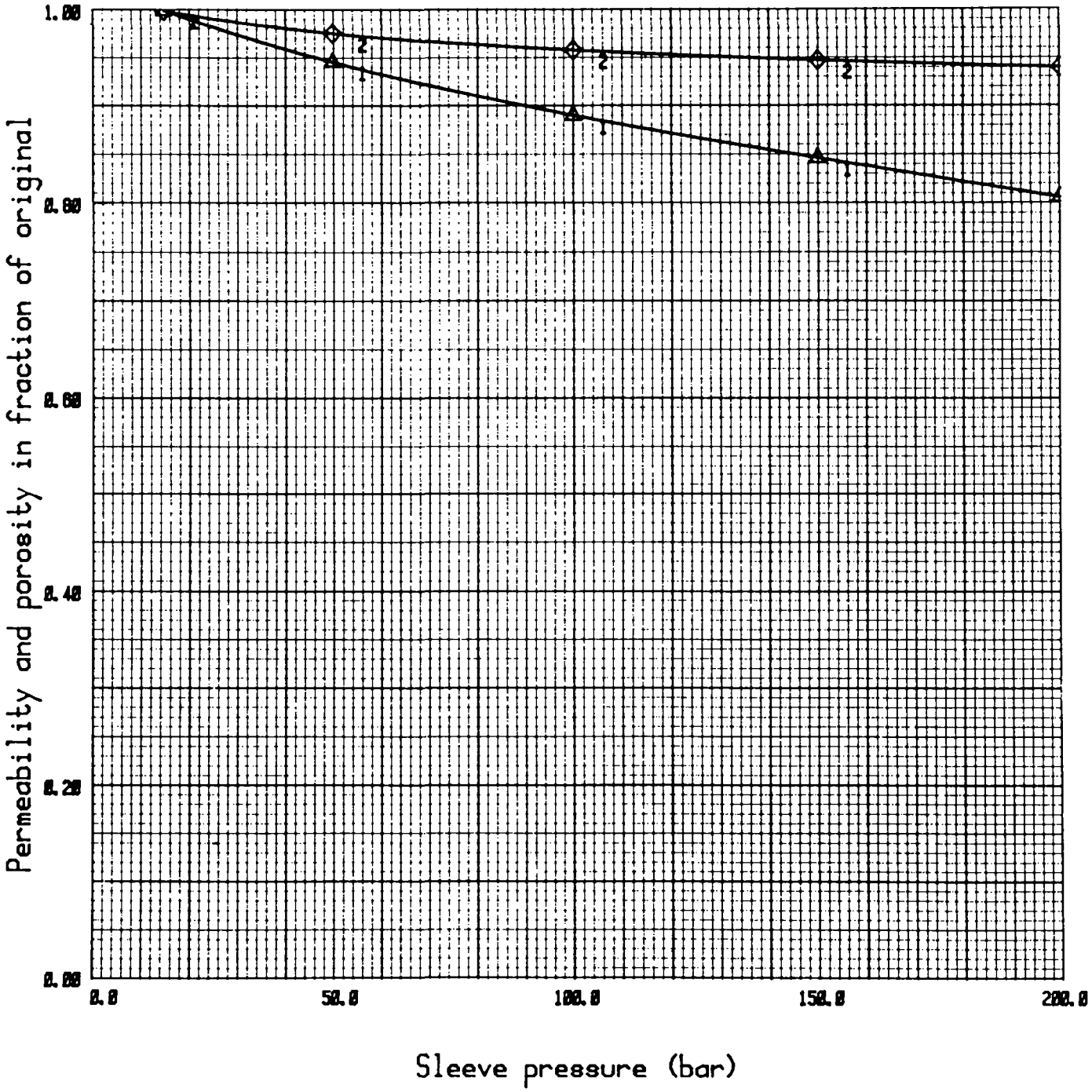
Permeability & Porosity vs. hydrostatic sleeve pressure

GECO Petroleum Laboratory

Depth (m): 1551.50

Original permeability (curve "1"): 2231 mD

Original porosity (curve "2"): 29.5 %



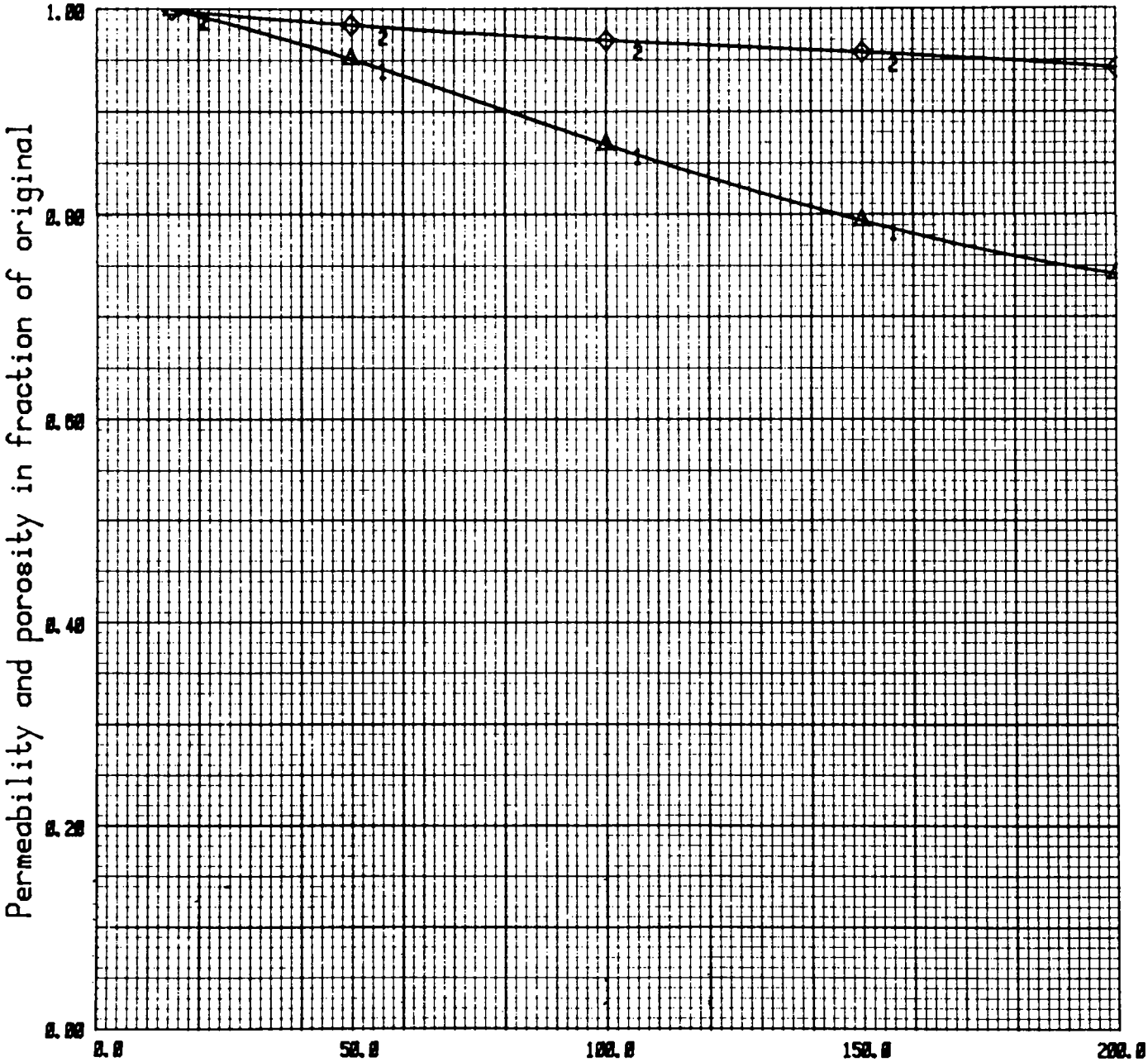
Permeability & Porosity vs. hydrostatic sleeve pressure

GECO Petroleum Laboratory

Depth (m): 1554.40

Original permeability (curve "1"): 230 mD

Original porosity (curve "2"): 27.2 %



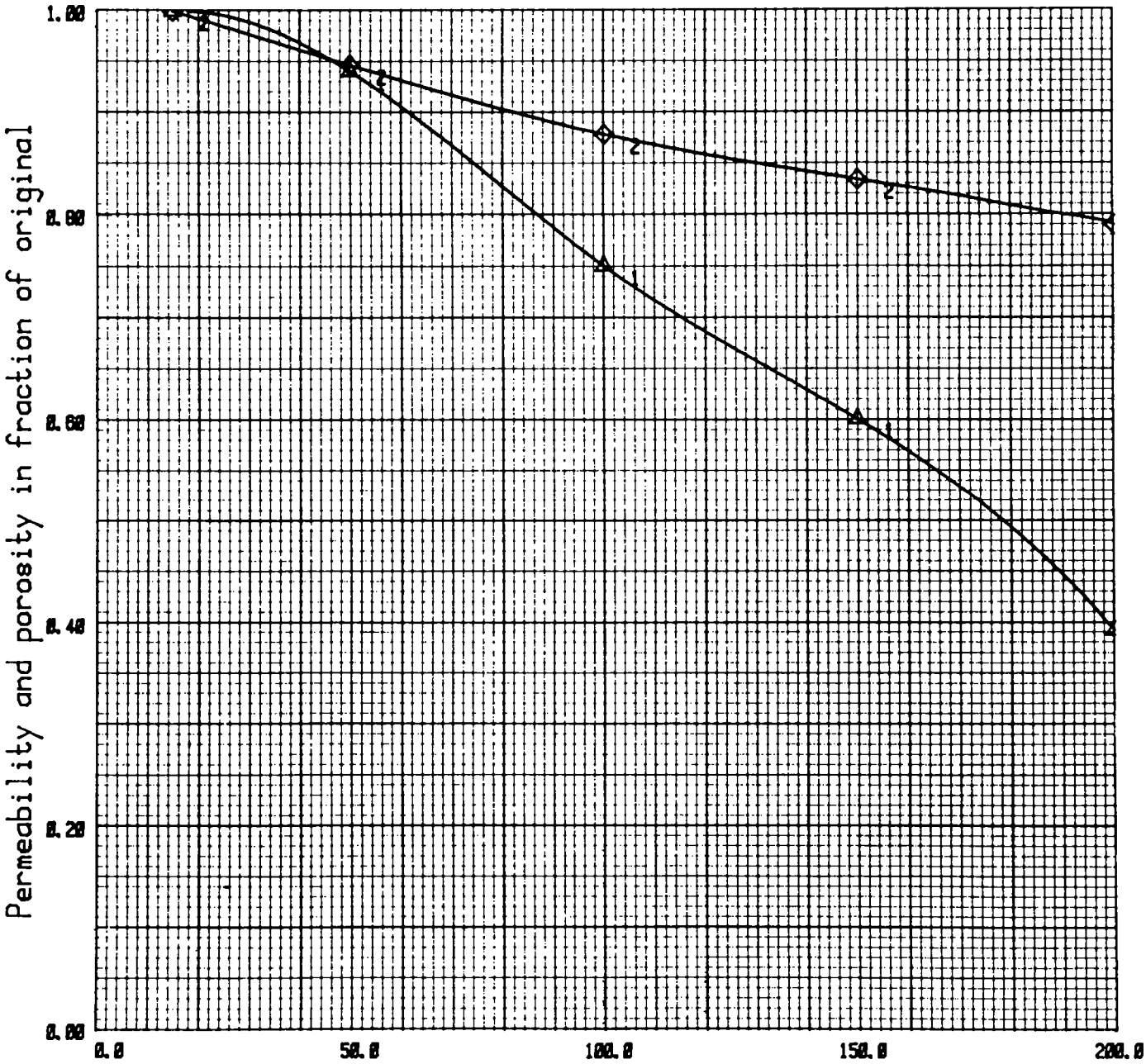
Permeability & Porosity vs. hydrostatic sleeve pressure

GECO Petroleum Laboratory

Depth (m): 1564.50

Original permeability (curve "1"): 5471 mD

Original porosity (curve "2"): 34.1 %



Permeability & Porosity vs. hydrostatic sleeve pressure

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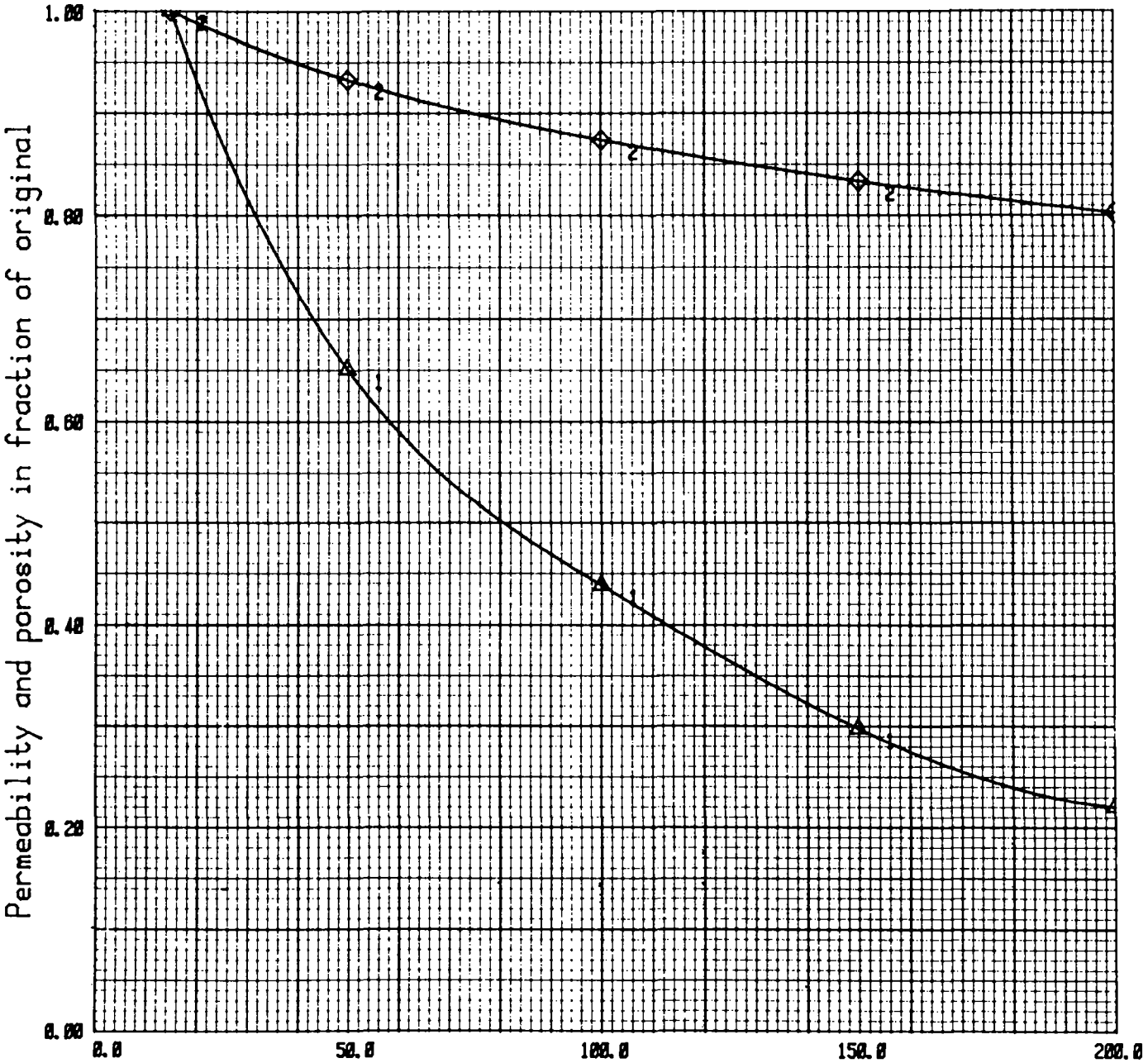
Depth (m): 1571.60

Original permeability (curve "1"): 6863 mD

Original porosity (curve "2"): 32.5 %



Permeability & Porosity vs. hydrostatic sleeve pressure

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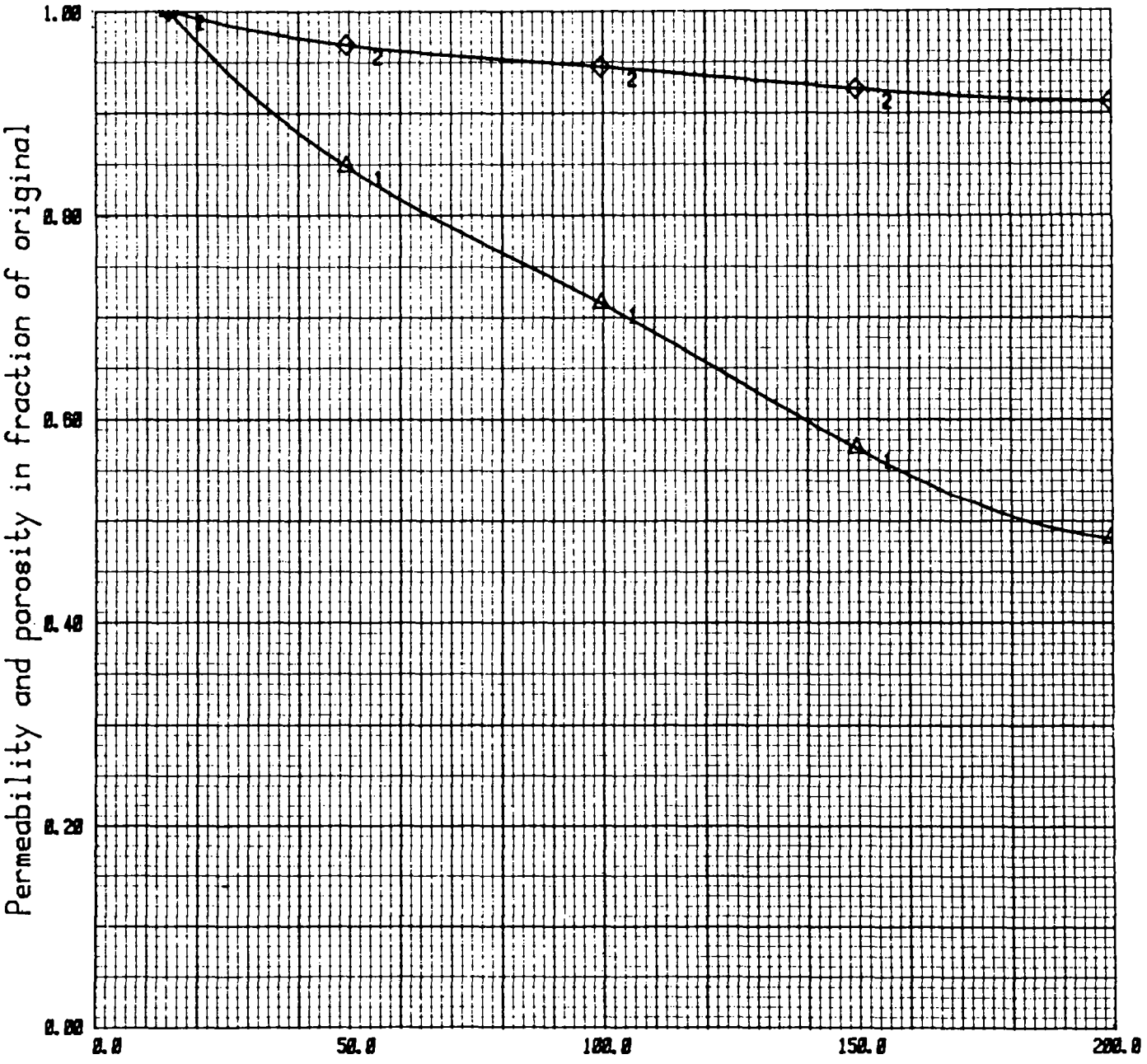
Depth (m): 1574.30

Original permeability (curve "1"): 6040 mD

Original porosity (curve "2"): 32.2 %



Permeability & Porosity vs. hydrostatic sleeve pressure

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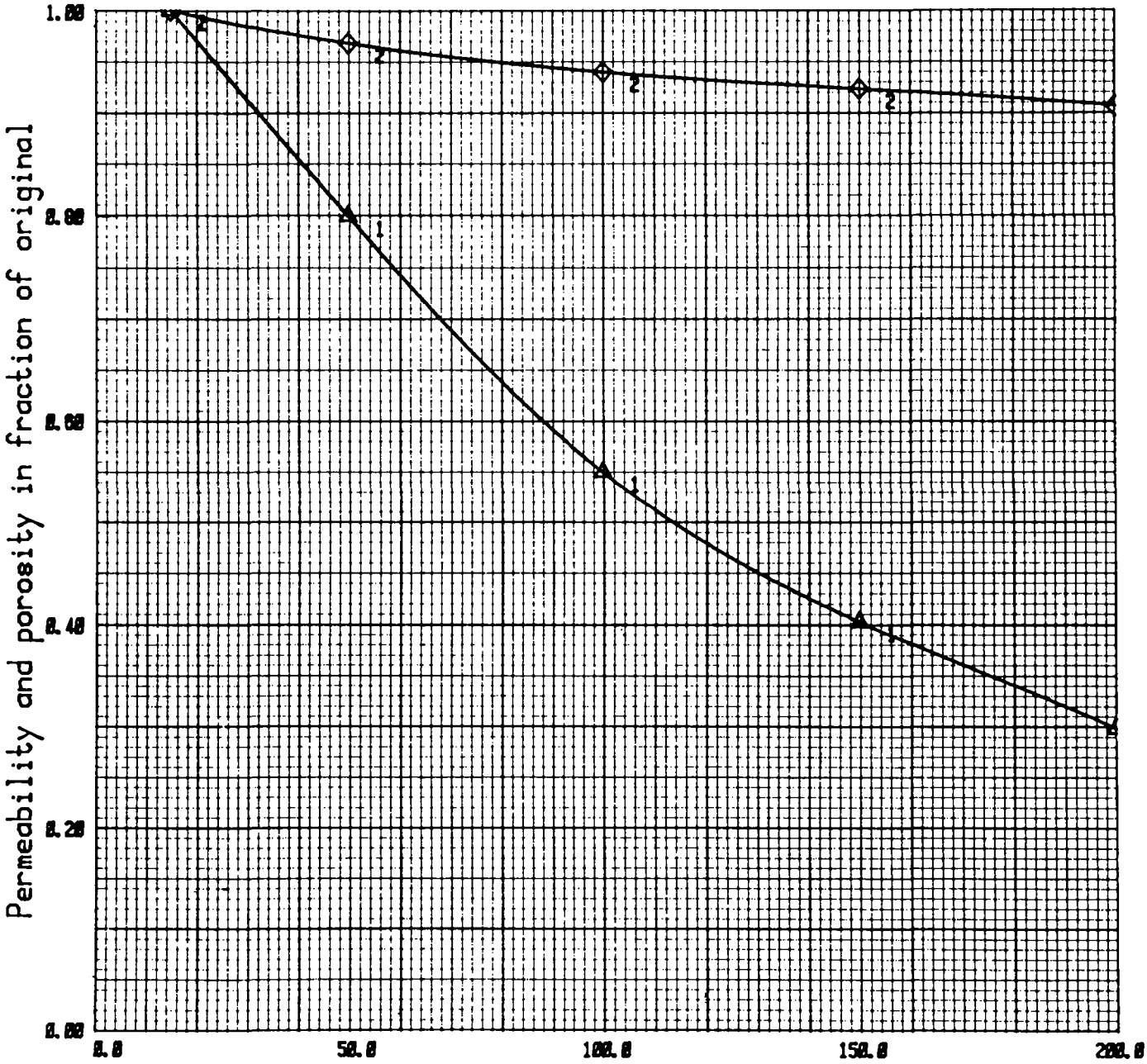
Depth (m): 1591.45

Original permeability (curve "1"): 144 mD

Original porosity (curve "2"): 24.9 %



Permeability & Porosity vs. hydrostatic sleeve pressure

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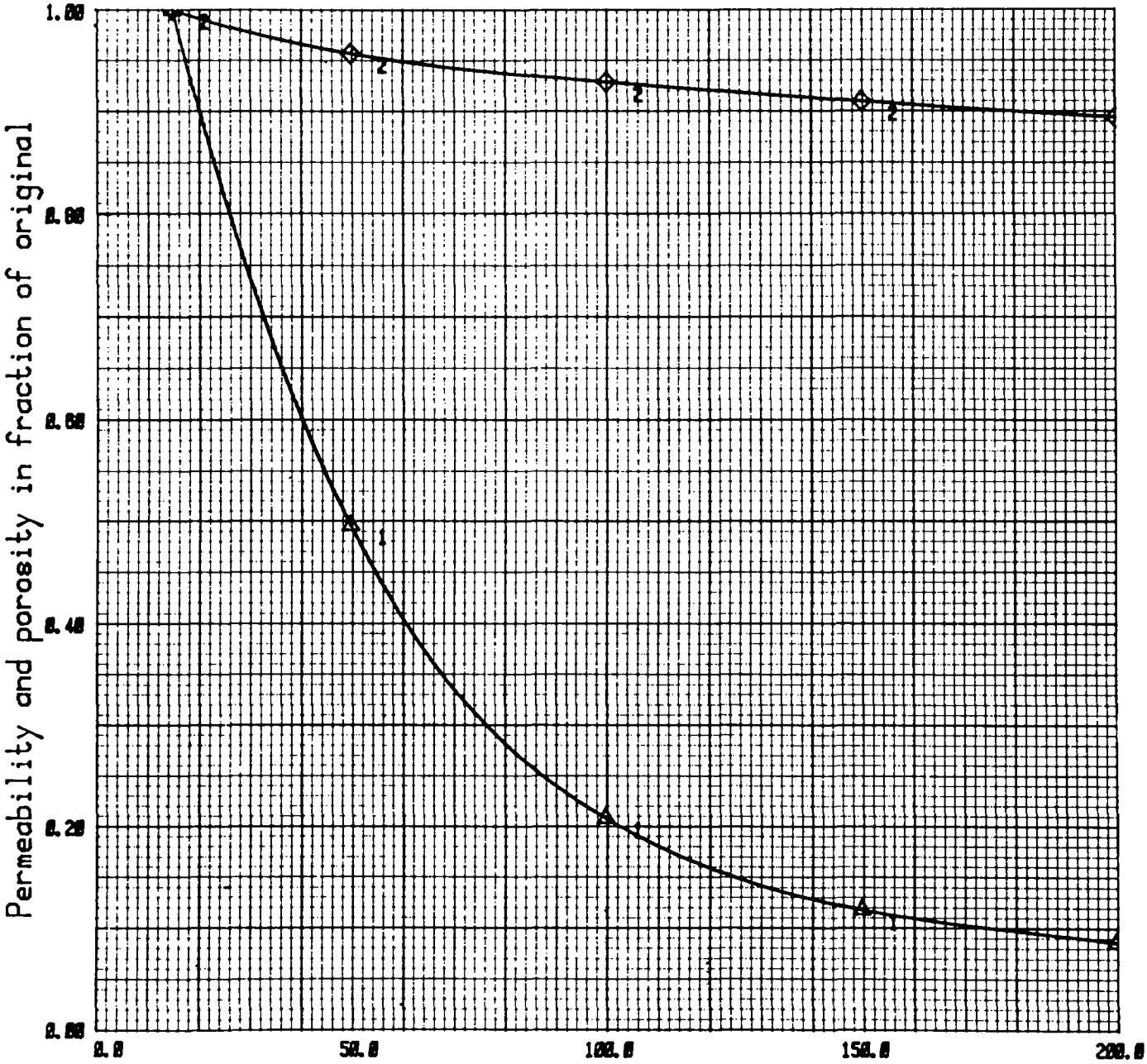
Depth (m): 1595.40

Original permeability (curve "1"): 1628 mD

Original porosity (curve "2"): 32.4 %



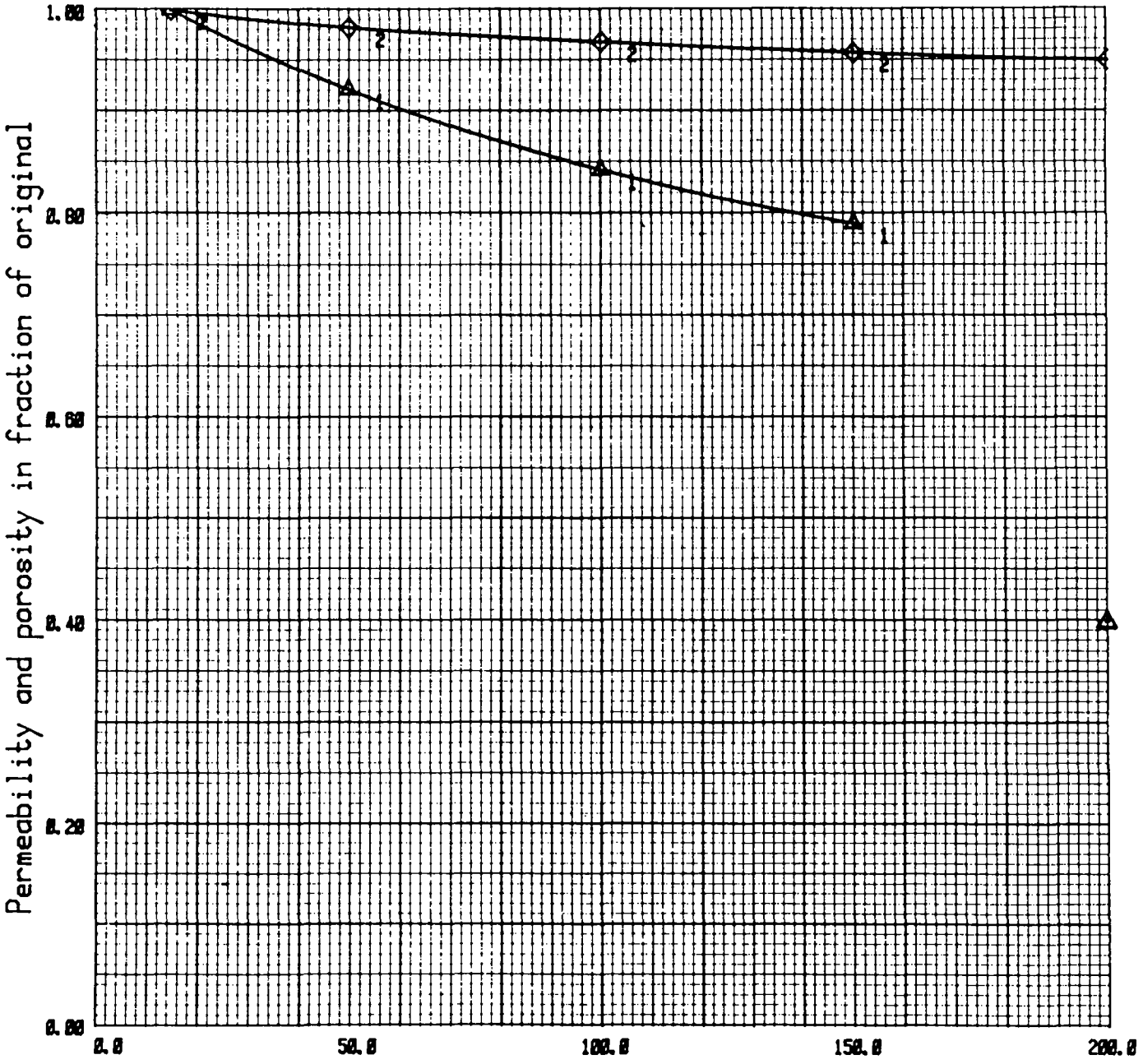
Permeability & Porosity vs. hydrostatic sleeve pressure

GECO Petroleum Laboratory

Depth (m): 1597.60

Original permeability (curve "1"): 115 mD

Original porosity (curve "2"): 28.9 %



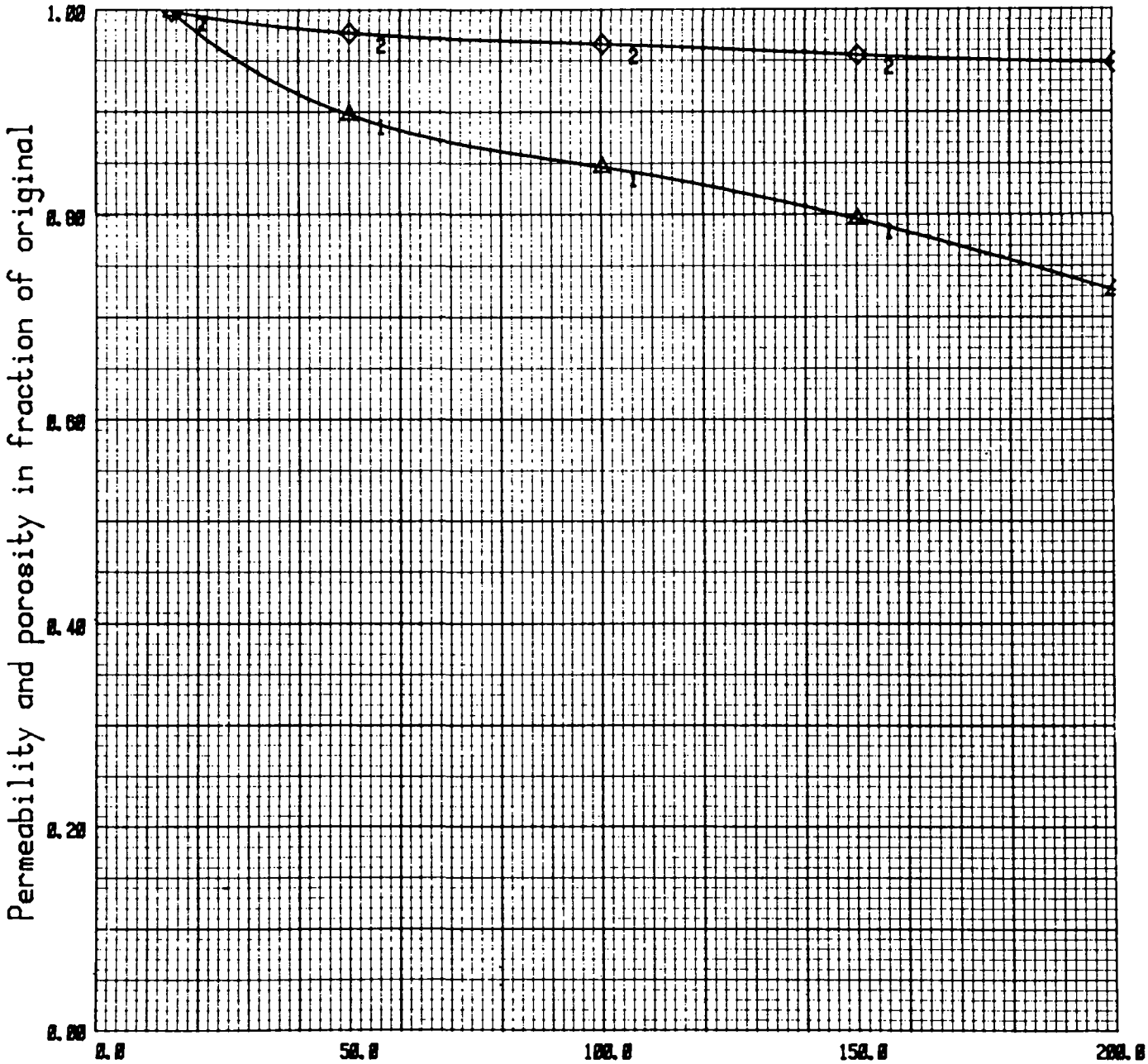
Permeability & Porosity vs. hydrostatic sleeve pressure

GECO Petroleum Laboratory

Depth (m): 1601.50

Original permeability (curve "1"): 37.5 mD

Original porosity (curve "2"): 28.2 %



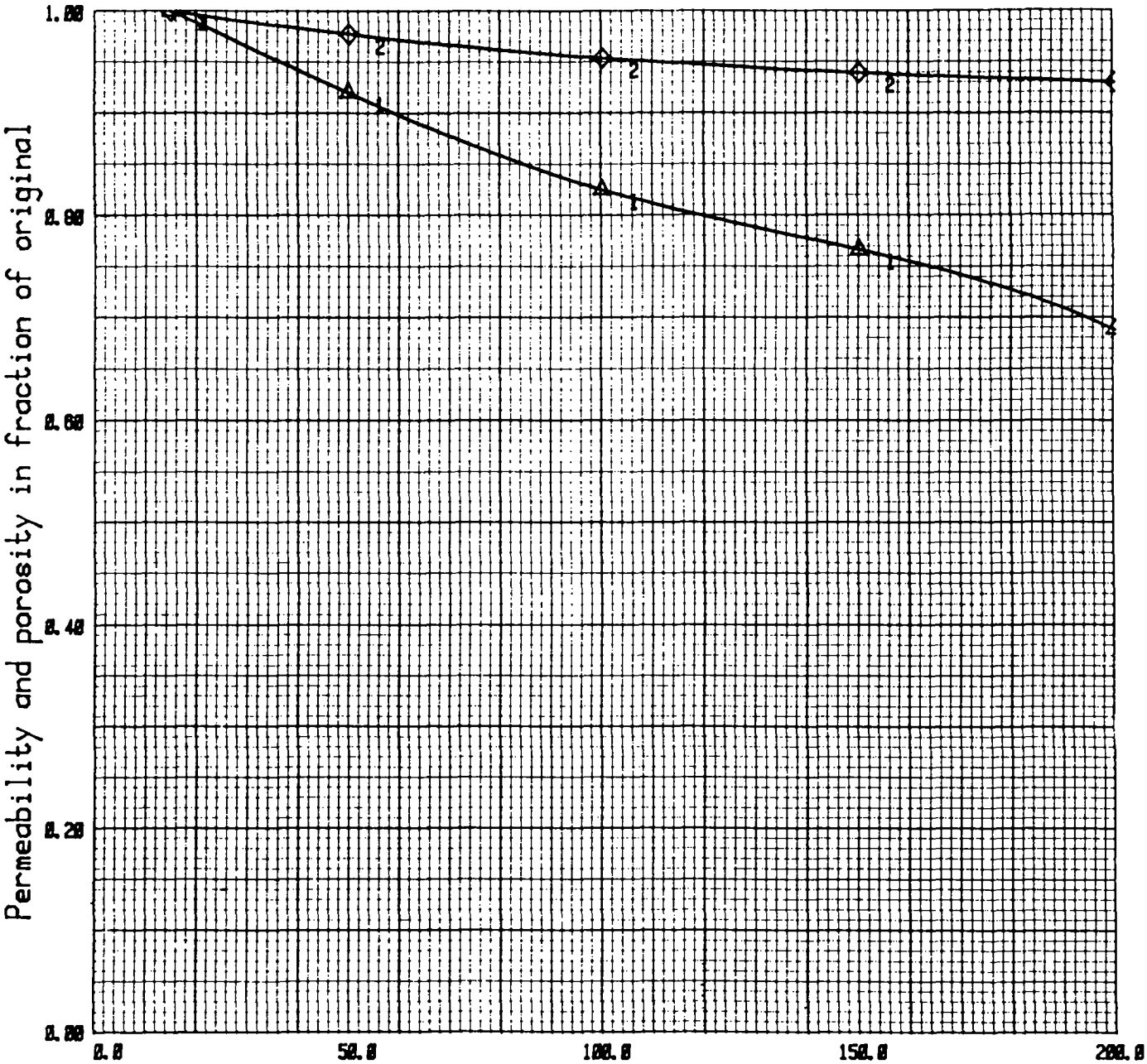
Permeability & Porosity vs. hydrostatic sleeve pressure

GECO Petroleum Laboratory

Depth (m): 1607.30

Original permeability (curve "1"): 5.5 mD

Original porosity (curve "2"): 21.7 %



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FORMATION RESISTIVITY FACTOR VERSUS POROSITY

Determination of the parameters "a" and "m".

$$FF = \frac{r_o}{r_w} = a \cdot \phi^{-m}$$

r_o = resistivity of sample (100% saturated).

r_w = resistivity of saturating brine.

a = FRF value at fractional porosity of 1.0.

ϕ = Fractional porosity.

m = Cementation factor.

The data sets and the calculated values are presented both tabularly and graphically.

CONFINED PRESSURE: FORMATION FACTOR/POROSITY

DEPTH (m)	"ATMOSPHERIC" FRF	"ATMOSPHERIC" POR.FRAC.	50 BAR FRF	50 BAR POR.FRAC.	100 BAR FRF	100 BAR POR.FRAC.	150 BAR FRF	150 BAR POR.FRAC.	200 BAR FRF	200 BAR POR.FRAC.
1547.50	7.29	0.285	8.34	0.279	8.55	0.274	8.72	0.271	8.84	0.269
1551.50	5.43	0.295	6.38	0.288	6.71	0.283	6.78	0.280	6.90	0.278
1554.40	7.72	0.272	8.02	0.268	8.22	0.264	8.32	0.261	8.48	0.257
1564.50	4.38	0.341	4.82	0.323	5.51	0.300	6.04	0.285	6.79	0.270
1571.60	4.67	0.325	5.21	0.303	5.81	0.284	6.42	0.271	7.12	0.261
1574.30	5.42	0.322	5.80	0.311	6.01	0.304	6.22	0.297	6.37	0.293
1591.45	9.43	0.249	10.20	0.241	11.00	0.234	11.30	0.230	11.60	0.226
1595.40	5.13	0.324	5.47	0.310	5.78	0.301	6.00	0.295	6.21	0.290
1597.60	8.84	0.289	9.46	0.284	9.79	0.280	9.91	0.277	10.1	0.275
1601.50	10.00	0.282	10.60	0.276	11.10	0.273	11.30	0.270	11.50	0.268
1607.30	15.20	0.217	16.00	0.212	16.50	0.207	16.90	0.204	17.40	0.202

Forced fit: $FF = \phi^{-1,59}$ $FF = \phi^{-1,61}$ $FF = \phi^{-1,62}$ $FF = \phi^{-1,62}$ $FF = \phi^{-1,62}$

Free fit: $FF = 0,24 \cdot \phi^{-2,71}$ $FF = 0,23 \cdot \phi^{-2,76}$ $FF = 0,25 \cdot \phi^{-2,68}$ $FF = 0,27 \cdot \phi^{-2,59}$ $FF = 0,32 \cdot \phi^{-2,47}$

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Formation Factor versus Porosity

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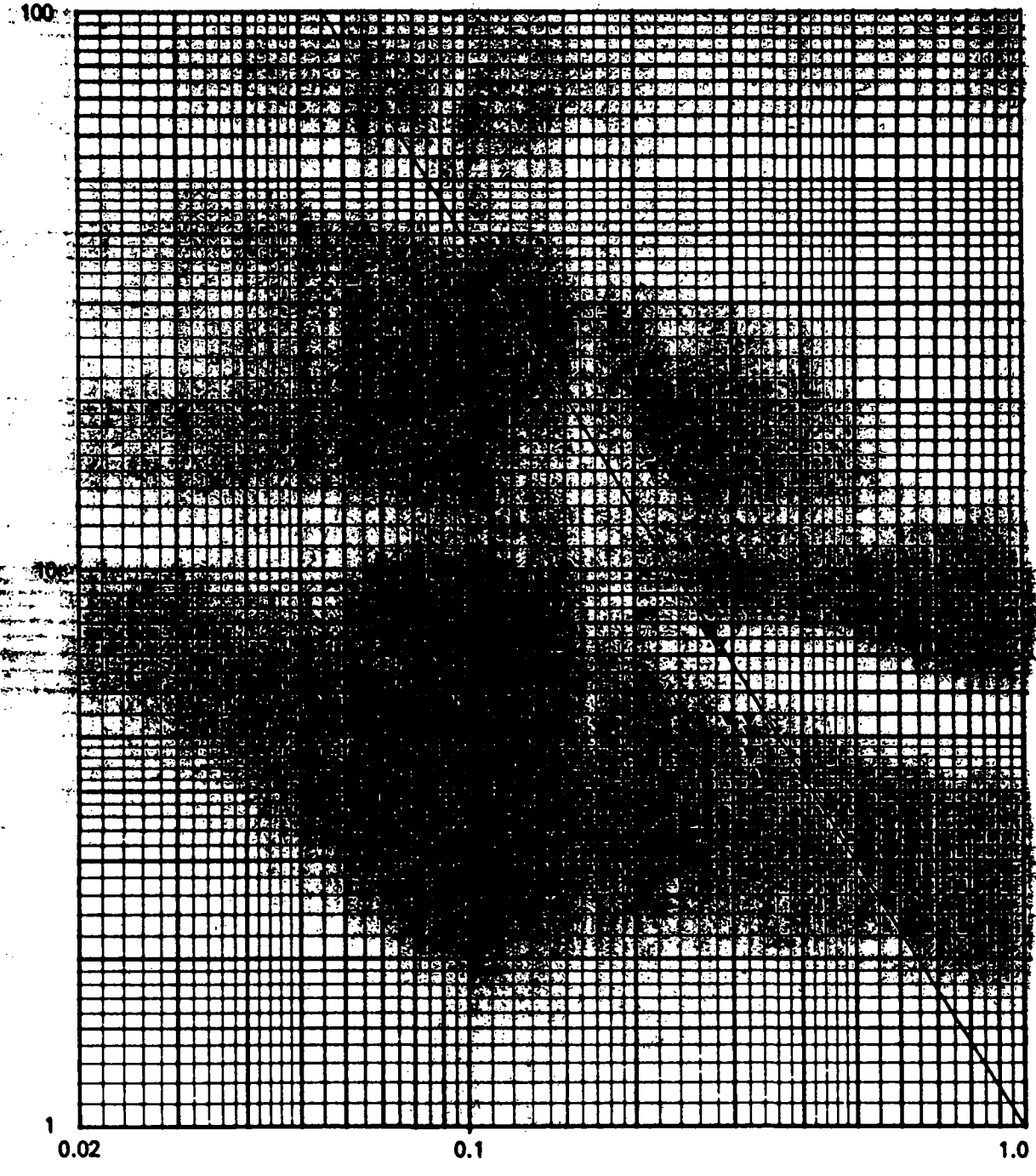
GEOPHYSICAL COMPANY OF NORWAY A/S

Company ..A/S. NORSKE. SHELL.....

Well ..31/2-7.....

Confining pressure : Atmospheric pressure (15 bar)

FF = $1.00 * \emptyset^{-1.50}$



Fractional Porosity.
"Ø"

Formation Factor versus Porosity

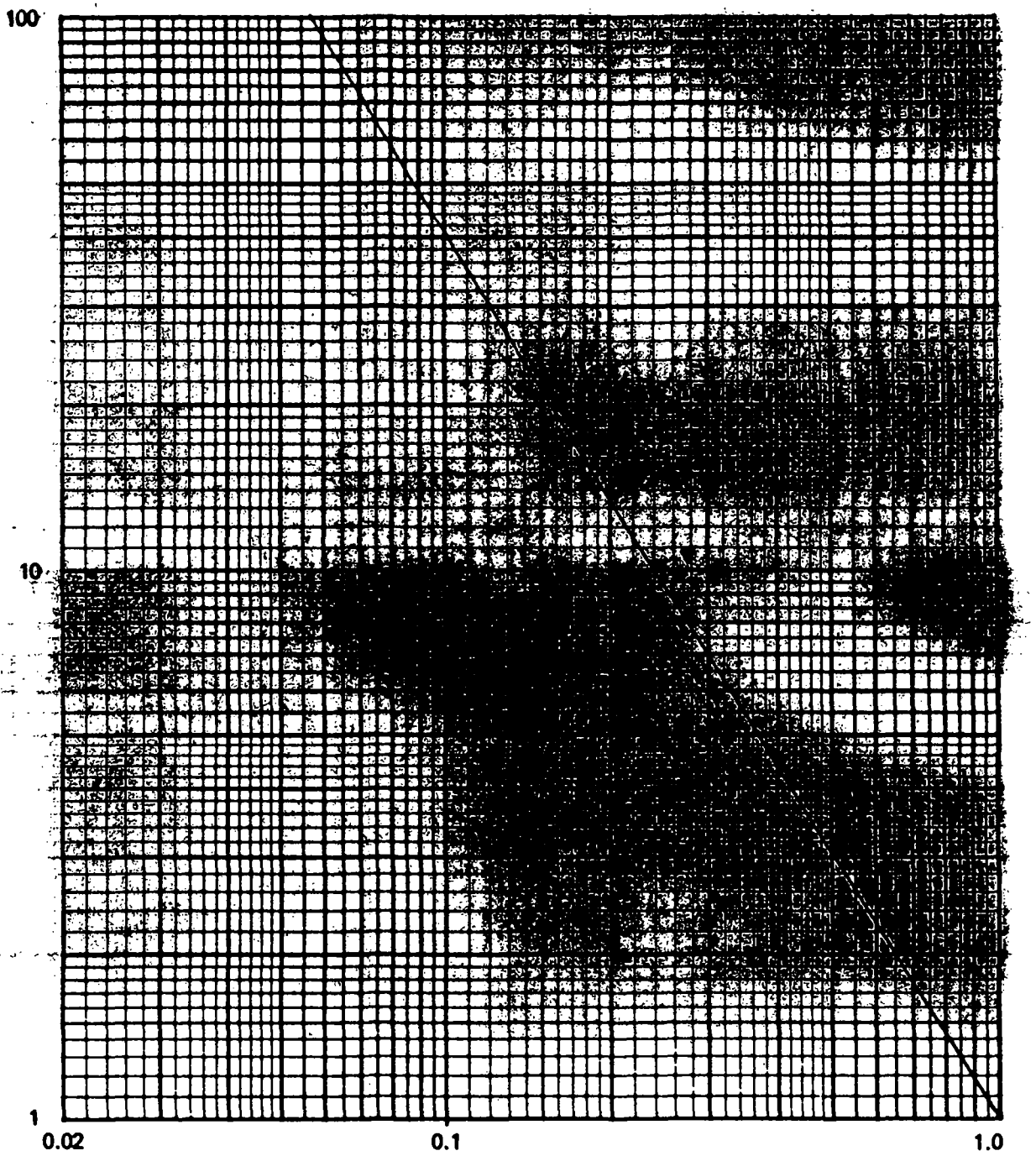
GECO
GEOPHYSICAL COMPANY OF NORWAY A/S

Company ..A/S NORSKE SHELL.....

Well ..31/2-7.....

Confining pressure : 50 bar

$FF = 1.00 * \emptyset^{-1.81}$



Formation Factor versus Porosity

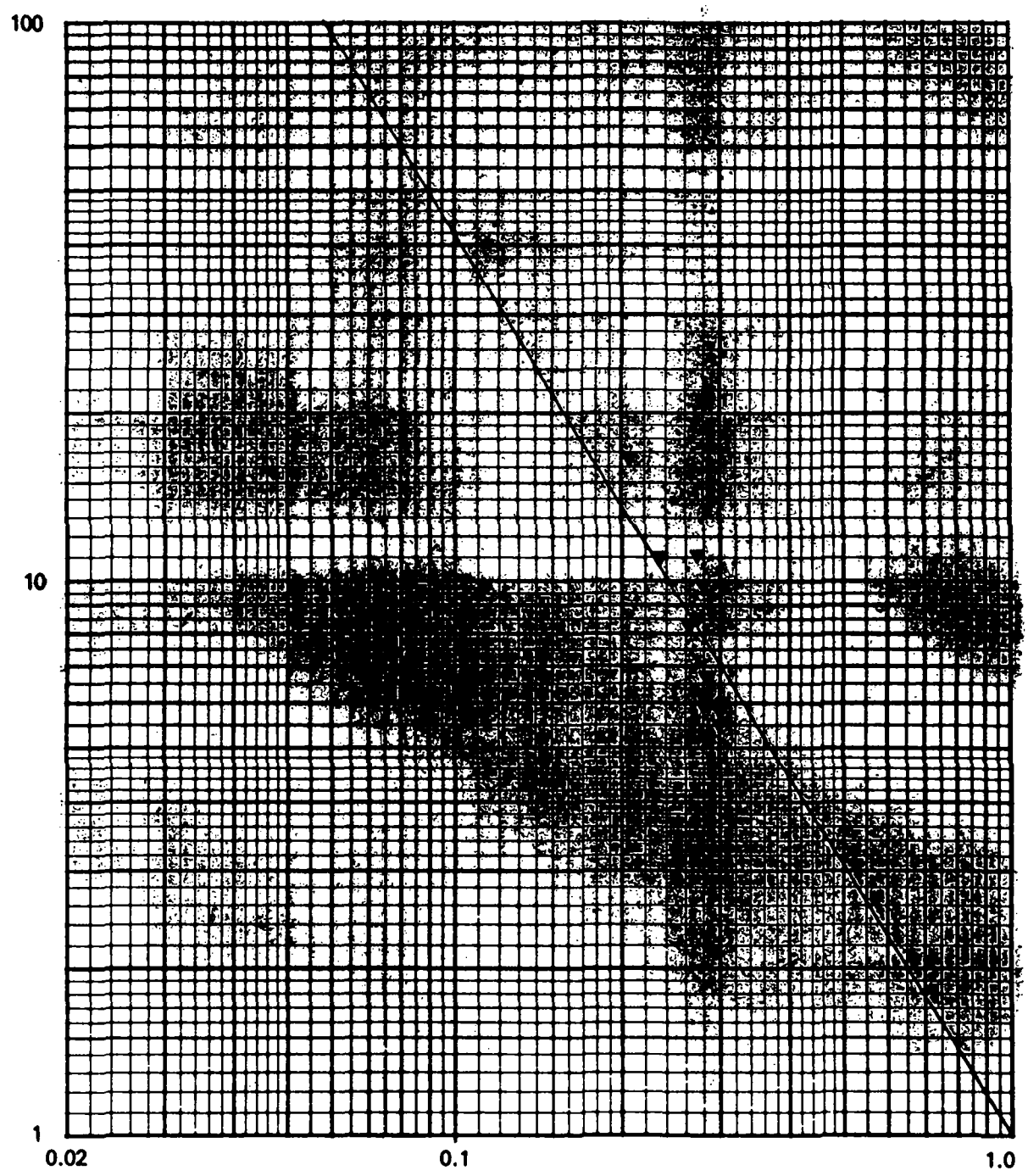
GECO
GEOPHYSICAL COMPANY OF NORWAY A/S

Company ..A/S NORSKE SHELL.....

Well ..31/2-7.....

Confining pressure : 100 bar

FF = $1.00 * \emptyset^{-1.82}$



Formation Resistivity Factor.
"FF"

Fractional Porosity.
"Ø"

Formation Factor versus Porosity

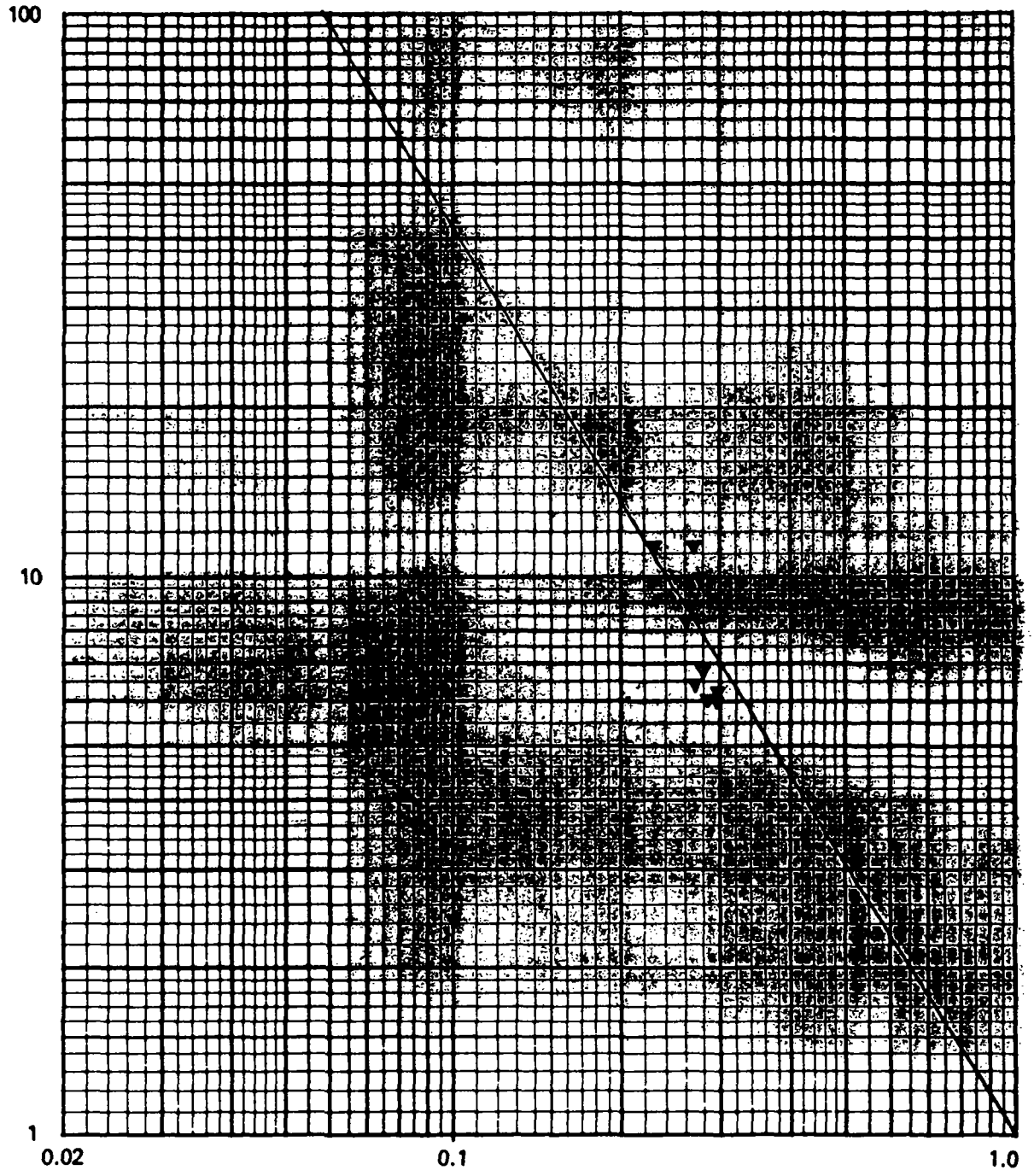
GECO
GEOPHYSICAL COMPANY OF NORWAY A/S

Company ..A/S NORSKE SHELL.....

Well ..31/2-7.....

Confining pressure : 150 bar

FF = $1.00 * \emptyset^{-1.82}$



Formation Resistivity Factor.
"FF"

Fractional Porosity.
"Ø"

Formation Factor versus Porosity

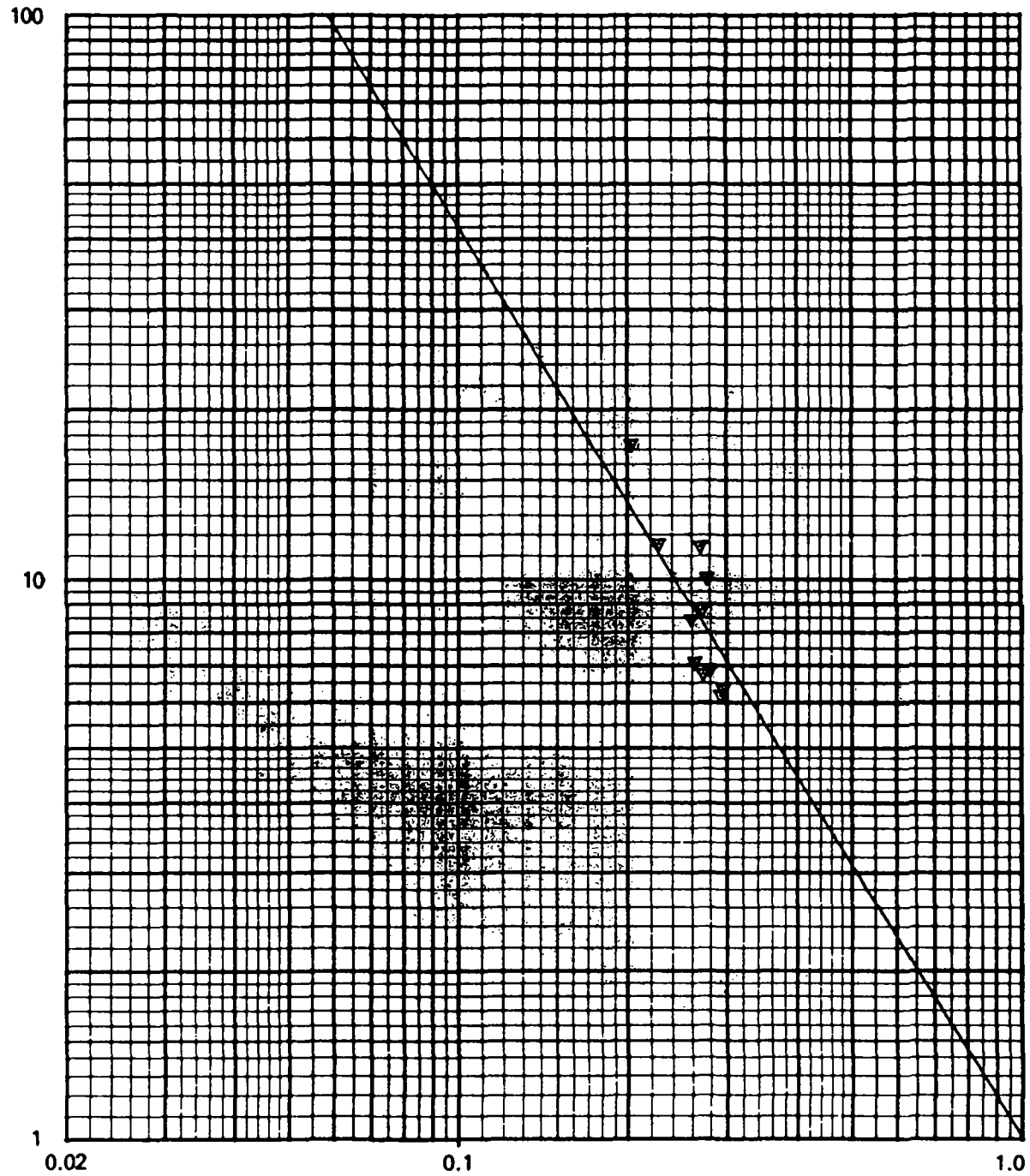
GECO
GEOPHYSICAL COMPANY OF NORWAY A/S

Company ..A/S. NORSKE. SHELL.....

Well ..31/2-7.....

Confining pressure : 200 bar

$FF = 1.00 * \emptyset^{-1.82}$



Formation Resistivity Factor.
"FF"

Fractional Porosity.
"Ø"