

725.6
L- 211

2 5 FEB. 1980

REGISTRERT
OLJESAKTIVITET

PETROPHYSICAL EVALUATION

WELL 34/10-3

BY: PETROLEUM ENGINEERING

PETROPHYSICAL GROUP

NOV 1979

ENG : J. RAFDAL

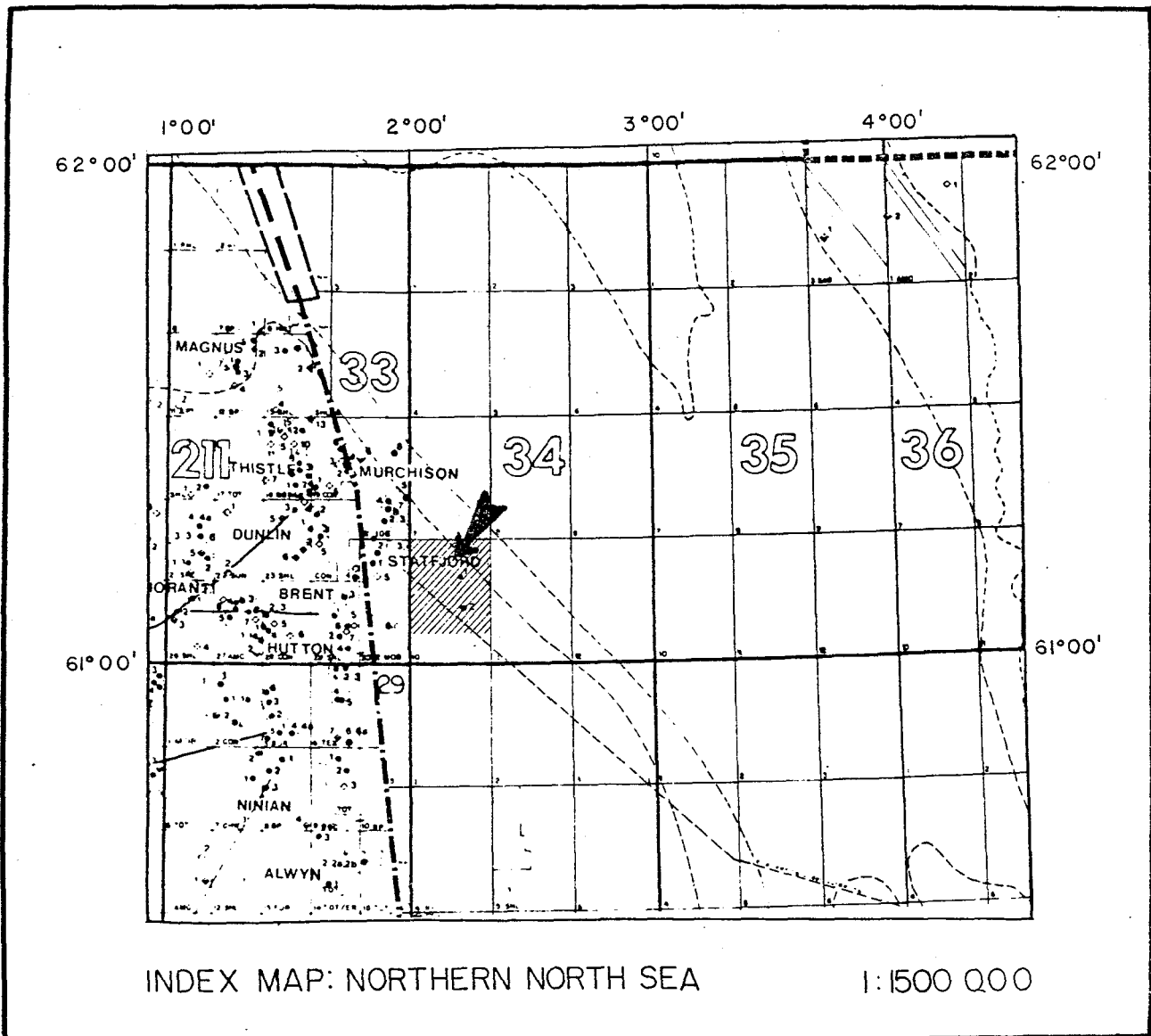
CONTENTS

	PAGE
General well data	1
Introduction	2
Summary	2
Lithology	2
Log quality	3
Input parameters	3
Formation water salinity	3
Formation temperature	3
Mud properties	4
Hydrocarbon density	4
Resistivity	4
Shale parameters	5
Computations	5
Shale volume	5
Porosity	6
Formation factor	6
Saturation exponent	6
Watersaturation	7
Coring summary	8
Comparison between core and log data	9
Permeability	9
Testing summary	10
Results table	11
Appendix	

GENERAL WELL DATA

Norway offshore

Licence : 050
Wildcat well : 34/10-3
Location : 61°12'49.5"N
 : 02°11'55.1"E
Spudded : 14 March 1979
Rig Released : 8 june 1979
KB-elevation : 25 m
Water depth : 179 m
Total depth : 2802 m
Objective : Jurassic sandstone
Operator : Statoil
Partners : Norsk Hydro, Saga Petroleum
Status : Plugged and abandoned



INTRODUCTION

This is the second well drilled on the delta-structure in block 34/10. The main objective was to test the Jurassic sandstone formations for hydrocarbon accumulations. The purpose of this report is to evaluate the petrophysical parameters of these formations using electrical logs core and test data.

SUMMARY

Only Brent formation (1892 - 2092 m) encountered hydrocarbons in 34/10-3. Statfjord formation (2495 - 2715 m) is waterbearing.

Oil water contact is at \pm 1971.5 m. Brent encounters 35.75 m. Net sand. Average porosity in 29.6 % and average watersaturation in the oil zone is 38.5 %.

Statfjord formation encounters 100.25 m of net sand with an average porosity of 18.9 %.

LITHOLOGY

The reservoir zones have been divided into the following units:

NESS (1892 - 1979) : Delta plain. Interbedded shale, sand, coal.

ETIVE (1979 - 2002) : Delta front. Clean sandstone.

RANNOCH (2002 - 2084) : Shore face. Fining downwards sequence. Some tight carbonate, cemented zones.

STATFJORD FM
(2495 - 2715) : Interbedded shale and sandstone.

LOG QUALITY

The logs are generally of good quality. In Statfjord formation, the sonic transit time has been taken out of BHC-G, run 1. The sonic on ISF/BHC-G run 6 is not acceptable.

INPUT PARAMETERS

Input parameters to the calculations have been picked from cross-plots, measured data and empirical relations.

FORMATION WATER SALINITY

DST No. 1 produced formation water with a salinity of 433200 ppm NaCl. Log analysis indicates the salinity to be the same in Statfjord and Brent formation. The following values have been used for formation water resistivity under reservoir conditions.

Brent fm : 0.073 Ω m at 160^oF
Statfjord fm : 0.062 Ω m at 185^oF

FORMATION TEMPERATURE

A constant temperature have been used in the computations for each zone:

Brent : 160^oF
Statfjord : 185^oF

MUD PROPERTIES

	At 48 ^o F		At reservoir cond.
	Rmf = .39* Ω m	,	.13 Ω m
Brent	Rm = .554 "	,	.18 "
	Rmc = 1.60	,	.52 "
	*23000 ppm NaCl		

	At 55 ^o F		At reservoir cond.
	Rmf = .323** Ω m	,	0.105 Ω m
Statfj.	Rm = .495 "	,	0.150 "
	Rmc = 1.15 "	,	0.340 "
	**24000 ppm NaCl		

HYDROCARBON DENSITY

The hydrocarbon density have been picked from RFT-pressure plots. A value of 0.785 gm/cc has been used.

RESISTIVITY

Brent formation:

RLLD has been used uncorrected (chart Rint - 9, Schlumberger).

R_{MSFL} has been used for RXO corrected for mudcake effect (chart RXO - 2, Schlumberger).

Corrections on R_{MSFL}:

- Hydrocarbon zone RXO = 0.88 R_{MSFL}
- Water zone RXO = 0.80 R_{MSFL}

Statfjord formation:

R_{ILD} (6FF40) has been used as R_T. No RXO tool available (SXO = 1)

SHALE PARAMETERS

Shale parameters have been selected from crossplots and visual inspection of the logs. High content of K-feldspar and mica increases the GR-reading. This makes it necessary to adjust GR min values in Rannoch. The table below lists the parameters used zone by zone.

ZONE	ØNSH	ρBSH	ΔtsH	RSH	GR min	GR max
NESS	.45	2.35	120	1.5	30	73
ETIVE	.45	2.35	120	1.5	30	73
RANNOCH	.45	2.35	120	1.5	42	73
STATFJORD	.45	2.45	100	2.0	30	90

COMPUTATIONS

SHALE VOLUME

Gamma Ray and FDC/CNL crossplots have been used for Vsh calculations. Where both indicators have been used, the minimum value have been picked as Vsh. Below is listed for which intervals the two indicators have been used:

Interval	Indicaor
1885 - 1892	FDC/CNL
1892 - 2100	FDC/CNL,GR
2490 - 2725	FDC/CNL,GR

POROSITY

The porosity has been calculated with a complex lithology method using density and neutron logs with the following matrix parameters:

	FDC	CNL
Quartz	2.65	-0.035
Heavy mineral	2.9	.25
Fluid	1.0	1.0

FORMATION FACTOR

Measurements performed on cores in Brent formation indicates that the following relationship can be used for formation factor:

$$F = \Phi^{-2}$$

In Statfjord formation, Humble's relationship has been used:

$$F = 0.62 \Phi^{-2.15}$$

SATURATION EXPONENT

Core measured data give an average value of 1.95 in Brent formation. In Statfjord formation, a value of 2 has been used.

WATERSAURATION

The Nigeria-equation (Schlumberger) has been used for calculations of the water saturation.

Nigeria Equation:

$$\frac{1}{R_T} = \frac{(V_{clay})^C S_w}{R_{clay}} + \frac{\phi^m S_w^n}{aR_w}$$

where:

- R_T = Resistivity of virgin zone
- S_w = Watersaturation
- R_{clay} = Resistivity of clay (Rsh)
- C = Vclay-exponent (1.6 used)
- ϕ = Porosity
- a = Lithology factor
- R_w = Formation water resistivity
- m = Cementation exponent
- n = Saturation exponent

CORING SUMMARY

Eight cores were out in Brent formation. The core-depths have been correlated to the CPI-depths based on description and petrophysical parameters.

Core # 1 1904 - 1919.4 rec.: 95.5 %
Log depth (Cpi) : 1902.5 - 1918.4

Core # 2 1919.4 - 1930.9 rec.: 90.4 %
Log depth (Cpi) : 1918.4 - 1929.9

Core # 3 1930.9 - 1936.1 rec.: 48 %

Core # 4 1936.1 - 1953.2 rec.: 68 %
Log depth (cpi) : 1934.1 - 1951.2

Core # 5 1953.2 - 1971.1 rec.: 88 %
Log depth (cpi) : 1951.2 - 1968.1

Core # 6 1971.1 - 1989.2 rec.: 100 %
Log depth (cpi) : 1968.1 - 1986.2

Core # 7 1989.2 - 2007.3 rec.: 95 %
Log depth (cpi) : 1986.2 - 2004.3

Core # 8 2007.3 - 2025.3 rec.: 100 %
Log depth (cpi) : 2004.3 - 2022.3

COMPARISON BETWEEN CORE AND LOG DATA

Log porosity and grain density have been compared with core data (GECO) in the interval 1979.5 - 2023 (cpi). The results are listed in the table below:

	LOG	CORE	LOG/CORE
Average Porosity	31.90	33.45	0.954
Average grain density	2.71	2.672	.

Data on 34/10-1-core indicates that the porosity at net-confining pressure should be 96-98 % of the porosity measured at atmospheric pressure; hence the log porosity is within acceptable limits. Histograms and crossplots of log and core porosity are enclosed in appendix.

PERMEABILITY

Horizontal permeability has been plotted against helium porosity for each lithologic unit on enclosed graphs in the appendix. There are two distinct trends; for Rannoch and Etive. The data in Ness are too scattered to make a good trend. The trends in Etive and Rannoch agree with the relationship found in 34/10-1 which was:

ETIVE : $\phi = .1 + .068 \log k$

RANNOCH : $\phi = .15 + .07 \log k$

where : ϕ = porosity in fractions

k = permeability in mD

TESTING SUMMARY

Three DST's were performed. Here is listed a summary of the main results of these tests:

DST # 1 : Interval : 1990 - 1995
Choke : 20/64 "
Production : 2600 STB/d (water)

DST # 2 : Interval : 1935 - 1940
Choke : (29 + 14)/64"
Production : 2850 STB/d oil
1167·10³ scf/d

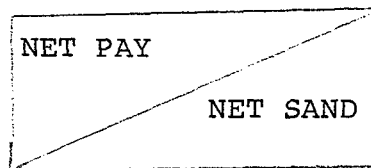
DST # 3 : Interval : 1895 - 1900
Choke : 10/64"
Production : 650 STB/d oil
Sand plugging

34/10-3 RESULTS TABLE OF PETROPHYSICAL PARAMETERS

FORMATION	INTERVAL RKB (m)	NET SAND (m)	AVERAGE POROSITY (%)	AVERAGE WATER- SATURATION (%)	NET/ GROSS RATIO
NESS	1892-1979	35.75	27.3	38.5	0.411
		37.25	26.8	42.8	0.428
ETIVE	1979-2002	22.25	32.4	100	0.967
RANNOCH	2002-2084	72.25	30.3	100	0.881
TOTAL BRENT	1892-2092	35.75	27.3	38.5	0.179
		131.75	29.6	0.879	.659
STATEFJORD	2495-2715	100.25	18.9	100	0.456

CUT-OFF CRITERION:

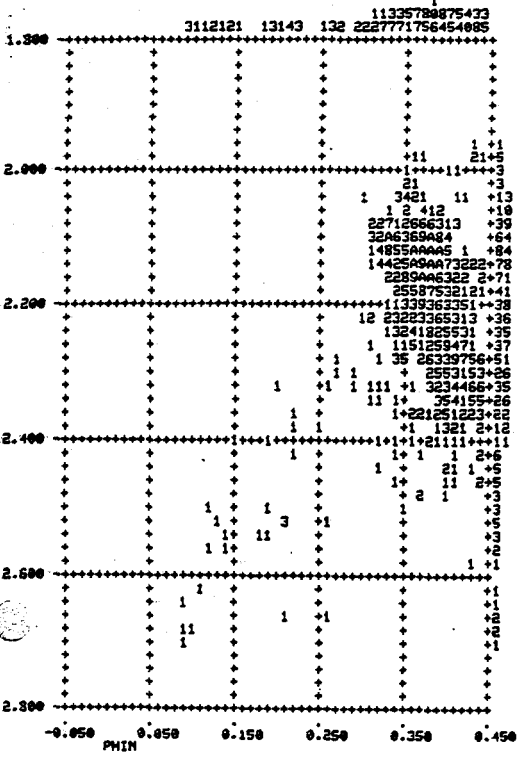
- VSH > 40%
- PHIF < 12%
- SW > 65%
- Bed thickness < 1 m (Brent fm)
- Net sand = Net pay above O/W contact



APPENDIX

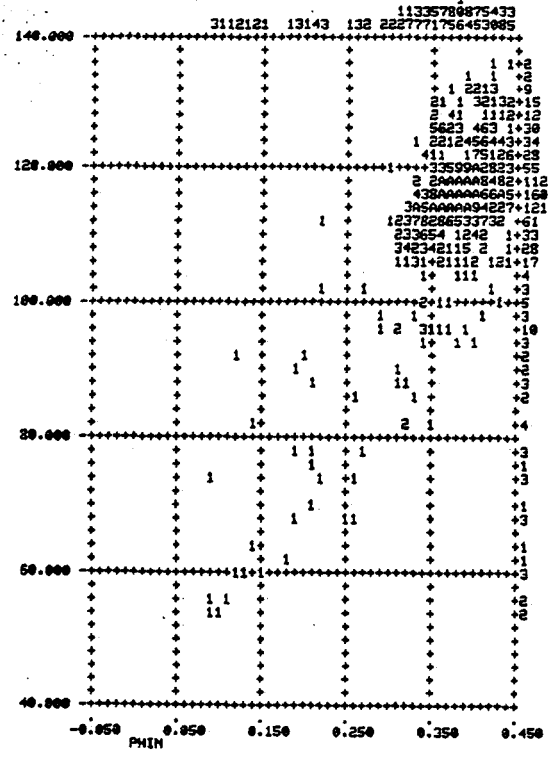
- Crossplots log vs log
permeability vs porosity
log vs core
- Summary log
- CPI
- Listing

34-10-3 RHOB VS PHIN (1885,2100)



PLOTTED BY: JRA

34-10-3 DT VS PHIN (1885,2100)

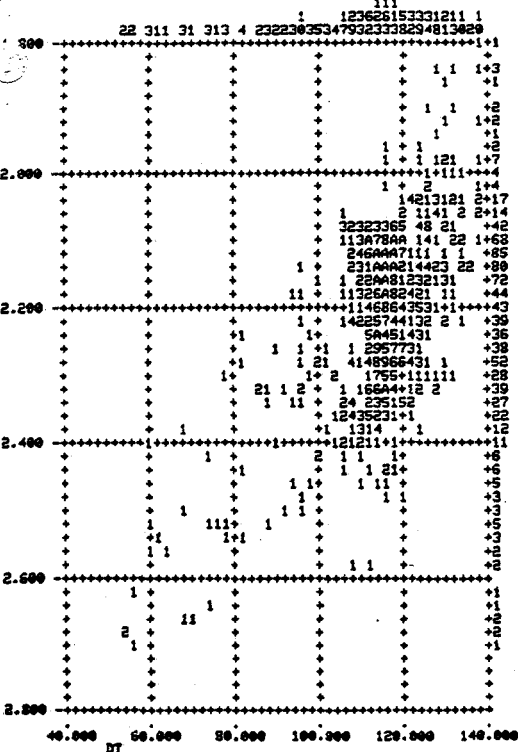


PLOTTED BY: JRA

BRENT (1885 - 2100)

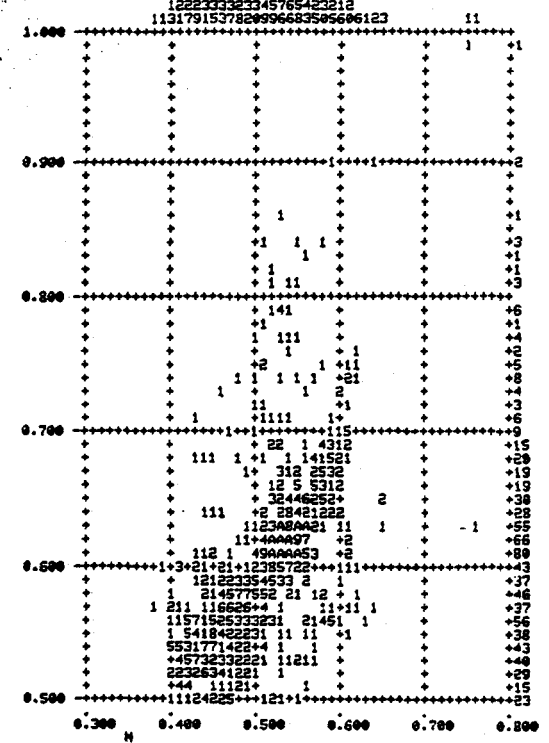
CROSSPLOTS : RHOB/PHIN, DT/RHOB, DT/PHIN, M/N

34-10-3 RHOB VS DT (1885,2100)

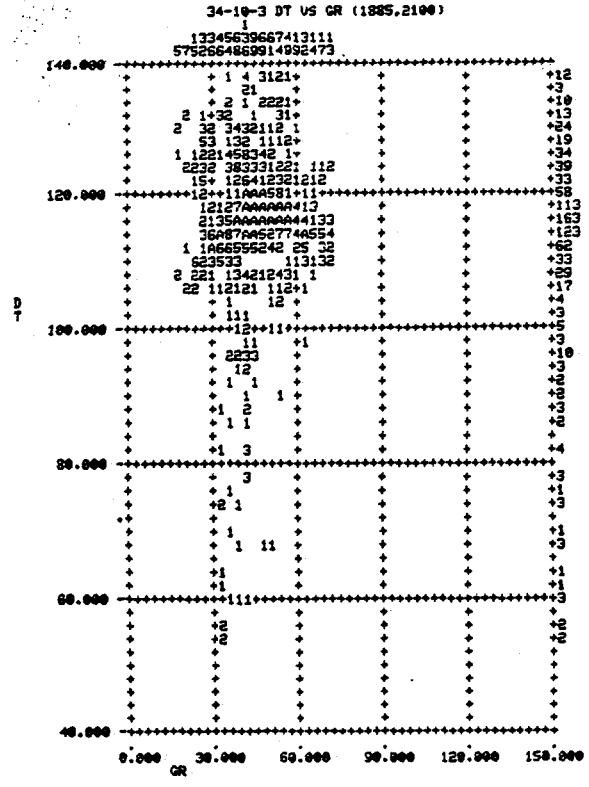
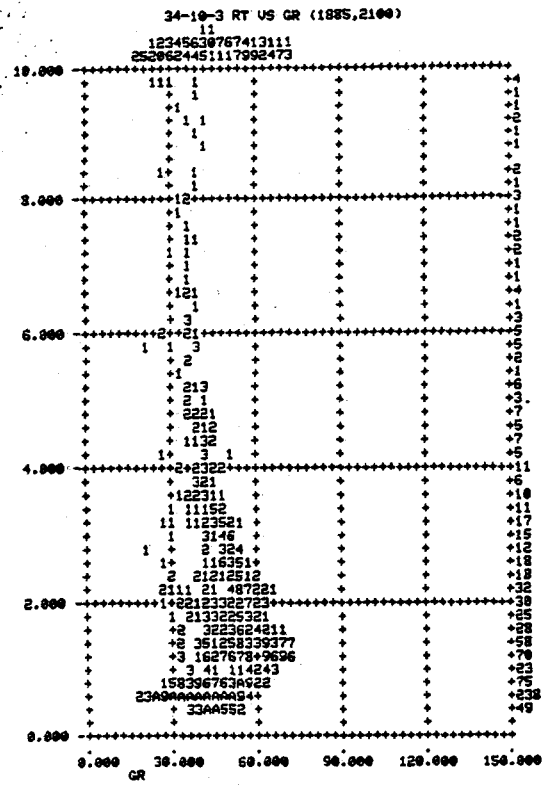


PLOTTED BY: JRA

34-10-3 M VS N (1885,2100)

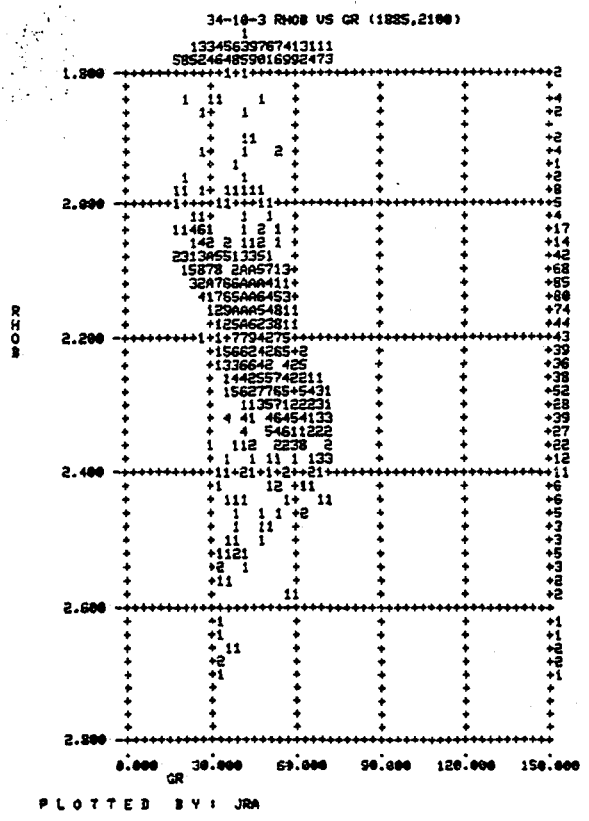
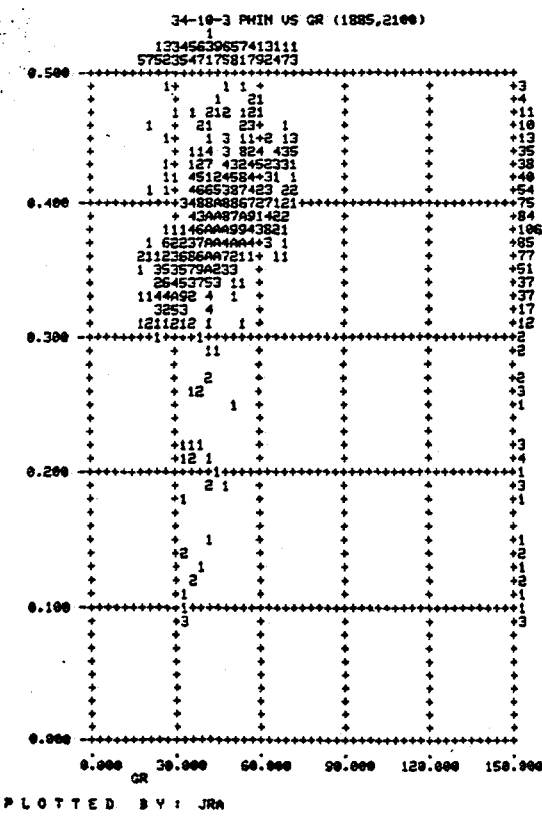


PLOTTED BY: JRA

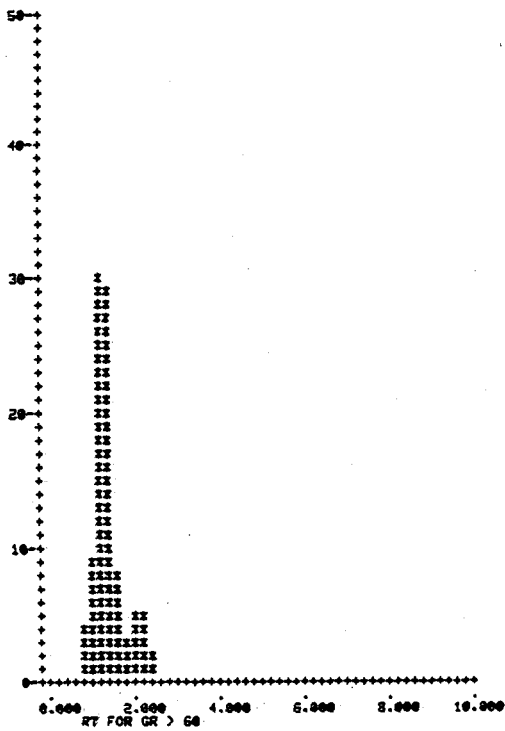


BRENT (1885 - 2100)

CROSSPLOTS : RT/GR, DT/GR, PHIN/GR, RHOB/GR

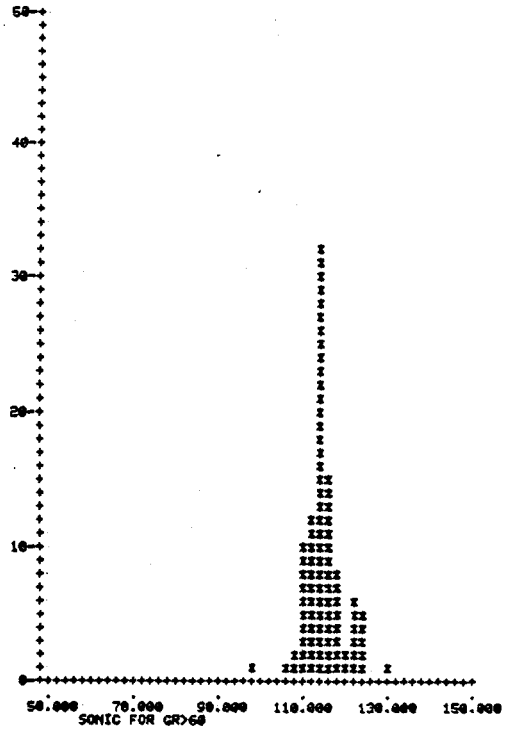


FREQUENCY PLOT



PLOTTED BY: JRA

FREQUENCY PLOT

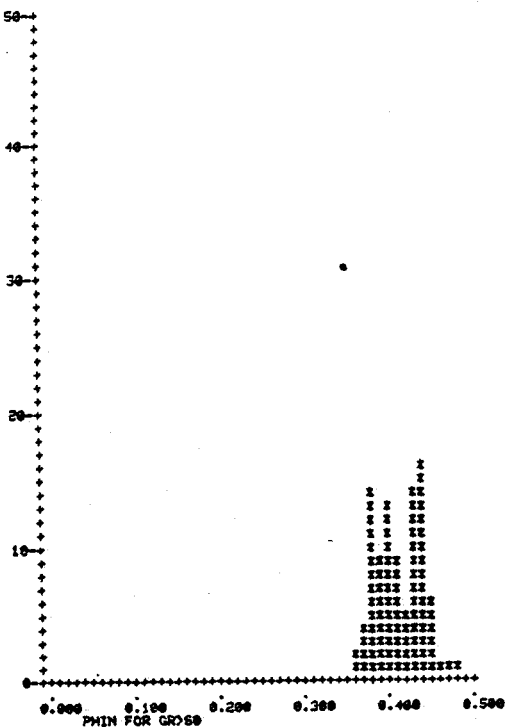


PLOTTED BY: JRA

BRENT (1885 - 2100)

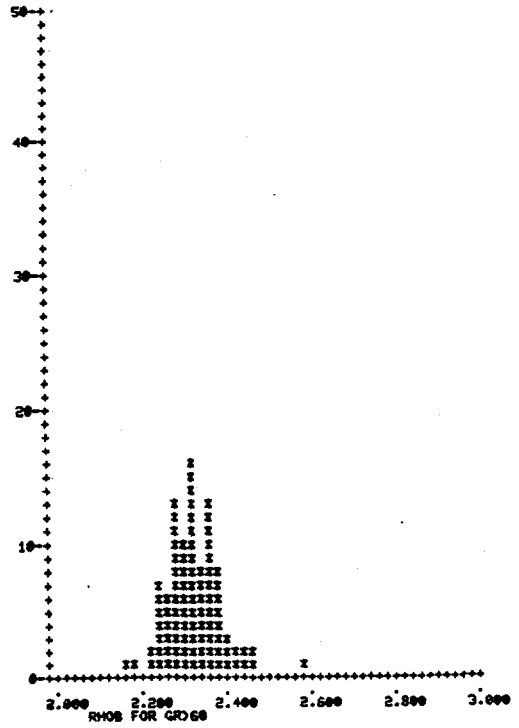
HISTOGRAMS FOR GR>60: RT, DT, PHIN, RHOB

FREQUENCY PLOT

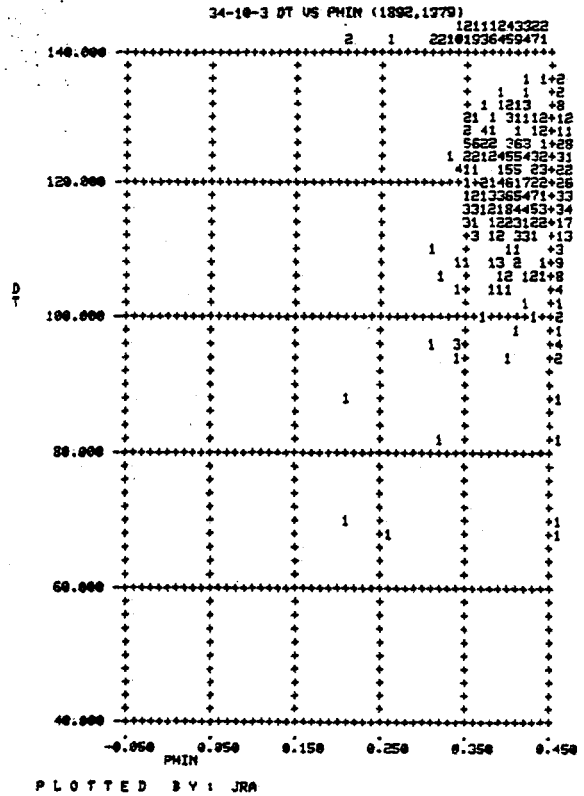
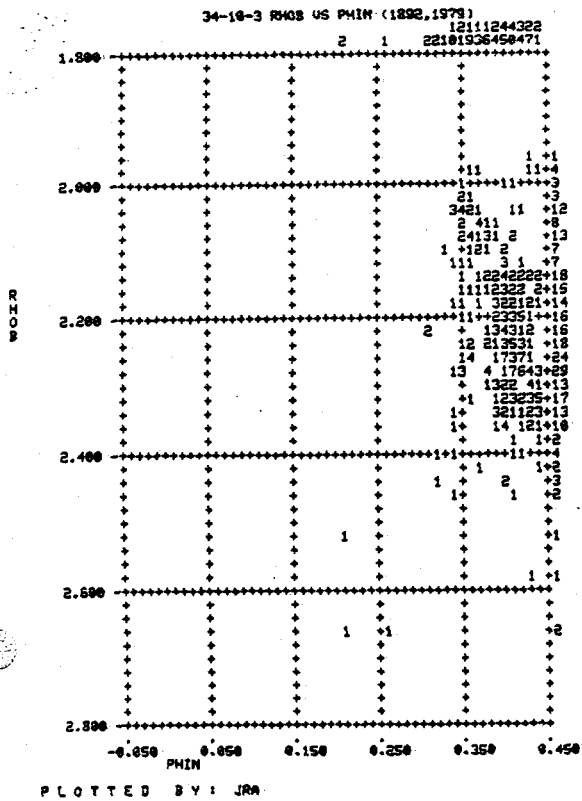


PLOTTED BY: JRA

FREQUENCY PLOT

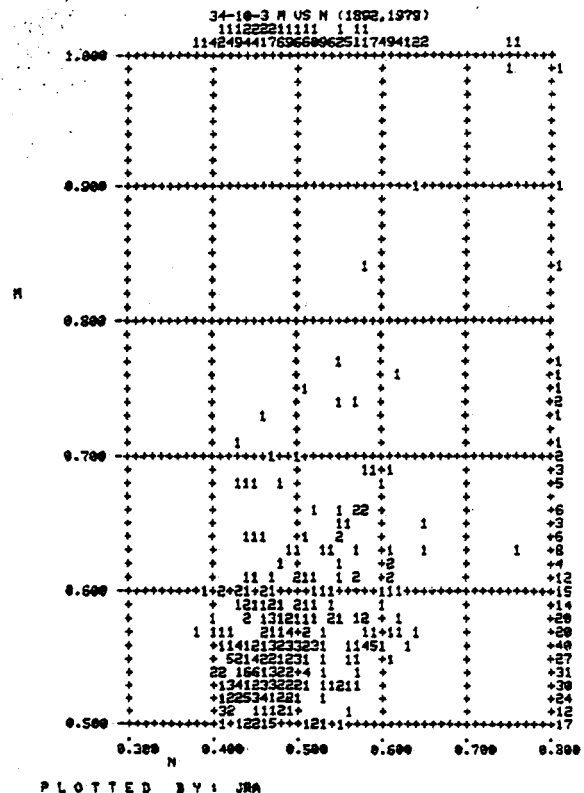
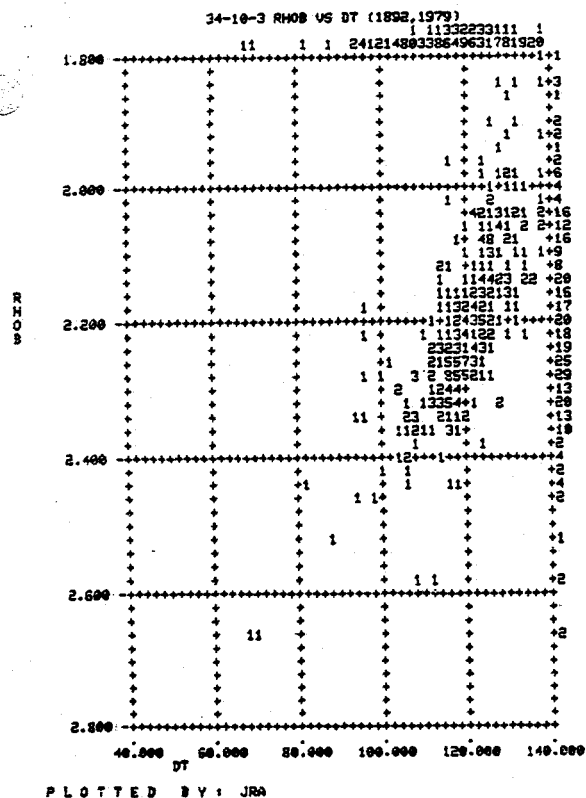


PLOTTED BY: JRA

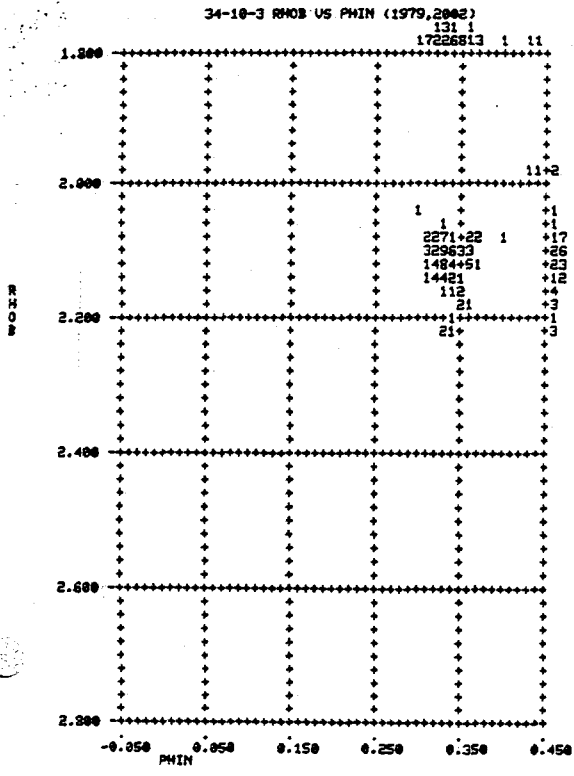


NESS (1892 - 1979)

CROSSPLOTS : RHOB/PHIN, DT/RHOB, DT/PHIN, M/N

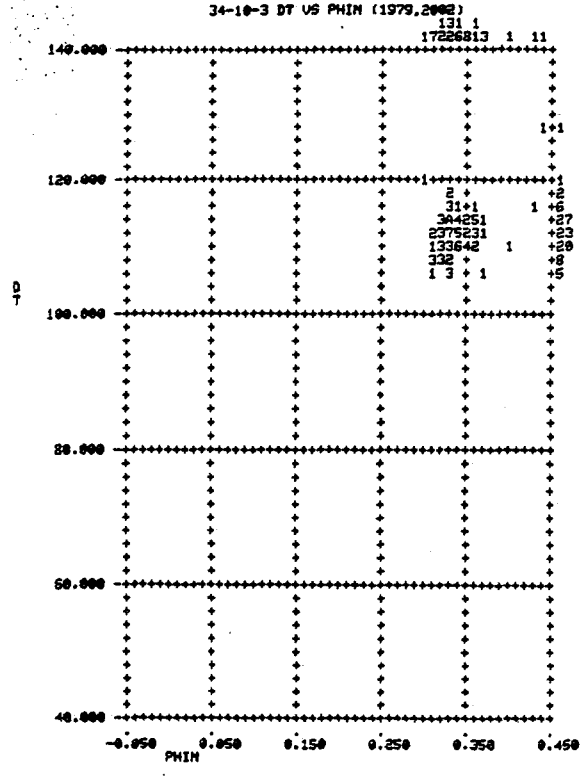


34-10-3 RHOB US PHIN (1979,2002)



PLOTTED BY: JRA

34-10-3 DT US PHIN (1979,2002)

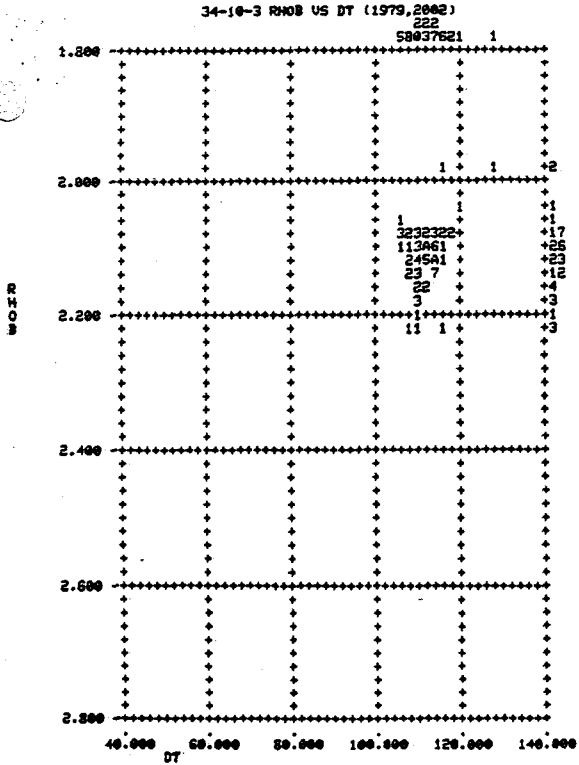


PLOTTED BY: JRA

ETIVE (1979 - 2002)

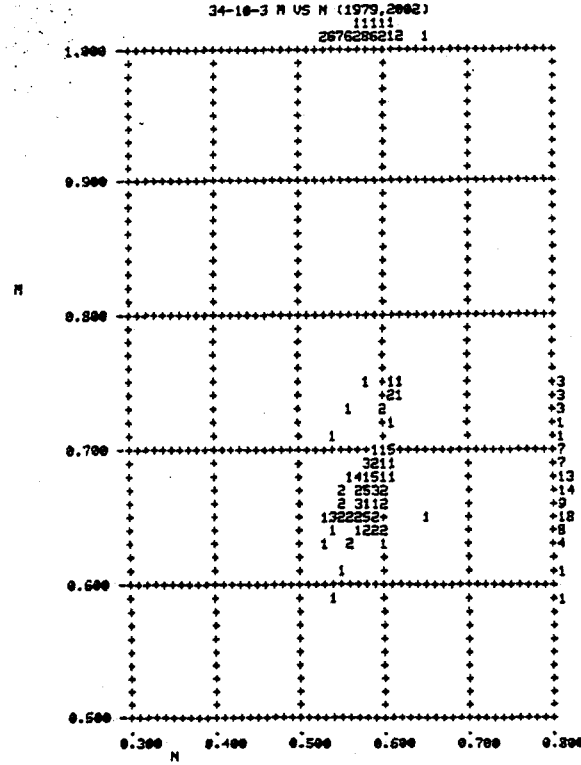
CROSSPLOTS : RHOB/PHIN, DT/RHOB, DT/PHIN, M/N

34-10-3 RHOB US DT (1979,2002)

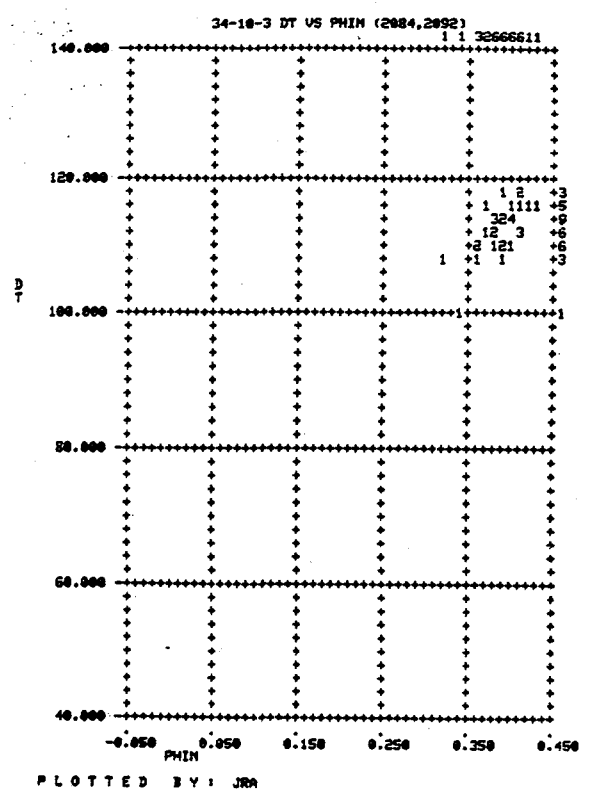
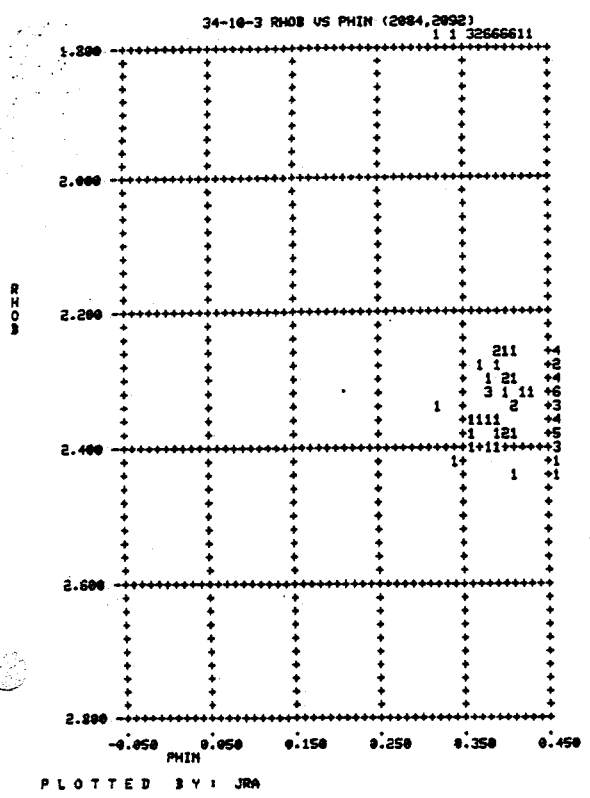


PLOTTED BY: JRA

34-10-3 M US N (1979,2002)

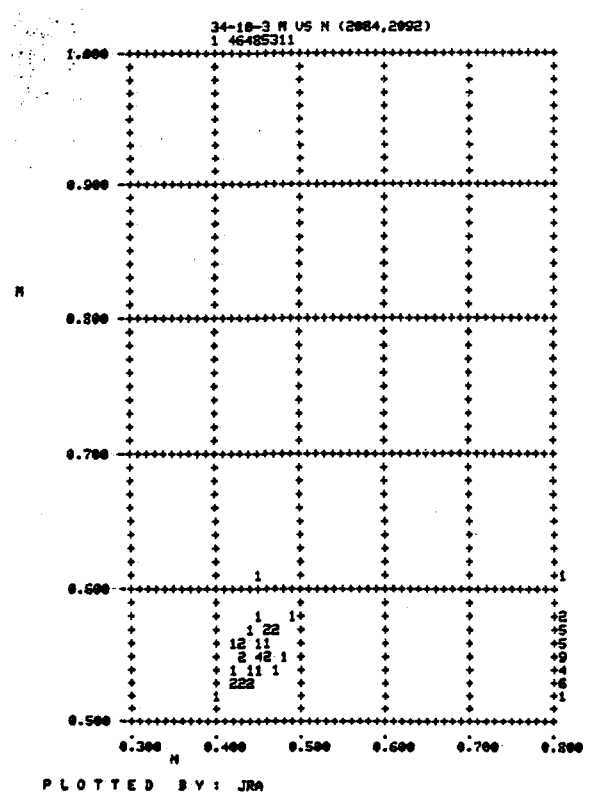
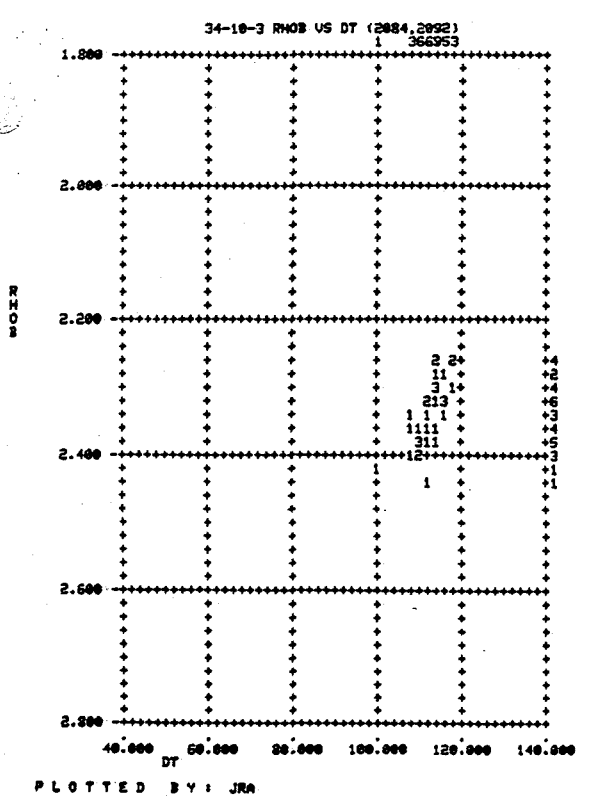


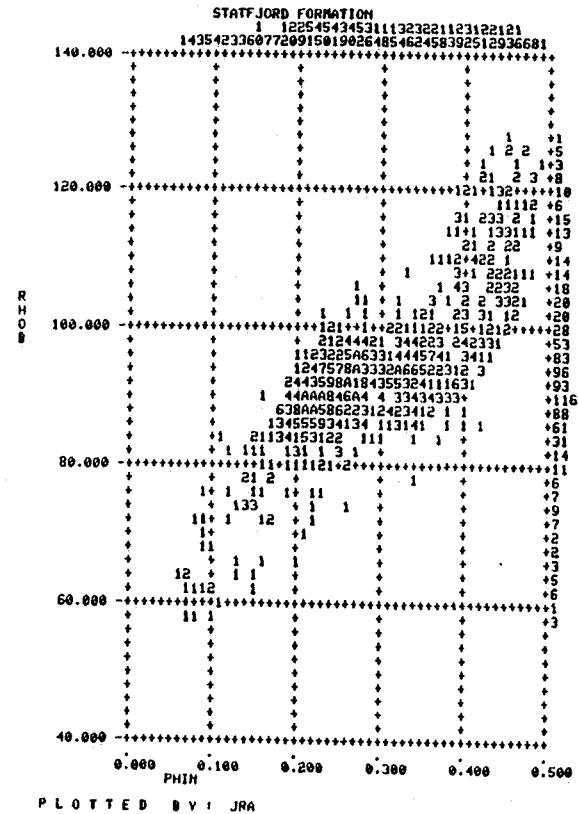
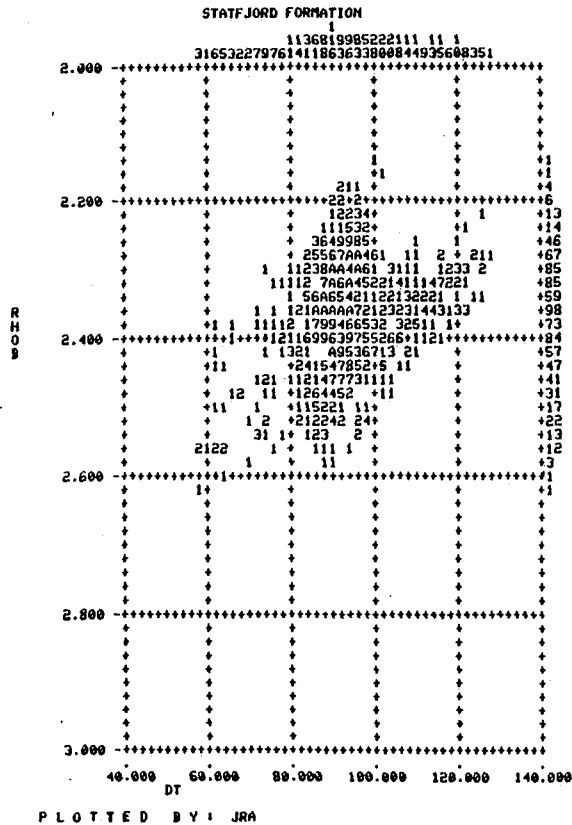
PLOTTED BY: JRA



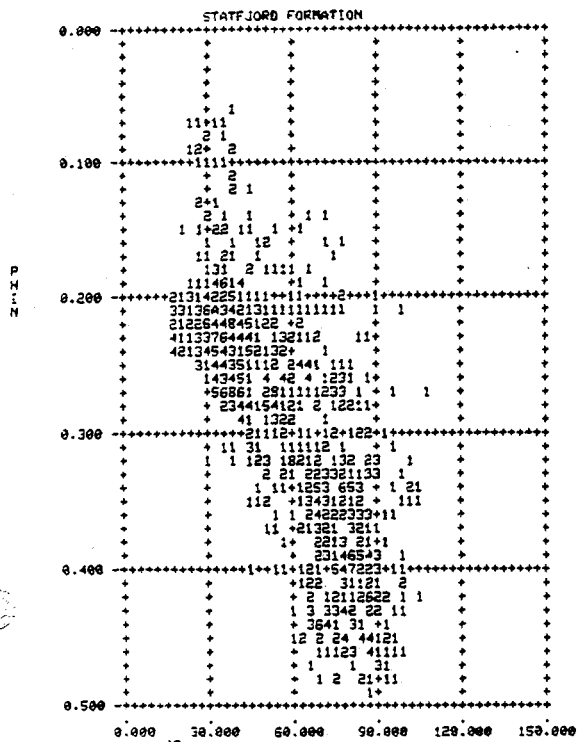
BROOM (2084 - 2092)

CROSSPLOTS : RHOB/PHIN, DT/RHOB, DT/PHIN, M/N

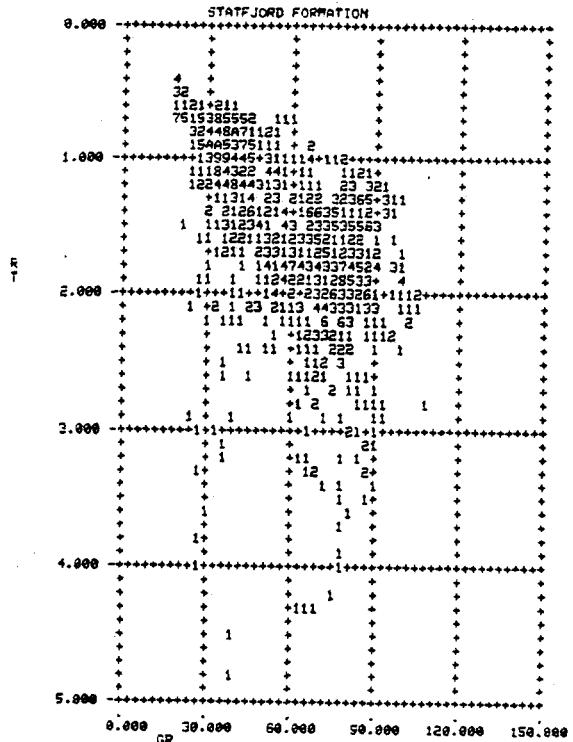




STATFJORD FORMATION : CROSSPLOTS RHO B/DT, RHO B/PHIN
(2495 - 2715)

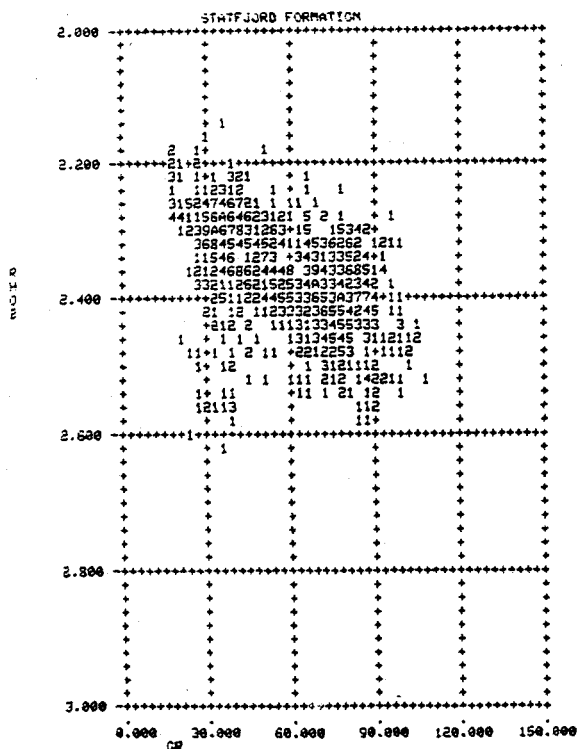


PLOTTED BY: JRA

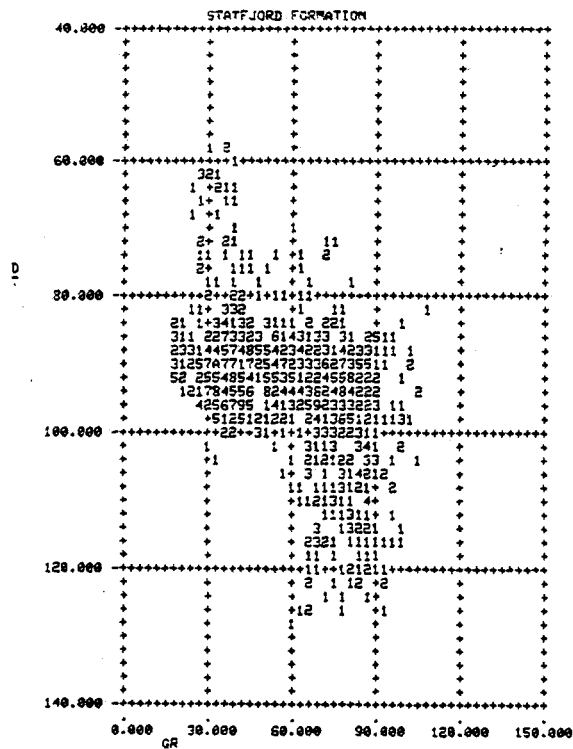


PLOTTED BY: JRA

STATFJORD FORMATION : CROSSPLOTS GR versus PHIN, RHOB, RT, DT
(2495 - 2715)

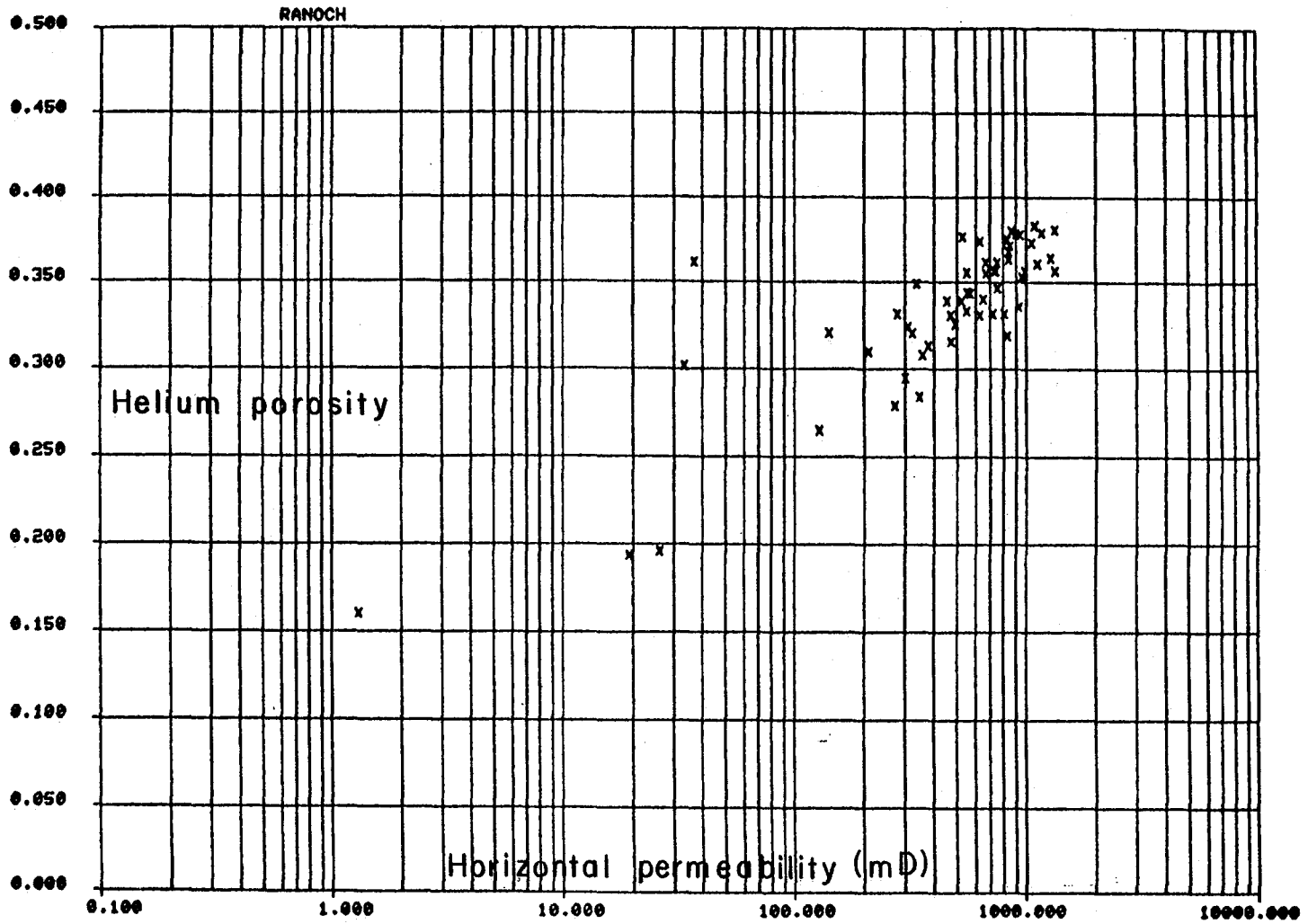


PLOTTED BY: JRA



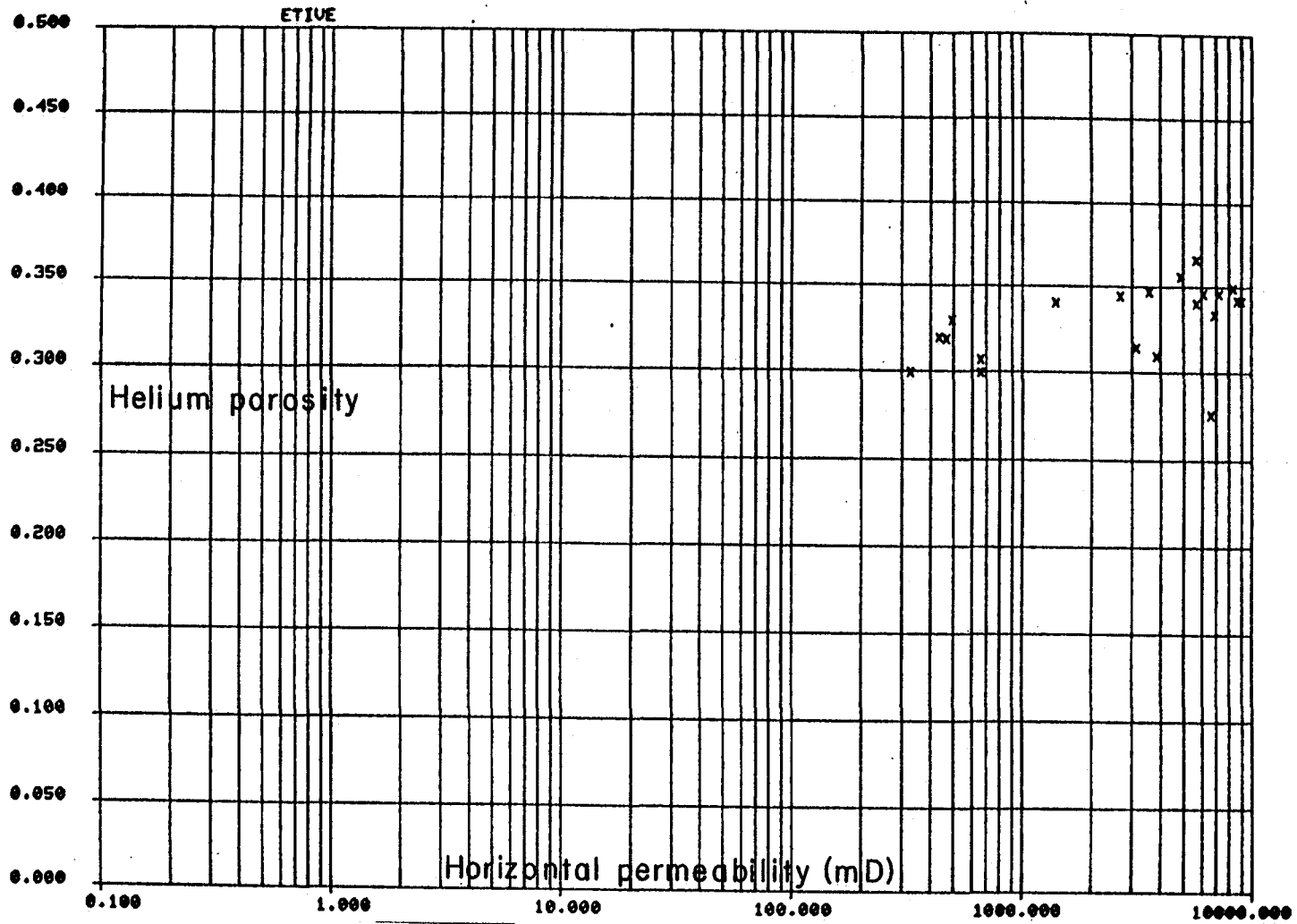
PLOTTED BY: JRA

RANOCH



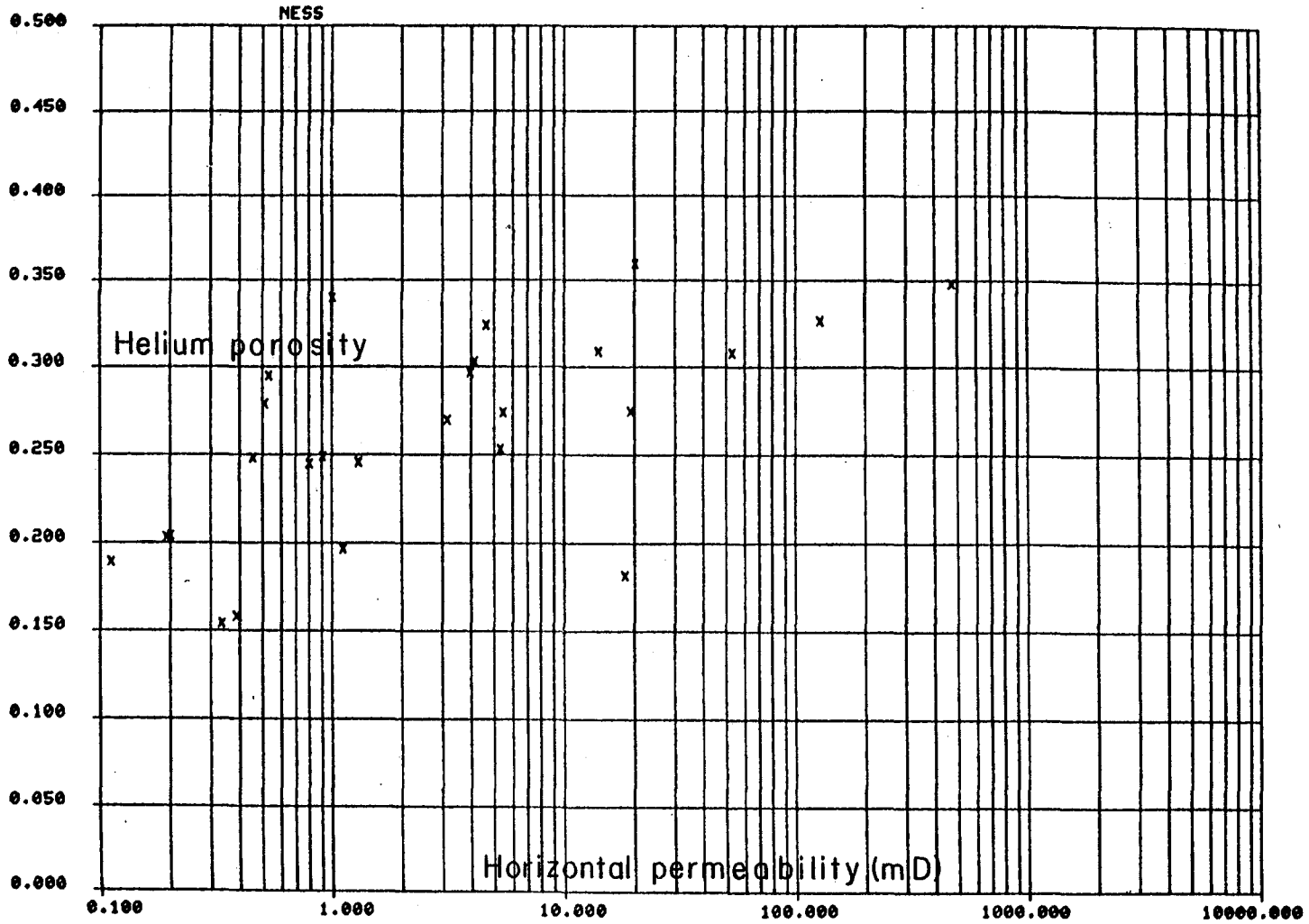
34/10-3 Helium porosity vs. horizontal permeability

ETIVE

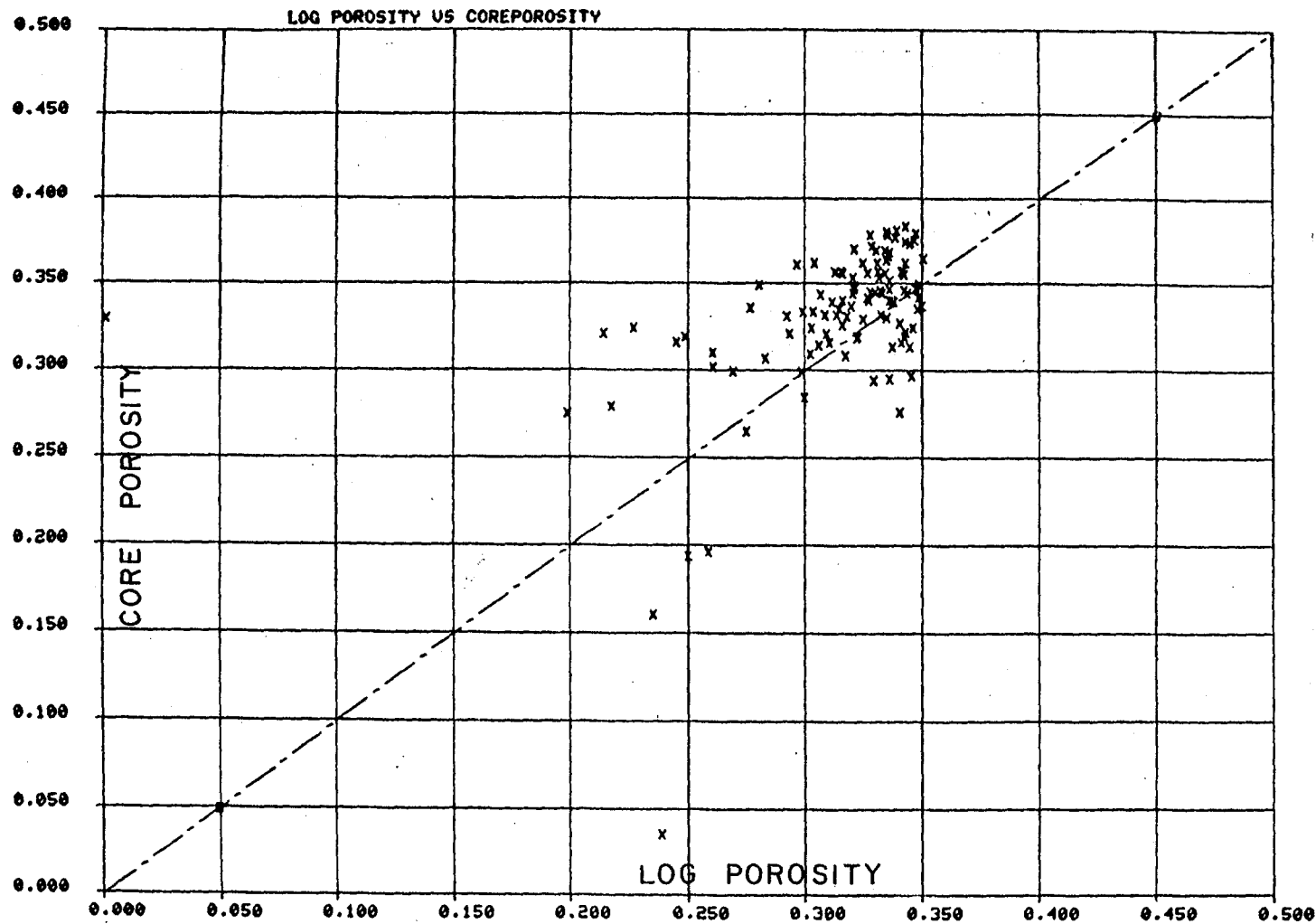


34/10-3 Helium porosity vs. horizontal permeability

NESS



34/10-3 Helium porosity vs. horizontal permeability.



34/10-3 LOG - VS COREPOROSITIES
INTERVAL 1980-2025

WELL: 34-10-3 (1890 - 2100)

DATE: 24DCT79/ILP

DEPTH	VSH	PHIF	SW
1890.00	1.000	0.001	1.000
1890.25	1.000	0.001	1.000
1890.50	0.972	0.001	1.001
1890.75	0.709	0.124	0.891
1891.00	0.521	0.232	0.714
1891.25	0.605	0.211	0.627
1891.50	0.863	0.091	0.683
1891.75	0.716	0.129	0.693
1892.00	0.722	0.140	0.664
1892.25	1.000	0.001	1.000
1892.50	1.000	0.001	1.000
1892.75	1.000	0.001	1.000
1893.00	1.000	0.001	1.000
1893.25	1.000	0.001	1.000
1893.50	1.000	0.001	1.000
1893.75	0.299	0.242	0.438
1894.00	0.286	0.246	0.420
1894.25	0.257	0.245	0.398
1894.50	0.229	0.244	0.386
1894.75	0.229	0.240	0.373
1895.00	0.228	0.238	0.359
1895.25	0.246	0.246	0.329
1895.50	0.274	0.257	0.296
1895.75	0.218	0.266	0.280
1896.00	0.226	0.273	0.279
1896.25	0.244	0.274	0.281
1896.50	0.262	0.266	0.293
1896.75	0.308	0.254	0.305
1897.00	0.289	0.257	0.311
1897.25	0.252	0.257	0.325
1897.50	0.205	0.251	0.346
1897.75	0.177	0.249	0.362
1898.00	0.148	0.248	0.375
1898.25	0.194	0.246	0.386
1898.50	0.240	0.261	0.371
1898.75	0.212	0.259	0.421
1899.00	0.188	0.252	0.415
1899.25	0.165	0.214	0.468
1899.50	0.197	0.175	0.571
1899.75	0.226	0.164	0.607
1900.00	0.256	0.232	0.431
1900.25	0.311	0.217	0.464
1900.50	0.375	0.198	0.502
1900.75	0.384	0.197	0.522
1901.00	0.365	0.191	0.538
1901.25	0.309	0.210	0.510
1901.50	0.244	0.232	0.480
1901.75	0.234	0.229	0.483
1902.00	0.331	0.204	0.547
1902.25	0.427	0.191	0.543

WELL: 34-10-3 (1890 - 2100)

DATE: 24DCT79/ILP

DEPTH	VSH	PHIF	SW
1902.50	0.483	0.176	0.560
1902.75	0.510	0.139	0.631
1903.00	0.537	0.111	0.824
1903.25	0.588	0.086	0.976
1903.50	0.566	0.120	0.900
1903.75	0.545	0.124	0.931
1904.00	0.554	0.139	0.882
1904.25	0.581	0.133	0.923
1904.50	1.000	0.001	1.000
1904.75	1.000	0.001	1.000
1905.00	1.000	0.001	1.000
1905.25	1.000	0.001	1.000
1905.50	1.000	0.001	1.000
1905.75	1.000	0.001	1.000
1906.00	1.000	0.001	1.000
1906.25	1.000	0.001	1.000
1906.50	1.000	0.001	1.000
1906.75	1.000	0.001	1.000
1907.00	1.000	0.001	1.000
1907.25	1.000	0.001	1.000
1907.50	1.000	0.001	1.000
1907.75	0.482	0.176	0.770
1908.00	0.602	0.127	0.843
1908.25	0.648	0.094	0.934
1908.50	0.647	0.062	1.141
1908.75	0.619	0.129	0.794
1909.00	0.498	0.170	0.875
1909.25	1.000	0.001	1.000
1909.50	1.000	0.001	1.000
1909.75	1.000	0.001	1.000
1910.00	0.338	0.257	0.663
1910.25	0.320	0.217	0.658
1910.50	0.338	0.207	0.655
1910.75	1.000	0.001	1.000
1911.00	1.000	0.001	1.000
1911.25	1.000	0.001	1.000
1911.50	0.428	0.183	0.647
1911.75	0.447	0.172	0.647
1912.00	0.483	0.162	0.661
1912.25	0.520	0.146	0.696
1912.50	0.621	0.122	0.781
1912.75	0.607	0.125	0.817
1913.00	0.592	0.122	0.884
1913.25	0.573	0.119	0.918
1913.50	0.573	0.119	0.922
1913.75	0.572	0.132	0.870
1914.00	0.544	0.136	0.839
1914.25	0.516	0.151	0.773
1914.50	0.460	0.149	0.790
1914.75	0.469	0.151	0.800

WELL: 34-10-3 (1890 - 2100)

DATE: 24OCT79/ILP

DEPTH	VSH	FHIF	SW
1915.00	0.477	0.196	0.650
1915.25	1.000	0.001	1.000
1915.50	1.000	0.001	1.000
1915.75	1.000	0.001	1.000
1916.00	1.000	0.001	1.000
1916.25	1.000	0.001	1.000
1916.50	1.000	0.001	1.000
1916.75	0.477	0.228	0.755
1917.00	0.332	0.256	0.753
1917.25	0.186	0.235	0.600
1917.50	0.102	0.248	0.400
1917.75	0.157	0.232	0.483
1918.00	0.305	0.182	0.626
1918.25	0.453	0.155	0.707
1918.50	0.600	0.116	0.829
1918.75	0.553	0.123	0.861
1919.00	0.507	0.128	0.906
1919.25	0.298	0.195	0.685
1919.50	0.089	0.267	0.517
1919.75	0.129	0.280	0.461
1920.00	0.168	0.272	0.484
1920.25	0.208	0.270	0.495
1920.50	0.356	0.226	0.557
1920.75	0.527	0.135	0.858
1921.00	0.562	0.130	0.976
1921.25	0.597	0.139	0.928
1921.50	1.000	0.001	1.000
1921.75	1.000	0.001	1.000
1922.00	1.000	0.001	1.000
1922.25	1.000	0.001	1.000
1922.50	0.593	0.166	0.906
1922.75	1.000	0.001	1.000
1923.00	1.000	0.001	1.000
1923.25	1.000	0.001	1.000
1923.50	1.000	0.001	1.000
1923.75	1.000	0.001	1.000
1924.00	0.395	0.214	0.743
1924.25	0.423	0.203	0.763
1924.50	0.607	0.121	0.932
1924.75	0.616	0.083	1.020
1925.00	0.625	0.045	1.170
1925.25	0.589	0.076	0.987
1925.50	0.511	0.127	0.806
1925.75	0.478	0.143	0.766
1926.00	0.521	0.135	0.762
1926.25	0.446	0.153	0.738
1926.50	0.441	0.152	0.733
1926.75	0.436	0.163	0.717
1927.00	0.389	0.177	0.650
1927.25	0.338	0.216	0.463

WELL: 34-10-3 (1890 - 2100)

DATE: 24DCT79/ILP

DEPTH	VSH	PHIF	SM
1927.50	0.287	0.238	0.474
1927.75	0.277	0.252	0.487
1928.00	0.258	0.252	0.530
1928.25	0.301	0.208	0.581
1928.50	0.343	0.148	0.754
1928.75	0.229	0.243	0.520
1929.00	0.386	0.227	0.488
1929.25	0.163	0.294	0.405
1929.50	0.162	0.302	0.382
1929.75	0.162	0.316	0.351
1930.00	0.157	0.313	0.301
1930.25	0.152	0.312	0.314
1930.50	0.198	0.292	0.360
1930.75	0.253	0.253	0.459
1931.00	0.359	0.224	0.549
1931.25	0.212	0.231	0.538
1931.50	0.066	0.235	0.461
1931.75	00000.000	0.309	0.290
1932.00	00000.000	0.368	0.199
1932.25	00000.000	0.366	0.145
1932.50	00000.000	0.371	0.103
1932.75	00000.000	0.371	0.107
1933.00	00000.000	0.360	0.178
1933.25	00000.000	0.352	0.197
1933.50	00000.000	0.335	0.224
1933.75	00000.000	0.411	0.260
1934.00	1.000	0.001	1.000
1934.25	1.000	0.001	1.000
1934.50	1.000	0.001	1.000
1934.75	1.000	0.001	1.000
1935.00	00000.000	0.322	0.171
1935.25	00000.000	0.345	0.166
1935.50	00000.000	0.352	0.188
1935.75	00000.000	0.351	0.218
1936.00	00000.000	0.352	0.201
1936.25	00000.000	0.350	0.176
1936.50	00000.000	0.357	0.184
1936.75	00000.000	0.353	0.199
1937.00	00000.000	0.348	0.219
1937.25	00000.000	0.349	0.237
1937.50	00000.000	0.348	0.238
1937.75	00000.000	0.347	0.191
1938.00	00000.000	0.346	0.153
1938.25	00000.000	0.354	0.173
1938.50	00000.000	0.356	0.200
1938.75	0.006	0.358	0.231
1939.00	0.049	0.346	0.278
1939.25	0.093	0.326	0.340
1939.50	0.152	0.296	0.375
1939.75	0.189	0.280	0.397

WELL: 34-10-3 (1890 - 2100)

DATE: 24OCT79/ILP

DEPTH	VSH	PHIF	SW
1940.00	0.281	0.246	0.438
1940.25	0.290	0.232	0.467
1940.50	0.299	0.222	0.498
1940.75	0.280	0.214	0.537
1941.00	0.363	0.184	0.633
1941.25	0.455	0.160	0.700
1941.50	0.482	0.156	0.719
1941.75	0.500	0.150	0.747
1942.00	0.556	0.134	0.788
1942.25	0.611	0.115	0.849
1942.50	0.700	0.065	1.031
1942.75	0.795	0.036	1.101
1943.00	0.808	0.033	1.133
1943.25	0.748	0.063	1.143
1943.50	0.701	0.070	1.153
1943.75	0.626	0.112	0.999
1944.00	0.445	0.182	0.849
1944.25	0.264	0.231	0.537
1944.50	0.083	0.196	0.473
1944.75	0.105	0.103	0.750
1945.00	0.151	0.036	2.143
1945.25	0.243	0.028	2.356
1945.50	0.345	0.105	0.922
1945.75	0.358	0.201	0.626
1946.00	0.372	0.195	0.647
1946.25	0.445	0.167	0.708
1946.50	0.456	0.159	0.742
1946.75	0.468	0.154	0.768
1947.00	0.518	0.138	0.792
1947.25	0.592	0.107	0.860
1947.50	0.638	0.088	0.931
1947.75	0.684	0.069	1.015
1948.00	0.695	0.061	1.110
1948.25	0.706	0.083	1.018
1948.50	0.599	0.119	1.023
1948.75	0.612	0.170	0.790
1949.00	0.607	0.183	0.741
1949.25	0.474	0.215	0.595
1949.50	0.340	0.243	0.477
1949.75	0.207	0.274	0.371
1950.00	0.170	0.238	0.425
1950.25	0.169	0.211	0.461
1950.50	0.169	0.175	0.535
1950.75	0.242	0.132	0.816
1951.00	0.316	0.177	0.673
1951.25	0.408	0.185	0.615
1951.50	0.408	0.202	0.584
1951.75	0.486	0.176	0.621
1952.00	0.522	0.161	0.651
1952.25	0.508	0.162	0.665

WELL: 34-10-3 (1890 - 2100)

DATE: 24OCT79/ILP

DEPTH	VSH	PHIF	SW
1952.50	0.498	0.154	0.705
1952.75	0.489	0.139	0.779
1953.00	0.627	0.089	0.920
1953.25	0.766	0.062	0.914
1953.50	0.835	0.049	0.919
1953.75	0.718	0.080	0.947
1954.00	0.755	0.077	0.945
1954.25	0.792	0.066	0.986
1954.50	0.726	0.082	0.983
1954.75	0.610	0.114	0.868
1955.00	0.494	0.134	0.838
1955.25	0.609	0.075	1.044
1955.50	0.724	0.067	0.943
1955.75	0.839	0.059	0.856
1956.00	0.758	0.081	0.875
1956.25	0.677	0.099	0.900
1956.50	0.639	0.112	0.902
1956.75	0.648	0.115	0.875
1957.00	0.652	0.116	0.853
1957.25	0.656	0.090	0.961
1957.50	0.688	0.050	1.153
1957.75	0.812	00000.000	1.311
1958.00	0.796	0.047	1.063
1958.25	0.779	0.103	0.879
1958.50	0.738	0.143	0.777
1958.75	0.697	0.127	0.864
1959.00	0.656	0.110	0.925
1959.25	0.615	0.114	0.899
1959.50	0.494	0.140	0.894
1959.75	0.325	0.204	0.757
1960.00	0.157	0.269	0.493
1960.25	00000.000	0.313	0.338
1960.50	0.023	0.335	0.244
1960.75	0.104	0.318	0.322
1961.00	0.184	0.303	0.418
1961.25	0.313	0.266	0.479
1961.50	0.362	0.246	0.500
1961.75	0.402	0.229	0.518
1962.00	0.397	0.212	0.553
1962.25	0.304	0.244	0.509
1962.50	0.340	0.244	0.521
1962.75	0.312	0.254	0.535
1963.00	0.237	0.275	0.465
1963.25	0.235	0.276	0.445
1963.50	0.137	0.290	0.423
1963.75	0.259	0.239	0.544
1964.00	0.361	0.217	0.588
1964.25	0.339	0.247	0.563
1964.50	0.361	0.239	0.603
1964.75	0.414	0.218	0.652

WELL: 34-10-3 (1990 - 2100)

DATE: 24OCT79/ILF

DEPTH	VSH	PHIF	SW
1965.00	0.515	0.178	0.731
1965.25	0.587	0.154	0.787
1965.50	0.571	0.170	0.808
1965.75	0.597	0.160	0.890
1966.00	0.617	0.151	0.981
1966.25	0.644	0.121	0.994
1966.50	0.511	0.161	0.859
1966.75	0.378	0.246	0.665
1967.00	1.000	0.001	1.000
1967.25	1.000	0.001	1.000
1967.50	1.000	0.001	1.000
1967.75	1.000	0.001	1.000
1968.00	00000.000	0.343	0.515
1968.25	00000.000	0.347	0.464
1968.50	00000.000	0.347	0.368
1968.75	00000.000	0.337	0.429
1969.00	0.003	0.342	0.431
1969.25	0.012	0.340	0.442
1969.50	0.054	0.331	0.517
1969.75	0.072	0.330	0.528
1970.00	0.107	0.319	0.552
1970.25	0.180	0.300	0.585
1970.50	0.313	0.247	0.676
1970.75	0.488	0.174	0.814
1971.00	0.611	0.122	0.934
1971.25	0.611	0.136	0.894
1971.50	0.488	0.183	0.832
1971.75	0.364	0.222	0.802
1972.00	0.241	0.231	0.859
1972.25	0.118	0.273	0.790
1972.50	0.124	0.286	0.777
1972.75	0.129	0.293	0.779
1973.00	0.135	0.301	0.779
1973.25	1.000	0.001	1.000
1973.50	1.000	0.001	1.000
1973.75	1.000	0.001	1.000
1974.00	1.000	0.001	1.000
1974.25	1.000	0.001	1.000
1974.50	1.000	0.001	1.000
1974.75	1.000	0.001	1.000
1975.00	0.613	0.199	0.820
1975.25	0.677	0.120	1.077
1975.50	0.649	0.067	1.503
1975.75	0.676	0.001	1.944
1976.00	0.722	00000.000	1.814
1976.25	0.754	0.122	0.852
1976.50	0.698	0.166	0.777
1976.75	1.000	0.001	1.000
1977.00	1.000	0.001	1.000
1977.25	1.000	0.001	1.000

WELL: 34-10-3 (1890 - 2100)

DATE: 24OCT79/ILF

DEPTH	VSH	PHIF	SW
1977.50	1.000	0.001	1.000
1977.75	0.283	0.324	0.665
1978.00	0.334	0.239	0.864
1978.25	0.341	0.215	0.952
1978.50	1.000	0.001	1.000
1978.75	1.000	0.001	1.000
1979.00	1.000	0.001	1.000
1979.25	00000.000	0.356	0.916
1979.50	00000.000	0.335	1.013
1979.75	00000.000	0.338	1.000
1980.00	00000.000	0.330	1.018
1980.25	00000.000	0.332	1.003
1980.50	00000.000	0.342	0.968
1980.75	00000.000	0.344	0.957
1981.00	00000.000	0.342	0.957
1981.25	00000.000	0.341	0.952
1981.50	00000.000	0.348	0.924
1981.75	00000.000	0.350	0.926
1982.00	00000.000	0.346	0.943
1982.25	00000.000	0.348	0.954
1982.50	00000.000	0.336	1.004
1982.75	0.014	0.343	0.879
1983.00	1.000	0.001	1.000
1983.25	1.000	0.001	1.000
1983.50	0.289	0.215	1.037
1983.75	0.189	0.243	1.006
1984.00	0.067	0.301	0.913
1984.25	0.076	0.322	0.893
1984.50	0.085	0.327	0.895
1984.75	0.094	0.327	0.914
1985.00	0.112	0.324	0.941
1985.25	0.112	0.328	0.955
1985.50	0.065	0.335	0.940
1985.75	0.069	0.329	0.954
1986.00	0.082	0.322	0.964
1986.25	0.123	0.299	1.022
1986.50	0.128	0.288	1.041
1986.75	0.102	0.303	0.987
1987.00	0.108	0.299	0.986
1987.25	0.089	0.303	0.968
1987.50	0.029	0.321	0.906
1987.75	0.005	0.325	0.902
1988.00	0.078	0.307	0.952
1988.25	0.143	0.283	1.018
1988.50	0.161	0.270	1.025
1988.75	0.230	0.250	1.052
1989.00	0.271	0.227	1.109
1989.25	0.173	0.245	1.093
1989.50	0.076	0.301	0.928
1989.75	0.001	0.343	0.896

WELL: 34-10-3 (1890 - 2100)

DATE: 24OCT79/ILP

DEPTH	VSH	PHIF	SM
1990.00	00000.000	0.347	0.929
1990.25	00000.000	0.345	0.940
1990.50	00000.000	0.339	0.963
1990.75	00000.000	0.333	0.964
1991.00	00000.000	0.321	0.984
1991.25	00000.000	0.321	1.007
1991.50	00000.000	0.320	1.016
1991.75	00000.000	0.330	0.991
1992.00	00000.000	0.344	0.942
1992.25	00000.000	0.349	0.940
1992.50	00000.000	0.349	0.932
1992.75	00000.000	0.336	0.960
1993.00	0.009	0.334	0.941
1993.25	0.050	0.321	0.967
1993.50	0.051	0.327	0.943
1993.75	0.088	0.316	0.989
1994.00	0.058	0.325	0.966
1994.25	0.039	0.332	0.945
1994.50	0.020	0.339	0.927
1994.75	0.040	0.333	0.945
1995.00	0.036	0.330	0.939
1995.25	0.020	0.336	0.910
1995.50	0.004	0.341	0.868
1995.75	00000.000	0.342	0.835
1996.00	0.017	0.335	0.830
1996.25	00000.000	0.342	0.847
1996.50	00000.000	0.348	0.906
1996.75	00000.000	0.347	0.964
1997.00	00000.000	0.346	0.973
1997.25	00000.000	0.341	0.993
1997.50	0.005	0.336	1.010
1997.75	0.051	0.319	1.041
1998.00	0.059	0.316	1.045
1998.25	0.078	0.303	1.067
1998.50	0.060	0.306	1.051
1998.75	0.030	0.319	1.020
1999.00	0.002	0.333	0.983
1999.25	0.020	0.328	1.008
1999.50	0.057	0.315	1.060
1999.75	0.088	0.314	1.058
2000.00	00000.000	0.345	0.981
2000.25	00000.000	0.345	0.981
2000.50	00000.000	0.343	0.962
2000.75	00000.000	0.333	0.963
2001.00	00000.000	0.324	0.986
2001.25	00000.000	0.318	1.003
2001.50	00000.000	0.326	0.975
2001.75	00000.000	0.345	0.991
2002.00	00000.000	0.345	0.946
2002.25	00000.000	0.336	0.927

WELL: 34-10-3 (1890 - 2100)

DATE: 24OCT79/ILP

DEPTH	VSH	PHIF	SM
2002.50	0.079	0.300	0.992
2002.75	0.210	0.246	1.110
2003.00	0.325	0.217	1.143
2003.25	0.157	0.249	1.074
2003.50	00000.000	0.278	0.978
2003.75	00000.000	0.277	1.027
2004.00	0.039	0.288	1.032
2004.25	0.042	0.310	0.996
2004.50	0.044	0.313	1.029
2004.75	0.047	0.314	1.031
2005.00	0.050	0.314	1.034
2005.25	0.023	0.311	1.054
2005.50	00000.000	0.326	1.008
2005.75	00000.000	0.333	0.993
2006.00	00000.000	0.338	0.981
2006.25	00000.000	0.342	0.984
2006.50	00000.000	0.343	0.998
2006.75	00000.000	0.351	0.991
2007.00	00000.000	0.350	0.989
2007.25	00000.000	0.344	1.006
2007.50	00000.000	0.341	1.010
2007.75	00000.000	0.339	1.014
2008.00	00000.000	0.337	1.004
2008.25	00000.000	0.331	1.007
2008.50	00000.000	0.318	1.033
2008.75	00000.000	0.304	0.991
2009.00	00000.000	0.276	1.001
2009.25	00000.000	0.275	0.994
2009.50	00000.000	0.317	0.997
2009.75	0.037	0.316	0.961
2010.00	0.124	0.297	0.959
2010.25	0.180	0.261	1.019
2010.50	0.202	0.249	1.099
2010.75	0.188	0.261	1.102
2011.00	0.143	0.280	1.086
2011.25	0.020	0.309	0.966
2011.50	0.007	0.309	1.027
2011.75	00000.000	0.321	1.051
2012.00	00000.000	0.336	1.015
2012.25	0.018	0.346	0.995
2012.50	0.075	0.328	1.053
2012.75	0.073	0.343	1.016
2013.00	0.101	0.336	1.046
2013.25	0.033	0.347	0.999
2013.50	00000.000	0.351	0.968
2013.75	00000.000	0.338	1.001
2014.00	00000.000	0.348	0.971
2014.25	0.010	0.345	0.977
2014.50	00000.000	0.340	0.991
2014.75	00000.000	0.335	0.981

WELL: 34-10-3 (1890 - 2100)

DATE: 24OCT79/ILP

DEPTH	VSH	PHIF	SW
2015.00	00000.000	0.333	0.964
2015.25	00000.000	0.342	0.949
2015.50	00000.000	0.341	0.964
2015.75	00000.000	0.336	0.988
2016.00	0.002	0.332	1.014
2016.25	0.063	0.321	1.047
2016.50	0.096	0.312	1.074
2016.75	0.049	0.335	0.999
2017.00	0.074	0.323	1.021
2017.25	0.098	0.313	1.039
2017.50	0.084	0.307	1.024
2017.75	0.080	0.293	1.035
2018.00	00000.000	0.303	0.903
2018.25	00000.000	0.282	0.868
2018.50	00000.000	0.261	0.840
2018.75	00000.000	0.250	0.837
2019.00	0.077	0.235	1.125
2019.25	0.114	0.259	1.287
2019.50	0.114	0.294	1.137
2019.75	0.113	0.316	1.059
2020.00	0.048	0.335	1.017
2020.25	0.064	0.330	1.030
2020.50	0.045	0.334	1.024
2020.75	0.033	0.336	1.024
2021.00	0.095	0.325	1.050
2021.25	0.084	0.329	1.044
2021.50	0.044	0.341	1.018
2021.75	00000.000	0.343	1.007
2022.00	0.056	0.331	1.032
2022.25	0.094	0.321	1.051
2022.50	0.143	0.304	1.101
2022.75	0.080	0.331	1.036
2023.00	0.090	0.325	1.067
2023.25	0.081	0.314	1.090
2023.50	0.026	0.318	1.074
2023.75	00000.000	0.331	1.035
2024.00	0.012	0.326	1.056
2024.25	00000.000	0.333	1.045
2024.50	00000.000	0.333	1.053
2024.75	00000.000	0.340	1.041
2025.00	00000.000	0.335	1.055
2025.25	00000.000	0.329	1.072
2025.50	00000.000	0.325	1.080
2025.75	0.105	0.282	1.236
2026.00	0.013	0.295	1.213
2026.25	00000.000	0.206	1.763
2026.50	00000.000	0.112	3.284
2026.75	00000.000	0.041	1.738
2027.00	00000.000	0.017	0.800
2027.25	00000.000	0.026	0.621

WELL: 34-10-3 (1090 - 2100)

DATE: 24OCT79/ILP

DEPTH	VSH	PHIF	SW
2027.50	00000.000	0.034	2.192
2027.75	00000.000	0.062	1.437
2028.00	00000.000	0.085	2.815
2028.25	00000.000	0.107	3.621
2028.50	00000.000	0.160	2.377
2028.75	0.083	0.221	1.657
2029.00	0.070	0.309	1.167
2029.25	0.085	0.304	1.192
2029.50	0.100	0.300	1.217
2029.75	0.157	0.286	1.261
2030.00	0.163	0.289	1.249
2030.25	0.137	0.298	1.211
2030.50	0.162	0.287	1.229
2030.75	0.133	0.300	1.175
2031.00	0.147	0.305	1.137
2031.25	0.172	0.297	1.143
2031.50	0.108	0.306	1.117
2031.75	0.056	0.314	1.085
2032.00	0.042	0.322	1.063
2032.25	0.054	0.326	1.052
2032.50	0.054	0.331	1.037
2032.75	0.079	0.333	1.028
2033.00	0.117	0.322	1.046
2033.25	0.154	0.302	1.095
2033.50	0.104	0.312	1.070
2033.75	0.076	0.315	1.058
2034.00	0.073	0.313	1.058
2034.25	0.040	0.319	1.037
2034.50	0.044	0.318	1.037
2034.75	0.048	0.317	1.037
2035.00	0.104	0.313	1.039
2035.25	0.090	0.321	1.018
2035.50	0.049	0.341	0.968
2035.75	0.055	0.344	0.958
2036.00	0.059	0.342	0.966
2036.25	0.145	0.311	1.042
2036.50	0.231	0.281	1.120
2036.75	0.172	0.301	1.073
2037.00	0.119	0.320	1.027
2037.25	0.081	0.335	0.992
2037.50	00000.000	0.361	0.929
2037.75	0.071	0.349	0.958
2038.00	0.051	0.346	0.970
2038.25	0.051	0.341	0.987
2038.50	0.132	0.311	1.065
2038.75	0.139	0.311	1.062
2039.00	0.107	0.321	1.037
2039.25	0.075	0.313	1.097
2039.50	0.100	0.300	1.164
2039.75	0.125	0.257	1.402

WELL: 34-10-3 (1000 - 2100)

DATE: 24OCT79/ILP

DEPTH	VSH	PHIF	SW
2040.00	0.098	0.219	1.110
2040.25	0.072	0.223	1.070
2040.50	0.045	0.284	1.222
2040.75	0.083	0.327	1.037
2041.00	0.045	0.333	1.013
2041.25	0.068	0.327	1.015
2041.50	00000.000	0.355	0.951
2041.75	0.047	0.338	1.002
2042.00	0.025	0.350	0.980
2042.25	00000.000	0.356	0.973
2042.50	0.040	0.325	1.096
2042.75	0.059	0.301	0.988
2043.00	0.042	0.276	0.906
2043.25	0.025	0.258	0.815
2043.50	0.050	0.276	0.983
2043.75	0.101	0.313	1.115
2044.00	0.110	0.317	1.094
2044.25	0.032	0.345	1.016
2044.50	00000.000	0.361	0.967
2044.75	00000.000	0.361	0.968
2045.00	00000.000	0.360	0.969
2045.25	00000.000	0.370	0.944
2045.50	0.014	0.356	0.977
2045.75	0.002	0.355	0.979
2046.00	0.128	0.298	1.141
2046.25	0.112	0.300	1.135
2046.50	00000.000	0.341	1.004
2046.75	0.199	0.279	1.154
2047.00	0.150	0.294	1.104
2047.25	0.102	0.305	1.057
2047.50	0.053	0.314	1.020
2047.75	0.078	0.311	1.006
2048.00	0.090	0.316	1.010
2048.25	0.051	0.323	1.019
2048.50	0.021	0.330	0.996
2048.75	00000.000	0.335	0.979
2049.00	00000.000	0.322	1.018
2049.25	0.003	0.247	1.414
2049.50	0.009	0.171	2.178
2049.75	0.047	0.106	1.283
2050.00	00000.000	0.134	0.599
2050.25	00000.000	0.133	0.907
2050.50	00000.000	0.154	2.189
2050.75	0.037	0.230	1.506
2051.00	0.094	0.300	1.157
2051.25	0.082	0.304	1.171
2051.50	0.039	0.316	1.152
2051.75	00000.000	0.352	1.056
2052.00	00000.000	0.353	1.052
2052.25	00000.000	0.359	1.034

WELL: 34-10-3 (1250 - 2100)

DATE: 24OCT79/ILP

DEPTH	VSH	PHIF	SW
2052.50	00000.000	0.361	1.030
2052.75	0.057	0.345	1.066
2053.00	00000.000	0.366	1.009
2053.25	00000.000	0.358	1.028
2053.50	00000.000	0.354	1.040
2053.75	0.126	0.306	1.181
2054.00	0.183	0.269	1.259
2054.25	0.095	0.284	1.184
2054.50	0.008	0.287	1.098
2054.75	00000.000	0.283	1.078
2055.00	00000.000	0.193	1.543
2055.25	00000.000	0.103	1.239
2055.50	00000.000	0.099	0.954
2055.75	00000.000	0.122	2.764
2056.00	00000.000	0.176	1.943
2056.25	00000.000	0.230	1.512
2056.50	00000.000	0.249	1.397
2056.75	00000.000	0.299	1.162
2057.00	0.042	0.289	1.202
2057.25	0.123	0.300	1.130
2057.50	0.016	0.349	0.983
2057.75	0.093	0.319	1.057
2058.00	00000.000	0.343	0.978
2058.25	0.035	0.327	1.008
2058.50	00000.000	0.343	0.954
2058.75	0.026	0.328	0.989
2059.00	0.044	0.313	1.012
2059.25	0.027	0.320	0.966
2059.50	0.027	0.320	0.941
2059.75	0.027	0.310	0.949
2060.00	0.013	0.302	0.954
2060.25	00000.000	0.299	0.918
2060.50	0.057	0.280	1.004
2060.75	0.114	0.270	1.055
2061.00	0.165	0.267	1.031
2061.25	0.242	0.243	1.082
2061.50	0.267	0.240	1.068
2061.75	0.281	0.241	1.177
2062.00	0.265	0.257	1.245
2062.25	0.023	0.356	0.980
2062.50	00000.000	0.359	0.978
2062.75	00000.000	0.356	0.990
2063.00	00000.000	0.354	1.000
2063.25	0.031	0.341	1.041
2063.50	00000.000	0.339	1.092
2063.75	00000.000	0.314	1.200
2064.00	00000.000	0.206	1.886
2064.25	0.228	0.075	1.435
2064.50	0.267	0.130	1.679
2064.75	0.156	0.228	1.463

WELL: 34-10-3 (1890 - 2100)

DATE: 24OCT79/ILP

DEPTH	VSH	PHIF	SW
2065.00	0.044	0.325	1.030
2065.25	00000.000	0.339	0.982
2065.50	00000.000	0.343	0.960
2065.75	0.109	0.296	1.086
2066.00	0.185	0.288	1.078
2066.25	0.159	0.294	1.140
2066.50	0.073	0.325	1.054
2066.75	00000.000	0.351	0.979
2067.00	00000.000	0.358	0.954
2067.25	00000.000	0.360	0.941
2067.50	00000.000	0.356	0.943
2067.75	0.039	0.342	0.975
2068.00	0.065	0.329	1.005
2068.25	0.050	0.330	0.985
2068.50	0.032	0.334	0.958
2068.75	0.055	0.322	0.970
2069.00	0.018	0.334	0.926
2069.25	0.046	0.324	0.938
2069.50	0.140	0.288	1.016
2069.75	0.158	0.287	0.998
2070.00	0.176	0.286	0.980
2070.25	0.217	0.271	1.033
2070.50	0.195	0.272	1.053
2070.75	0.195	0.268	1.084
2071.00	0.099	0.304	1.002
2071.25	0.101	0.309	1.000
2071.50	0.184	0.281	1.027
2071.75	0.259	0.253	1.056
2072.00	0.277	0.235	1.138
2072.25	0.183	0.270	1.062
2072.50	0.166	0.289	1.018
2072.75	0.203	0.279	1.019
2073.00	0.308	0.234	1.117
2073.25	0.317	0.228	1.117
2073.50	0.403	0.194	1.187
2073.75	0.378	0.212	1.098
2074.00	0.313	0.238	1.048
2074.25	0.353	0.228	1.080
2074.50	0.323	0.232	1.098
2074.75	0.201	0.276	1.048
2075.00	0.219	0.290	1.044
2075.25	0.207	0.287	1.042
2075.50	0.185	0.287	1.037
2075.75	0.249	0.255	1.098
2076.00	0.255	0.249	1.089
2076.25	0.228	0.257	1.042
2076.50	0.250	0.244	1.073
2076.75	0.332	0.219	1.122
2077.00	0.398	0.201	1.148
2077.25	0.453	0.184	1.168

WELL: 34-10-3 (1890 - 2100)

DATE: 24OCT79/ILP

DEPTH	VSH	PHIF	SW
2077.50	0.486	0.170	1.199
2077.75	0.486	0.170	1.191
2078.00	0.428	0.188	1.173
2078.25	0.431	0.179	1.234
2078.50	0.403	0.186	1.212
2078.75	0.381	0.193	1.182
2079.00	0.451	0.174	1.198
2079.25	0.453	0.173	1.181
2079.50	0.426	0.185	1.130
2079.75	0.413	0.191	1.114
2080.00	0.441	0.181	1.146
2080.25	0.445	0.175	1.149
2080.50	0.538	0.139	1.226
2080.75	0.531	0.146	1.173
2081.00	0.479	0.163	1.123
2081.25	0.468	0.163	1.116
2081.50	0.451	0.165	1.103
2081.75	0.533	0.138	1.145
2082.00	0.604	0.112	1.184
2082.25	0.573	0.122	1.169
2082.50	0.619	0.116	1.148
2082.75	0.586	0.124	1.150
2083.00	0.609	0.120	1.143
2083.25	0.587	0.135	1.089
2083.50	0.523	0.148	1.091
2083.75	0.523	0.135	1.166
2084.00	0.619	0.101	1.244
2084.25	0.703	0.082	1.239
2084.50	0.552	0.131	1.151
2084.75	0.401	0.182	1.040
2085.00	0.426	0.182	1.017
2085.25	0.451	0.158	1.097
2085.50	0.528	0.139	1.104
2085.75	0.475	0.153	1.149
2086.00	0.494	0.164	1.133
2086.25	0.513	0.154	1.123
2086.50	0.664	0.079	1.336
2086.75	0.938	00000.000	1.397
2087.00	0.986	00000.000	1.300
2087.25	0.843	0.033	1.277
2087.50	0.813	0.013	1.438
2087.75	0.706	0.059	1.321
2088.00	0.599	0.103	1.227
2088.25	0.695	0.058	1.328
2088.50	0.781	0.010	1.496
2088.75	0.781	0.014	1.510
2089.00	0.884	0.014	1.299
2089.25	0.935	0.003	1.314
2089.50	0.782	0.053	1.250
2089.75	0.762	0.059	1.234

WELL: 34-10-3 (1890 - 2100)

DATE: 24OCT79/ILP

DEPTH	VSH	PHIF	SM
2090.00	0.581	0.124	1.098
2090.25	0.089	0.260	0.843
2090.50	0.076	0.220	1.000
2090.75	0.299	0.135	1.456
2091.00	0.522	0.097	1.480
2091.25	0.654	0.086	1.375
2091.50	0.732	0.045	1.399
2091.75	0.873	0.008	1.392
2092.00	1.000	0.001	1.000
2092.25	0.994	00000.000	1.179
2092.50	1.000	0.001	1.000
2092.75	0.912	0.025	1.171
2093.00	0.754	0.087	1.068
2093.25	0.738	0.089	1.080
2093.50	0.791	0.055	1.201
2093.75	0.977	0.011	1.147
2094.00	1.000	0.001	1.000
2094.25	1.000	0.001	1.000
2094.50	0.664	0.105	1.120
2094.75	0.700	0.074	1.269
2095.00	0.942	0.018	1.205
2095.25	0.937	0.035	1.183
2095.50	0.894	0.050	1.169
2095.75	0.845	0.067	1.155
2096.00	0.868	0.053	1.142
2096.25	0.771	0.051	1.266
2096.50	0.732	0.038	1.446
2096.75	0.722	0.016	1.702
2097.00	0.743	0.048	1.317
2097.25	0.820	0.028	1.392
2097.50	0.853	0.056	1.191
2097.75	0.918	0.027	1.256
2098.00	0.882	0.034	1.242
2098.25	0.820	0.069	1.158
2098.50	0.827	0.072	1.155
2098.75	0.777	0.081	1.203
2099.00	0.777	0.057	1.401
2099.25	0.860	0.009	1.690
2099.50	0.943	00000.000	1.427
2099.75	0.949	0.005	1.273
2100.00	0.863	0.035	1.207

COMPUTERIZED LOG INTERPRETATION

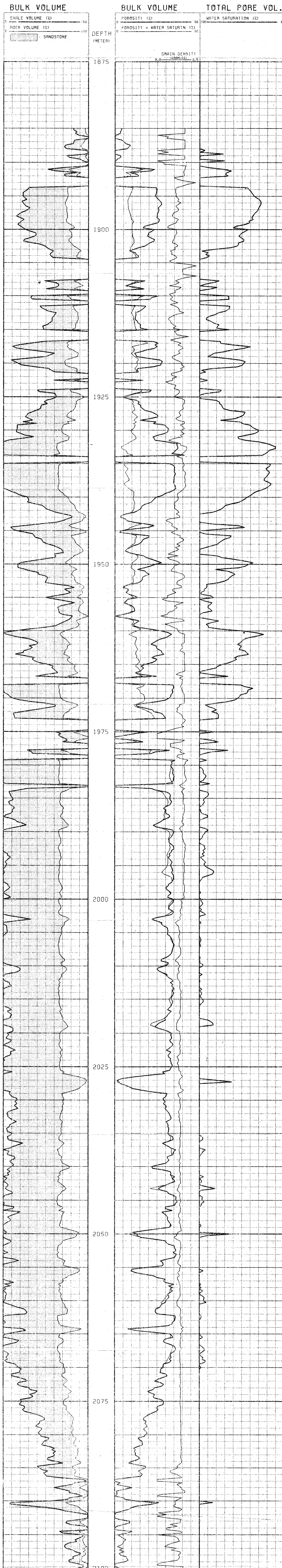
statoil
Den norske stats oljeselskap a.s.
PROGRAM: PG0377 VERSATEC
VERSION: 1 (28APR78) +
BY: COP/DB-SEKSJONEN

WELL: 34/10-3
FIELD: WILDCAT
ENGINEER: J. RAFDAL
DATE: 22 OCT 1979

DEPTH INTERVAL: 1885 - 2100 (METER)
RKB: 25.0 (METER) SCALE: 1 : 200
PERMANENT DATUM: MSL
DEPTH REFERENCE: 1SF/SONIC

INPUT PARAMETERS:

DEPTH INTERVAL	RW	RHF	RSH	RHOBSH	PHINSH	DTSH	FORM. TEMP. (DEG. F)
1885 - 2100	0.073	0.130	1.50	2.35	0.45	120.0	160



COMPUTERIZED LOG INTERPRETATION

statoil
 Den norske stats
 oljeselskap a.s.

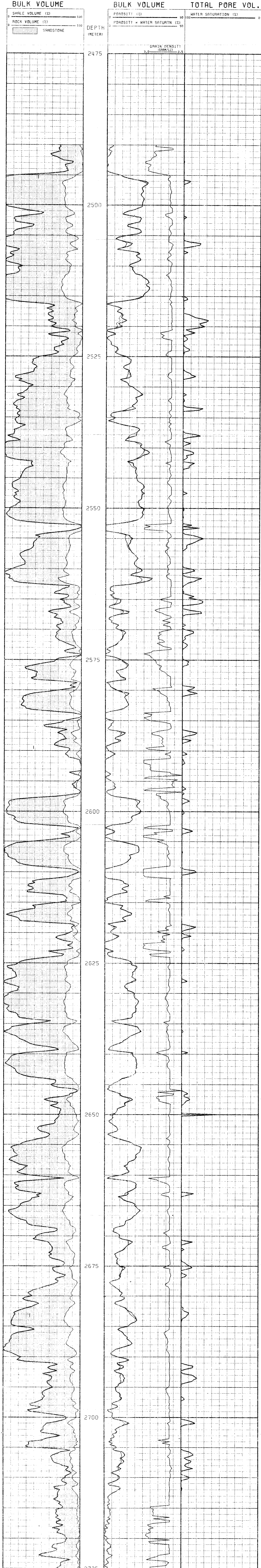
PROGRAM: PG0377 VERSATEC
 VERSION: 1 (28APR78) +
 BY: COP/DB-SEKSJONEN

WELL: 34/10-3
 FIELD: WILDCAT
 ENGINEER: J. RAFDAL
 DATE: 22 OCT 1979

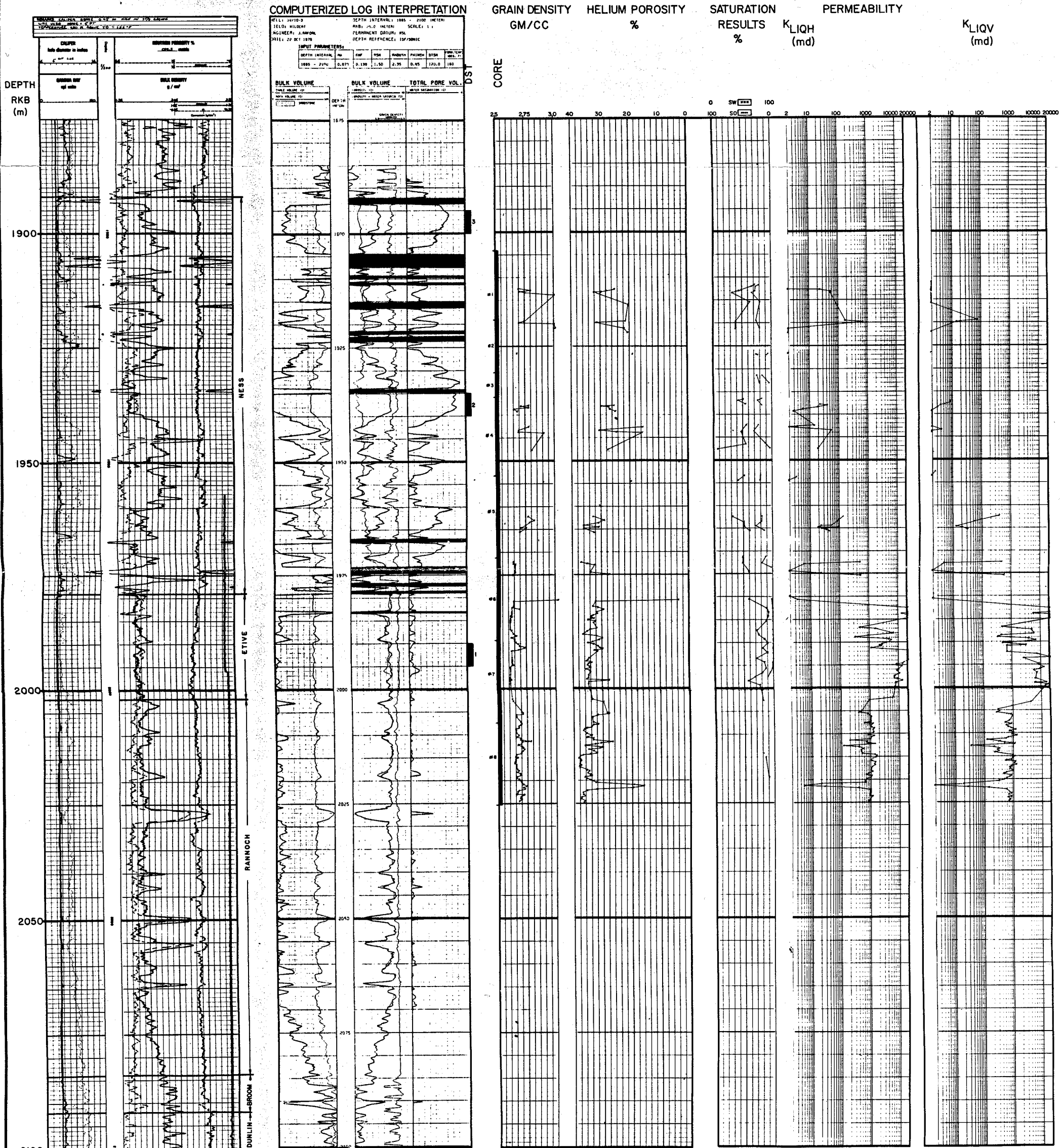
DEPTH INTERVAL: 2490 - 2725 (METER)
 RKB: 25.0 (METER) SCALE: 1 : 200
 PERMANENT DATUM: MSL
 DEPTH REFERENCE: 15F/SONIC

INPUT PARAMETERS:

DEPTH INTERVAL	RW	RMF	RSH	RHOBSH	PHINSH	DTSH	FORM. TEMP (DEG. F)
2490 - 2725	0.062	0.105	2.00	2.45	0.45	100.0	185



SUMMARY LOG WELL 34/10-3 BRENT FORMATION



DST DATA

DST # 1
Interval : 1990 - 1995
Choke : 20/64"
Production : 2600 STB/D
Water

DST # 2
Interval : 1935 - 1940
Choke : (20+14)/64"
Production : 2850 STB/D (Oil)
1167 * 10³ SCF/D (Gas)

DST # 3
Interval : 1895 - 1900
Choke : 10/64"
Production : 650 STB/D (Oil)
sand plugging

Location
61°12' 49.5" N
02°11' 55.1" E

KBE levation = 25 m
Water depth = 179 m

Spudded: 14. March 1979
Rig released: 8. Juni 1979
Status: Plugged and abandoned

Oct. : 1979
PE / EVALTEK
JRa/AM

