APPENDIX 2, VOL 2 OF WCR

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INTERPRETATIVE

Log Analysis of
The Hydrocarbon Bearing Formations
of the Latrobe Group in
Anemone-1,1A

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1. SUMMARY AND CONCLUSIONS

A total of 2090m of wireline logs, covering the entire Latrobe Group at Anemone-1,1A have been evaluated. The analysis covers the interval from 2670m (5m above Top Latrobe Unconformity) to 4775m (TD).

The conclusions are:

(a) The presence of hydrocarbons has been confirmed in three zones within the Campanian, and one zone in the Santonian intervals. These zones and their characteristics are listed in Table 1 below.

(b) Two intervals, both in the Campanian, show major seal potential. The first, from 4144-4198m, is a shale/siltstone unit which seals the gas/condensate bearing Campanian "1" Sandstones. The second is also a shale/siltstone unit from 4244m to 4525m and seals the gas/condensate bearing Santonian Sandstones.

(c) Abundant siltstone units 5-20m thick occur in the upper Campanian section between 3425m to 3605m. These are interbedded with sandstones with good reservoir potential. Assuming that hydrocarbon charging is not a problem, the lack of hydrocarbons in any of these sandstones could suggest that the argillaceous units lack lateral continuity, giving them a poor seal potential.

(d) The porosity versus depth plot (Fig. 1) shows that moderate effective porosity of 17% can be expected down to 4250m in favourable sandy facies. The porosities in the Santonian Sandstone have been ignored because of petrographic evidence suggesting that a major fraction of the effective porosity in these sands is secondary in nature.

2. INTRODUCTION

This report presents the results of Petrofina's log analysis over the entire Latrobe Group Section in Anemone-1,1A. The aims of this work were to assess the reservoir and seal potential of the Latrobe Group at Anemone-1,1A, with special emphasis on the zones with hydrocarbon shows detected while drilling.

The computations were performed using LOGCALC 2 software, using environmentally corrected wireline logs. As with the previous Petrofina log analysis performed on wells in the VIC/P20 area (Tringham and Questiaux, 1988; Questiaux, 1989), a shaley sand model was used with water saturations derived from the Indonesian equation.

Reservoir parameters were selected separately for each zone and Rw values were automatically corrected during computation for temperature changes with depth. Results are presented on a zone by zone basis and include a summary of results for quick reference (Table 3). A listing of reservoir and log analysis parameters, and detailed tabulated results from each of the hydrocarbon bearing zones are included as Appendices 1 and 2. Graphic output logs of the results include a 1:500 scale display for the entire Latrobe Group (Encl. 1), and a 1:200 scale display of the four zones where hydrocarbon saturations have been observed and computed (Encls. 2 to 5).

The log quality is good down to 4520m, with few washouts or rugose hole sections. Below 4520m however, in the 6" diameter section, the hole was extremely washed out and the log quality is adversely affected. The MSFL and LDT logs for most part read mud properties, making the correction for

invasion impossible. Hence, Rt over this interval is equal to LLD corrected for borehole effects only. Similarly, the LDC could not be used for porosity determination, relying only on the CNL and Sonic logs over this interval.

No fewer than five intermediate logging runs were required to log the entire well, and as a result of overlap problems some gaps occur in the logs, but are mainly restricted to zones of little or no interest. Due to hole problem in the 6" section the upper 5m of the Santonian Sandstones, 4525-4530m, could not be logged with the LDT-CNL tool and logs are only available down to 4740m or 35m above TD.

3. METHOD

All log analysis calculations were done by computer using LOGCALC 2 software from Scientific Software-Intercomp Inc., Denver.

Briefly summarized below is the method employed for the log evaluation:

(i) The final edited logs received from Schlumberger at the end of the well were loaded into LOGCALC 2, and quality controlled.

(ii) The Gamma Ray, density and neutron logs were then corrected for borehole effects, and the resistivity logs corrected for invasion to give the true Rt.

(iii) Reservoir parameters were then selected for each zone, and by means of an iterative process, modified until results became internally consistent (good match between various porosity curves computed from the separate logs) and satisfied the constraints from the wellsite data (Vshale, mineralogy, hydrocarbon shows, etc.).

(iv) Where applicable, sensitivity runs were performed to evaluate the effect of parameter variations. Results from the sensitivity runs over the Campanian "2" Sandstones and the Santonian Sandstones are presented in Tables 4 and 5.

4. PARAMETERS, CUTOFFS AND ANALYSIS OPTIONS

The key reservoir parameters used in the log analysis are listed in Table 2 and the full list of parameters for the four hydrocarbon bearing zones are contained in Appendix 1.

4.1 Formation Water Resistivity (Rw)

No formation water samples were obtained for the first three zones analysed and Rw values therefore had to be indirectly derived. The only formation water sample collected was from the interval 4599m to 4652m during DST #1, providing an accurate Rw for the Santonian sandstone. For the other zones Rw were indirectly derived, using as a first appoximation, values similar to those from Angler-1, and then modified these until Ro and Rt curves closely matched in known water bearing sandstones. Rwa estimations were also considered in Rw determination. The output

logs (Encls. 1 to 5) show Ro and Rt plotted together in the same track. In water bearing sandstones these curves overlay each other, while in hydrocarbon bearing sandstones Rt reads higher than Ro, the separation between the two curves being a function of the hydrocarbon saturation. Table 2 lists the Rw values at the base of each zone.

4.2 Matrix and Reservoir Parameters

Selected matrix parameters range from 2.64 g/cc to 2.67 g/cc and 61 μs/ft to 52 μs/ft (Table 2). The variations in the matrix parameters reflect the variation in mineralogy within the sandstones. Preliminary petrographic work has indicated that the Latrobe Group sandstones at Anemone-1, like Angler-1, originate from a granitic source, and contain highly variable proportions of feldspars, micas and calcareous or dolomitic cement.

The shale and coal parameters were selected for each zone from the logs, while mud properties and temperatures were taken from the log headers. Bottom hole temperatures for each run were first corrected for static borehole conditions. Table 2 includes a list of the shale parameters for each zone.

4.3 Analysis

A shaley sand analysis was selected because of the complete gradation of sandstone to shale within the Latrobe Group. For the Intra-Campanian, Campanian "1" and Campanian "2" sandstones Vshale determinations were made using both the GR and Density Neutron cross-plots, with LOGCALC 2 selecting the lowest computed Vshale from either. Porosities were calculated using the three standard

porosity curves, while the effective porosity (Phie) was computed from the density neutron porosity and sonic porosity curves unless either of these are flagged by bad hole condition. The computed porosity curves, together with Phie, are displayed on the output logs (Encls. 1 to 5). Because of the extremely bad hole conditions in the Santonian Sandstones only the CNL and Sonic logs were used for porosity determination.

4.4 Cutoffs

Cutoff values used were:

(i) porosity > 6%; Vshale < 40% for gross reservoir sandstone

(ii) porosity > 6%; Vshale < 40% and Sw < 50% for net reservoir sandstone in the Intra-Campanian, Campanian "1" and Campanian "2" sandstones

(iii) porosity > 6%; Vshale < 40% and Sw < 65% for net reservoir sandstone in the Santonian sandstone

5. LOG ANALYSIS RESULTS

Overall Anemone-1,1A contains 662.8m of gross reservoir, representing a 32% gross sandstone/gross interval ratio. Average porosities by zone range from 11.4% to 23.2%. Four zones, listed in Table 1, were found to be hydrocarbon bearing with only the lower two zones containing significant amounts of net hydrocarbon sandstones. Results for each zone are summarised in Tables 1 and 3 while detailed listings are included in Appendix 2. Similarly reservoir parameters used in the computation are summarised in Table 2 and listed in detail in Appendix 1.

5.1 Intra-Campanian Sandstone (Zone 1; 3325-3386m)

This interval of thinly bedded sandstones, siltstones and coal stringers had gas shows of 0.4% to 0.6% total gas observed in the sandstones with hydrocarbon iC4 the heaviest component detected in the gas. No fluorescence or cut was recorded in the cuttings. The log analysis indicates the presence of a 5m thick sandstone from 3363-3368m with an Sw of around 60%, while the other sandstones show near 100% water saturation (Encl. 2). The RFT pressure measurements over this interval show a water gradient of 0.441 psi/ft. The conclusions are that the hydrocarbon shows are related to residual gas sourced in situ from the abundant coal beds. Maturity levels at that depth are of the order of 0.47% Ro which is sufficient to generate hydrocarbons if exudatinite type macerals are present in the coals, as was the case in the lower Maastrichtian section at Angler-1.

5.2 Campanian "1" Sandstones (Zone 2; 4042-4140m)

Moderate gas shows of 0.1% to 0.4% total gas were recorded over this interval with an isolated peak of 1.5%. This gas was overall dry with the heaviest hydrocarbons detected being 0.07% of C3, associated with the 1.5% gas peak. Pale yellow to dull orange fluorescence with poor to good yellow cut was noted both in siltstones and sandstones within the upper 20m of this interval.

The log analysis indicates water saturation of around 70% in all the sandstones, confirming the presence of hydrocarbons. RFT results on the other hand show a clear water gradient of 0.440 psi/ft. The conclusions are that the hydrocarbons shows in these sandstones are similarly to zone 1, related to residual hydrocarbon saturations.

5.3 Campanian "2" Sandstones (Zone 3; 4198-4244m)

This sequence of interbedded sandstones and siltstones is the shallowest interval in Anemone-1,1A to contain significant net reservoirs. The sandstones produced good gas shows of up to 3% total gas while drilling, with C3 the heaviest hydrocarbon detected. Weak pale yellow to gold fluorescence yielding very slow yellow cut was noted in some of the sandstones.

The RFT measurements show a gas gradient of 0.184 psi/ft, which when extrapolated to a water line indicate a possible GWC at 4331m. 31.25 ft^3 of gas (C1 = 77%; C2 = 13%; C3 = 6.6%, iC4 = 0.4%; nC4 = 0.5%), 5.9 litres of mud filtrate and 150 ml of light oil emulsion was collected at 4230.5m from the 2 3/4 gallon chamber of the RFT tool.

The presence of gas as the hydrocarbon phase is confirmed by the density neutron cross-plot (Figs. 2 and 3) and a dew point of 5180 psig established from PVT analysis on the segregated sample.

Unlike the upper zones, there was a significant discrepancy between the sonic and density porosity curves when using standard sandstone matrix parameters. The sonic porosity was significantly higher than the density porosity, requiring a /\t matrix of 57 μsec/ft and a Rho matrix of 2.67 g/cc to match the two porosity traces.

Preliminary results from petrographic work on the sandstone cuttings in this interval, indicate a mineralogical assemblage consistent with a granitic source. This produces a complex mineralogy, rich in orthoclase feldspars, micas and clay minerals. An M + N plot (Fig. 4) shows how the bulk of the points plot well outside the main mineralogical end points in a sector which indicates a strong shale or clay effect on the matrix parameters. Because of this uncertainty in the matrix parameters, 15 sensitivity runs were performed, using /\t matrix and /\Rhob matrix conformable with a matrix made up essentially of a mixture of feldspars and quartz. Rw was also varied using a pessimistic 0.19 ohm-m (10,000 ppm NaCl) and an optimistic 0.085 ohm-m. Results show a wide range of net reservoir thickness from 3.7m to 20.1m (Table 4), but a narrower range of porosities and saturations (porosities: 11.4% to 14.4%; Sw: 43.5% to 36.2%).

5.4 Santonian Sandstones (Zone 4; 4525-4775m)

This interval was encountered both in Anemone-1 and the sidetrack Anemone-1A. In Anemone-1 the mud gas increased rapidly from 0.08% C1 to 15% C1 and 0.1% C2 when entering these sandstones. At 4585m the mud gas increased further to around 30% C1; 3% C2; 0.02% C3 and traces iC4. Bright green to yellow fluorescence with fast to instantaneous bluish white cut occurred throughout the interval 4525-4609m (Anemone-1 TD). Small amounts of light oil/condensate were found in the drilling mud during circulation after reaching TD. The marked change in the gas composition below 4585m and the presence of the liquid hydrocarbon in the mud was interpreted as a possible gas-oil contact at that level.

Gas shows were similar in Anemone-1A, but lower than Anemone-1 due to the higher mud density used during drilling. C3 was the heaviest hydrocarbon recorded apart from an iC4 peak of 0.1% at 4586m, thought to be the result of swabbing. Below 4620m gas values dropped sharply (C1 = 0.3% - 0.02%; no C2 +) due to an increase in mud weight (1.48 SG). An isolated gas peak of 20% total gas was recorded in a 3m thick sandstone unit at 4734m. Heavier hydrocarbons up to 0.03% iC4 were recorded with the peak. Fluorescence and cut were similar to those found in Anemone-1, but extended only from 4525-4585m and again from 4630-4645m.

In view of the good hydrocrabon shows and the high hydrocarbon saturations computed from the logs it was decided to perform a production test on these sandstones. Two DSTs were carried out and results are briefly summarized below:

DST #1

Perforations: 4599-4618m
4629-4652m

Results: Flow Rates

1. Condensate : 120-150 bpd (gravity 0.78 SG)
2. Water : 120-140 bpd (NaCl = 10,000 ppm)
3. Gas : 0.8-1.0 mmscf (gravity = 0.94) (air = 1) (C1/Ct = ±80%)

The conclusions drawn from DST #1 were:

(i) Sandstones have very low permeability

(ii) Hydrocarbon saturations are close to residual saturations, resulting in a mixed production of gas/condensate and water.

(iii) Formation water salinity is much lower than originally expected.

(iv) The depth and high pressure in the reservoir (9600-9900 psi at 4600m) and the low mud weights used while drilling this section, contributed to misleadingly high mud gas readings.

DST #2

Perforations: 4535-4545m (DST #1 perforation isolated by bridge plug)

Results: Flow Rates

1. Water : 60 bpd
2. Gas : Traces of gas at surface
3. Condensate : None

An important result from DST #1 was the unusual freshness of the formation water. Since the Santonian Sandstones are interpreted as a marine sequence and that marine sandstones higher up in this well and in the other VIC/P20 wells usually contain saline formation water, an Rw of 0.07 was used in the log evaluation before the test.

Using a cutoff of Sw < 65%; Vshale of < 40% and Phie < 6%, yielded net reservoir thickness of 90m; with an average porosity of 16.5% and an average Sw of 40%. This result seemed reasonable in view of the excellent shows noted while drilling. However, using the true Rw of 0.16 ohm-m at the reservoir temperature and using a Δt matrix of 61 μsec/ft which is equivalent to a $\pm$ 50% orthoclase and 50% quartz matrix as indicated from the petrography, yielded the much lower results listed in Table 1. Six sensitivity runs, using various Δt matrix equivalent to a range of possible ratios of orthoclase and quartz in the matrix yeilded 12.8m to 38.6m of net reservoir thickness (Table 5) with a porosity range of 17.6% to 18.1% and a Sw range of 54.2% to 55.3%.

It must be noted that the logs are badly affected by the hole conditions. This made it impossible to correct the resistivity curve for invasion, while the density log was so badly affected that it could not be used in the computations. The sonic log was similarly affected by the hole condition, resulting in some anomalously low $\underline{/\backslash}t$ readings in the badly washed out sections and thus yielding relatively high porosities. This problem is clearly illustrated in a 5m thick sandstone from 3530-3535m (Encl. 5) where the sonic log is essentially reading mud and the computed porosities are abnormally high. Preliminary results from the petrographic studies on cuttings samples suggest that a large fraction of the effective porosity is secondary porosity resulting from the leaching of feldspars. In the absence of core data, the log evaluation will remain ambiguous in terms of porosity and water saturation.

6. REFERENCES

QUESTIAUX, J.M. (1989). Log Analysis of The Latrobe Group in Anger-1
Petrofina Exploration Australia S.A., Unpublished Company Report GL/89/023

TRINGHAM, M.E. and QUESTIAUX, J.M. (1988). A Log Analysis of the Latrobe and Strzelecki Group in the Wells of the VIC/P20 Area
Petrofina Exploration Australia S.A., Unpublished Company Report GL/88/006

Tables 1, 2, 3, 4 and 5 to follow.

TABLE 1

ANEMONE-1,1A SUMMARY OF HYDROCARBON BEARING ZONES

INTERVAL	RESERVOIR TYPE	HYDROCARBON TYPE	COMMENTS
3325-3386m Intra-Campanian Sandstone	Thinly bedded sandstones within a siltstone and coal sequence	gas	Low hydrocarbon saturations. Moderate gas shows while drilling. Average porosity = 20.7% Average Sw = 82.4% RFT indicates a water gradient of 0.441 psi/ft
4042-4140m Campanian "1" Sandstone	Interbedded sequence of sandstones and siltstones	gas	Low hydrocarbon saturations. Moderate gas shows while drilling. Pale yellow fluorescence with poor to good cut in siltstones and sandstones within upper 20m of section. Average porosity = 13.7% Average Sw = 75.3% RFT indicates water gradient of 0.440 psi/ft
4198-4244m Campanian "2" Sandstone	Interbedded sequence of sandstones and siltstones	gas/ condensate	18.8m of net gas reservoir Sandstone. Average porosity = 12.8%, Sw = 35.7%. RFT shows gas gradient of 0.184 psi/ft with an extrapolated GWC @ 4331m. RFT fluid sample @ 4230.5m recovered 31.25ft^3 gas, 5.9 litres mud filtrate and 150ml light oil emulsion
4525-4775m Santonian Sandstone	Thickly bedded sandstones with minor siltstone interbeds	gas/ condensate	24.2m of net reservoir sandstone. Average porosity = 17.7%, Sw = 55.2%. Strong gas shows while drilling. Condensate, gas and water produced from DST #1 (4599-4618m and 4629-4652m). Only water produced from DST #2 (4535-4545m)

TABLE 2
ANEMONE-1,1A ZONATION AND KEY RESERVOIR PARAMETERS

ZONE	INTERVAL (m) Top	Bottom	PARAMETER SET NAME	Rw @ BOTTOM OF ZONE (ohm-m)	GR Matrix (API)	GR Shale (API)	Rho Shale (g/cc)	PhiN Shale (pu)	/\t Shale (µs/ft)	Res Shale (ohm-m)	Rho Matrix (g/cc)	/\t Matrix (µs/ft)	Cp	Rho Fluid (g/cc)
PALAEOCENE	2677	2760	PALC	0.12	70	120	2.53	33	90	2.2	2.62	58	1.4	1
UPPER T.LONGUS	2760	2810	MAAS1	0.12	70	120	2.53	33	90	2.2	2.62	58	1.3	1
MIDDLE T.LONGUS	2810	2850	MAAS2	0.11	65	150	2.50	27	82	9	2.66	58	1	1
LOWER T.LONGUS	2850	3325	MAAS3	0.13	50	150	2.48	27	79	9	2.66	56	1	1
INTRA-CAMP SST (Z1)	3325	3386	Z1	0.10	50	155	2.50	21	79	9	2.67	57	1	1
INTRA-CAMPANIAN	3386	3517	CAMP1	0.10	60	155	2.55	25	76	12	2.66	56	1	1
INTRA-CAMPANIAN	3517	3790	CAMP2	0.10	65	160	2.55	24	75	12	2.66	55	1	1
INTRA-CAMPANIAN	3790	3830	CAMP3	0.12	60	155	2.50	24	75	15	2.67	57	1	1
INTRA-CAMPANIAN	3830	4025	CAMP4	0.12	48	150	2.50	20	65	19	2.67	57	1	1
CAMPANIAN "1" SST (Z2)	4025	4198	Z2	0.10	50	155	2.50	21	79	9	2.67	57	1	1
CAMPANIAN "2" SST (Z3)	4198	4250	Z3	0.10	47	170	2.60	22	71	20	2.67	60	1	0.9
UPPER SANTONIAN	4250	4525	SANT1	0.10	47	160	2.58	25	73	17	2.67	60	1	1
SANTONIAN SST (Z4)	4525	4740	Z4	0.16	38	180	2.73	15	65	25	-	61	1	0.95

Cp = Compaction factor

TABLE 3

ANEMONE-1,1A SUMMARY OF LOG ANALYSIS RESULTS

ZONE	INTERVAL (m) Top	INTERVAL (m) Bottom	THICKNESS (m)	GROSS RESERVOIR THICKNESS (m)	GROSS RESERVOIR THICKNESS/GROSS INTERVAL THICKNESS	AVERAGE PHIE (%)	AVERAGE Sw (%)	NET RESERVOIR THICKNESS (m)	AVERAGE PHIE (%)	AVERAGE Sw (%)
PALAEOCENE	2677	2760	83	4.0	0.05	22.5	97.2	0	-	-
UPPER T.LONGUS	2760	2810	50	25.9	0.52	23.2	99.9	0	-	-
MIDDLE T.LONGUS	2810	2850	40	16.8	0.42	17.4	99.0	0	-	-
LOWER T.LONGUS	2850	3198	348	140.2	0.40	19.4	96.8	0	-	-
UPPER CAMPANIAN (UK4)	3198	3325	127	45.1	0.36	20.4	97.0	0	-	-
INTRA-CAMPANIAN SST (Z1)	3325	3386	61	11.1	0.18	20.7	82.7	0.8	22.3	44.9
INTRA-CAMPANIAN (UK3/T.LILLEI)	3386	3920	534	216.4	0.40	15.1	95.9	0	-	-
INTRA-CAMPANIAN (UK2/SENECTUS)	3920	4042	122	16.8	0.14	13.6	88.9	0	-	-

TABLE 3 (continued)

ANEMONE-1,1A SUMMARY OF LOG ANALYSIS RESULTS

ZONE	INTERVAL (m) Top	INTERVAL (m) Bottom	THICKNESS (m)	GROSS RESERVOIR THICKNESS (m)	GROSS RESERVOIR THICKNESS/GROSS INTERVAL THICKNESS	AVERAGE PHIE (%)	AVERAGE Sw (%)	NET RESERVOIR THICKNESS (m)	AVERAGE PHIE (%)	AVERAGE Sw (%)
CAMPANIAN "1" SST (Z2)	4042	4140	98	51.4	0.52	13.9	75.6	1.7	11.6	45.0
INTRA-CAMPANIAN (UK2/SENECTUS)	4140	4198	58	0	-	-	-	0	-	-
CAMPANIAN "2" SST (Z3)	4198	4244	46	24.6	0.53	11.4	41.8	18.8	12.8	35.7
UPPER SANTONIAN	4244	4525	281	0	-	-	-	0	-	-
SANTONIAN SST (Z4)	4525	4740*	215	110.5	0.51	13.8	73.3	24.2	17.7	55.2

* SANTONIAN SST calculations done to 4740m only; equivalent to maximum depth at which valid wireline logs are available.

TABLE 4

ANEMONE-1,1A RESULTS OF SENSITIVITY RUN IN GAS ZONE OF CAMPANIAN '2' SANDSTONE (4198-4244m)

Cut offs: Sw <50%; Vshale <40%; Phie >6%

RUN #	Rw @ BOTTOM OF ZONE (ohm-m)	Rho Fluid (g/cc)	/\t Mat (µs/ft) (ohm-m)	Rhob Mat (g/cc)	Thickness of Net Sandstone (m)	Average Porosity (%)	Average Sw (%)
1	0.085	0.95	60	2.60	14.9	10.9	37.3
2	0.085	0.95	59	2.64	18.3	11.3	36.2
3	0.085	0.95	57	2.67	20.6	11.9	35.0
4	0.085	0.95	56	2.68	21.3	12.7	34.7
5	0.085	0.95	55	2.70	22.1	12.9	33.7
6	0.10	0.95	60	2.60	11.7	11.4	39.0
7	0.10	0.95	59	2.64	15.0	11.8	38.1
8 *	0.10	0.95	57	2.67	18.4	12.8	37.5
9	0.10	0.95	56	2.68	19.4	13.0	37.2
10	0.10	0.95	55	2.70	20.1	13.3	36.2
11	0.19	0.95	60	2.60	3.7	13.7	43.3
12	0.19	0.95	59	2.64	6.5	13.8	43.5
13	0.19	0.95	57	2.67	7.9	14.2	42.2
14	0.19	0.95	56	2.68	8.5	14.3	42.1
15	0.19	0.95	55	2.70	10.8	14.4	42.0

* Run #8 taken as most likely case

Rw = 0.19 @ 236°F, is equivalent to a water salinity of 10,000 ppm (same salinity as for Santonian Sandstones)

TABLE 5

ANEMONE-1,1A RESULTS OF SENSITIVITY RUN IN GAS ZONE OF SANTONIAN SANDSTONE (4325-4740m)

Cut offs: Sw <65%; Vshale <40%; Phie >6%

RUN #	Rw @ BOTTOM OF ZONE (ohm-m)	Rho Fluid (g/cc)	/\t Mat (µs/ft) (ohm-m)	Thickness of Net Sandstone (m)	Average Porosity (%)	Average Sw (%)
1	0.16	0.95	65	12.8	18.1	54.2
2	0.16	0.95	63	16.9	17.9	54.3
3 *	0.16	0.95	61	24.2	17.6	55.1
4	0.16	0.95	59	33.8	17.5	55.4
5	0.16	0.95	58	38.6	17.6	55.3

* Run #3 taken as most likely case

Run #1 equivalent to ±70% ORTHOCLASE and 30% QUARTZ

Run #5 equivalent to ±20% ORTHOCLASE and 80% QUARTZ

figures 1, 2, 3 and 4 to follow.

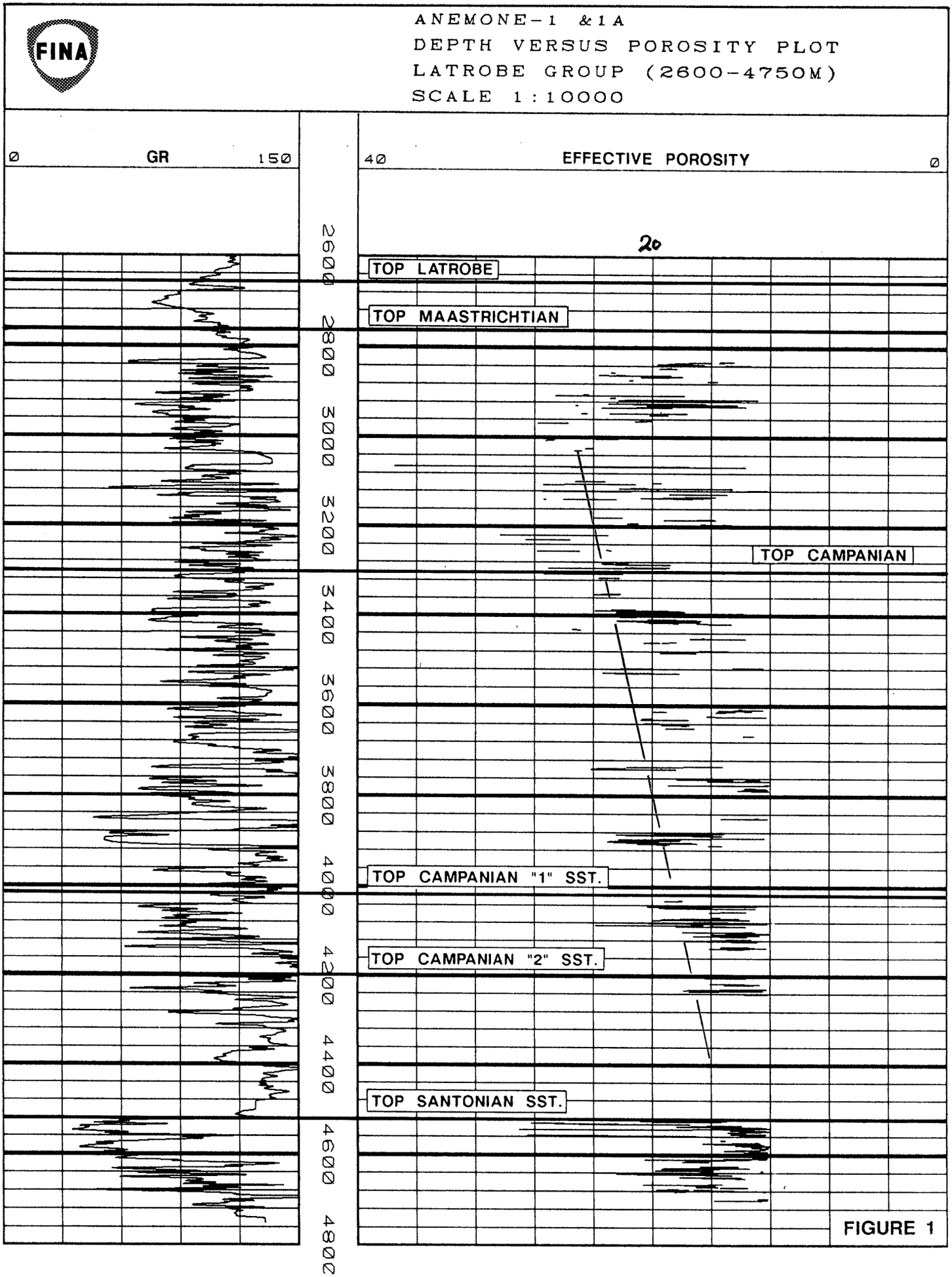

FINA
ANEMONE-1 &1A
DEPTH VERSUS POROSITY PLOT
LATROBE GROUP (2600-4750M)
SCALE 1:10000
Ø
GR
150
40
EFFECTIVE POROSITY
Ø
20
2600
2800
3000
3200
3400
3600
3800
4000
4200
4400
4600
4800
TOP LATROBE
TOP MAASTRICHTIAN
TOP CAMPANIAN
TOP CAMPANIAN "1" SST.
TOP CAMPANIAN "2" SST.
TOP SANTONIAN SST.

FIGURE 1

FIGURE 2

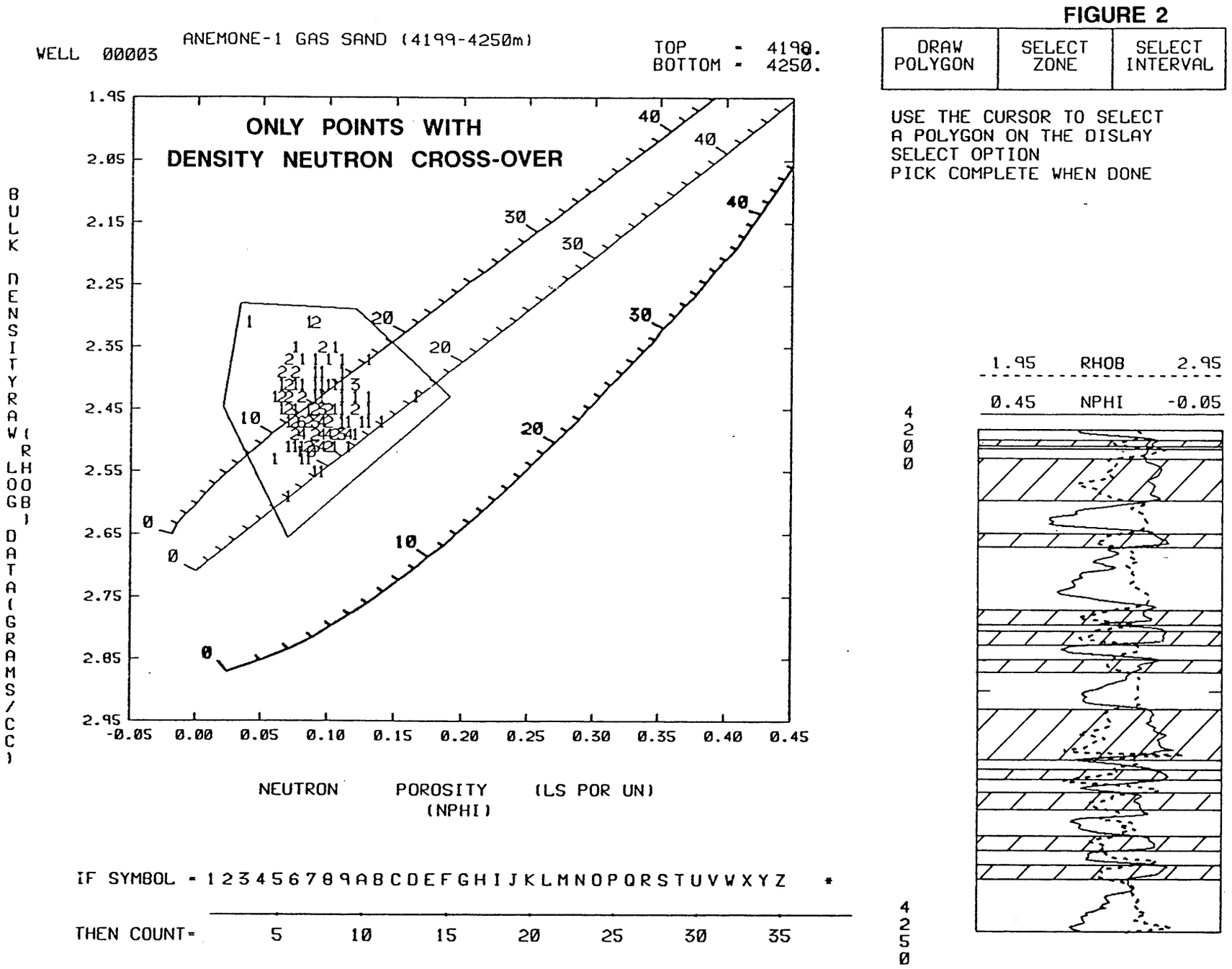
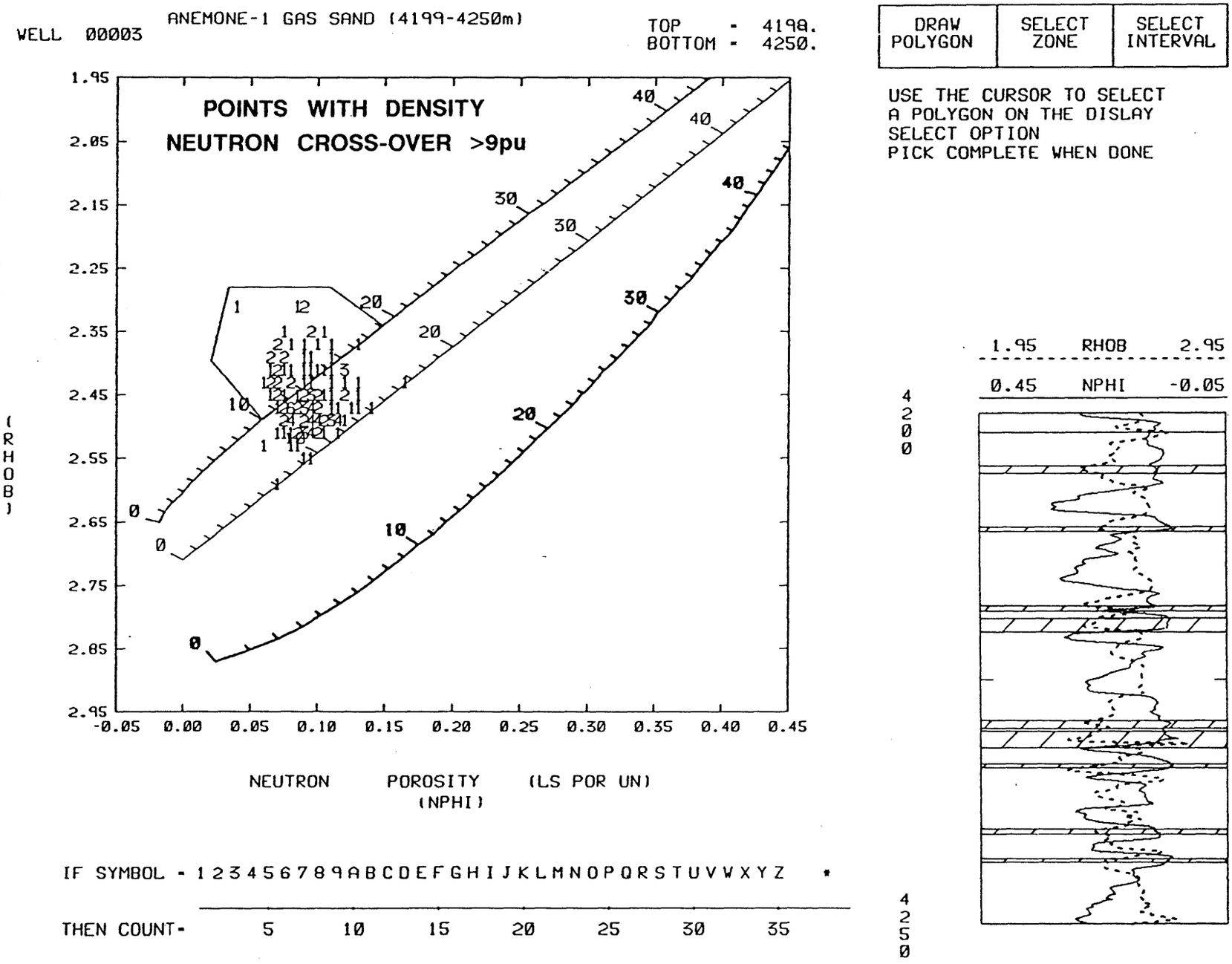

ANEMONE-1 GAS SAND (4199-4250m)
WELL 00003
TOP - 4190.
BOTTOM - 4250.
ONLY POINTS WITH
DENSITY NEUTRON CROSS-OVER
DRAW POLYGON
SELECT ZONE
SELECT INTERVAL
USE THE CURSOR TO SELECT
A POLYGON ON THE DISLAY
SELECT OPTION
PICK COMPLETE WHEN DONE
BULK DENSITY RAW LOG DATA (GRAMS/CC) (RHOB)
1.95
2.05
2.15
2.25
2.35
2.45
2.55
2.65
2.75
2.85
2.95
-0.05 0.00 0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45
NEUTRON POROSITY (LS POR UN)
(NPHI)
IF SYMBOL = 1 2 3 4 5 6 7 8 9 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z *
THEN COUNT= 5 10 15 20 25 30 35
1.95 RHOB 2.95
0.45 NPHI -0.05
4200
4250

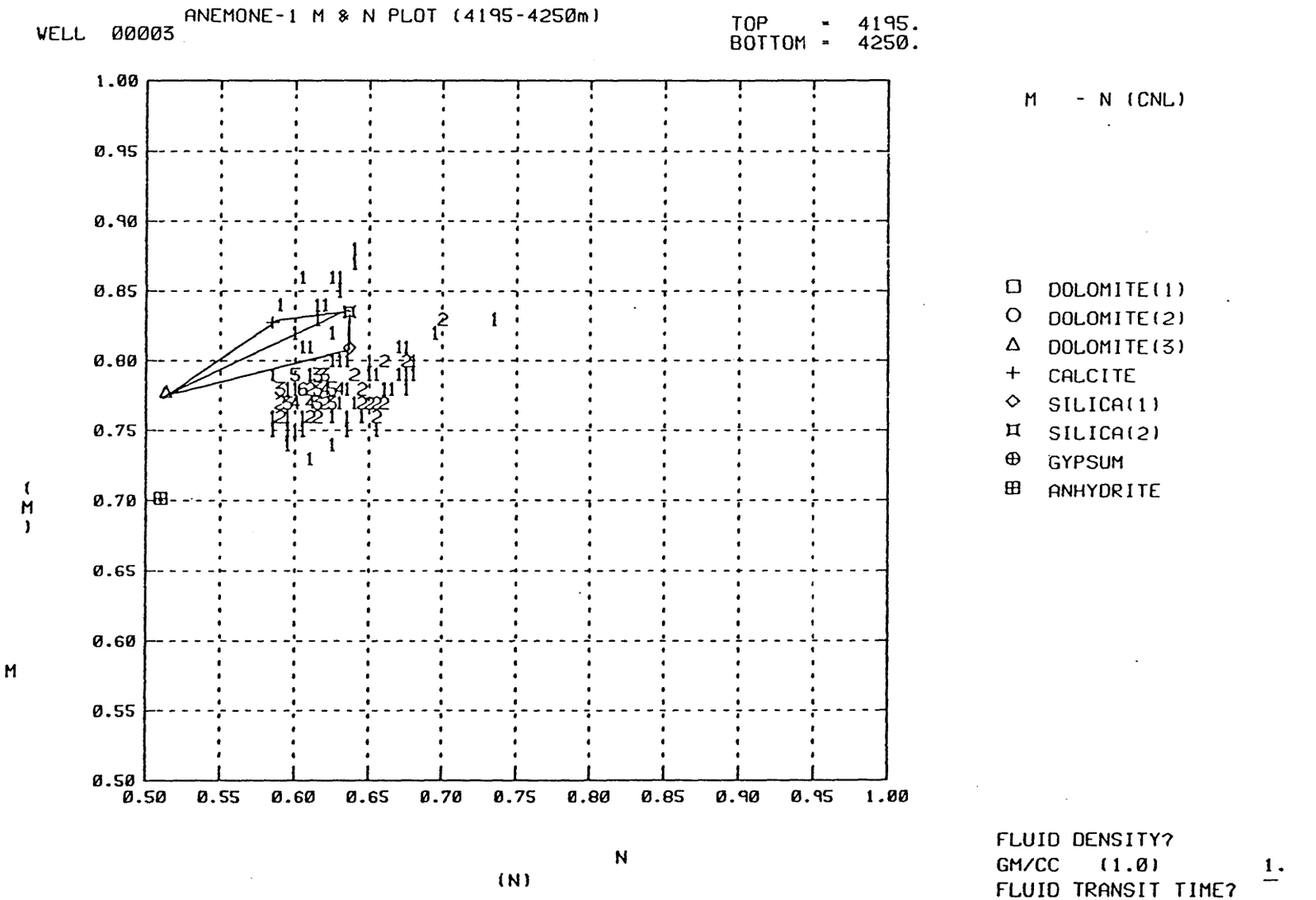
FIGURE 3



DRAW POLYGON	SELECT ZONE	SELECT INTERVAL

USE THE CURSOR TO SELECT
A POLYGON ON THE DISLAY
SELECT OPTION
PICK COMPLETE WHEN DONE

FIGURE 4



FLUID DENSITY?
GM/CC (1.0) 1.
FLUID TRANSIT TIME?
MICROSECS/FT (189) 189.

IF SYMBOL - 1 2 3 4 5 6 7 8 9 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z *

THEN COUNT- 5 10 15 20 25 30 35

APPENDIX 1

LOG ANALYSIS PARAMETERS

GENERAL LOG ANALYSIS - CALC

WELL :ANEMONE-1&1A
PARAMETER SET/ZONE FROM MENU :HYDROCARBON ZONE 1
:INTRA-CAMPANIAN.

TOP DEPTH 3325.0000 BOTTOM DEPTH 3386.0000

RESERVOIR SUMMARY

GROSS RESERVOIR

INTERVAL PHIE	INTERVAL SWE	AVG. PHIE	AVG. SWE	AVG. PERM	SHALE VOL	METERS
0- 6	0-100	0.0	0.93	0.00	0.74	50.0
6-12	0-100	0.0	0.00	0.00	0.00	0.0
12-18	0-100	16.7	81.23	0.01	0.32	1.2
18-24	0-100	21.0	82.12	0.01	0.22	9.4
24-99	0-100	25.1	91.33	0.03	0.17	0.5
6-99	0-100	20.7	82.40	0.01	0.23	11.1

NET PAY

INTERVAL PHIE	INTERVAL SWE	AVG. PHIE	AVG. SWE	AVG. PERM	SHALE VOL	METERS
0- 6	0- 50	0.0	0.00	0.00	0.00	0.0
6-12	0- 50	0.0	0.00	0.00	0.00	0.0
12-18	0- 50	0.0	0.00	0.00	0.00	0.0
18-24	0- 50	22.3	44.90	0.02	0.24	0.8
24-99	0- 50	0.0	0.00	0.00	0.00	0.0
6-99	0- 50	22.3	44.90	0.02	0.24	0.8

CUTOFFS USED: POROSITY (PHILIM) = 6.0, SW (SWLIM) = 50.0, SHALE (VSHLIM) = 0.400

LITHOLOGY SUMMARY

POINTS ABOVE SANDSTONE LINE	275
POINTS BETWEEN SANDSTONE AND LIMESTONE LINES	0
POINTS BETWEEN SANDSTONE AND DOLOMITE LINES	0
POINTS BETWEEN LIMESTONE AND DOLOMITE LINES	0
POINTS BELOW DOLOMITE LINE WITH POROSITY	0
POINTS BELOW DOLOMITE LINE WITH NO POROSITY	0
POINTS WHERE LITHOLOGY IS UNDETERMINED (SOLO TOOL)	126
METERS OF POTENTIAL SOURCE ROCK	14.6

RESERVOIR SUMMARY

	GROSS	NET
TOTAL METERS	11.13	0.76
EFFECTIVE POROSITY METERS (PHIE)	2.30	0.17
HYDROCARBON METERS (SUM (INCR * PHIE * (1-SWE))	0.40	0.09
AVERAGE EFFECTIVE POROSITY (PHIE)	20.71	22.32
WEIGHTED AVERAGE OF SW (SUM (PHIE*SWE) / SUM (PHIE))	82.50	44.85
AVERAGE UNBOUNDED EFFECTIVE POROSITY (PHIE)	3.79	

CALC - SUMMARY OF COMPUTATIONAL METHODS

COMPUTATIONAL SUMMARY

BOTTOM DEPTH OF INTERVAL	=	3386.02 METERS
FORMATION TEMPERATURE AT BOTTOM DEPTH	=	182.6
RW AT BOTTOM DEPTH	=	0.1045
RMF AT BOTTOM DEPTH	=	0.0782
POINTS WITH SW ABOVE 100	=	19
POINTS WITH VSH ABOVE 1.0	=	51
POINTS WITH VSH ABOVE VSHLIM (0.40)	=	294
POINTS AFFECTED BY BAD HOLE	=	39

COMPUTATIONAL METHODS USED

POROSITY CALCULATIONS

NEUTRON/DENSITY	253 PTS.
NEUTRON/SONIC	22 PTS.
SONIC/DENSITY	0 PTS.
SOLO POROSITY TOOL	126 PTS.

SHALE CALCULATIONS

GAMMA RAY	289 PTS.
SPECTRAL LOGS	0 PTS.
SONIC/DENSITY	0 PTS.
NEUTRON/DENSITY	112 PTS.
SP	0 PTS.
TPL ATTENUATION	0 PTS.

GENERAL LOG ANALYSIS - CALC

WELL :ANEMONE-1&1A
PARAMETER SET/ZONE FROM MENU :HYDROCARBON ZONE 2
:CAMPANIAN "1" SANDSTONES

TOP DEPTH 4042.0000 BOTTOM DEPTH 4140.0000

RESERVOIR SUMMARY

GROSS RESERVOIR

INTERVAL PHIE	INTERVAL SWE	AVG. PHIE	AVG. SWE	AVG. PERM	SHALE VOL	METERS
0- 6	0-100	0.3	6.70	0.00	0.73	68.4
6-12	0-100	9.5	76.87	0.00	0.24	15.8
12-18	0-100	14.9	74.50	0.00	0.10	30.6
18-24	0-100	19.3	76.50	0.01	0.03	6.0
24-99	0-100	0.0	0.00	0.00	0.00	0.0
6-99	0-100	13.9	75.59	0.00	0.13	51.4

NET PAY

INTERVAL PHIE	INTERVAL SWE	AVG. PHIE	AVG. SWE	AVG. PERM	SHALE VOL	METERS
0- 6	0- 50	0.0	0.00	0.00	0.00	0.0
6-12	0- 50	9.3	43.25	0.00	0.27	1.1
12-18	0- 50	14.5	46.45	0.00	0.19	0.5
18-24	0- 50	18.4	45.99	0.01	0.03	0.2
24-99	0- 50	0.0	0.00	0.00	0.00	0.0
6-99	0- 50	11.6	44.38	0.00	0.22	1.7

CUTOFFS USED: POROSITY (PHILIM) = 6.0, SW (SWLIM) = 50.0, SHALE (VSHLIM) = 0.400

LITHOLOGY SUMMARY

POINTS ABOVE SANDSTONE LINE	685
POINTS BETWEEN SANDSTONE AND LIMESTONE LINES	28
POINTS BETWEEN SANDSTONE AND DOLOMITE LINES	0
POINTS BETWEEN LIMESTONE AND DOLOMITE LINES	0
POINTS BELOW DOLOMITE LINE WITH POROSITY	0
POINTS BELOW DOLOMITE LINE WITH NO POROSITY	0
POINTS WHERE LITHOLOGY IS UNDETERMINED (SOLO TOOL)	108
METERS OF POTENTIAL SOURCE ROCK	0.6

RESERVOIR SUMMARY

	GROSS	NET
TOTAL METERS	51.39	1.68
EFFECTIVE POROSITY METERS (PHIE)	7.79	0.19
HYDROCARBON METERS (SUM (INCR * PHIE * (1-SWE))	1.93	0.11
AVERAGE EFFECTIVE POROSITY (PHIE)	13.84	11.56
WEIGHTED AVERAGE OF SW (SUM (PHIE*SWE) / SUM (PHIE))	75.57	44.98
AVERAGE UNBOUNDED EFFECTIVE POROSITY (PHIE)	6.39	

CALC - SUMMARY OF COMPUTATIONAL METHODS

COMPUTATIONAL SUMMARY

BOTTOM DEPTH OF INTERVAL	=	4150.00 METERS
FORMATION TEMPERATURE AT BOTTOM DEPTH	=	218.3
RW AT BOTTOM DEPTH	=	0.1048
RMF AT BOTTOM DEPTH	=	0.0728
POINTS WITH SW ABOVE 100	=	44
POINTS WITH VSH ABOVE 1.0	=	102
POINTS WITH VSH ABOVE VSHLIM (0.40)	=	405
POINTS AFFECTED BY BAD HOLE	=	20

COMPUTATIONAL METHODS USED

POROSITY CALCULATIONS

NEUTRON/DENSITY	695 PTS.
NEUTRON/SONIC	18 PTS.
SONIC/DENSITY	0 PTS.
SOLO POROSITY TOOL	108 PTS.

SHALE CALCULATIONS

GAMMA RAY	500 PTS.
SPECTRAL LOGS	0 PTS.
SONIC/DENSITY	0 PTS.
NEUTRON/DENSITY	320 PTS.
SP	0 PTS.
TPL ATTENUATION	0 PTS.

GENERAL LOG ANALYSIS - CALC

WELL :ANEMONE-1&1A
PARAMETER SET/ZONE FROM MENU :HYDROCARBON ZONE 3
:CAMPANIAN "2" SANDSTONES

TOP DEPTH 4198.0000 BOTTOM DEPTH 4245.0000

RESERVOIR SUMMARY

GROSS RESERVOIR

INTERVAL PHIE	INTERVAL SWE	AVG. PHIE	AVG. SWE	AVG. PERM	SHALE VOL	METERS
0- 6	0-100	0.3	4.52	0.00	0.79	22.6
6-12	0-100	9.6	49.63	0.00	0.22	15.8
12-18	0-100	14.4	33.92	0.00	0.05	8.8
18-24	0-100	0.0	0.00	0.00	0.00	0.0
24-99	0-100	0.0	0.00	0.00	0.00	0.0
6-99	0-100	11.4	41.78	0.00	0.14	24.6

NET PAY

INTERVAL PHIE	INTERVAL SWE	AVG. PHIE	AVG. SWE	AVG. PERM	SHALE VOL	METERS
0- 6	0- 50	4.2	36.77	0.00	0.30	0.5
6-12	0- 50	10.1	43.14	0.00	0.20	9.9
12-18	0- 50	14.5	33.61	0.00	0.07	8.5
18-24	0- 50	0.0	0.00	0.00	0.00	0.0
24-99	0- 50	0.0	0.00	0.00	0.00	0.0
6-99	0- 50	12.1	38.73	0.00	0.14	18.4

CUTOFFS USED: POROSITY (PHILIM) = 6.0, SW (SWLIM) = 50.0, SHALE (VSHLIM) = 0.400

LITHOLOGY SUMMARY

POINTS ABOVE SANDSTONE LINE	260
POINTS BETWEEN SANDSTONE AND LIMESTONE LINES	2
POINTS BETWEEN SANDSTONE AND DOLOMITE LINES	0
POINTS BETWEEN LIMESTONE AND DOLOMITE LINES	0
POINTS BELOW DOLOMITE LINE WITH POROSITY	0
POINTS BELOW DOLOMITE LINE WITH NO POROSITY	0
POINTS WHERE LITHOLOGY IS UNDETERMINED (SOLO TOOL)	47
METERS OF POTENTIAL SOURCE ROCK	4.4

RESERVOIR SUMMARY

	GROSS	NET
TOTAL METERS	24.58	18.74
EFFECTIVE POROSITY METERS (PHIE)	2.78	2.23
HYDROCARBON METERS (SUM (INCR * PHIE * (1-SWE))	1.62	1.40
AVERAGE EFFECTIVE POROSITY (PHIE)	11.32	12.81
WEIGHTED AVERAGE OF SW (SUM (PHIE*SWE) / SUM (PHIE))	41.78	35.68
AVERAGE UNBOUNDED EFFECTIVE POROSITY (PHIE)	6.03	

CALC - SUMMARY OF COMPUTATIONAL METHODS

COMPUTATIONAL SUMMARY

BOTTOM DEPTH OF INTERVAL	=	4244.95 METERS
FORMATION TEMPERATURE AT BOTTOM DEPTH	=	222.1
RW AT BOTTOM DEPTH	=	0.1063
RMF AT BOTTOM DEPTH	=	0.0716
POINTS WITH SW ABOVE 100	=	4
POINTS WITH VSH ABOVE 1.0	=	44
POINTS WITH VSH ABOVE VSHLIM (0.40)	=	138
POINTS AFFECTED BY BAD HOLE	=	0

COMPUTATIONAL METHODS USED

POROSITY CALCULATIONS		SHALE CALCULATIONS	
NEUTRON/DENSITY	225 PTS.	GAMMA RAY	169 PTS.
NEUTRON/SONIC	15 PTS.	SPECTRAL LOGS	0 PTS.
SONIC/DENSITY	0 PTS.	SONIC/DENSITY	0 PTS.
SOLO POROSITY TOOL	63 PTS.	NEUTRON/DENSITY	134 PTS.
		SP	0 PTS.
		TPL ATTENUATION	0 PTS.

GENERAL LOG ANALYSIS - CALC

WELL :ANEMONE-1&1A
PARAMETER SET/ZONE FROM MENU :HYDROCARBON ZONE 4
:SANTONIAN SANDSTONES

TOP DEPTH 4525.0000 BOTTOM DEPTH 4740.0000

RESERVOIR SUMMARY

GROSS RESERVOIR

INTERVAL PHIE	INTERVAL SWE	AVG. PHIE	AVG. SWE	AVG. PERM	SHALE VOL	METERS
0- 6	0-100	0.0	0.42	0.00	0.73	109.6
6-12	0-100	10.1	85.62	0.00	0.21	35.5
12-18	0-100	14.4	74.36	0.00	0.09	64.0
18-24	0-100	19.9	58.99	0.01	0.06	7.5
24-99	0-100	26.4	46.14	0.04	0.04	3.5
6-99	0-100	13.8	76.04	0.00	0.12	110.5

NET PAY

INTERVAL PHIE	INTERVAL SWE	AVG. PHIE	AVG. SWE	AVG. PERM	SHALE VOL	METERS
0- 6	0- 65	0.0	0.00	0.00	0.00	0.0
6-12	0- 65	10.7	62.81	0.00	0.24	2.3
12-18	0- 65	15.4	57.94	0.00	0.14	12.6
18-24	0- 65	20.1	56.27	0.01	0.07	5.8
24-99	0- 65	26.4	46.14	0.04	0.04	3.5
6-99	0- 65	17.6	56.29	0.01	0.12	24.2

CUTOFFS USED: POROSITY (PHILIM) = 6.0, SW (SWLIM) = 65.0, SHALE (VSHLIM) = 0.400

LITHOLOGY SUMMARY

POINTS ABOVE SANDSTONE LINE	1247
POINTS BETWEEN SANDSTONE AND LIMESTONE LINES	0
POINTS BETWEEN SANDSTONE AND DOLOMITE LINES	0
POINTS BETWEEN LIMESTONE AND DOLOMITE LINES	0
POINTS BELOW DOLOMITE LINE WITH POROSITY	0
POINTS BELOW DOLOMITE LINE WITH NO POROSITY	0
POINTS WHERE LITHOLOGY IS UNDETERMINED (SOLO TOOL)	197
METERS OF POTENTIAL SOURCE ROCK	8.2

RESERVOIR SUMMARY

	GROSS	NET
TOTAL METERS	110.49	24.23
EFFECTIVE POROSITY METERS (PHIE)	15.20	4.28
HYDROCARBON METERS (SUM (INCR * PHIE * (1-SWE))	4.06	1.92
AVERAGE EFFECTIVE POROSITY (PHIE)	13.76	17.65
WEIGHTED AVERAGE OF SW (SUM (PHIE*SWE) / SUM (PHIE))	73.29	55.16
AVERAGE UNBOUNDED EFFECTIVE POROSITY (PHIE)	6.92	

CALC - SUMMARY OF COMPUTATIONAL METHODS

COMPUTATIONAL SUMMARY

BOTTOM DEPTH OF INTERVAL	=	4739.94 METERS
FORMATION TEMPERATURE AT BOTTOM DEPTH	=	258.5
RW AT BOTTOM DEPTH	=	0.1609
RMF AT BOTTOM DEPTH	=	0.0598
POINTS WITH SW ABOVE 100	=	59
POINTS WITH VSH ABOVE 1.0	=	135
POINTS WITH VSH ABOVE VSHLIM (0.40)	=	714
POINTS AFFECTED BY BAD HOLE	=	1

COMPUTATIONAL METHODS USED

POROSITY CALCULATIONS		SHALE CALCULATIONS	
NEUTRON/DENSITY	0 PTS.	GAMMA RAY	1442 PTS.
NEUTRON/SONIC	1247 PTS.	SPECTRAL LOGS	0 PTS.
SONIC/DENSITY	0 PTS.	SONIC/DENSITY	0 PTS.
SOLO POROSITY TOOL	197 PTS.	NEUTRON/DENSITY	0 PTS.
		SP	0 PTS.
		TPL ATTENUATION	0 PTS.

APPENDIX 2

DETAILED LOG ANALYSIS RESULTS

LISTING OF ENVIRON PARAMETERS

ZONE HYDROCARBON ZONE 1 WELL ANEMONE 1&1A
INTRA-CAMPANIAN

TOP	3325.0000	(METRES) TOP OF INTERVAL
BOTTOM	3386.0000	(METRES) BOTTOM OF INTERVAL

FLUID VALUES

RHOFR	1.00	(KG/M3 OR GR/CC)RECORDED FLUID DENSITY
SALFM	22000.	(PPM) FORMATION SALINITY (NACL)
SALMD	26000.	(PPM) MUD SALINITY (NACL)
RMM	0.2660	(OHM-M) RM
		IF USING AN OIL BASED MUD SET TO > 100
RMMT	65.	(FARENHEIT) MEASURED TEMPERATURE FOR RM
RMFM	0.2340	(OHM-M) RMF
RMFMT	61.	(FARENHEIT) MEASURED TEMPERATURE FOR RMF
RMCM	0.3410	(OHM-M) RMC
RMCMT	61.	(FARENHEIT) MEASURED TEMPERATURE FOR RMC

HOLE AND MUD VALUES

MW	9.40	(KG/M3 LBS/GAL LBS/FT3 OR SP. GRAV) MUD WT
		ENTER 0 MW FOR AIR FILLED HOLE
BITSIZ	8.500	(MM OR INCHES) BIT SIZE
AMST	54.0	(FARENHEIT) ANNUAL MEAN SURFACE TEMP
BHT	212.0	(FARENHEIT) BOTTOM HOLE TEMPERATURE
TD	4160.	(METRES) TOTAL DEPTH OF BOREHOLE
RSTAND	1.500	(INCHES) STANDOFF SETTING ON INDUCTION

LIMITING VALUES

RHOMIN	1.25	(KG/M3 OR GR/CC) MIN. VALID BULK DENSITY
DLTMIN	40.	(USEC/FT) MIN. VALID SONIC ITT
DLTMAX	190.	(USEC/FT) MAX. VALID SONIC ITT
PHNMAX	70.	(PERCENT) MAXIMUM VALID NEUTRON POROSITY
RUGMAX	6.00	(INCHES) MAX. RUGOSITY TO ACCEPT NEUTRON
STOMAX	3.00	(INCHES) MAX. NEUT. STANDOFF
STOMIN	0.00	(INCHES) MIN. NEUT. STANDOFF TO CORRECT
		(SET TO STOMAX TO BYPASS STANDOFF LOGIC)
DROLIM	0.20	(KG/M3 OR GR/CC) MAXIMUM DENSITY CORRECTON
		TO ACCEPT (+ OR -)

MATRIX VALUES

GRMA	50.	(API) GAMMA RAY MATRIX
SPMA	-40.	(MV) SP MATRIX (MV)
ATTMA	150.	(DB/M) ATTENUATIONOF THE MATRIX(DB/M)
DLTSS	57.00	(USEC/FT) DELTA T SANDSTONE
DLTLS	48.78	(USEC/FT) DELTA T LIMESTONE
DLTDOL	43.96	(USEC/FT) DELTA T DOLOMITE
DLTANH	50.00	(USEC/FT) DELTA T ANHYDRITE
RHOSS	2.67	(KG/M3 OR GR/CC) MATRIX DENS OF SANDSTONE
RHOLS	2.71	(KG/M3 OR GR/CC) MATRIX DENS OF LIMESTONE
RHODOL	2.87	(KG/M3 OR GR/CC) MATRIX DENS OF DOLOMITE
RHOANH	2.98	(KG/M3 OR GR/CC) MATRIX DENS OF ANHYDRITE
TPLSS	7.20	(NSEC/M) TPL OF SANDSTONE
TPLLS	9.10	(NSEC/M) TPL OF LIMESTONE
TPLDOL	8.70	(NSEC/M) TPL OF DOLOMITE
TPLANH	8.40	(NSEC/M) TPL OF ANHYDRITE

VALUES FOR SOLO TOOLS

RHOMAB	2.67	(KG/CM OR GR/CC) MATRIX DENSITY
DLTMAB	57.	(KG/M3 OR GR/CC) TRANSIT TIME MATRIX
TPLMAB	8.50	(NSEC/M) TPL MATRIX
NEUMAB	0	NEUTRON MATRIX 0=LS 1=SS 2=DOL

VALUES FOR COAL DETECTION

```
GRCOAL    200.          (API) MAXIMUM GR IN COAL.
DLTCOL     95.          (USEC/FT) MINIMUM SONIC IN COAL.
UCOAL     8.00          (PPM) MINIMUM URANIUM IN COAL.
RHOCOL    2.25          (KG/M3 OR GR/CC) MAXIMUM DENSITY OF COAL.
PNCOL      27.          (PERCENT) MINIMUM LS. NEUTRON POR. IN COAL
PECOL     2.00          (BARNS/ELEC.) MAXIMUM PEF IN COAL.
COALCK       3          NUMBER OF POSITIVE COAL CHECKS NEEDED TO
                        IDENTIFY COAL (COAL=1).

************************************************************
********************     FLUID VALUES     ********************
************************************************************

RHOF      1.00          (KG/M3 OR GR/CC)    FLUID DENSITY
DLTF      189.          (USEC/FT) TRANSIT TIME OF FLUID
RHOH      0.60          (KG/M3 OR GR/CC)    HYDROCARBON DENSITY
ANEUT     1.00          NEUTRON GAS FACTOR(USUAL RANGE 1 TO 1.4)
                        1=HIGH DENSITY AND 1.5 LOW DENSITY
RHOMF     1.00          (KG/M3 OR GR/CC)    MUD FILTRATE DENSITY
TPLH      5.00          (NSEC/M)            HYDROCARBON TPL
SALMD    26000.         (PPM)      MUD SALINITY
RWM       0.090         (OHM-M)  RW AT MEASURED TEMPERATURE
RWMT      212.          (FARENHEIT) TEMPERATURE OF RW MEASUREMENT
RWBM      0.07          (OHM-M)  BOUND WATER RESISTIVITY
RWBMT     212.          (FARENHEIT) TEMPERATURE OF RWB MEASUREMENT

************************************************************
***************     SHALE AND CLAY VALUES     ****************
************************************************************
GRSH      155.          (API) GAMMA RAY VALUE IN SHALE
SPSH      -45.          (MV)  SP VALUE IN SHALE
ATTSH     600.          (DB/M) EPT ATTENUATION IN SHALE
RHOSH     2.50          (KG/M3 OR GR/CC) MATRIX DENSITY OF SHALE
PEFSH     3.60          (BARNS/ELECTRON) PEF IN SHALE
TPLSH     9.00          (NSEC/M)         TPL IN SHALE
PHINSH     21.          (PERCENT) NEUTRON LOG POROSITY OF SHALE
DLTSH      79.          (USEC/FT) TRANSIT TIME OF SHALE
RSH       9.00          (OHM-M) RESISTIVITY OF SHALE
PHIMAX   27.00          (PERCENT) MAX SHALE POROSITY IN INTERVAL

                        WAXMAN SMITS CONSTANTS

RHOCL     2.70          (KG/M3 OR GR/CC) DENS OF DRY CLAY
HICL     25.00          (PERCENT) HYDROGEN INDEX OF DRY CLAY
CEC      0.100          (MEQ/G) CATION EXCHANGE CAPACITY
                        NOTE: ALSO SUPPLY RSH, M (USED AS M*),
                              N (USED AS N*), RW, AND A.

************************************************************
******     LOG CALCULATION CONSTANTS AND EXPONENTS     *******
************************************************************

A         0.62          CONSTANT IN FORMATION FACTOR EQUATION
M         2.15          CEMENTATION EXPONENT
N         2.00          SATURATION EXPONENT
CP        1.00          COMPACTION FACTOR

************************************************************
****  LIMITING VALUES FOR NET AND GROSS PAY CALCULATIONS  ****
************************************************************

PHILIM    6.00          (PERCENT) LOWER POROSITY LIMIT
VSHLIM    0.40          (FRACTION) VOLUME OF SHALE UPPER LIMIT
SWLIM    50.00          (PERCENT) WATER SATURATION LIMIT

************************************************************
********     LOG CALCULATION OPTIONS AND SWITCHES     ********
************************************************************

VSHCIN       3          GR TO VOL. OF SHALE CURVATURE INDEX
VSHOFF       0          0=CALC VOL. OF SHALE - 1=VOL.OF SH=0
GROFF        0          GR AS SHALE INDICATOR (0-USE ,1-NO)
NEUOFF       0          NEUTRON AS SHALE INDICATOR (0-USE ,1-NO)
MINOPT       3          MINERAL OPTION SWITCH
                        3 = SANDSTONE AND SHALE ONLY (CLASSICAL)
MOPOFF       0          MOVEABLE OIL PLOT SWITCH  0-USE RXO
                                                  1-NO RXO
QOPT         1          SW OPTION - 0=SW FROM PHIT AND Q
                                    1=SW FROM PHIE AND VSH
NOPRT        0          PRINT OPTION - 0=PRINT ALL VALUES
                                       1=SKIP SHALE ZONES
SWOPT        5          1 - ARCHIE; 2 - SIMANDOUX; 3 - SIMANDOUX
                        LAMINAR; 4 - V2 SIMANDOUX; 5 - INDONESIAN
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**************************************************************
          LISTING OF ENVIRON PARAMETERS

ZONE      HYDROCARBON ZONE 2            WELL        ANEMONE 1&1A
          CAMPANIAN "1" SANDSTONE

**************************************************************

TOP       4025.0000     (METRES) TOP OF INTERVAL
BOTTOM    4150.0000     (METRES) BOTTOM OF INTERVAL

**************************************************************
*******************     FLUID VALUES     ********************
**************************************************************

RHOFR      1.00         (KG/M3 OR GR/CC)RECORDED FLUID DENSITY
SALFM    22000.         (PPM) FORMATION SALINITY (NACL)
SALMD    20000.         (PPM) MUD SALINITY (NACL)
RMM      0.3630         (OHM-M) RM
                        IF USING AN OIL BASED MUD SET TO > 100
RMMT       56.          (FARENHEIT) MEASURED TEMPERATURE FOR RM
RMFM     0.2840         (OHM-M) RMF
RMFMT      56.          (FARENHEIT) MEASURED TEMPERATURE FOR RMF
RMCM     0.7540         (OHM-M) RMC
RMCMT      56.          (FARENHEIT) MEASURED TEMPERATURE FOR RMC


**************************************************************
****************     HOLE AND MUD VALUES      ****************
**************************************************************

MW         9.60         (KG/M3 LBS/GAL LBS/FT3 OR SP. GRAV) MUD WT
                         ENTER 0 MW FOR AIR FILLED HOLE
BITSIZ    8.500         (MM OR INCHES) BIT SIZE
AMST       54.0         (FARENHEIT) ANNUAL MEAN SURFACE TEMP
BHT       232.0         (FARENHEIT) BOTTOM HOLE TEMPERATURE
TD       4450.          (METRES) TOTAL DEPTH OF BOREHOLE
RSTAND    1.500         ( INCHES ) STANDOFF SETTING ON INDUCTION

**************************************************************
*******************     LIMITING VALUES     ******************
**************************************************************

RHOMIN     1.25         (KG/M3 OR GR/CC) MIN. VALID BULK DENSITY
DLTMIN      40.         (USEC/FT) MIN. VALID SONIC ITT
DLTMAX     190.         (USEC/FT) MAX. VALID SONIC ITT
PHNMAX      70.         (PERCENT) MAXIMUM VALID NEUTRON POROSITY
RUGMAX     6.00         (INCHES) MAX. RUGOSITY TO ACCEPT NEUTRON
STOMAX     3.00         (INCHES) MAX. NEUT. STANDOFF
STOMIN     0.00         (INCHES) MIN. NEUT. STANDOFF TO CORRECT
                        (SET TO STOMAX TO BYPASS STANDOFF LOGIC)
DROLIM     0.15         (KG/M3 OR GR/CC) MAXIMUM DENSITY CORRECTON
                           TO ACCEPT (+ OR -)

**************************************************************
*******************     MATRIX VALUES     ********************
**************************************************************
GRMA        50.         (API) GAMMA RAY MATRIX
SPMA       -40.         (MV)  SP MATRIX (MV)
ATTMA      150.         (DB/M) ATTENUATIONOF THE MATRIX(DB/M)

DLTSS     57.00         (USEC/FT) DELTA T SANDSTONE
DLTLS     48.78         (USEC/FT) DELTA T LIMESTONE
DLTDOL    43.96         (USEC/FT) DELTA T DOLOMITE
DLTANH    50.00         (USEC/FT) DELTA T ANHYDRITE

RHOSS      2.67         (KG/M3 OR GR/CC) MATRIX DENS OF SANDSTONE
RHOLS      2.71         (KG/M3 OR GR/CC) MATRIX DENS OF LIMESTONE
RHODOL     2.87         (KG/M3 OR GR/CC) MATRIX DENS OF DOLOMITE
RHOANH     2.98         (KG/M3 OR GR/CC) MATRIX DENS OF ANHYDRITE

TPLSS      7.20         (NSEC/M) TPL OF SANDSTONE
TPLLS      9.10         (NSEC/M) TPL OF LIMESTONE
TPLDOL     8.70         (NSEC/M) TPL OF DOLOMITE
TPLANH     8.40         (NSEC/M) TPL OF ANHYDRITE

    VALUES FOR SOLO TOOLS

RHOMAB     2.67         (KG/CM OR GR/CC) MATRIX DENSITY
DLTMAB      57.         (KG/M3 OR GR/CC) TRANSIT TIME MATRIX
TPLMAB     8.50         (NSEC/M) TPL MATRIX
NEUMAB        0         NEUTRON MATRIX 0=LS 1=SS 2=DOL
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VALUES FOR COAL DETECTION

GRCOAL	200.	(API) MAXIMUM GR IN COAL.
DLTCOL	110.	(USEC/FT) MINIMUM SONIC IN COAL.
UCOAL	8.00	(PPM) MINIMUM URANIUM IN COAL.
RHOCOL	2.25	(KG/M3 OR GR/CC) MAXIMUM DENSITY OF COAL.
PNCOL	27.	(PERCENT) MINIMUM LS. NEUTRON POR. IN COAL
PECOL	2.00	(BARNS/ELEC.) MAXIMUM PEF IN COAL.
COALCK	6	NUMBER OF POSITIVE COAL CHECKS NEEDED TO IDENTIFY COAL (COAL=1).

****
********** FLUID VALUES **********
****

RHOF	1.00	(KG/M3 OR GR/CC) FLUID DENSITY
DLTF	189.	(USEC/FT) TRANSIT TIME OF FLUID
RHOH	0.60	(KG/M3 OR GR/CC) HYDROCARBON DENSITY
ANEUT	1.00	NEUTRON GAS FACTOR(USUAL RANGE 1 TO 1.4) 1=HIGH DENSITY AND 1.5 LOW DENSITY
RHOMF	1.00	(KG/M3 OR GR/CC) MUD FILTRATE DENSITY
TPLH	5.00	(NSEC/M) HYDROCARBON TPL
SALMD	20000.	(PPM) MUD SALINITY
RWM	0.075	(OHM-M) RW AT MEASURED TEMPERATURE
RWMT	212.	(FARENHEIT) TEMPERATURE OF RW MEASUREMENT
RWBM	0.06	(OHM-M) BOUND WATER RESISTIVITY
RWBMT	212.	(FARENHEIT) TEMPERATURE OF RWB MEASUREMENT

****
********** SHALE AND CLAY VALUES **********
****

GRSH	155.	(API) GAMMA RAY VALUE IN SHALE
SPSH	-45.	(MV) SP VALUE IN SHALE
ATTSH	600.	(DB/M) EPT ATTENUATION IN SHALE
RHOSH	2.50	(KG/M3 OR GR/CC) MATRIX DENSITY OF SHALE
PEFSH	3.60	(BARNS/ELECTRON) PEF IN SHALE
TPLSH	9.00	(NSEC/M) TPL IN SHALE
PHINSH	21.	(PERCENT) NEUTRON LOG POROSITY OF SHALE
DLTSH	79.	(USEC/FT) TRANSIT TIME OF SHALE
RSH	9.00	(OHM-M) RESISTIVITY OF SHALE
PHIMAX	27.00	(PERCENT) MAX SHALE POROSITY IN INTERVAL

WAXMAN SMITS CONSTANTS

RHOCL	2.70	(KG/M3 OR GR/CC) DENS OF DRY CLAY
HICL	25.00	(PERCENT) HYDROGEN INDEX OF DRY CLAY
CEC	0.100	(MEQ/G) CATION EXCHANGE CAPACITY

NOTE: ALSO SUPPLY RSH, M (USED AS M*), N (USED AS N*), RW, AND A.

****
****** LOG CALCULATION CONSTANTS AND EXPONENTS *******
****

A	0.62	CONSTANT IN FORMATION FACTOR EQUATION
M	2.15	CEMENTATION EXPONENT
N	2.00	SATURATION EXPONENT
CP	1.00	COMPACTION FACTOR

****
**** LIMITING VALUES FOR NET AND GROSS PAY CALCULATIONS ****
****

PHILIM	6.00	(PERCENT) LOWER POROSITY LIMIT
VSHLIM	0.40	(FRACTION) VOLUME OF SHALE UPPER LIMIT
SWLIM	50.00	(PERCENT) WATER SATURATION LIMIT

****
******** LOG CALCULATION OPTIONS AND SWITCHES ********
****

MSI	0	0=STANDARD UNITS 1=MSI
VSHCIN	3	GR TO VOL. OF SHALE CURVATURE INDEX
VSHOFF	0	0=CALC VOL. OF SHALE - 1=VOL.OF SH=0
GROFF	0	GR AS SHALE INDICATOR (0-USE ,1-NO)
NEUOFF	0	NEUTRON AS SHALE INDICATOR (0-USE ,1-NO)
MINOPT	3	MINERAL OPTION SWITCH 3 = SANDSTONE AND SHALE ONLY (CLASSICAL)
MOPOFF	0	MOVEABLE OIL PLOT SWITCH 0-USE RXO 1-NO RXO
QOPT	1	SW OPTION - 0=SW FROM PHIT AND Q 1=SW FROM PHIE AND VSH
NOPRT	0	PRINT OPTION - 0=PRINT ALL VALUES 1=SKIP SHALE ZONES
SWOPT	5	1 - ARCHIE; 2 - SIMANDOUX; 3 - SIMANDOUX LAMINAR; 4 - V2 SIMANDOUX; 5 - INDONESIAN

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************************************************************
            LISTING OF ENVIRON PARAMETERS

ZONE      HYDROCARBON ZONE 3            WELL        ANEMONE 1&1A
          CAMPANIAN "2" SANDSTONE

************************************************************

TOP       4198.0000     (METRES) TOP OF INTERVAL
BOTTOM    4250.0000     (METRES) BOTTOM OF INTERVAL

************************************************************
*******************     FLUID VALUES     *******************
************************************************************

RHOFR      0.90         (KG/M3 OR GR/CC)RECORDED FLUID DENSITY
SALFM     9950.         (PPM) FORMATION SALINITY (NACL)
SALMD    19500.         (PPM) MUD SALINITY (NACL)
RMM      0.4090         (OHM-M) RM
                        IF USING AN OIL BASED MUD SET TO > 100
RMMT       55.          (FARENHEIT) MEASURED TEMPERATURE FOR RM
RMFM     0.2810         (OHM-M) RMF
RMFMT      55.          (FARENHEIT) MEASURED TEMPERATURE FOR RMF
RMCM     0.8180         (OHM-M) RMC
RMCMT      55.          (FARENHEIT) MEASURED TEMPERATURE FOR RMC


************************************************************
****************     HOLE AND MUD VALUES      ****************
************************************************************

MW        12.70         (KG/M3 LBS/GAL LBS/FT3 OR SP. GRAV) MUD WT
                         ENTER 0 MW FOR AIR FILLED HOLE
BITSIZ    6.000         (MM OR INCHES) BIT SIZE
AMST       54.0         (FARENHEIT) ANNUAL MEAN SURFACE TEMP
BHT       260.0         (FARENHEIT) BOTTOM HOLE TEMPERATURE
TD        4775.         (METRES) TOTAL DEPTH OF BOREHOLE
RSTAND    1.500         ( INCHES ) STANDOFF SETTING ON INDUCTION

************************************************************
*******************     LIMITING VALUES     ******************
************************************************************

RHOMIN     1.25         (KG/M3 OR GR/CC) MIN. VALID BULK DENSITY
DLTMIN      40.         (USEC/FT) MIN. VALID SONIC ITT
DLTMAX     190.         (USEC/FT) MAX. VALID SONIC ITT
PHNMAX      70.         (PERCENT) MAXIMUM VALID NEUTRON POROSITY
RUGMAX     6.00         (INCHES) MAX. RUGOSITY TO ACCEPT NEUTRON
STOMAX     3.00         (INCHES) MAX. NEUT. STANDOFF
STOMIN     0.00         (INCHES) MIN. NEUT. STANDOFF TO CORRECT
                        (SET TO STOMAX TO BYPASS STANDOFF LOGIC)
DROLIM     0.15         (KG/M3 OR GR/CC) MAXIMUM DENSITY CORRECTON
                           TO ACCEPT (+ OR -)

************************************************************
*******************     MATRIX VALUES     ******************
************************************************************
GRMA        47.         (API) GAMMA RAY MATRIX
SPMA       -40.         (MV)  SP MATRIX (MV)
ATTMA      150.         (DB/M) ATTENUATIONOF THE MATRIX(DB/M)

DLTSS     57.00         (USEC/FT) DELTA T SANDSTONE
DLTLS     48.78         (USEC/FT) DELTA T LIMESTONE
DLTDOL    43.96         (USEC/FT) DELTA T DOLOMITE
DLTANH    50.00         (USEC/FT) DELTA T ANHYDRITE

RHOSS      2.67         (KG/M3 OR GR/CC) MATRIX DENS OF SANDSTONE
RHOLS      2.71         (KG/M3 OR GR/CC) MATRIX DENS OF LIMESTONE
RHODOL     2.87         (KG/M3 OR GR/CC) MATRIX DENS OF DOLOMITE
RHOANH     2.98         (KG/M3 OR GR/CC) MATRIX DENS OF ANHYDRITE

TPLSS      7.20         (NSEC/M) TPL OF SANDSTONE
TPLLS      9.10         (NSEC/M) TPL OF LIMESTONE
TPLDOL     8.70         (NSEC/M) TPL OF DOLOMITE
TPLANH     8.40         (NSEC/M) TPL OF ANHYDRITE

   VALUES FOR SOLO TOOLS

RHOMAB     2.67         (KG/CM OR GR/CC) MATRIX DENSITY
DLTMAB      57.         (KG/M3 OR GR/CC) TRANSIT TIME MATRIX
TPLMAB     8.50         (NSEC/M) TPL MATRIX
NEUMAB        0         NEUTRON MATRIX 0=LS 1=SS 2=DOL
```

VALUES FOR COAL DETECTION

GRCOAL	180.	(API) MAXIMUM GR IN COAL.
DLTCOL	94.	(USEC/FT) MINIMUM SONIC IN COAL.
UCOAL	8.00	(PPM) MINIMUM URANIUM IN COAL.
RHOCOL	2.30	(KG/M3 OR GR/CC) MAXIMUM DENSITY OF COAL.
PNCOL	27.	(PERCENT) MINIMUM LS. NEUTRON POR. IN COAL
PECOL	2.00	(BARNS/ELEC.) MAXIMUM PEF IN COAL.
COALCK	6	NUMBER OF POSITIVE COAL CHECKS NEEDED TO IDENTIFY COAL (COAL=1).

****
********** FLUID VALUES **********
****

RHOF	1.00	(KG/M3 OR GR/CC) FLUID DENSITY
DLTF	189.	(USEC/FT) TRANSIT TIME OF FLUID
RHOH	0.60	(KG/M3 OR GR/CC) HYDROCARBON DENSITY
ANEUT	1.40	NEUTRON GAS FACTOR(USUAL RANGE 1 TO 1.4) 1=HIGH DENSITY AND 1.5 LOW DENSITY
RHOMF	1.00	(KG/M3 OR GR/CC) MUD FILTRATE DENSITY
TPLH	5.00	(NSEC/M) HYDROCARBON TPL
SALMD	19500.	(PPM) MUD SALINITY
RWM	0.100	(OHM-M) RW AT MEASURED TEMPERATURE
RWMT	236.	(FARENHEIT) TEMPERATURE OF RW MEASUREMENT
RWBM	0.10	(OHM-M) BOUND WATER RESISTIVITY
RWBMT	236.	(FARENHEIT) TEMPERATURE OF RWB MEASUREMENT

****
********** SHALE AND CLAY VALUES **********
****

GRSH	170.	(API) GAMMA RAY VALUE IN SHALE
SPSH	-45.	(MV) SP VALUE IN SHALE
ATTSH	600.	(DB/M) EPT ATTENUATION IN SHALE
RHOSH	2.60	(KG/M3 OR GR/CC) MATRIX DENSITY OF SHALE
PEFSH	3.60	(BARNS/ELECTRON) PEF IN SHALE
TPLSH	9.00	(NSEC/M) TPL IN SHALE
PHINSH	22.	(PERCENT) NEUTRON LOG POROSITY OF SHALE
DLTSH	71.	(USEC/FT) TRANSIT TIME OF SHALE
RSH	20.00	(OHM-M) RESISTIVITY OF SHALE
PHIMAX	30.00	(PERCENT) MAX SHALE POROSITY IN INTERVAL

WAXMAN SMITS CONSTANTS

RHOCL	2.70	(KG/M3 OR GR/CC) DENS OF DRY CLAY
HICL	25.00	(PERCENT) HYDROGEN INDEX OF DRY CLAY
CEC	0.100	(MEQ/G) CATION EXCHANGE CAPACITY

NOTE: ALSO SUPPLY RSH, M (USED AS M*), N (USED AS N*), RW, AND A.

****
****** LOG CALCULATION CONSTANTS AND EXPONENTS *******
****

A	0.62	CONSTANT IN FORMATION FACTOR EQUATION
M	2.15	CEMENTATION EXPONENT
N	2.00	SATURATION EXPONENT
CP	1.00	COMPACTION FACTOR

****
**** LIMITING VALUES FOR NET AND GROSS PAY CALCULATIONS ****
****

PHILIM	6.00	(PERCENT) LOWER POROSITY LIMIT
VSHLIM	0.40	(FRACTION) VOLUME OF SHALE UPPER LIMIT
SWLIM	50.00	(PERCENT) WATER SATURATION LIMIT

****
******** LOG CALCULATION OPTIONS AND SWITCHES ********
****

MSI	0	0=STANDARD UNITS 1=MSI
VSHCIN	3	GR TO VOL. OF SHALE CURVATURE INDEX
VSHOFF	0	0=CALC VOL. OF SHALE - 1=VOL.OF SH=0
GROFF	0	GR AS SHALE INDICATOR (0-USE ,1-NO)
NEUOFF	0	NEUTRON AS SHALE INDICATOR (0-USE ,1-NO)
PEOFF	0	USE PEF? (0-USE ,1-NO)
MINOPT	3	MINERAL OPTION SWITCH 3 = SANDSTONE AND SHALE ONLY (CLASSICAL)
MOPOFF	0	MOVEABLE OIL PLOT SWITCH 0-USE RXO 1-NO RXO
QOPT	1	SW OPTION - 0=SW FROM PHIT AND Q 1=SW FROM PHIE AND VSH
NOPRT	0	PRINT OPTION - 0=PRINT ALL VALUES 1=SKIP SHALE ZONES
SWOPT	5	1 - ARCHIE; 2 - SIMANDOUX; 3 - SIMANDOUX LAMINAR; 4 - V2 SIMANDOUX; 5 - INDONESIAN

LISTING OF ENVIRON PARAMETERS

ZONE HYDROCARBON ZONE 4 WELL ANEMONE 1&1A
SANTONIAN SANDSTONE

TOP	4525.0000	(METRES) TOP OF INTERVAL
BOTTOM	4775.0000	(METRES) BOTTOM OF INTERVAL

FLUID VALUES

RHOFR	0.95	(KG/M3 OR GR/CC)RECORDED FLUID DENSITY
SALFM	9950.	(PPM) FORMATION SALINITY (NACL)
SALMD	19500.	(PPM) MUD SALINITY (NACL)
RMM	0.4090	(OHM-M) RM IF USING AN OIL BASED MUD SET TO > 100
RMMT	55.	(FARENHEIT) MEASURED TEMPERATURE FOR RM
RMFM	0.2810	(OHM-M) RMF
RMFMT	55.	(FARENHEIT) MEASURED TEMPERATURE FOR RMF
RMCM	0.8180	(OHM-M) RMC
RMCMT	55.	(FARENHEIT) MEASURED TEMPERATURE FOR RMC

HOLE AND MUD VALUES

MW	12.70	(KG/M3 LBS/GAL LBS/FT3 OR SP. GRAV) MUD WT ENTER 0 MW FOR AIR FILLED HOLE
BITSIZ	6.000	(MM OR INCHES) BIT SIZE
AMST	54.0	(FARENHEIT) ANNUAL MEAN SURFACE TEMP
BHT	260.0	(FARENHEIT) BOTTOM HOLE TEMPERATURE
TD	4775.	(METRES) TOTAL DEPTH OF BOREHOLE
RSTAND	1.500	(INCHES) STANDOFF SETTING ON INDUCTION

LIMITING VALUES

RHOMIN	1.25	(KG/M3 OR GR/CC) MIN. VALID BULK DENSITY
DLTMIN	40.	(USEC/FT) MIN. VALID SONIC ITT
DLTMAX	190.	(USEC/FT) MAX. VALID SONIC ITT
PHNMAX	70.	(PERCENT) MAXIMUM VALID NEUTRON POROSITY
RUGMAX	6.00	(INCHES) MAX. RUGOSITY TO ACCEPT NEUTRON
STOMAX	3.00	(INCHES) MAX. NEUT. STANDOFF
STOMIN	0.00	(INCHES) MIN. NEUT. STANDOFF TO CORRECT (SET TO STOMAX TO BYPASS STANDOFF LOGIC)
DROLIM	0.15	(KG/M3 OR GR/CC) MAXIMUM DENSITY CORRECTON TO ACCEPT (+ OR -)

MATRIX VALUES

GRMA	38.	(API) GAMMA RAY MATRIX
SPMA	-40.	(MV) SP MATRIX (MV)
ATTMA	150.	(DB/M) ATTENUATIONOF THE MATRIX(DB/M)
DLTSS	61.00	(USEC/FT) DELTA T SANDSTONE
DLTLS	48.78	(USEC/FT) DELTA T LIMESTONE
DLTDOL	43.96	(USEC/FT) DELTA T DOLOMITE
DLTANH	50.00	(USEC/FT) DELTA T ANHYDRITE
RHOSS	2.60	(KG/M3 OR GR/CC) MATRIX DENS OF SANDSTONE
RHOLS	2.71	(KG/M3 OR GR/CC) MATRIX DENS OF LIMESTONE
RHODOL	2.87	(KG/M3 OR GR/CC) MATRIX DENS OF DOLOMITE
RHOANH	2.98	(KG/M3 OR GR/CC) MATRIX DENS OF ANHYDRITE
TPLSS	7.20	(NSEC/M) TPL OF SANDSTONE
TPLLS	9.10	(NSEC/M) TPL OF LIMESTONE
TPLDOL	8.70	(NSEC/M) TPL OF DOLOMITE
TPLANH	8.40	(NSEC/M) TPL OF ANHYDRITE

VALUES FOR SOLO TOOLS

RHOMAB	2.60	(KG/CM OR GR/CC) MATRIX DENSITY
DLTMAB	61.	(KG/M3 OR GR/CC) TRANSIT TIME MATRIX
TPLMAB	8.50	(NSEC/M) TPL MATRIX
NEUMAB	0	NEUTRON MATRIX 0=LS 1=SS 2=DOL

VALUES FOR COAL DETECTION

GRCOAL	180.	(API) MAXIMUM GR IN COAL.
DLTCOL	94.	(USEC/FT) MINIMUM SONIC IN COAL.
UCOAL	8.00	(PPM) MINIMUM URANIUM IN COAL.
RHOCOL	2.30	(KG/M3 OR GR/CC) MAXIMUM DENSITY OF COAL.
PNCOL	27.	(PERCENT) MINIMUM LS. NEUTRON POR. IN COAL
PECOL	2.00	(BARNS/ELEC.) MAXIMUM PEF IN COAL.
COALCK	6	NUMBER OF POSITIVE COAL CHECKS NEEDED TO IDENTIFY COAL (COAL=1).

****
********** FLUID VALUES **********
****

RHOF	1.00	(KG/M3 OR GR/CC) FLUID DENSITY
DLTF	189.	(USEC/FT) TRANSIT TIME OF FLUID
RHOH	0.60	(KG/M3 OR GR/CC) HYDROCARBON DENSITY
ANEUT	1.25	NEUTRON GAS FACTOR(USUAL RANGE 1 TO 1.4) 1=HIGH DENSITY AND 1.5 LOW DENSITY
RHOMF	1.00	(KG/M3 OR GR/CC) MUD FILTRATE DENSITY
TPLH	5.00	(NSEC/M) HYDROCARBON TPL
SALMD	19500.	(PPM) MUD SALINITY
RWM	0.160	(OHM-M) RW AT MEASURED TEMPERATURE
RWMT	260.	(FARENHEIT) TEMPERATURE OF RW MEASUREMENT
RWBM	0.16	(OHM-M) BOUND WATER RESISTIVITY
RWBMT	260.	(FARENHEIT) TEMPERATURE OF RWB MEASUREMENT

****
********** SHALE AND CLAY VALUES **********
****

GRSH	200.	(API) GAMMA RAY VALUE IN SHALE
SPSH	-45.	(MV) SP VALUE IN SHALE
ATTSH	600.	(DB/M) EPT ATTENUATION IN SHALE
RHOSH	2.73	(KG/M3 OR GR/CC) MATRIX DENSITY OF SHALE
PEFSH	3.60	(BARNS/ELECTRON) PEF IN SHALE
TPLSH	9.00	(NSEC/M) TPL IN SHALE
PHINSH	15.	(PERCENT) NEUTRON LOG POROSITY OF SHALE
DLTSH	65.	(USEC/FT) TRANSIT TIME OF SHALE
RSH	40.00	(OHM-M) RESISTIVITY OF SHALE
PHIMAX	21.00	(PERCENT) MAX SHALE POROSITY IN INTERVAL

WAXMAN SMITS CONSTANTS

RHOCL	2.70	(KG/M3 OR GR/CC) DENS OF DRY CLAY
HICL	25.00	(PERCENT) HYDROGEN INDEX OF DRY CLAY
CEC	0.100	(MEQ/G) CATION EXCHANGE CAPACITY

NOTE: ALSO SUPPLY RSH, M (USED AS M*), N (USED AS N*), RW, AND A.

****
****** LOG CALCULATION CONSTANTS AND EXPONENTS *******
****

A	0.62	CONSTANT IN FORMATION FACTOR EQUATION
M	2.15	CEMENTATION EXPONENT
N	2.00	SATURATION EXPONENT
CP	1.00	COMPACTION FACTOR

****
**** LIMITING VALUES FOR NET AND GROSS PAY CALCULATIONS ****
****

PHILIM	6.00	(PERCENT) LOWER POROSITY LIMIT
VSHLIM	0.40	(FRACTION) VOLUME OF SHALE UPPER LIMIT
SWLIM	65.00	(PERCENT) WATER SATURATION LIMIT

****
******** LOG CALCULATION OPTIONS AND SWITCHES ********
****

MSI	0	0=STANDARD UNITS 1=MSI
VSHCIN	3	GR TO VOL. OF SHALE CURVATURE INDEX
VSHOFF	0	0=CALC VOL. OF SHALE - 1=VOL.OF SH=0
GROFF	0	GR AS SHALE INDICATOR (0-USE ,1-NO)
PEOFF	0	USE PEF? (0-USE ,1-NO)
MINOPT	3	MINERAL OPTION SWITCH 3 = SANDSTONE AND SHALE ONLY (CLASSICAL)
MOPOFF	0	MOVEABLE OIL PLOT SWITCH 0-USE RXO 1-NO RXO
QOPT	1	SW OPTION - 0=SW FROM PHIT AND Q 1=SW FROM PHIE AND VSH
NOPRT	0	PRINT OPTION - 0=PRINT ALL VALUES 1=SKIP SHALE ZONES
SWOPT	5	1 - ARCHIE; 2 - SIMANDOUX; 3 - SIMANDOUX LAMINAR; 4 - V2 SIMANDOUX; 5 - INDONESIAN

PE601648

This is an enclosure indicator page.
The enclosure PE601648 is enclosed within the container PE903131 at this location in this document.

The enclosure PE601648 has the following characteristics:

ITEM_BARCODE	= PE601648
CONTAINER_BARCODE	= PE903131
NAME	= Anemone 1 logcalc2 results
BASIN	= GIPPSLAND
PERMIT	= VIC/P20
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Log analysis results(2675-4775m) from log analysis of hydrocarbon bearing formations of the La Trobe group in Anemone 1, 1A, enclosure 1
REMARKS	=
DATE_CREATED	= 21/10/89
DATE_RECEIVED	= 26/10/89
W_NO	= W997
WELL_NAME	= Anemone-1
CONTRACTOR	= Petrofina Exploration Australia S.A
CLIENT_OP_CO	= Petrofina Exploration Australia S.A

(Inserted by DNRE - Vic Govt Mines Dept)

PE601649

This is an enclosure indicator page.
The enclosure PE601649 is enclosed within the container PE903131 at this location in this document.

The enclosure PE601649 has the following characteristics:

ITEM_BARCODE	= PE601649
CONTAINER_BARCODE	= PE903131
NAME	= Anemone 1 Composite Log showing Campanian 1 sandstones
BASIN	= GIPPSLAND
PERMIT	= VIC/P20
TYPE	= WELL
SUBTYPE	= COMPOSITE_LOG
DESCRIPTION	= Composite Log analysis of Campanian 1 Sandstones,(enclosure 3 of WCR) for Anemone-1
REMARKS	=
DATE_CREATED	= 20/10/89
DATE_RECEIVED	= 26/10/89
W_NO	= W997
WELL_NAME	= Anemone-1
CONTRACTOR	= Petrofina Exploration Australia S.A
CLIENT_OP_CO	= Petrofina Exploration Australia S.A

(Inserted by DNRE - Vic Govt Mines Dept)

PE601650

This is an enclosure indicator page.
The enclosure PE601650 is enclosed within the container PE903131 at this location in this document.

The enclosure PE601650 has the following characteristics:

ITEM_BARCODE	= PE601650
CONTAINER_BARCODE	= PE903131
NAME	= Anemone-1 Composite Log showing intra campanian sandstones
BASIN	= GIPPSLAND
PERMIT	= VIC/P20
TYPE	= WELL
SUBTYPE	= COMPOSITE_LOG
DESCRIPTION	= composite Log analysis of Intra-Campanian Sandstones, (enclosure 2 fo WCR) for Anemone-1
REMARKS	=
DATE_CREATED	= 20/10/89
DATE_RECEIVED	= 26/10/89
W_NO	= W997
WELL_NAME	= Anemone-1
CONTRACTOR	= Petrofina Exploration Australia S.A
CLIENT_OP_CO	= Petrofina Exploration Australia S.A

(Inserted by DNRE - Vic Govt Mines Dept)

PE601651

This is an enclosure indicator page.
The enclosure PE601651 is enclosed within the container PE903131 at this location in this document.

The enclosure PE601651 has the following characteristics:

ITEM_BARCODE	PE601651
CONTAINER_BARCODE	PE903131
NAME	Anemone 1Composite Log showing campanian 2 sandstone
BASIN	GIPPSLAND
PERMIT	VIC/P20
TYPE	WELL
SUBTYPE	COMPOSITE_LOG
DESCRIPTION	Composite Log analysis of Campanian 2 Sandstone, (enclosure 4 of WCR) for Anemone-1
REMARKS	
DATE_CREATED	23/10/89
DATE_RECEIVED	26/10/89
W_NO	W997
WELL_NAME	Anemone-1
CONTRACTOR	Petrofina Exploration Australia S.A
CLIENT_OP_CO	Petrofina Exploration Australia S.A

(Inserted by DNRE - Vic Govt Mines Dept)

PE601652

This is an enclosure indicator page.
The enclosure PE601652 is enclosed within the container PE903131 at this location in this document.

The enclosure PE601652 has the following characteristics:

ITEM_BARCODE	= PE601652
CONTAINER_BARCODE	= PE903131
NAME	= Anemone 1 Composite Log showing santonian sandstone
BASIN	= GIPPSLAND
PERMIT	= VIC/P20
TYPE	= WELL
SUBTYPE	= COMPOSITE_LOG
DESCRIPTION	= Composite Log analysis of Santonian Sandstone, (enclosure 5 of WCR) for Anemone-1
REMARKS	=
DATE_CREATED	= 23/10/89
DATE_RECEIVED	= 26/10/89
W_NO	= W997
WELL_NAME	= Anemone-1
CONTRACTOR	= Petrofina Exploration Australia S.A
CLIENT_OP_CO	= Petrofina Exploration Australia S.A

(Inserted by DNRE - Vic Govt Mines Dept)