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BEACH PETROLEUM N.L.

GREENBANKS NO. 1

PEP 105

WELL COMPLETION REPORT

BEACH PETROLEUM N.L.
(Incorporated in South Australia)

WCR GREENBANKS - 1

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PEP 105

WELL COMPLETION REPORT

BY:

A. TABASSI

JUNE 1983

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SUMMARY

Green Banks-1 was drilled over a 9 day period from the 4th to 12th April 1983, as a new field wildcat exploration well in the Heywood Area, P.E.P. 105, Otway Basin, Victoria.

The well was designed as a test of a Lower Cretaceous Sandstone/ conglomeritic unit immediately overlying basement on the substantial Lake Condah High. This primary objective was not present.

At the secondary objective of the Eumeralla Sandstones, the well encountered weak cutting fluorescence in very thin sandstone drilled from 1008m to the base of this formation. Very minor but increasing background gas from 15-20 ppm-C_1 up to 80 ppm-C_1 was also recorded. Due to extremely low porosity and thin nature of the sandstone beds no test was warranted. The maximum gas reading associated with the coal seams, immediately overlying basement, was 380 ppm-C_1, 20 ppm-C_2 and 8 ppm-C_3 with the background gas of 30-40 ppm-C_1.

The well was drilled by Petroleum Drilling Services of Australia Pty.Ltd., Kremco 750 Rig No. 1 with the following contract services:-

Halliburton Manufacturing and Services Ltd.	- Testing and Cementing
Schlumberger Seaco Inc.	- Wireline Logging
Exploration Logging of Australia Ltd.	- Mud Logging
Baroid N.L.	- Mud Engineering

Beach Petroleum N.L. was the operator for the well, which was drilled as an earning well for Gas and Fuel Exploration. This was one of the series of operations whereby Gas and Fuel Exploration can earn a 50% interest in P.E.P. 105.

1. PURPOSE OF WELL

The Green Banks No. 1 well was proposed as a test of a Lower Cretaceous Sandstone/Conglomeratic unit immediately overlying basement on the substantial Lake Condah High. This large untested high can be mapped at basement or near basement level only.

The structure is well placed to trap hydrocarbons migrating from either the Portland Trough to the south or the Ardonachie Trough to the north.

Mines Department stratigraphic hole, Hotspur No. 1, 20 kilometres to the north west, penetrated porous and permeable Eumeralla sandstones as well as a basal sandstone/conglomerate in which gas shows were reported at the wellsite.

2. WELL HISTORY

2.1. Location (Refer Figure 1)

(i)	Co-ordinates (Approx.):	38° 01' 14" S 141° 46' 32" E
(ii)	Geophysical Control:	Shot Point 180 Line OB82A-A80 Beach Petroleum N.L. 1982 Ardonachie Seismic Survey
(iii)	Real Property Description:	Parish of CONDAH Shire of PORTLAND County of NORMANBY
(iv)	Property Owner:	Mr. L.C. Wallis RMB 7570 Condah Vic. 3303
(v)	District:	Portland Sheet 7221 100,000 sheet map

2.2. General Data (Refer Figure 2)

(i)	Well Name and Number:	Green Banks No. 1
(ii)	Tenement:	P.E.P. 105
(iii)	Elevation:	Ground Level - 105.4 m Kelly Bushing - 111.4 m (All depths are referred to KB)
(iv)	Total Depth:	Driller 1226.2 m Schlumberger 1227.0 m
(v)	Date Drilling Commenced:	4/4/1983 @ 0100 hours
(vi)	Total Depth Reached:	12/4/1983 @ 2000 hours
(vii)	Date Rig Released:	14/4/1983 @ 2300 hours
(viii)	Drilling Time to Total Depth:	9 days (See Appendix No. 1)
(ix)	Status:	Plugged and Abandoned

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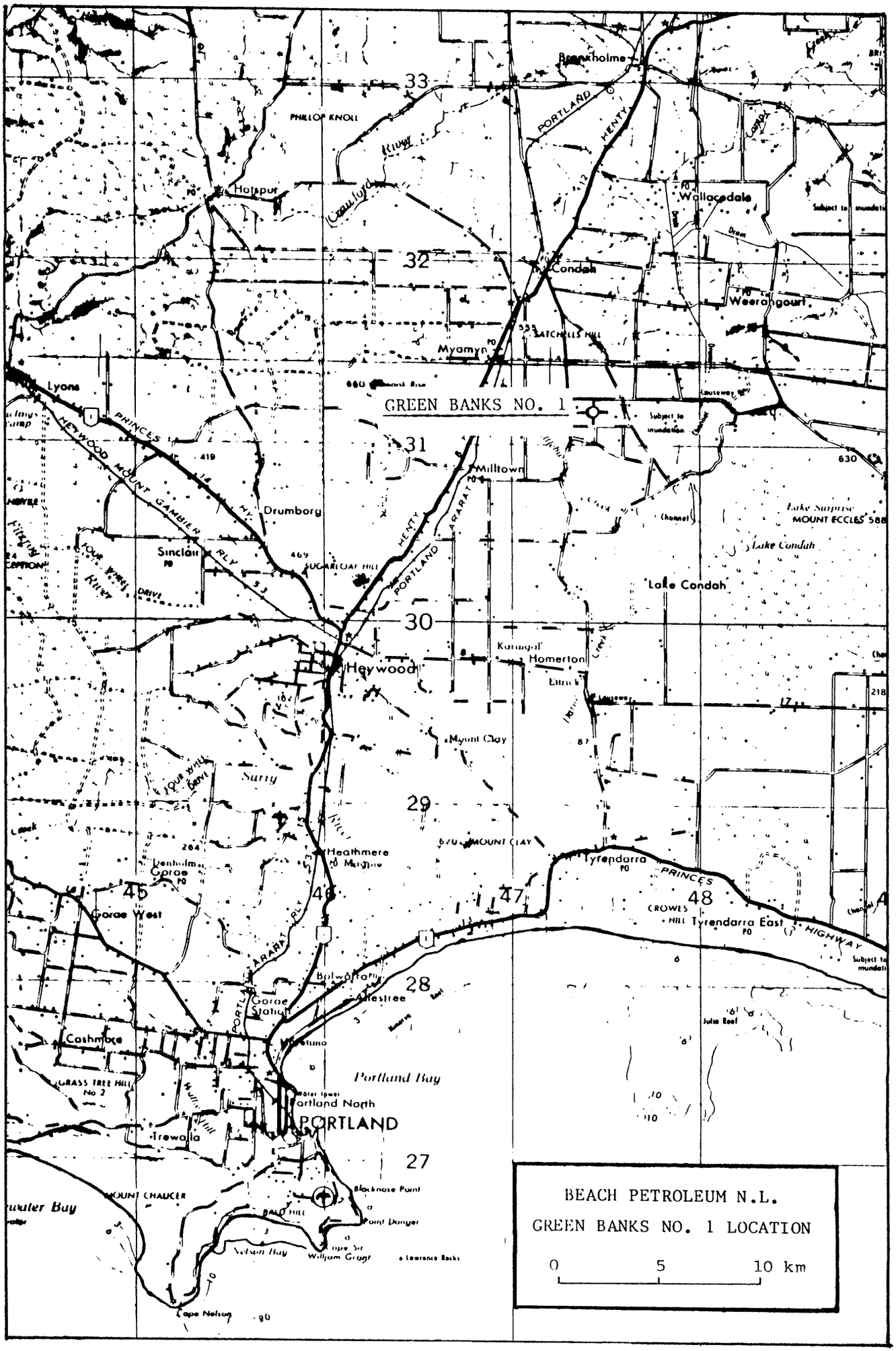

FIG.-1 DETAILED LOCATION MAP

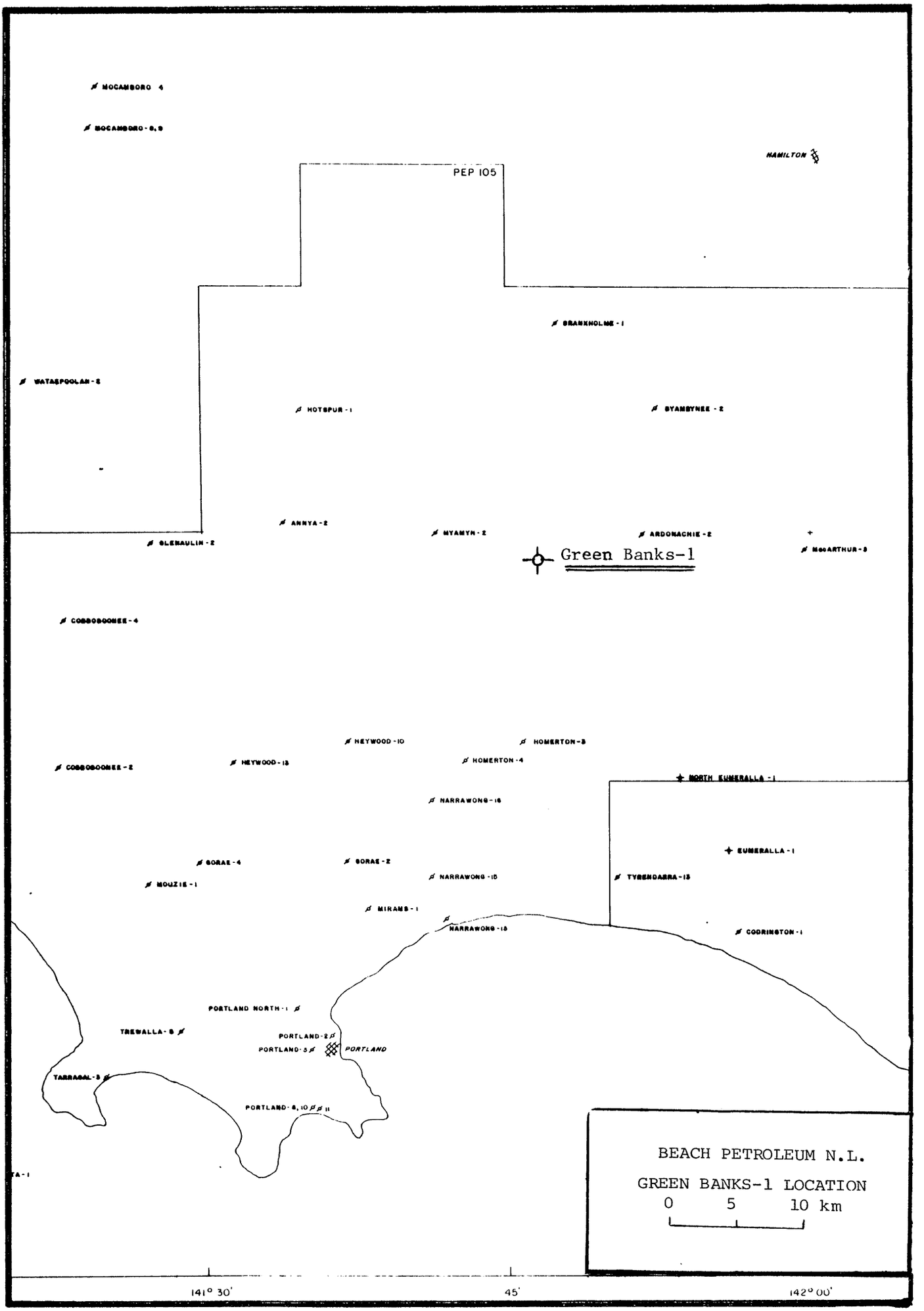

FIG.-2 WELL LOCATION MAP

2. WELL HISTORY - Continued

2.3. Drilling Data

2.3.1. Drilling Contractor: Petroleum Drilling Services Pty Ltd., 5 Westcombe Street, Darra, Qld. 4076

2.3.2. Drilling Rig: Kremco 750 Rig No. 1. Details of the drilling plant are included in Appendix No. 2.

2.3.3. Casing and Cementing Details:

(i) Plugs

Plug No. 1

Interval:	1030 to 950 m
Cement:	100 sacks Class 'A'
Method:	Balanced
Tested:	No

Plug No. 2

Interval:	410 to 330 m
Cement:	100 sacks
Method:	Balanced
Tested:	Yes, pressure tested to 1100 psi.

Plug No. 3

Interval:	Surface
Cement:	20 sacks
Method:	Hand
Tested:	No

(ii) Conductor

A 20" conductor was set at 7 m.

(iii) Surface Casing

Size:	13-3/8"
Weight:	54.5 lb/ft
Grade:	J55
Range:	3
Coupling:	STC
Centraliser:	2

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2. WELL HISTORY - Continued

2.3. Drilling Data - Continued

2.3.3. Casing and Cementing Details - Continued

Float Collar:	Yes
Shoe	@ 101 m
Cement:	300 sacks Class 'A' neat followed by 100 sacks Class 'A' plus 2% $CaCl_2$.
Cemented to:	Surface
Method:	Displacement
Equipment:	Halliburton truck - mounted pump.

(iv) Intermediate Casing

Size:	9-5/8"
Weight:	36 lb/ft
Grade:	J55
Range:	3
Coupling:	STC
Centraliser:	3
Float Collar:	Yes
Shoe:	@ 403.5 m
Cement:	501 sacks Class 'A' neat cement
Cemented to:	Surface
Method:	Displacement
Equipment:	Halliburton truck - mounted pump.

2.3.4. Drilling Fluid (See Appendix No. 3)

(i) 17½" Hole, 0.0 to 103. 0 m

The well was spudded using only AQUAGEL. As drilling progressed, LIME was then slowly added to maintain viscosity and to provide some clay inhibition prior to drilling Gellibrand Marl. The range of properties:-

S.G.	1.04 - 1.06
Viscosity	36 - 37 secs
Water Loss	Not Taken.

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2. WELL HISTORY - Continued

2.3. Drilling Data - Continued

2.3.4. Drilling Fluid - Continued

(ii) 12¼" Hole, 103.0 to 406.0 m

The 12¼" hole section was drilled using the same mud as in 17½" hole. Once through the Gellibrand Marl, Calcium was treated out with SODA ASH and began adding AQUAGEL to boost viscosity and provide better water loss control. Due to recycling water from the sump the PH in this water had risen to 12.0 resulting in a higher water loss in the freshwater AQUAGEL mud. As there were not important zones in this hole section, it was not considered worthwhile to reduce water loss. However, to maintain hole cleaning, several high viscosity pills were pumped using the bentonite extender, ALCOMER 1773. The range of properties:-

S.G.	1.04 - 1.10
Viscosity	35 - 45 secs
Water Loss	14 - 18 a.p.i.

(iii) 8½" Hole, 406.0 to 1226.2 m

The 8½" hole was drilled entirely with an unweighted KCl-Polymer mud, using only MONPAC and XC-POLYMER, in a roughly 4:1 ratio for viscosity and water loss control. The rapid drilling through the upper section of the Eumeralla Formation caused the increase in water loss. The mud was diluted with water to reduce the mud viscosity and pump rate was slowed down to 90 spm from 120 spm. The drilling rate slowed down gradually with depth and consequently water loss decreased and mud properties gradually improved towards T.D.

The range of properties:-

S.G.	1.08 - 1.16
Viscosity	37 - 43 secs
Water Loss	8.0 - 10.0 a.p.i.

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2. WELL HISTORY - Continued

2.3. Drilling Data - Continued

2.3.5. Water Supply

Drilling water was obtained from the natural rain water run-off through ditches to the sump and turkey's nest. Some of the sump fluid was also recycled whenever additional water was required. Consequently no water supply via trucks was required at all during the drilling of the well.

The low fluid consumption not only reduced the cost of drilling water, but it will also make sump clean-up much cheaper.

2.4. Formation Sampling and Testing

2.4.1. Cuttings

Lagged samples of cuttings were collected from the shale shaker at the following intervals:-

Surface to 10.0 m - Nil
20.0 m to 100.0 m - @ 10 m frequency
100.0 m to 1226.5 m - @ 5 m frequency

Four splits were made of the washed, oven-dried samples and stored in labelled polythene bags: one for Beach Petroleum N.L., one for Gas and Fuel Exploration N.L., one for Victorian Department of Minerals and Energy and one spare. One set of unwashed, air-dried samples were taken at 10 m intervals in calico bags for micropalaeo/palynology/source rock studies at a later date.

2.4.2. Cores

(i) Conventional

No cores were taken.

(ii) Sidewall

Twenty sidewall cores were attempted from the following depths (in metres):-

2. WELL HISTORY - Continued

2.4. Formation Sampling and Testing - Continued

2.4.2. Cores - Continued

No. 1	1223.0	No. 11	1000.0
No. 2	1218.0	No. 12	942.5
No. 3	1211.5	No. 13	870.0
No. 4	1207.5	No. 14	812.0
No. 5	1204.5	No. 15	755.5
No. 6	1195.0	No. 16	695.0
No. 7	1155.0	No. 17	610.0
No. 8	1100.0	No. 18	567.0
No. 9	1075.0	No. 19	527.0
No. 10	1012.0	No. 20	454.0

Descriptions of the cores are enclosed as Appendix No. 4.

2.4.3. Formation Tests

No formation tests were carried out.

2.5. Logging and Surveys

2.5.1. Mud Logging

A skid-mounted Exploration Logging (EXLOG) unit was used to provide penetration rate, continuous mud gas monitoring, intermittent mud and cuttings gas analyses, pump rate and mud volume data and cuttings descriptions.

The Mud Log is enclosed as Enclosure 1.

2.5.2. Wireline Logging

Schlumberger recorded the following logs in open hole:-

Run 1

Dual Laterolog (DLL-SP-GR)	101.0 - 398.0 m
Sonic Log (BHC-CAL)	101.0 - 397.0 m

Run 2

Dual Laterolog (DLL-SP-GR)	405.0 - 1222.5 m
Sonic Log (BHC-CAL)	405.0 - 1223.0 m

These logs are enclosed as Enclosures 3 to 6.

2. WELL HISTORY - Continued

2.5. Logging and Surveys - Continued

2.5.3. Deviation Surveys

The results of deviation surveys using a TOTCO survey instrument were:-

¼°	@	32 m	0°	@	406 m
½°	@	60 m	Misrun	@	607 m
½°	@	103 m	½°	@	626 m
3/4°	@	188 m	3/4°	@	826 m
½°	@	310 m	3/4°	@	1127 m
			1°	@	1214 m

2.5.4. Velocity Survey

Schlumberger recorded a Velocity Survey at total depth. The results of this survey form Appendix No. 5 and Enclosure 7.

3. RESULTS OF DRILLING

3.1. Formation Tops

The following formation tops have been picked using cuttings' descriptions, mudlog, wireline log data and Palaeontological as well as Palynological data in part (all depths in metres);

GROUP	FORMATION	MEMBER	K.B.	SUBSEA	THICKNESS
-	Newer Volcanics		Surface	+ 105.4	17.0
Post Heytesbury	Whaler's Bluff		23.0	+ 88.4	17.0
Heytesbury	-		40.0	+ 71.4	188.5
Wangerrip	Dilwyn		228.5	- 117.1	72.5
"		Pember Mudstone	301.0	- 189.6	90.0
"	Pebble Point		391.0	- 279.6	16.0
Sherbrook	Paaratte	Timboon Sand	407.0	- 295.6	24.5
"			431.5	- 320.1	84.5
"		Belfast Mudstone	516.0	- 404.6	16.5
Otway	Eumeralla		532.5	- 421.1	676.5
Basement			1209.0	-1097.6	17.2+
T.D.			1226.2	-1114.8	

3.2. Lithologic Description

The lithologies encountered in the well are generalised as follows:- (All depths are in metres below K.B.)

Newer Volcanics — Surface - 23.0

VOLCANICS light to dark red brown, light yellow gold, medium to dark greenish brown, hard to very hard, granular texture, occasional quartz grains, rare clear to white, yellow gold quartz overgrowths grading to:-

Whaler's Bluff Formation — 23.0 - 40.0

SANDSTONE, clear to light grey, gold to light yellow, iron-stained in part, loose to friable, medium to very coarse, dominantly coarse grained, subangular to subrounded, dominantly subrounded, poorly sorted quartz, fine silt matrix in part,

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3. RESULTS OF DRILLING - Continued

3.2. Lithologic Description - Continued

Whaler's Bluff - Continued

trace limonitic matrix at depth, occasional calcite, common to rare glauconite at depth, rare pyrite, rare volcanic materials, trace fossil fragments, moderate visual porosity, some clay at base.

HEYTESBURY GROUP 40.0 - 228.5

From 40.0 - 60.0

CALCARENITE, light to medium grey, firm to hard, fine to medium, dominantly medium, common bryozoans, echinoid spines, corals, rare forams, occasional glauconite, in part filling the bryozoans' zooids.

From 60.0 - 180.5

MARL, medium greenish grey to medium green, becoming medium olive green with depth, soft, becoming sticky with depth, commonly fossiliferous; forams, echinoid spines, gastropods, bivalves, trace corals, trace glauconite, trace carbonaceous detrities, trace pyrite, towards the base inter-bedded with; thin SANDSTONE, brownish black, blackish red, medium brown, loose-hard in part, fine to pebble size, subangular to rounded, dominantly rounded, very poorly sorted limonitic, goethitic, magnetitic in part, pellets, pisoliths, ooliths and some subangular quartz grains, apparent primary cement iron-oxide/hydroxide, apparent secondary cement mainly consists of carbonates, poor to fair visual porosity.

Note: Lumps (composite grains bonded by limonite and/or goethite) as well as individual ooliths, pisoliths and pellets appeared to have been polished in their place of origin (a high energy environment) and/or during transportation.

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3. RESULTS OF DRILLING - Continued

3.2. Lithologic Description - Continued

HEYTESBURY GROUP - Continued

From 180.5 - 228.5
COQUINA LIMESTONE, moderate reddish orange to moderate orange pink with no apparent matrix with 100% fossil fragments; bryozoans, echinoid spines, forams, bivalves, corals, trace gastropods. Very good visual porosity, interbedded at 185.0 - 190.0 m with; MARL, medium greenish grey to medium green, soft, sticky, very fossiliferous, at base, 225.0 - 228.5 m , CALCARENITE, bluish white to white, firm to hard, very fossiliferous, good visual porosity.

WANGERRIP GROUP 228.5 - 407.0

Dilwyn Formation 228.5 - 301.0

From 228.5 - 256.0
SANDSTONE, light to medium brown, iron-stained in part, loose to friable, firm in part, very fine to very coarse to pebble size, dominantly coarse grained, subangular to subrounded, poorly sorted quartz, silty clay matrix in part, calcite cemented in part, rare to common iron-oxide/hydroxide ooliths and pellets, rare clear, white to light yellow quartz overgrowths, trace cryptocrystalline pyrite, moderate visual porosity, interbedded with; SILTY CLAYSTONE, greyish black, soft to firm, dispersive in part, trace fine carbonaceous detritus.

From 256.0 - 290.0
SANDSTONE, clear to white to light grey, loose to firm, friable in part, fine to very coarse, dominantly coarse grained, subangular to subrounded, dominantly subrounded, poor to moderately sorted quartz, silty clay matrix in part, rare calcite cement strongly siliceous cement at the base, trace medium grey lithic fragments, common pyrite,

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3. RESULTS OF DRILLING - Continued

3.2. Lithologic Description - Continued

WANGERRIP GROUP - Continued

very rare black conchoidal COAL, good visual porosity, interbedded with; SILTY CLAYSTONE, greyish black, soft to firm, slightly sticky, trace of fine carbonaceous detritus, very rare COAL, trace fine muscovite flakes, rare fossil fragments, trace glauconite.

From 290.0 - 301.0
SANDSTONE, medium reddish brown, very hard, fine to medium, subangular to subrounded, well sorted quartz, strongly siliceous cement, trace pyrite, no visual porosity, interbedded with; SILTY CLAYSTONE, medium grey, soft, calcareous in part, micaceous in part, trace fine carbonaceous detritus, very rare COAL, rare fossil fragments.

Pember Mudstone Member

301.0 - 391.0
From 301.0 - 360.0
CLAYSTONE, medium to dark grey, soft, sticky in part, slightly dispersive in part, strongly micaceous, moderately arenaceous, common fine carbonaceous detritus, rare light green glauconite, rare pyrite, trace COAL, trace; gastropods, forams, bryozoans and other fossil fragments.

From 360.0 - 391.0
SANDY SILTY CLAYSTONE, medium brownish grey, soft, sticky, slightly carbonaceous, very slightly micaceous, silt size fine-medium grained, subangular to subrounded, moderately sorted quartz, common forams and other fossil fragments, rare dolomite crystals, trace COAL, trace glauconite, trace pyrite.

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3. RESULTS OF DRILLING - Continued

3.2. Lithologic Description - Continued

Pebble Point Formation 391.0 - 407.0

LATERITIC SANDSTONE, dark greyish brown, dark greenish brown, hard to very hard, silt size to very coarse to pebble size, subangular to sub-rounded, very poorly sorted, dominantly iron-stained/chlorite-stained quartz grains, with abundant iron oxide/hydroxide ooliths, pisoliths and pellets, abundant primary, dark green, hard chloritic clay matrix and limonitic cement, rare to common secondary light to medium grey, firm, clay matrix, trace secondary pyrite cement, rare dolomite, rare calcite, rare fossil fragments, trace chlorite flakes, trace glauconitic materials, no visual porosity, grading to;

SANDSTONE, brownish grey, olive grey in part, loose, firm in part, medium to very coarse, dominantly coarse, subangular to rounded, dominantly subrounded, moderately sorted quartz, iron-stained in part, chlorite-stained in part, rare chloritic clay matrix, rare calcite cement in part, trace silica cement, trace COAL, trace pyrite, trace fossil fragments, trace green mica flakes, trace dolomite, moderate visual porosity, interbedded with minor; CLAYSTONE, medium greenish grey/greyish green, soft to firm, slightly dispersive, extremely carbonaceous, slightly arenaceous.

Note: As it has recently been experienced, the Pebble Point Formation commences, at least in some part of the Otway Basin, with a Lateritic Cap of variable thickness. Apparently it is thicker in Port Campbell area than that of the Tyrendarra Embayment. In Green Banks-1 it may be up to three metres thick. This is a 'SLOPE BOTTOM' Laterite which contains both primary and secondary matrix and/or cement.

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3. RESULTS OF DRILLING - Continued

3.2. Lithologic Description - Continued

SHERBROOK GROUP 407.0 - 532.5

Paaratte Formation
Timboon Sand Member 407.0 - 431.5

SANDSTONE, clear to light grey to very light brownish grey, loose, medium to very coarse, dominantly coarse grained, subangular to subrounded, moderate to well sorted quartz, trace medium to dark brown lithic fragments, fine silt matrix in part, trace pyrite cement, trace muscovite, very good visual porosity.

Undifferentiated
Paaratte Formation 431.5 - 516.0

SANDSTONE, medium brownish grey, dark greyish green at top, becoming medium to dark greyish green-greenish grey with depth, becoming clear to light grey at base, firm to hard, friable to loose in part, silt size to very coarse to pebble size, generally becoming finer with depth, dominantly medium to coarse grained, subangular to subrounded, roundness generally improving upwards, poorly sorted, becoming well sorted with depth, quartz, multi-colored lithic fragments, decreasing with depth, silty clay matrix in part, silica cement in part, trace pyrite cement in part, common iron oxide/hydroxide pellets at the very top (?weathered zone), common to rare glauconite, increasing with depth, rare to trace feldspar, strongly altered at top, trace muscovite, trace chlorite flakes, trace pyrite, trace dolomite in part, very rare fine black COAL at depth, generally poor visual porosity (good visual porosity from 490.0 to 495.0 m). Some quartz grains are chlorite stained, interbedded with SILTY CLAYSTONE, dark greenish grey, dark greyish green, becoming medium grey with depth, firm to hard becoming soft to firm with depth, chloritic at top, micaceous, becoming finely carbonaceous with depth, arenaceous at base, trace pyrite, trace chlorite flakes in part, trace fossil fragments, trace dark brown COAL in part.

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3. RESULTS OF DRILLING - Continued

3.2. Lithologic Description - Continued

Belfast Mudstone Member — 516.0 - 532.5

CLAYSTONE, medium to dark greenish grey, soft to firm, moderately carbonaceous, slightly arenaceous, calcareous in part, rare glauconite, trace pyrite, trace dark brown-black COAL.

OTWAY GROUP — 532.5 - 1209.0

Eumeralla Formation — 532.5 - 1209.0

From 532.5 - 1000.0

SILTY CLAYSTONE, medium grey, medium bluish grey, firm, hard in part, moderately carbonaceous, micaceous in part, slightly calcareous, trace black COAL, interbedded with thin SANDSTONE beds at the following intervals; 532.5 - 536.0, 559.0 - 560.0, 570.0 - 571.0, 601.0 - 602.0, 640.0 - 642.0, 653.0 - 654.0, 700.5 - 701.0, 722.0 - 723.0, 761.0 - 763.0, 824.0 - 825.0, 918.0 - 919.0, 925.0 - 925.5, 957.0 - 958.0.

SANDSTONE, light grey, light greyish green, light greenish grey, firm to hard, extremely hard in part, very fine to medium, dominantly fine grained, subangular to subrounded, dominantly subrounded, well sorted quartz, multi-colored lithic fragments in part, rare light grey clay matrix in part, strongly calcite cemented, rare pyrite cement in part, common to rare glauconite, decreasing with depth, rare mica and chlorite flakes, trace feldspar, trace black COAL, none to very poor visual porosity.

From 1000.0 - 1209.0

SILTY CLAYSTONE, light to medium to dark grey, medium brownish grey, light bluish grey in part, soft to firm, arenaceous (sandy) at top, carbonaceous in part, micaceous in part, rare multi-colored lithic fragments interbedded with

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3. RESULTS OF DRILLING - Continued

3.2. Lithologic Description - Continued

OTWAY GROUP - Continued

COAL SEAMS at the following intervals:

1184.0 - 1184.5, 1188.5 - 1189.0, 1199.5 - 1200.5 and 1206.0 - 1209.0. COAL SEAMS, very dark brown to black, firm to hard, subvitreous to earthy, occasionally as laminae in the sand and clay, argillaceous in part, trace pyrite, interbedded with thin SANDSTONE bed at the following intervals:

1008.0 - 1009.0, 1011.5 - 1012.5, 1015.0 - 1015.5, 1040.0 - 1040.5, 1044.0 - 1044.5, 1067.0 - 1067.5, 1071.0 - 1072.0, 1082.0 - 1083.0, 1084.0 - 1085.0, 1097.0 - 1097.5, 1104.0 - 1104.5, 1117.5 - 1118.0, 1123.0 - 1124.5, 1128.0 - 1128.5, 1134.0 - 1134.5, 1143.0 - 1143.5, 1149.5 - 1150.5, 1163.0 - 1163.5, 1170.0 - 1170.5, 1172.0 - 1172.5, 1175.5 - 1176.0, 1186.0 - 1187.5, 1193.0 - 1193.5.

SANDSTONE, light to medium grey, light greenish grey, hard to very hard, extremely hard in part, very fine to medium, dominantly fine grained, subangular to subrounded, well sorted quartz, common to rare multi-colored lithic fragments, common light grey clay matrix (kaolin) in part, strongly calcite cemented, trace silica cement in part, trace mica in part, trace light reddish pink minerals (?garnet), very poor visual porosity.

Note: -The SANDSTONE shows 10%-15% patchy, very dull-dull yellow-orange natural fluorescence giving an extremely weak milky white crush cut fluorescence. No oil staining, no free oil in mud.

-The COAL has no natural fluorescence but gives a moderate bright very slow streaming milky white cut fluorescence.

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3. RESULTS OF DRILLING - Continued

3.2 Lithologic Description - Continued

BASEMENT 1209.0 - 1226.2

QUARTZ BIOTITE MUSCOVITE SCHIST, off white-pale greenish grey, mottled, very hard, no visual porosity, (The rock consists of quartz, biotite, muscovite, chlorite in part, acicular hornblende in part, accessories include: idioblastic and cryptocrystalline pyrite, rare very fine magnetite, very rare hematite (after pyrite), trace garnet, trace (tourmaline?). Biotite is very fine and dissemenated at first, becoming larger and more concentrated with depth, hence the schistosity is more pronounced with depth. Quartz vein and/or quartzite are also present. Abundant (low grade?), dark brown Hornfelsic rock fragments and some fragments of slate are associated with the basement rock at top).

4. GEOLOGY

4.1 Stratigraphy

The Stratigraphic Table (Table No. 1 on page 22) gives details of the section penetrated. The well was drilled in the area where only scattered data from a few V.D.M.E. stratigraphic/water bore holes, were available to base formation tops. As a result, a number of minor but significant variations occur:- (See also Figures 3 and 4).

1. The Whaler's Bluff Formation was encountered in Green Banks No. 1 whilst it was absent in the nearby V.D.M.E. Hotspur No. 1 well. The presence of Whaler's Bluff sandstone as well as surface volcanics are probably the reason for the greater surface elevation at Green Banks.

2. The lower section of the Gellibrand Formation, between 108.5 m and 228.5 m, resembles the Clifton Formation. This is supported by the presence of a strong seismic signature at this level on the synthetic seismogram (See Appendix No. 5). This is diagnostic of the Clifton Formation in most parts of the Otway Basin, particularly the Port Campbell High. However, due to extra thickness at this location, compared with Clifton Formation elsewhere, and its inconsistancy in log character and lithology, it was not considered as a separate formation.

3. The presence of the lateritic sandstone on the top of the Pebble Point Formation in Green Banks No. 1 confirmed the widespread development of "Slope Bottom" laterite in the Otway Basin as a whole. The absence of this lateritic cap in some wells could be attributed to Palaeotopography at the time of deposition.

4. The presence of a porous and permeable sandstone, resembling the Timboon Sand Member, seems to be the product of the local facies variation of the Paaratte Formation. Timboon Sand was not reported in Hotspur No. 1 or any other V.D.M.E. boreholes in this vicinity.

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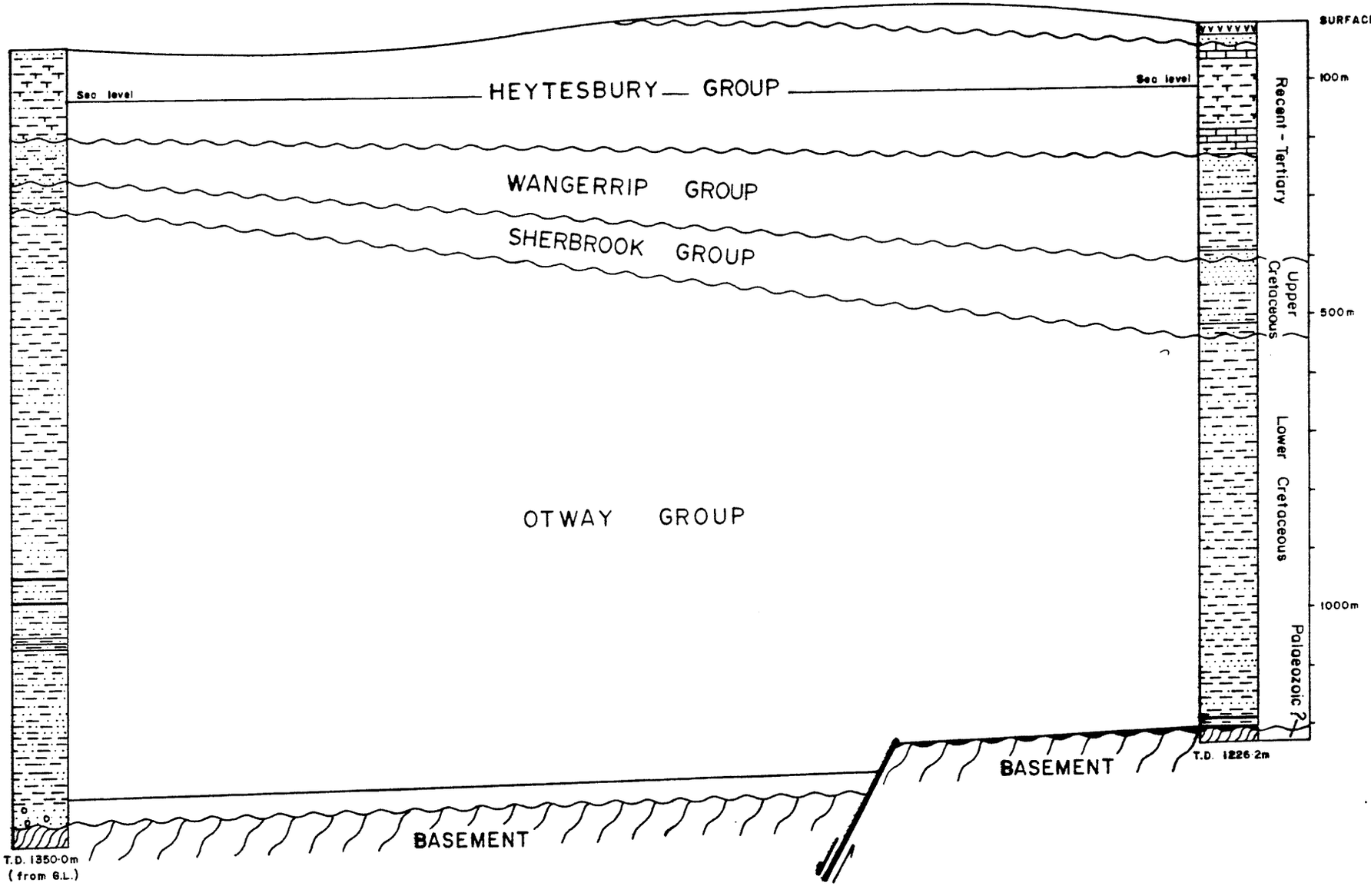
TABLE NO. 1

G R E E N B A N K S N O . 1 S T R A T I G R A P H I C T A B L E

GENERAL AGE			GROUP	FORMATION MEMBER	K.B. (M)	SUBSEA (M)	THICK-NESS. (M)	L I T H O L O G Y
Q.			POST-HEYTESBURY	NEWER VOLCANICS	SURFACE	+105.4	17.0	Volcanic rock (Basalt)
TERTIARY	PLIOCENE	PLEISTO-CENE	POST-HEYTESBURY	WHALERS BLUFF	23.0	+88.4	17.0	Sandstone, clear to light grey to iron-stained, loose to fiable, some clay at base.
	OLIGOCENE	-MIOCENE	HEYTESBURY	PORT CAMPBELL	40.0	+71.4	20.0	Calcarenite, light to medium grey, firm to hard, fossiliferous.
				GELLIBRAND	60.0	+51.4	168.5	Marl, generally green, soft, fossiliferous interbedded with Coquina & Calcarenite.
	PALAEOCENE	EOCENE	WANGERGRIP	DILWYN	228.5	-117.1	72.5	Sandstone, medium brown-light grey, loose to friable, interbedded with Silty Claystone.
				PEMBER	301.0	-189.6	90.0	Claystone/Silty Claystone, medium grey to brownish grey, soft, sticky trace Coal.
				PEBBLE POINT	391.0	-279.6	16.0	Lateritic Sandstone/Sandstone, greyish brown to brownish grey, interbedded with minor Claystone.
MESOZIC	CRETACEOUS	UPPER	SHERBROOK	TIMBOON SAND.	407.0	-295.6	24.5	Sandstone, light brownish grey, loose, moderate to well sorted quartz, trace fine silt matrix.
				PAARATTE	431.5	-320.1	84.5	Sandstone, greenish grey-greyish green, firm, silty clay matrix, interbedded with silty claystone, trace Coal.
				BELFAST	5160.0	-404.6	16.5	Claystone, medium to dark greenish grey, soft, carbonacous, trace Coal.
		Lower	OTWAY	EUMERALLA	532.5	-421.1	676.5	Silty Claystone, medium grey, interbedded with several thin Sandstone beds, Coal Seams at base.
PALAEOZOIC?			B A S E M E N T		1209.0	-1097.6	17.2+	Quartz Biotite Muscovite Schist.
				TOTAL DEPTH	1226.2	-1114.8		

HOTSPUR No.1

GREEN BANKS No.1



BEACH PETROLEUM N.L.

DIAGRAMMATIC CROSS SECTION

BETWEEN GREEN BANKS No.1 & HOTSPUR No.1

Horizontal Scale 1 : 100,000

FIGURE 3

OT 1971

BEACH PETROLEUM N.L.

GREEN BANKS No.1

FORMATION TOPS

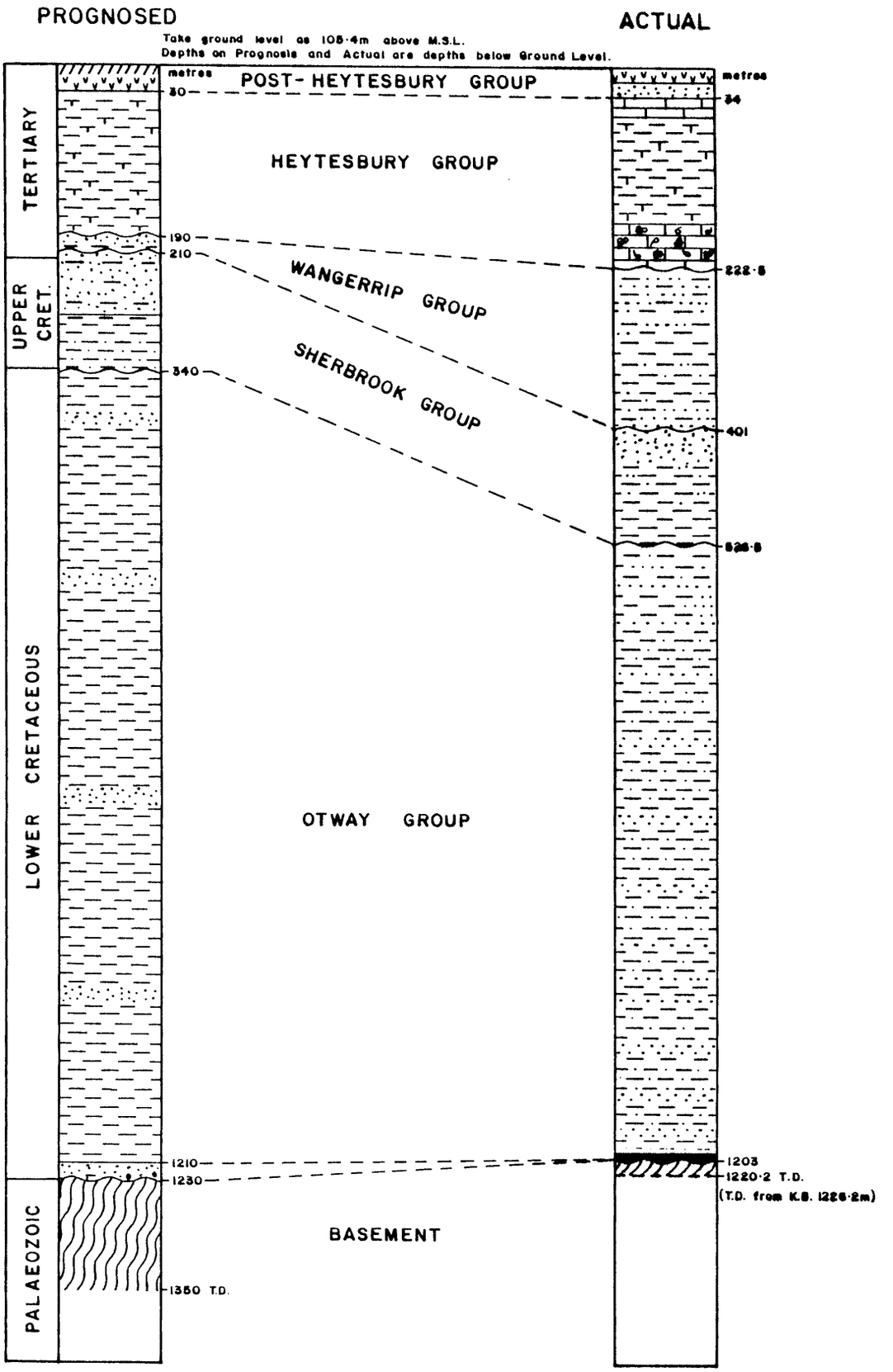


FIGURE 4

4. GEOLOGY - Continued

4.1. Stratigraphy - Continued

5. Palynological study results in Green Banks No. 1 in conjunction with those of Hotspur No. 1 (See Appendix No. 6) revealed that within the Eumeralla Formation:

(a) Late Albian is apparently missing in Green Banks No. 1.

(b) Sidewall Core No.'s 14 (812.0 m) and 7 (1155.0 m) are believed to be of the Middle Albian and Late Neocomian-Aptian age respectively. Although no other sample within this interval was dated, the presence of an intraformational unconformity can not be overruled. This hypothesis is partially supported by thickness variation of the Lower Cretaceous sections between Hotspur No. 1 and Green Banks No. 1. The Hotspur No. 1 Lower Cretaceous section is two and a half times thicker than that at Green Banks No. 1 and covers a shorter time interval. One should not expect the compaction effect to be greatly different in the two wells.

4.2. Structure

The Lake Condah High at Green Banks No. 1 at the "Basement" level can be recognised on seismic as a substantial structural high. The structure, as mapped on basement (See Figure No. 5), is a plunging anticline and dipping to the south, but is generally controlled by a NW-SE trending fault to the north. This is a normal fault with its downthrown side to the north. It appears to have first moved prior to any deposition on the top of the basement, i.e. the Lake Condah structure is older than Lower Cretaceous. The presence of a basal sand in Hotspur No. 1 and lack of it in Green Banks No. 1 can be attributed to its more basinward location (See Figures 3 and 6).

As shown on seismic line A80 (See Figure 6), there are three reflectors close to or within basement. Results of drilling and the derived synthetic seismogram proved the middle reflector to be top of the basement. The shallower reflector, which was prognosed as top of the basal

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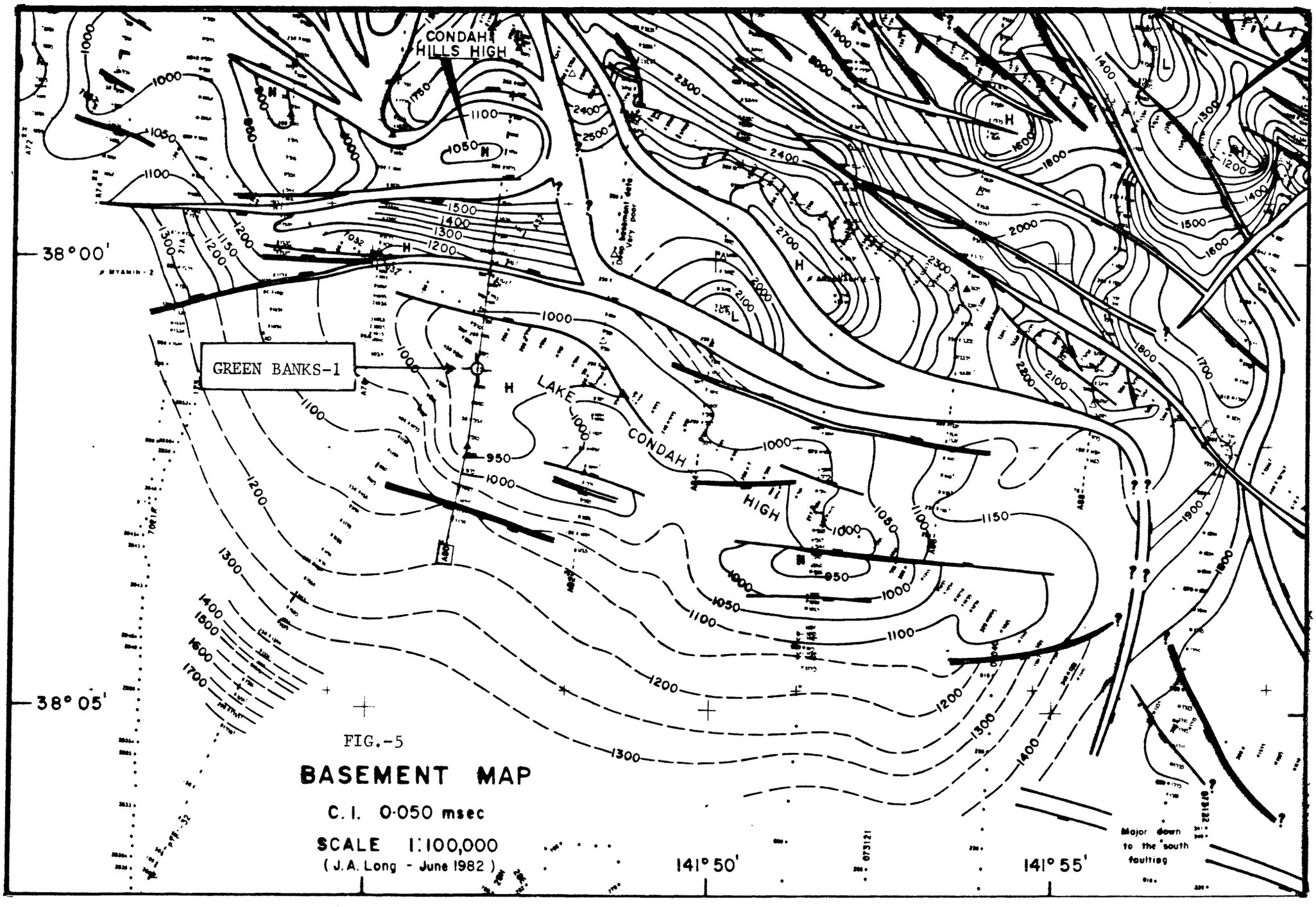


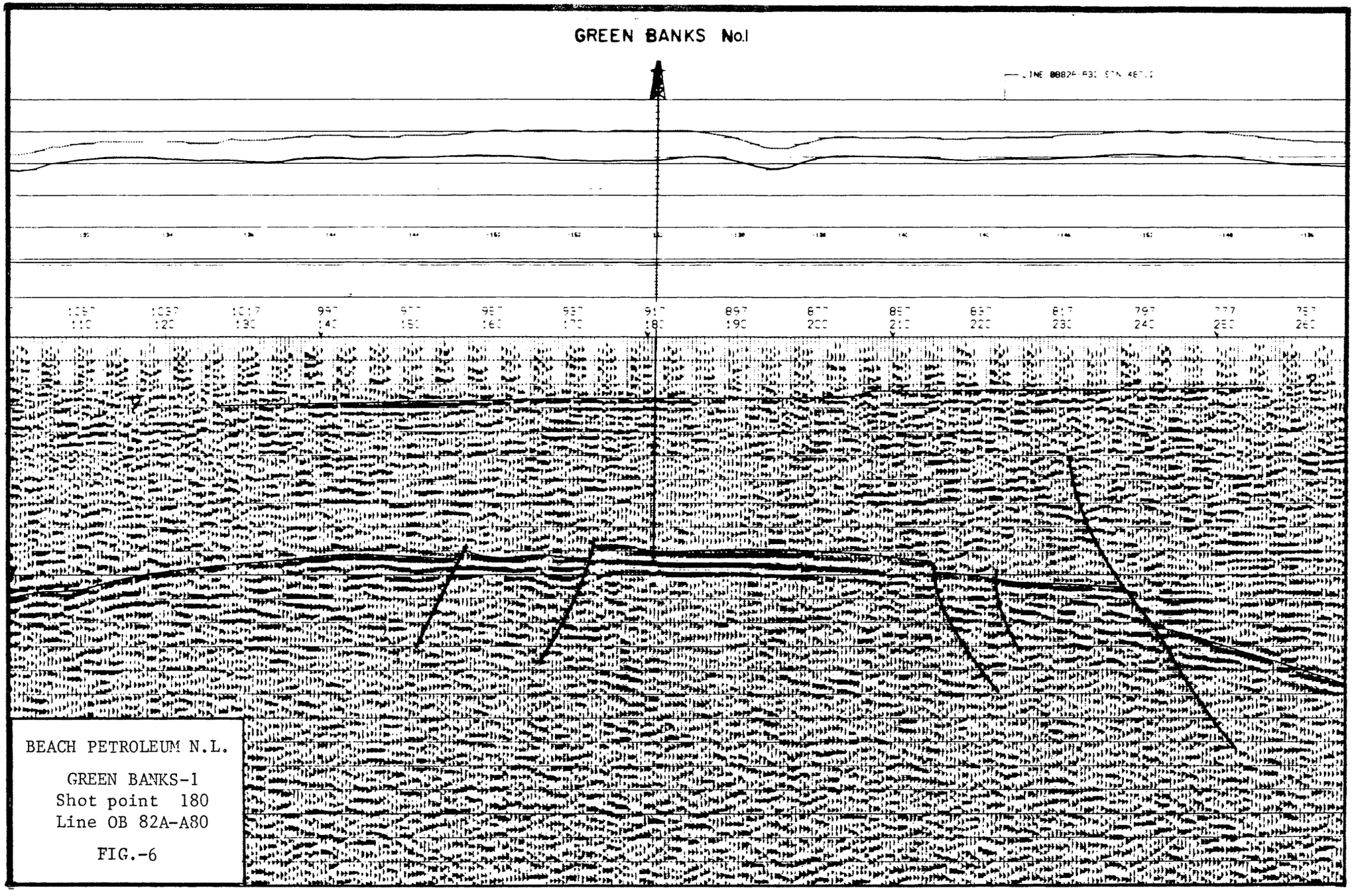
FIG.-5

BASEMENT MAP

C.I. 0·050 msec

SCALE 1:100,000

(J.A. Long - June 1982)



BEACH PETROLEUM N.L.

GREEN BANKS-1
Shot point 180
Line OB 82A-A80

FIG.-6

4. GEOLOGY - Continued

4.2. Structure - Continued

sand, appears to have resulted from the velocity differences between basal coal seams and the overlying claystones of the Eumeralla Formation. The deepest reflector was not penetrated by the well.

Due to the poor quality data on the seismic line in the upper section (Upper Cretaceous/Tertiary) of the well, the prognosis of formation tops was based mainly on the available information from stratigraphic bore holes drilled by the V.D.M.E. in this vicinity.

4.3. Occurrence of Hydrocarbons

(a) Gas Show

No major gas shows were encountered while drilling the well. Background gas of 15-20 ppm C_1 commenced building up at around 400.0 m in the Upper Cretaceous section which gradually increased with depth to 25-40 ppm C_1. The maximum gas reading associated with the thin beds of sandstone found in the Eumeralla Formation was 150 ppm, C_1 only, at 1124.0 m. The highest gas readings in the well were 350 ppm C_1, 15 ppm C_2, 5 ppm C_3 and 380 ppm C_1, 20 ppm C_2, 8 ppm C_3 at 1199.0 m and 1207.0 m respectively and were associated with the COAL seams.

(b) Fluorescence

The first hydrocarbon fluorescence encountered in the well was at the interval of 1008.0 m to 1009.0 m, a thin bed of sandstone. The sandstone had 10% patchy very dull-dull yellow-orange natural fluorescence giving an extremely weak milky white crush cut fluorescence. Coal had no natural fluoescence but gave a moderate bright very slow streaming milky white cut fluorescence.

The fluorescence was present in all the thin sandstone beds below 1008 m down to the top of the basement. The rock porosity and permeability of these thin sandstone beds were extremely low.

.../

4. GEOLOGY - Continued

4.3. Occurrence of Hydrocarbons - Continued

(b) Fluorescence - Continued

Furthermore, the sandstone had hard abundant calcite cement (with natural fluorescence dull yellow orange) making identification of any natural oil fluorescence difficult.

However, the presence of some liquid hydrocarbon in the sand was confirmed, but due to the ultra-low porosity it was difficult to say whether it was residual or not.

No test was warranted.

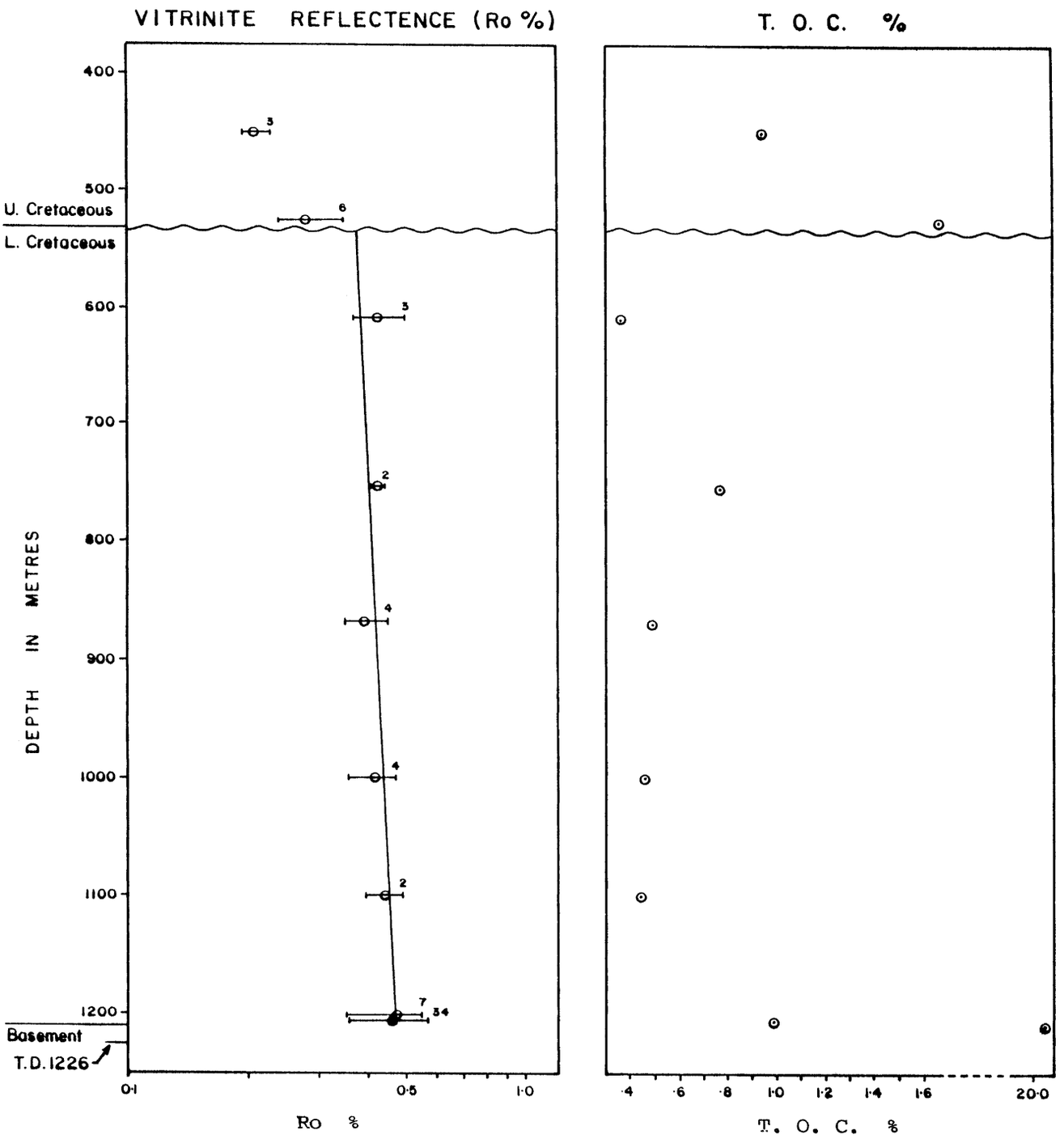
4.4. Source Rock Studies

Eight sidewall core samples and two samples from the cuttings from the interval 454.0 - 1207.0 m were analysed for specific source rock related properties including kerogen content, total organic carbon and vitrinite reflectance. The result is summarised as follows: (See Appendix No. 7.)

- As can be seen from the Vitrinite Source Rock Maturity Profile (Figure No. 7 on page 30), the Upper Cretaceous section is immature and has a moderately high T.O.C. but contains predominantly Inertinite.

- The Lower Cretaceous is separated from the Upper Cretaceous by an unconformity. The section generally appears to be immature with a maximum Ro recorded of 0.47% at very near the basement top. The Lower Cretaceous sediment contains predominantly oil producing organics except the last two samples, below 1200 m, where the gas producing organics are dominant. These two samples are from, or associated with the COAL seams, hence their high Total Organic Carbon.

.../



BEACH PETROLEUM N.L.

GREEN BANKS No.1

VITRINITE SOURCE ROCK MATURITY PROFILE

FIGURE 7

4. GEOLOGY - Continued

4.4 Source Rock Studies - Continued

The hydrocarbon fluorescence was encountered at below 1008 m in the very thin sandstone beds. These sandstones are believed to be discontinuous lenses unfavourable for trapping migrating hydrocarbons. If this is true, then the presence of hydrocarbon fluorescence and the proximity of Vitrinite Reflectance to the onset of maturation with depth could be indicative of the beginning of the marginal hydrocarbons generation in this area. However, the low Total Organic Carbon content of this section should not be overlooked since this downgrades the potential of the source rock.

In general, the Lower Cretaceous section in Green Banks No. 1 can be classified as potentially poor oil prone source rock. Should exploration be directed towards the deeper part of the basin, where optimum maturation is more likely to occur, more encouraging results may be expected.

4.5 Contribution to Geological Knowledge

The Green Banks No. 1 was drilled in an area where very few exploration wells were previously drilled and the Victorian Department of Minerals and Energy stratigraphic/water bore holes are either shallow and/or poorly documented. Hence, the subsurface geological information in this area, in comparison with that of the Port Campbell High, is scarce. Subsequently, information derived from Green Banks No. 1 is considered as a guideline for future exploration in this area. The important findings of the well are:

1. The confirmation of the widespread lateritic cap at the top of the Pebble Point Formation.
2. Local development of the porous and permeable Timboon Sands of the Paaratte Formation.
3. The possible presence of a time break, an intraformational unconformity, somewhere between Early Albian to Late Neocomian in the Eumeralla Formation.

.../

4. GEOLOGY - Continued

4.5 Contribution to Geological Knowledge - Continued

4. Although the deeper section of the Eumeralla Formation was not proved to be mature, the dominance of the oil producing organics and the occurrance of hydrocarbon fluorescence in the tight thin sandstone beds at depth, could well be indicative of the oil generating potential of the Eumeralla Formation at a deeper part of the basin.

5. The presence of a relatively thick coal seam on the top of the basement.

6. It was confirmed that the basal Lower Cretaceous clastic unit, as found in the Hotspur No. 1 well, does not extend across the major seismically defined Lake Condah High.

APPENDIX NO. 1

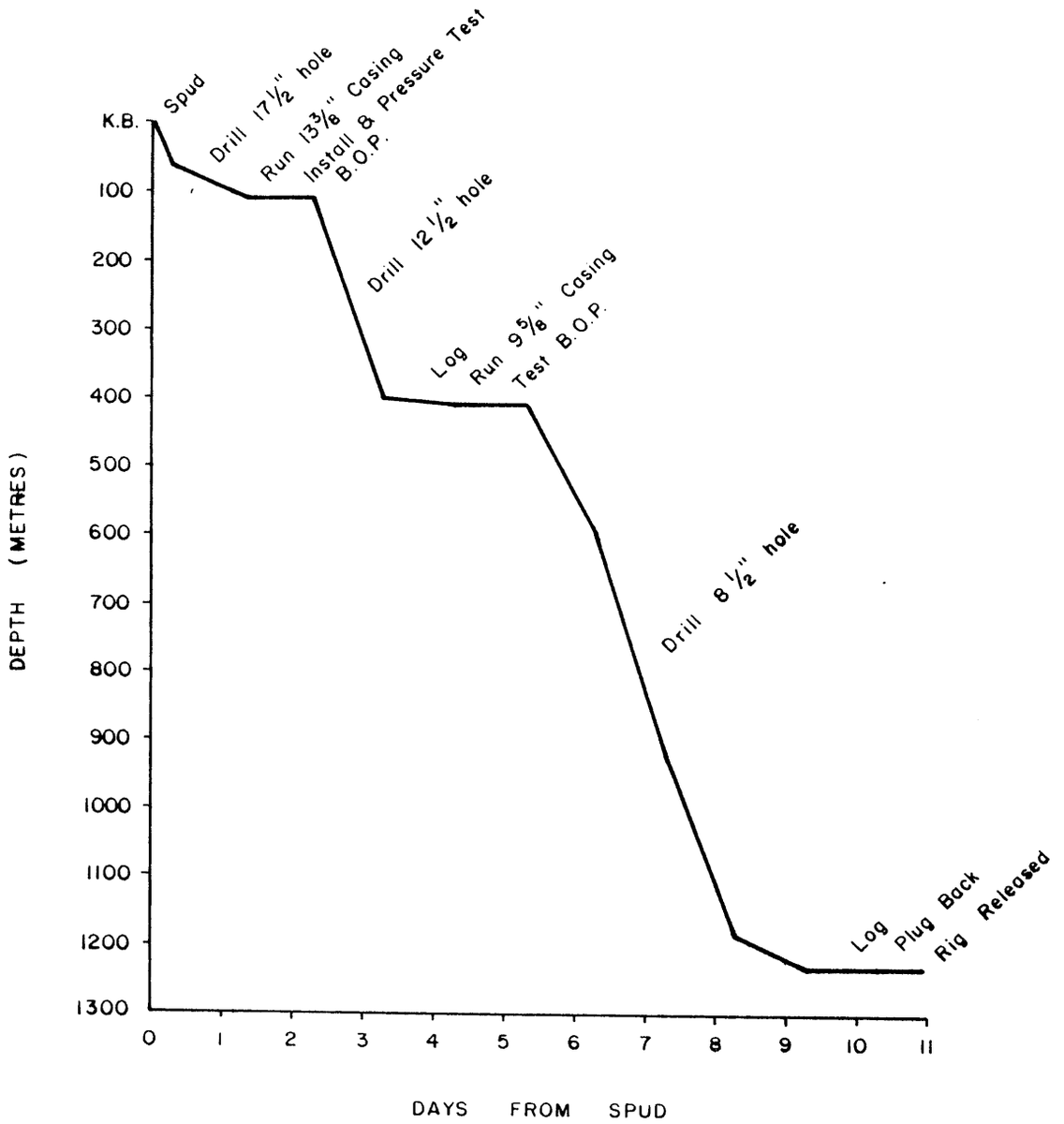
ACTUAL PENETRATION PROFILE

GREENBANKS No. 1

SPUDDED : 0100hrs - 4/4/83

T.D. 1226·2m : 2000hrs - 12/4/83

RIG RELEASE : 2300hrs - 14/4/83



ACTUAL PENETRATION PROFILE

APPENDIX NO. 2

DETAILS OF DRILLING PLANT

4. (a) DRILLING RIG AND EQUIPMENT TO BE FURNISHED BY CONTRACTOR:

Contractor's Rig No: P.D.S.A. RIG 1

Drawworks: KREMCO K 750T DOUBLE DRUM 860 HP. MAX. RATING

Compound: SUPERIOR

Engines: 2 x CAT. 3406 PTCA.

Rotary Table: GARDNER DENVER 17½" INCH.

Substructure: HEIGHT - 18FT. WIDTH 12FT. LENGTH 15FT. OVERHALL SKID LENGTH 34FT. WIDTH OF FLOOR IN WORKING POSITION 16FT. A.P.I. RATING 350,000LBS. WITH A 280,000LBS SET BACK.

Rig Lighting: EXPLOSION PROOF, FLOOD AND FLUORESCENT LIGHTS, MAST FITTED WITH AIRCRAFT W/LIGH

Mast: KREMCO 112FT CLEAR WORKING HEIGHT, HYDRAULICALLY RAISING AND TELESCOPING. RACKING BOARD AUTOMATICALLY ERECTING TYPE. CAPACITY 8,000FT OF 4½" INCH D[illegible]L PIPE IN DOUBLES MOUNTED 55 FT FROM GROUND.

Crown Block: 1-36 INCH FAST LINE SHEAVE 4-30 INCH CROWN SHEAVE 1-20 INCH SANDLINE SHEAVE.

Travelling Block: 150 TON McKISSICK WITH WEBB WILSON 150 TON HOOK.

Swivel: 150 TON TRISERVICE MACHINE.

Kelly Drive:

Mud Pumps: 2- OILWELL MODEL PT. 600 7 INCH X 8 INCH SINGLE ACTING.

Mixing Pump: WARMAN 6 INCH x 4 INCH 50 HP.

Mud Agitator: 4- PIONEER 40 TD-15 "PIT BULL" WITH 15HP. ELECTRIC MOTORS

Mud Tanks: 1-300 BARRELS CAPACITY 1-220 BARREL CAPACITY.

Shale Shakers: 1-BRANDT DUAL TANDEM.

Desander: 1-PIONEER T8 - 6

Desilter: 1-PIONEER T12- 4

Degasser: 1-DRILCO ATMOSPHERIC

Generators: 2-CAT. 3408 TA 230 KW. EACH.

BOP's and Accumulator: ANNULAR HYDRIL TYPE GK. 13 5/8 3,000lbs.
RAM TYPE HYDRIL DOUBLE 13 5/8 5,000lbs.
WAGNER 160 GALLON CAPACITY.

Kelly Cock: HYDRIL 7 3/4 INCH 6 3/8 REG LH.

Drill Pipe Safety Valve: HYDRIL 6 5/8 4½ XH RH HYDRIL STABBING VALVE

Air Compressors & Receivers: 2 - ATLAS COPCO TYPE GA-208

Spools: 1 - 13 5/8 SERIES 1500 (BX - 160) x 12 INCH SERIES 9000(R-57) WITH 1x3" 1x2" OUTL
1 - 13 5/8 SERIES 1500 (BX - 160) x 10 INCH SERIES 9000(R-53) WITH 1x3" 1x2" OUTLE

Cup Tester: 1- CAMERON

Rathole Driller: YES.

Choke Manifold: WKM 5000 PSI. TO A.P.I. STANDARD WITH 1 MANUAL 1 SWACO SUPER CHOKE

Drill Pipe: 8,000FT 4½ INCH GRADE E 16.6. LBS/FT.
300FT 4½ INCH HEAVY WEIGHT

Drill Collars: 22 ~~20~~ - 6½ WITH 4½ INCH XH CONNECTIONS
6 - 8 WITH 4½ INCH XH CONNECTIONS

Shock Subs

Kelly: 4½ SQUARE x 2¼" I.D. 40' LONG

Core Barrels

Stabilizers: DRILCO 8¼ INCH O.D.

Fishing Tools: 8¼ INCH BOWEN SERIES 150 OVERSHOT
CATCH SIZES 6-½", 6-3/8", 6¼", 6" , 4½"
BOWEN 8" JUNK SUB BOWEN 6½" JUNK SUB.
BOWEN 8-1/8" JUNK BASKET
BOWEN 6-½" HYDRAULIC JAR

Handling Tools: CASING ELEVATORS 150 TON, BJ, 9-5/8, 7", 5½". SINGLE CASING JOINT PICKUP ELEVATORS BJ. TYPE SJ, 13 5/8, 9 5/8,7", VARCO CASING CLAMPS MODEL M.P.R. 5½, 13 5/ 250 TON VARCO DRILL PIPE ELEVATORS 6½" 8" DRILL COLLAR ZIP LIFT ELEVATORS CASING SLIPS, VARCO OMS-XL 13 5/8, 9 5/8, 7". VARCO S.D.M.L. 5½" TUBULAR SLIPS VARCO S.D.M.L. 4", 3½", 2 7/8", 2 3/8". DRILL COLLAR SLIPS VARCO DCS-R, DCS-L 6½" 8". FARR POWER TONGS 13 5/8, 9 5/8, 7", 5½" CASING

Instruments and Indicators: GEOSOURCE 2 PEN MUD SENTRY.

Drilling Rate Recorder: GEOSOURCE 6 PEN SENTRY RECORDER.

Deviation Instrument: TOTCO 0 - 8°

Tool House: YES

Dog House: YES

Generator House: YES

Welding Equipment: YES

Pipe Racks: YES

Catwalks: YES

Water Tank: YES

Fuel Tank: YES

Substitutes:

Mud Testing: YES

Junk Box: YES

Rathole Driller: YES

Mud Saver: YES

Cellar Pump: YES

Matting: YES

Pipe Straightener: NO

Hydraulic Pump: YES

Water Pumps: YES

Fire Extinguishers: YES

4. (b) TRANSPORT EQUIPMENT AND MOTOR VEHICLES:

1 FORKLIFT OR POLE TRUCK
1 TOYOTA PICK UP TRUCK
1 TOYOTA 10 MAN TROOP CARRIER

4. (c) CAMP AND EQUIPMENT:

FULLY AIR CONDITIONED TOOLPUSHER COMPANY REPRESENTATIVE SHACK COMPLETE WITH COOKING, REFRIGERATION AND ABLUTION FACILITIES.

APPENDIX NO. 3

DRILLING FLUID RECAP

BEACH PETROLEUM

DRILLING FLUID RECAP FOR

GREENBANKS #1

Prepared by: M. Olejniczak

May, 1983.

BAROID AUSTRALIA PTY. LIMITED

NL INDUSTRIES

WELL SUMMARY

Baroid Engineers: M. Olejniczak

	Operator	:	Beach Petroleum
	Well Number	:	Greenbanks #1
	Location	:	Heywood, Victoria
	Contractor	:	P.D.S.A.
	Rig	:	1
	Total Depth	:	1226m
	Water Depth/KB to Ocean Floor	:	Surface
	Arrived on Location	:	3rd April, 1983
	Spud Date	:	4th April, 1983.
*	Date Reached T.D.	:	14th April, 1983.
*	Total Days Drilling	:	11
	Date off Location	:	14th April, 1983
	Total Days on Well	:	12
*	Total Cost of Mud Materials	:	AUD$13,740.91
*	Mud Costs/m	:	AUD$11.21
*	Mud Costs/day	:	AUD$1,249.17
	Engineer Service (12 days) @ $ 265.00	:	$3,180.00
	Total Cost Materials and Engineer Service	:	$4,429.17
	Mud Materials not Charged to Drilling	:	-
	Engineer Service Not Charged to Drilling	:	-
	Casing Program	:	13.3/8" @ 102m 9.5/8" @ 403.5m

* Calculated as from actual spud to P and A or final casing run and testing program started etc.

BEACH PETROLEUM

GREENBANKS #1

SUMMARY

The Greenbanks #1 well was quite successfully drilled from the mud point of view, with no significant problems while drilling, tripping or running casing.

The low mud cost achieved, was the result of particular emphasis on costs by the Beach Petroleum representative, followed through by the mud engineer, and also constant surveillance of equipment performance, and pit volumes, to minimise the volume of fluid used.

Besides this actual low mud cost there were considerable savings in the planning of water supply by Beach Petroleum. By using natural rain water runoff through ditches to the sump and turkeys nest, and recyclying some of the sump fluid, no water resupply via trucks was required at all during the drilling of the well.

The low fluid consumption, would also make sump cleanup much cheaper at the end of the well.

BEACH PETROLEUM

GREENBANKS #1

DISCUSSION BY INTERVAL

17½" Hole, Surface to 103m - 2 days

As the surface 17½" hole was expected to drill into the Gellibrand Marl at 30m after going through surface volcanics, the consumption of AQUAGEL was deliberately minimised for the spud in.

This was done by only mixing enough AQUAGEL to allow circulation through the suction and desilter tanks, so that the desilter at least could be run, while other tanks were bypassed with the trough. Consumption of AQUAGEL was thus limited to 27 sakcs while drilling through the surface volcanics.

Once sufficient volume had been mixed using only AQUAGEL, LIME was then slowly added to maintain viscosity and to provide some clay inhibition as drilling progressed into the marl.

The marl was finally reached at 60m, and drilling progressed through it without any problems, to 102m. At this depth a wiper trip was successfully run, before drilling on to 103m. The 13.3/8" casing was then satisfactorily landed and cemented after washing down the last four joints of the casing.

.../Cont.

DISCUSSION BY INTERVAL (Cont.)

12¼" Hole, 103 - 406m - 3 days

The 13.3/8" casing shoe and cement were drilled out with the mud from the previous section, diluted with water, to control cement contamination without chemical treatment. This would retain the inhibiting effect of the calcium in the mud as drilling continued through the Gellibrand Marl. In practice this was apparently effective as no problems were experienced with the marl at all in this well.

Using calcium for inhibition however gives a very high water loss, so as soon as drilled out of the marl at 180m into a porous limestone composed of shell fragments, had to discontinue using a flocculated inhibitive mud system. The calcium was treated out with SODA ASH and began adding AQUAGEL to boost viscosity and provide better water loss control. It was hoped that this would reduce water loss to about 12 cc's API, without any additional expenditure being required.

However, as all the water used up to date had been recycled from the sump, the pH in this water had risen to 12.0 from the additions of LIME, and drilling of cement. This high pH resulted in a higher water loss in the freshwater AQUAGEL mud of between 14 and 18 cc's API. The operator's representative however did not consider it worthwhile to reduce this further using CMC as there were no important zones in this hole section.

Drilling progressed through the Limestone with high fluid losses to the shaker and solids equipment, causing the viscosity to drop to 33-34 seconds. So to maintain hole cleaning, several

.../Cont.

DISCUSSION BY INTERVAL (Cont.)

12¼" Hole (Cont.)

high viscosity pills were pumped using the bentonite extender, ALCOMER 1773.

At 396m after drilling into the Eumarella Formation, a wiper trip was run without problems and then another single was drilled to 406m, before pulling out and running Schlumberger logs. After running another wiper trip the casing was then run and cemented to 403.5m, without any significant problems.

.../Cont.

BEACH PETROLEUM

GREENBANKS #1

DISCUSSION BY INTERVAL (Cont.)

8½" Hole, 406 - 1226m - 6 days

The 8½" hole was drilled entirely with an unweighted KCl-Polymer mud, using only MONPAC and XC-POLYMER, in a roughly 4:1 ratio for viscosity and water loss control.

As this mud functions most effectively, and economically, if it is kept as low in solids, (particularly clays) as possible, the old clay based mud was dumped, and the pits cleaned and filled with freshwater from the turkey's nest, while nippling up the B.O.P. stack. Due to insufficient manpower only the polymers and a little of the KCl were mixed prior to drilling out.

The cement and casing shoe were drilled out using water only from the suction tank, bypassing the other tanks filled with new mud. After the leak-off test at 408.7m changed over the new mud system, having avoided most of the cement contamination.

Drilling immediately resumed through a loose sand section which caused shaker screen blinding with associated serious losses of the new mud. The rig shaker were low speed, low impact shakers which could not adequately handle rapid drilling through loose sands, particularly with a low gel polymer mud, which will easily bounce right across a partially blocked screen. The screens in use, were only B40 over B60, with a lot of fine sand already passing through so did not change to coarser screens, but instead diluted with water to reduce the mud viscosity, and had the pump rate slowed to 90 spm from 120 spm. This reduced losses to an acceptable level, although the shakers still had to be frequently checked, washed and brushed.

.../Cont.

BEACH PETROLEUM

GREENBANKS #1

DISCUSSION BY INTERVAL (Cont.)

8½" Hole (Cont.)

The drilling rate through the Eumarella Formation gradually slowed down with increasing depth, and also as the proportion of claystone increased. Under these conditions all the solids control equipment began to perform better with less fluid loss and the mud properties gradually improved towards T.D. The viscosity was gradually increased from 37 to 43 seconds, with more polymer, and the water loss gradually improved from 10 cc's to 8 cc's. The KCl concentration was gradually increased to 8% at T.D., although it was at 6% for most of the section. It had been hoped to reach 10%, but the unexpected rapid drilling meant that re-supply of KCl was unlikely, so that usage had to be controlled to last until T.D., without running out, or having any sudden salinity changes which could effect the logs.

At 918.5m the bit was changed to an insert bit. The corresponding further slowing of the drilling rate allowed finer,(B60 over B80) screens to be run. At 1208m drilled into the meta-sediment basement, so only drilled on to 1226m to allow logging tools to penetrate the basement. Then ran a wiper trip, which showed that the hole was slightly tight from 982m to 557m, P.O.O.H. and ran Schlumberger logs, prior to plugging and abandoning.

It should also be noted that this mud never showed any tendency to foam at all, so that no defoamers were used at all. This can be attributed to three factors:-

.../Cont.

BEACH PETROLEUM

GREENBANKS #1

DISCUSSION BY INTERVAL (COnt.)

8½" Hole (Cont.)

(i) Maintaining a high yield point over 15 lb/100 sq.ft.

(ii) No DEXTRID in the make-up.

(iii) The pit system itself, where most of the equipment discharge was into the trough, not directly into the pits.

BAROID MATERIAL RECAP

COMPANY Beach Petroleum
LOCATION Heywood, Victoria
WELL Greenbanks #1
COST/DAY AUD$308.91
COST/M AUD$6.00
COST/M/DAY AUD$3.00
COST/M³ AUD$11.44
COST/M³/DAY AUD$5.72

MUD TYPE F.W. Gel/LIME
CONTRACTOR P.D.S.A.
DRILLING DAYS/PHASE 2
ROTATING HRS/PHASE 8.3/4
TOTAL DRILLING 103m
MUD CONSUMPTION FACTOR 0.52 m³/m
DATE 5th April, 1983

PHASE HOLE SIZE 17½"
INTERVAL TO 103m
FROM Surface

MATERIAL	UNIT	COST UNIT	QUANTITY				TOTAL COST	
			ESTIMATE	KG/M³	ACTUAL	KG/M³	ESTIMATE	ACTUAL
AQUAGEL	100 lb	15.55			27			$419.85
CONDET	200 lt	202.32			½			101.16
LIME		*6.00			8			48.00
CALCIUM CHLORIDE	25 kg	12.20			4			48.80
DIESEL								
FRESH WATER								
SEA WATER					52 m³			
TOTAL MUD MADE					54 m³			
COST LESS BARYTES							AUD$	617.81
COST W/BARYTES							AUD$	617.81

COMMENTS LIME used, Beach stock from Cobden, with $6.00 price an estimate only.
CALCIUM CHLORIDE used for 13.3/8" cement job.

BAROID MATERIAL RECAP

COMPANY Beach Petroleum
LOCATION Heywood, Victoria
WELL Greenbanks #1
COST/DAY AID$571.87
COST/M AUD$5.66
COST/M/DAY AUD$1.89
COST/M³ AUD$27.23
COST/M³/DAY AUD$9.08

MUD TYPE F.W./Gel/CMC
CONTRACTOR P.D.S.A. Rig 1
DRILLING DAYS/PHASE 3
ROTATING HRS/PHASE 13½
MUD CONSUMPTION FACTOR
DATE 8th April, 1983

PHASE HOLE SIZE 12¼"
INTERVAL TO 406m
FROM 103m
TOTAL DRILLING 303m
0.21 m³/m

MATERIAL	UNIT	COST UNIT	QUANTITY				TOTAL COST	
			ESTIMATE	KG/M³	ACTUAL	KG/M³	ESTIMATE	ACTUAL
AQUAGEL	100 lb	15.55			56			$870.80
SODA ASH	40 kg	13.68			3			41.04
CONDET	200 lt	202.32			½			101.16
ALCOMER 1773		210.00			1			210.00
CMC-L.V.		53.40*			9			480.60
LIME		6.00*			2			12.00
DIESEL								
FRESH WATER					60 m³			
SEA WATER								
TOTAL MUD MADE					63 m³			
COST LESS BARYTES								$1,715.60
COST W/BARYTES								$1,715.60

COMMENTS CMC-L.V. and LIME are old Beach stock from Cobden warehouse, with the prices estimated for LIME, and old price on the CMC-L.V.

BAROID MATERIAL RECAP

COMPANY Beach Petroleum
LOCATION Heywood, Victoria
WELL Greenbanks #1
COST/DAY AUD$1,901.25
COST/M AUD$13.91
COST/M/DAY AUD$2.32
COST/M³ AUD$61.00
COST/M³/DAY AUD$10.17

MUD TYPE KCl/Polymer
CONTRACTOR P.D.S.A. Rig 1
DRILLING DAYS/PHASE 6
ROTATING HRS/PHASE 54½
TOTAL DRILLING 820m
MUD CONSUMPTION FACTOR 0.23 m³/m
DATE 14th April, 1983

PHASE HOLE SIZE 8½"
INTERVAL TO 1226m
FROM 406m

MATERIAL	UNIT	COST UNIT	QUANTITY				TOTAL COST	
			ESTIMATE	KG/M³	ACTUAL	KG/M³	ESTIMATE	ACTUAL
MONPAC	50 lb	110.27			41		$	4,521.07
XC-POLYMER	50 lb	244.15			10			2,441.50
CMC-E.H.V.	25 kg	54.33			9			488.97
SODA ASH	40 kg	18.68			10			136.80
CONDET	200 lt	202.32			½			101.16
KCl	50 kg	11.00			338			3,718.00
DIESEL								
FRESH WATER					170 m³			
SEA WATER								
TOTAL MUD MADE					187 m³			
COST LESS BARYTES								$11,407.5
COST W/BARYTES								$11,407.5

COMMENTS KCl used was locally purchased by Beach Petroleum. The $11.00 price being an estimate only for the purpose of this report.

BAROID MATERIAL RECAP SUMMARY

COMPANY Beach Petroleum
LOCATION Heywood, Victoria
WELL NAME Greenbanks #1
CONTRACTOR P.D.S.A. Rig 1
COST/DAY AUD$1,249.17
COST/M AUD$11.21
COST/M/DAY AUD$1.02
COST/M³ AUD$45.20
COST/M³/DAY AUD$4.11
RECAPPED BY M. Olejniczak

MUD TYPES F.W./Gel/LIME, F.W./Gel/CMC, and KCl-Polymer

TOTAL DEPTH 1226m
TOTAL ROTATING HRS. 76.3/4
TOTAL DAYS ON HOLE 11
DATE 14th April, 1983
DATE OF RECAP 24th April 83

HOLE SIZE	AMOUNT HOLE DRILLING	DRILLING DAYS
17½"	103m	2
12¼"	303m	3
8½"	820m	6
TOTAL	1226m	11

WELL AVERAGE MUD CONSUMPTION 0.25 m³/m

MATERIALS	UNIT	COST UNIT	QUANTITY ESTIMATE	KG/m³	QUANTITY ACTUAL	KG/m³	TOTAL COST ESTIMATE	TOTAL COST ACTUAL
AQUAGEL	100 lb	15.55			83			$1,290.65
SODA ASH	40 kg	13.68			13			177.84
ONDET	200 lt	202.32			1½			303.48
ALCOMER 1773		210.00			1			210.00
CALCIUM CHLORIDE	25 kg	12.20			4			48.80
MONPAC	50 lb	110.27			41			4,521.07
XC-POLYMER	50 lb	244.15			10			2,441.50
CMC-E.H.V.	25 kg	54.33			9			488.97
*LIME	25 kg	6.00			10			60.00
*CMC-L.V.	25 kg	53.40			9			480.60
*KCl	50 kg	11.00			338			3,718.00
SALVAGE MUD								
DIESEL OIL								
FRESH WATER								
SEA WATER					282 m³			
TOTAL MUD MADE								
COST LESS BARYTES					304 m³			
COST WITH BARYTES								$13,740.91
								AUD$13,740.91

COMMENTS LIME, CMC-L.V. and KCl were Beach Petroleum old stock, or in the case of KCl locally purchased. So their prices are estimates only, used for the purpose of completing this cost analysis.

BAROID DIVISION N.L. INDUSTRIES
DRILLING FLUID PROPERTY RECAP

Company: Beach Petroleum
Well: Greenbanks #1
Contractor/Rig: P.D.S.A. Rig 1

date 1983	depth m.	hole size "	temp. °c.	wt. sg.	vis. sec.	P.V.	Y.P.	gels 10 sec.	gels 10 min.	w.l. api	cake mm	w.l. hpht	°c	filtrate anal. pf	filtrate anal. Cl.ppm	filtrate anal. Ca.	sand %	retort anal.% oil	retort anal.% wat.	retort anal.% sol.	mbc	PH	activity	forma
APRIL 4	60	17½"	-	1.06	36	6	8	6	12	N.C.	-	-	-	.05	100	400	1.5	-	95	5	-	8.5	Drilling	
5	103	17½"	-	1.04	37	5	8	6	12	N.C.	-	-	-	.05	100	450	0.5	-	96	4	-	8.5	Ran Csg.	
6	103	12¼"	-	1.04	35	5	6	4	10	N.C.	-	-	-	.05	100	250	0.1	-	96	4	-	8.5	Nipple up	
7	396	12¼"	-	1.10	36	10	5	3	10	14	4	-	-	.9	300	40	TR	-	95	5	-	12.0	Drilling	
8	406	12¼"	-	1.10	45	11	12	10	20	18	4	-	-	.9	300	40	0.1	-	95	5	-	12.0	Logged Run Csg.	
9	406	8½"	-	MIXING NEW KCl-POLYMER MUD AFTER PUMPING TANKS																				
10	588	8½"	-	1.08	37	15	10	1	3	10.0	1	-	-	.4	20000	100	0.2	-	96	3	-	10.0	Drill out	
11	918.5	8½"	-	1.16	39	15	15	3	5	9.5	1	-	-	.1	31000	250	0.1	-	91	7	6	10.0	Drill	
12	1178	8½"	-	1.14	38	14	15	2	4	8.8	1	-	-	.05	31500	880	TR	-	93	5	6	9.0	Drill	
13	1226	8½"	43	1.16	43	20	20	3	5	8.0	1	-	-	.05	39000	600	TR	-	91	6	10	9.0	Drill Wiper trip	
14	1226	8½"	-	1.16	43	20	20	3	5	8.0	1	-	-	.05	39000	600	TR	-	91	6	10	9.0	Logging	

BIT RECORD

COUNTRY	STATE	FIELD	LOCATION
AUSTRALIA	VICTORIA	OTWAY BASIN	PETERBOROUGH

WELL	CONTRACTOR	RIG
GREENBANKS #1	P.D.S.A.	#1

OPERATOR	TOOL PUSHERS	SPUD	REACHED T.D.
BEACH PETROLEUM	W. TSCHACHER	4TH APRIL 1983	13 APRIL, 1983

UNDER SURFACE	UNDER INTER.	PUMP NO.1 LINER	PUMP NO.2 LINER	PIPE COLLARS	MUD
1226m	822.5m	6½" x 8"	6½" x 8"	4½" 8"/6½"	F.W. Gel/KCl POLYM

no.	size	make	type	jets 32nd	depth out(m)	mtrs.	hours	m/h	accum. drlg. hours	tonne wt.	rpm	ver. dev.	pump pres. psi.	spm 1	spm 2	mud wt.	mud vis.	mud w.l.	formation, remarks
1	17½"	SEC	S35J	OPEN	103	103	8.3/4	11.8	8.3/4	2-4	140		-	120	120	1.04	37	NC	Volcanics, Marl
2	12¼"	SEC	S33S	OPEN	406	303	13½	22.5	22¼	5	140		500	110	110	1.10	36	14	Marl, Shell fragment
3	8½"	HTC	X3A	2 x 12 1 x 9	919	513	21	24.4	43¼	15-20	120		1200	90	-	1.08	37	10.0	Sands with claystones
4	8½"	SEC	S84F	3 x 12	1226	307	33½	9.2	76.3/4	15-20	120		1225	100	-	1.14	38	8.8	Claystones with sands

APPENDIX NO. 4

SIDEWALL CORE DESCRIPTIONS

NUMBER	DEPTH (m)	RECOVERY (m m)	DESCRIPTION
SWC 1	1223.0	0	No recovery
SWC 2	1218.0	0	A piece of broken bullet (Metal) !
SWC 3	1211.5	0	No recovery
SWC 4	1207.5	18	COAL, very dark brown to black, firm to hard, subvitreous to earthy, argillaceous in part, occasionally as laminae in the sand and clay.
SWC 5	1204.5	18	CLAYSTONE, light to medium grey, medium to dark brownish grey, firm to hard, carbonaceous, arenaceous in part, calcareous in part, rare to common COAL particles.
SWC 6	1195.0	22	CLAYSTONE, as for SWC 5
SWC 7	1155.0	48	SILTY SANDY CLAYSTONE, light to dark grey, medium brownish grey, firm to hard, carbonaceous in part, micaceous in part, rare red, green and brown lithic fragments, trace light grey, medium grained quartz.
SWC 8	1100.0	45	SILTY SANDY CLAYSTONE, as for SWC 7
SWC 9	1075.0	40	SILTY SANDY CLAYSTONE, as for SWC 7
SWC 10	1012.0	0	No recovery
SWC 11	1000.0	35	SILTY CLAYSTONE, medium green grey to light blue grey, firm, arenaceous, carbonaceous, calcareous in part, trace mica and chlorite, trace pyrite.
SWC 12	942.5	38	SILTY CLAYSTONE, as for SWC 11
SWC 13	870.0	43	SILTY CLAYSTONE, as for SWC 11
SWC 14	812.0	27	CLAYSTONE, medium greenish grey to light bluish grey, firm to hard, commonly arenaceous, commonly carbonaceous, rare calcareous, trace mica, trace pyrite.

NUMBER	DEPTH (m)	RECOVERY (m m)	DESCRIPTION
SWC 15	755.5	50	CLAYSTONE, as for SWC 14
SWC 16	695.0	48	SILTY CLAYSTONE, medium greenish grey, firm to hard arenaceous, carbonaceous, rare calcareous, rare mica trace pyrite, trace multi-colored lithic fragments, trace calcite crystal, trace white to light orange quartz grain.
SWC 17	610.0	50	SILTY CLAYSTONE, medium grey, as for SWC 16
SWC 18	567.0	50	SANDSTONE, medium to dark grey, friable to firm, fine to medium, dominantly medium, subangular to subrounded, well sorted dominantly quartz, common multi-colored lithic fragments, abundant light to medium grey clay matrix, silty in part, rare calcite cement in part, common glauconite, rare fine mica flakes, trace calcite, trace dolomite, trace chlorite flakes, fair visual porosity.
SWC 19	527.0	10	CLAYSTONE, medium to dark grey, medium greenish grey in part, firm soft in part, finely carbonaceous, slightly calcareous, finely micaceous in part, common glauconite, trace multi-colored lithic fragments, trace clear to light yellow to light grey quartz overgrowths, trace COAL.
SWC 20	454.0	50	SILTY CLAYEY SANDSTONE, dark greyish green, dark greenish grey, medium to dark greyish brown in part, firm to hard, silt size to very coarse to Pebble size, dominantly bimodal distribution of fine and very coarse, angular to subrounded, very poorly sorted quartz, common multi-colored lithic fragments, abundant greenish grey chloritic clay matrix, silty in part, rare chlorite cement, common glauconite, trace dolomite, trace calcite, trace mica, poor visual porosity. NOTE; the SANDSTONE is immature and sand grains appear to have had multiple source!

APPENDIX NO. 5

VELOCITY SURVEY JOB DATA

PE602610

This is an enclosure indicator page.
The enclosure PE602610 is enclosed within the container PE902562 at this location in this document.

The enclosure PE602610 has the following characteristics:

ITEM_BARCODE	PE602610
CONTAINER_BARCODE	PE902562
NAME	Greenbanks 1 geogram ricker wavelets zero phase
BASIN	OTWAY
PERMIT	PEP105
TYPE	WELL
SUBTYPE	SYNTH_SEISMOGRAM
DESCRIPTION	Greenbanks 1 geogram from wst ricker wavelets, zero phase reverse polarity
REMARKS	
DATE_CREATED	30/06/83
DATE_RECEIVED	25/07/83
W_NO	W967
WELL_NAME	Fahley-2
CONTRACTOR	Beach Petroleum N.L
CLIENT_OP_CO	Beach Petroleum N.L

(Inserted by DNRE - Vic Govt Mines Dept)

PROCESSING REPORT
BEACH PETROLEUM
GREEN BANKS #1

1) OPEN HOLE LOGS

- Sonic data used over interval 1226.0 - 110.0m (K.B.). Interval where Sonic data missing (405.0 - 397.0m) made linear interpolation.
- No density data available, used constant 2.30 gr/cc through the hole interval (1226.0 - 110.0m) (K.B.)
- Wherever no Sonic data available, data was interpolated from first/ last value.

2) SHOT DATA

- Level at 30.0m (K.B.) not used due to noise.

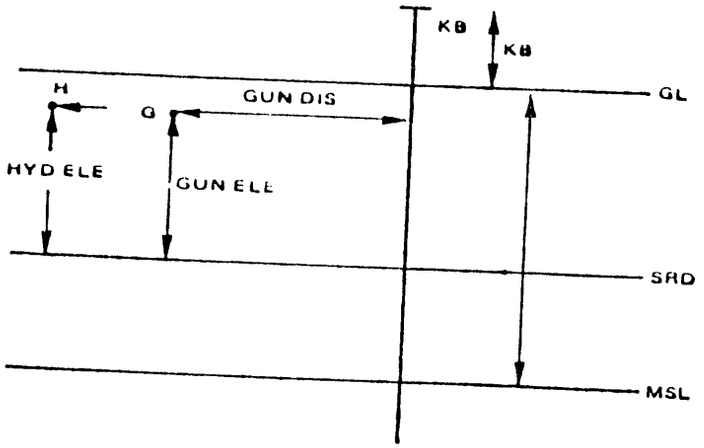
3) DATA PROCESSING INFORMATION

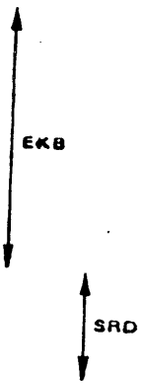
- SRD is 110m from K.B. or log data depth measurement and 1m below main sea level (MSL) as requested.
- SRD elevation is -1.0m from MSL.
- Ground level (G.L.) = 105.00m from SRD.
- Gun distance from welbore = 42.06m.
- Acelerometer distance from welbore 42.06m
- Azimuth for gun and acelerometer 130°
- Gun and accelerometer elevation from SRD = 102.56
- Velocity used between source and SRD, derived from shot at SRD (110m K.B.) was - 1539.58 m/s.

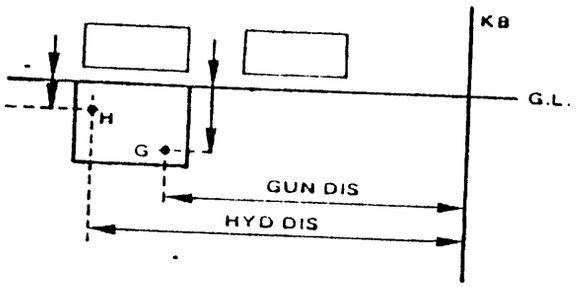
If you require any further information, please do not hesitate to contact me.

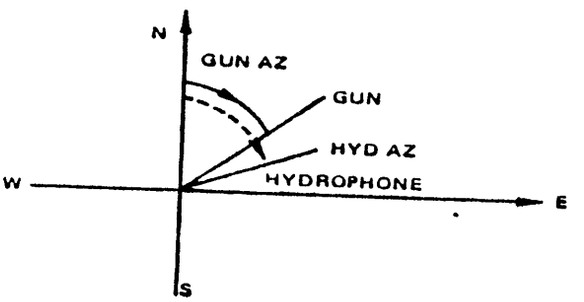
F. SEMINARIO

SHOOTING GEOMETRY : LAND OPERATION









GUN DIS : HORIZONTAL DISTANCE FROM THE SOURCE TO THE WELL
GUN ELE : ELEVATION OF THE SOURCE ABOVE THE SRD
GUN AZ : AZIMUTH OF THE SOURCE FROM WELL NORTH
HYD DIS : HORIZONTAL DISTANCE FROM REFERENCE DETECTOR TO THE WELL
HYD ELE : ELEVATION OF THE REFERENCE DETECTOR ABOVE THE SRD
HYD AZ : AZIMUTH OF THE REFERENCE DETECTOR FROM WELL NORTH

VELSUR : VELOCITY FROM THE SOURCE TO THE SRD
- FROM CHECK SHOT LEVEL AT SRD ☒
- FROM WEATHERED ZONE SHOTS ☐

VELSUR = 1539.58 m/sec

VELHYD VELOCITY FROM THE SOURCE TO THE REFERENCE DETECTOR
- ELEVATIONS ARE POSITIVE UP FROM SRD
- DEPTH ARE POSITIVE DOWN FROM SRD

VELHYD = 1480 NOT USED

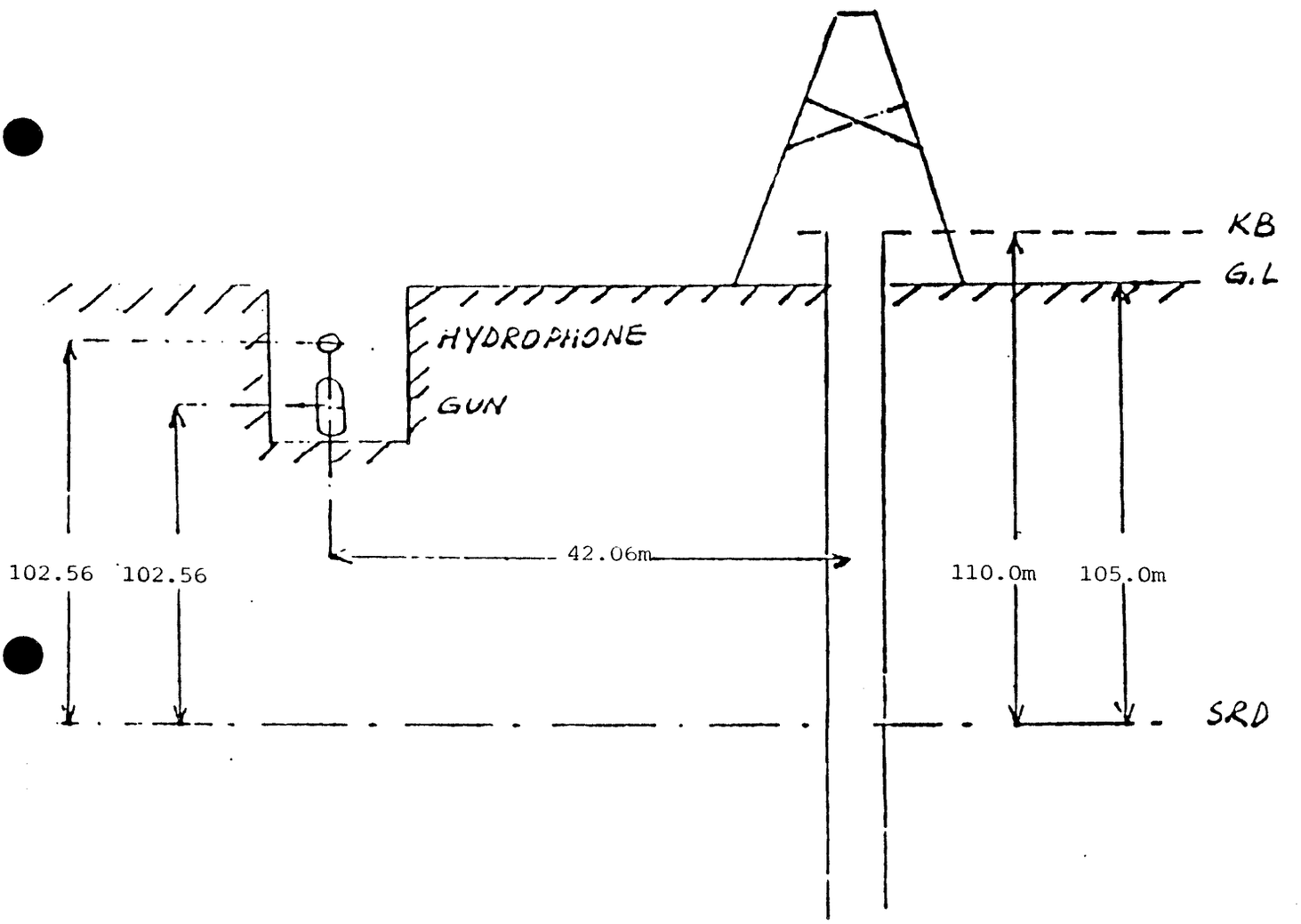
Run Number	SOURCE			REFERENCE DETECTOR		
	ELEVATION (GUN ELE)	DISTANCE (GUN DIS)	AZIMUTH (GUN AZ)	ELEVATION (HYD ELE)	DISTANCE (HYD DIS)	AZIMUTH (HYD AZ)
1	102.56m	42.06m	130°	102.56	42.06	130°

REMARKS:

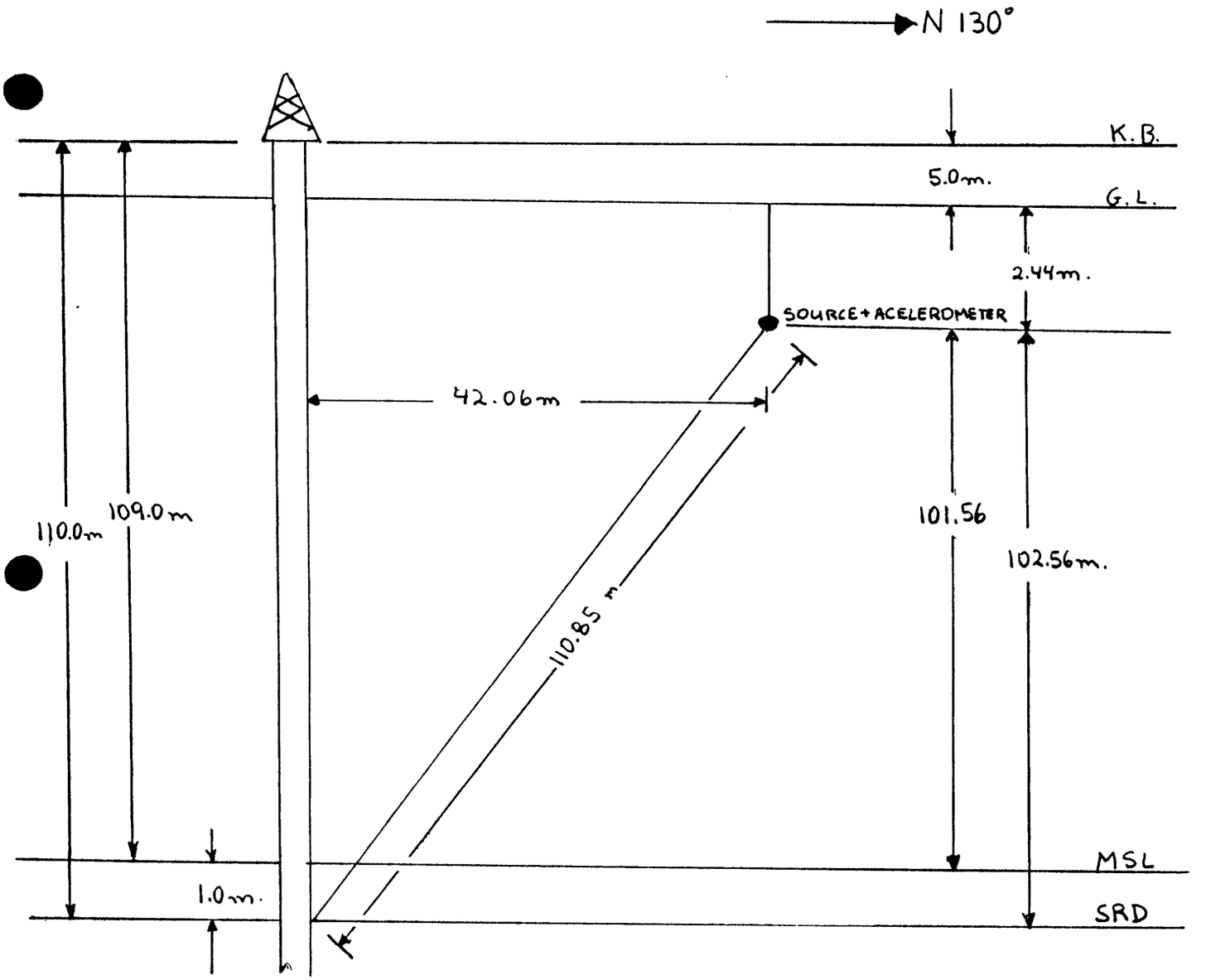
- A SHOT SENSOR (ACCELEROMETER) WAS USED INSTEAD OF HYDROPHONE.

SHOOTING GEOMETRY

WELL NAME : GREENBANKS #1



GREENBANKS #1



VELOCITY USED BETWEEN SOURCE AND SRD

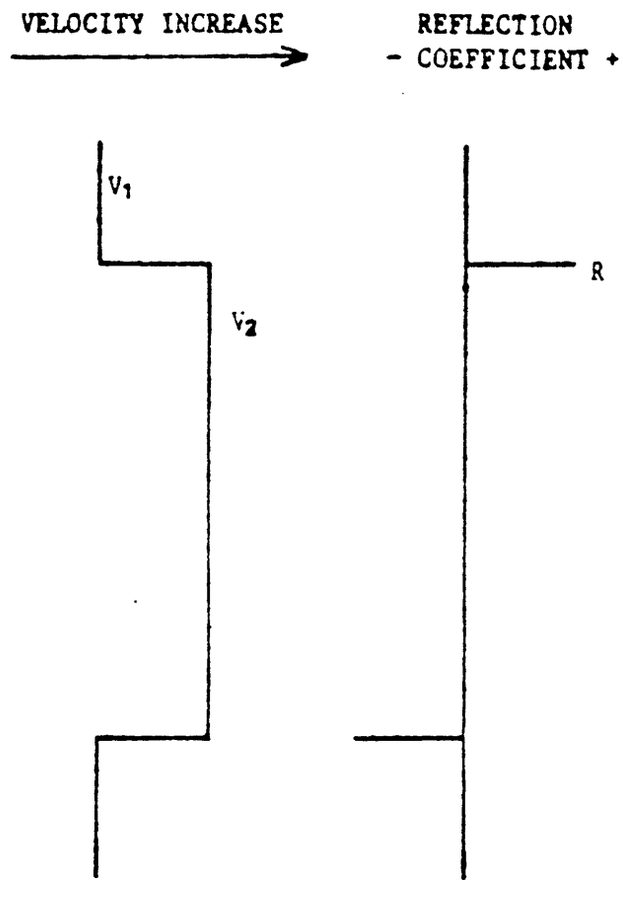
DISTANCE = 110.85 m

TRANSIT TIME = 0.072 SEC (SHOT AT 110.0m. K.B.)

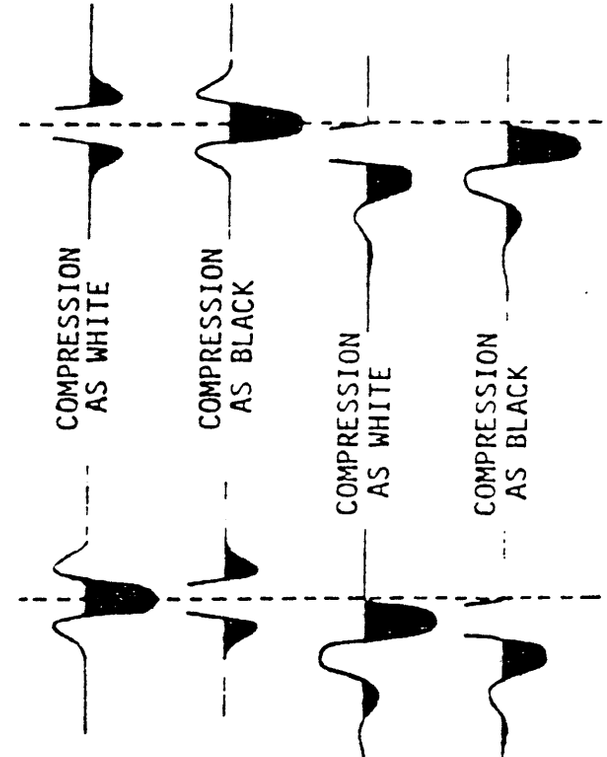
VEL = 1539.58 m/SEC

SHOOTING GEOMETRY AND SURFACE VELOCITY CALCULATION

SCHLUMBERGER WAVELET POLARITY CONVENTION



$$R = \frac{\rho_2 V_2 - \rho_1 V_1}{\rho_2 V_2 + \rho_1 V_1}$$



NORMAL POLARITY RICKER ZERO PHASE	REVERSE POLARITY RICKER ZERO PHASE	NORMAL POLARITY RICKER MINIMUM PHASE	REVERSE POLARITY RICKER MINIMUM PHASE

NOTE : WAVELET DISPLAYED UNDER GEOGRAMS ARE FOR A REFLECTION COEFFICIENT OF -0.5

APPENDIX NO. 6

PALYNOLOGICAL & PALAEONTOLOGICAL

STUDIES RESULT

BY:

V.D.M.E.

BEACH PETROLEUM NO LIABILITY

M E M O R A N D U M

TO: Mr D G Langton

FROM: A Tabassi

SUBJECT: PALYNOLOGICAL AND PALAEONTOLOGICAL STUDIES RESULT - GREEN BANKS NO. 1

DATE: 15 July 1983

Eleven samples (7 sidewall cores and 4 cutting) from Green Banks No. 1 were studies Palynologically and in part Palaeontologically. For comparison and/or correlation, five samples (2 cores and 3 sidewall cores) from the V.D.M.E. Hotspur No. 1 were also analysed Palynologically. Based on these studies, together with data derived from lithology and wireline logs, the Green Banks No. 1 stratigraphic units were tabled more confidently.

Three cutting samples from Green Banks No. 1 from the intervals: 280.0-290.0, 330.0-340.0 and 370.0-380.0 metres were studied both Palynologically and Palaeontologically. The Palaeontological results indicated a late Early Miocene age for these samples whilst the Palynological results revealed an older date, Early Eocene. The contradictory results are a result of contamination of samples by the friable Coquina Limestone at the base of Gellibrand Formation. This limestone has a distinctive colour and appearance which was readily recognisable in these samples. Consequently the older date, Early Eocene, was considered more acceptable since no spore and pollen of the late Early Miocene age were reported from the contaminated samples.

A. Tabassi
PETROLEUM GEOLOGIST

AT:GC

MICROPALAEONTOLOGICAL AND PALYNOLOGICAL REPORTS ON SAMPLES FROM BEACH PETROLEUM GREEN BANKS NO 1 AND DEPARTMENT OF MINERALS AND ENERGY HOTSPUR NO 1 WELLS

Palaeontology Section
Geological Survey Division
Department of Minerals and Energy

June 1983

Micropalaeontological report on samples from Green Banks 1 well.

Three samples of unwashed cuttings from the Green Banks 1 well near Heywood in southwestern Victoria were investigated palaeontologically at the request of Beach Petroleum N. L.

The samples contain fragments of bryozoans, pelecypods and gastropods, and fairly rich assemblages of foraminifera. The following planktonic species, relevant for biostratigraphic correlation and age determination, are present:

280 - 290m

Globigerinoides sicanus, Globigerinoides trilobus, Globoquadrina dehiscens, Globorotalia semivera, Globigerina woodi woodi, Globigerina praebulloides

330 - 340m

Globigerinoides trilobus (some tending towards sicanus), Globigerinoides ~~puber~~ subquadratus, Globoquadrina dehiscens, Globigerina woodi woodi, Globigerina praebulloides

370 - 380m

Globigerinoides trilobus, Globoquadrina dehiscens, Globorotalia semivera, Globigerina woodi woodi, Globigerina woodi connecta, Globigerina praebulloides

In terms of Australian foraminiferal zones, the planktonic foraminifera represent the Globigerinoides trilobus and Globigerinoides sicanus zones (distinguished by the absence or presence of G. sicanus). These correspond to the internationally used planktonic foraminiferal zones N7 and lower part of N8, indicating a late Early Miocene age. No pre-Miocene foraminifera were observed in the samples.

In the Heywood area the foraminifera observed would be expected to occur in the upper part of the Gellibrand Marl. The foraminifera and other fossil fragments in the samples from the Green Banks 1 well obviously come from strata well above the Upper Cretaceous section.

C Abele 2.6.1983

DR C ABELE
OIC PALAEONTOLOGY SECTION

Palynological Report on samples from the Green Banks 1 and Hotspur 1 wells.

Samples from the Beach Petroleum well Green Banks 1 and the DM&E Well Hotspur 1 were examined for palynological dating at the request of Beach Petroleum.

The wells are located in the onshore portion of the Otway Basin, approximately north-east of Heywood, Victoria.

The zonation scheme used is that of Dettmann 1969 in "Palynological Zonation of Lower Cretaceous Sediments of the Otway Basin, Victoria", S.D.A. Report R 1817 (Unpublished).

Samples have been assigned to Subzones, and where possible, to Units, on the basis of the above Zonation Scheme.

A species list for each sample is included in Attachment A.

Vivienne Archer
PALYNOLOGIST

9/6/83

Report on Samples from the Green Banks 1 and Hotspur 1 wells

Results

GREEN BANKS 1

TYPE	DEPTH (M)	LITHOLOGY	CONFIDENCE RATING	SPORE-POLLEN ZONE	AGE
SWC	454.0	Carb. silty clay	0	T. longus Zone	Maastrichtian
"	569.5	"	2	C.paradoxa Zone : D.filosus unit	Middle Albian
"	755	"	1	"	"
"	812.0	"	1	"	"
"	1155.0	"	1	C.hughesi Subzone	Late Neocomian - Aptian
"	1195.5	"	2	"	"
"	1207	Coal	1	"	"

HOTSPUR 1

Core	319 - 321	Sandy mudstone	1	C.striatus Subzone	Early Albian
SWC	409.5	"	2	"	"
"	776.0	"	2	"	"
Core	917-919	"	1	"	"
SWC	1138.5	"	1	C.hughesi Subzone : Rouseisporites reticulatus unit	Early Aptian

CONFIDENCE RATING

0 = Excellent confidence; assemblage with zone species of spores, pollen and microplankton.

1 = Good confidence; assemblage with zone species of spores and pollen or microplankton.

2 = Poor confidence; assemblage with non-diagnostic spores, pollen and/or microplankton.

ATTACHMENT A	WELL	GREEN BANKS 1							HOTSPUR 1			
	DEPTH (M)	454.0	569.0	755.5	812.0	1155.0	1195.0	1207.5	319-321	409.5	776	917-919	1138.
Aequitriradites spinulosus													X
A. verrucosus						X			X				X
Alisporites grandis		X	X	X	X	X	X	X	X		X	X	X
A similis				X	X	X	X	X	X				X
Amosipollis cruciformis		X											
Araucariacites australis		X							X				
Arcellites reticulatus				X									
Baculatisporites comaumensis			X					X	X	X	X		X
Balmeisporites holodictyus				X									
B. tridictyus				X									
Biretisporites spectabilis			X	X					X				
Beaupreaidites verrucosus		C											
Camaro zonosporites amplus		X											
C. ohaiensis		X											
Ceratosporites equalis			X		X	X	X		X			X	X
Cicatricosisporites australiensis			X	X	X	X			X	X	X		X
C. ludbrooki						X	X						X
C. pseudotripartitus									X				
Classopollis classoides			X	X	X	X	X	X	X	X	X		X
Cooksonites Variabilis								Cf.					X
Coptospora paradoxa				X	X								
C. Sp. A Dettman 1963					X								
Crybelosporites striatus			X						X			X	
C. stylosus									R/W		Cf.	R/W	
Cyathidites asper				X	X	X	X			X			
C. australis			X	X	X	X	X	X	X		X	X	X

WELL	GREEN BANKS 1							HOTSPUR 1				
DEPTH (M)	454.0	569.0	755.5	812.0	1155.0	1195.0	1207.5	319-321	409.5	776.0	917-919	1138
C. minor	X			X				X	X	X	X	
Cyclosporites hughesi					X							
Dictyotosporites complex						X						
D. filosus											X	
D. speciosus		X			X	X						
Dilwynites granulatus	X											
D. tuberculatus	X											
Foraminisporis asymmetricus			X	X				X	X	X		
F. dailyi		X				X						
F. wonthaggiensis						X		X		X		X
Foveotriletes parviretus		X										
Gambierina edwardsii	X											
G. rudata	X											
Gephyrapollenites wahooensis	X											
Gingkocycadophytus nitidus		X		X	X		X					
Gleicheniidites cercinidites	X			X			X	X	X			
Haloragacidites haloragoides								C				
H. harrisii	X	C										
Herkosporites elliottii	X											
Ilexpollenites anguloclavatus	X											
Ishyosporites punctatus	X				X						X	X
Klukisporites scaberis		X				X	X				X	X
Kuylisporites lunaris						X						
Laevigatisporites ovatus				X				X		X		
Leptolepidites major				X								X
L. verrucatus				X	X	X						

WELL	GREENBANKS 1							HOTSPUR 1				
DEPTH (M)	454.0	569.0	755.5	812.0	1155.0	1195.0	1207.5	319-321	409.5	776.0	917-919	1138
Lycopodiacidites asperatus								X				
Lycopodiumsporites austroclavatidites	X	X		x		x	x		x	x	x	
L. facetus						X						
L. nodosus						X	X	X				
L. reticulumsporites						X						
Lygistepollenites balmei	X											
L. florinii	X											
Microcachyridites antarcticus		X				X	X		X			
Neoraistrickia truncatus				X	X	X						
Nothofagidites heterus				C								
N senectus	X											
Ornamentifera sentosa	X											
Osmundacidites wellmanii				X			X				X	X
Parvisaccites catastus								Cf.	Cf.			Cf
Periporopollenites polyoratus	X											
Peromonolites densus	X											
Phyllocladidites mawsonii								X				
P. reticulosaccatus	X											
Pilosisporites parvispinosus									X			
P. notensis					X	X						X
Podocarpidites spp.	X	X	X		X	X	X	X	X	X	X	
Podosporites microsaccatus	X	X	X	X	X			X				
Proteacidites adenanthoides	X											
P. amolosexinus	X											
P. angulatus	X											
P. crassus	Cf.											

	WELL	GREENBANKS 1						HOTSPUR 1				
	DEPTH (M) 454.0	569.0	755.5	812.0	1155.0	1195.0	1207.5	319-321	409.5	776.0	917-919	1138
P. latrobensis	X											
P. palisadus	X											
P. reticoloscabratus	X											
Quadraplanus brossus	X											
Reticulatisporites pudens						X						X
Rouseisporites radiatus			X	X								
R. reticulatus			X						X			X
R. simplex								X		X		
Schizosporis parvus			X			X						
S. reticulatus		X	X			X						X
Simplicepollice meridianus	X											
Stereisporites antiquasporites		X	X	X	X	X		X	X	X		
S. (Tripunctisporis) sp.	X											
Tetracolporites verrucosus	Cf.											
Tricolpites confessus	X											
T. gillii	X											
T. longus	X											
T. waiparaensis	X											
Tricolporites lillei	X											
Trilobosporites trioreticulosus		X						X				
Triporopollenites sectilis	X											
Tsugaepollenites dampieri				X	X					X		
T. trilobatus				X								
Velosporites triquetrus				X								

WELL	GREENBANKS 1							HOTSPUR 1				
DEPTH (M)	454.0	569.0	755.5	812.0	1155.0	1195.0	1207.5	319-321	409.5	776.0	917-919	1138
MICROPLANKTON												
Eurydinium conoratum	X											
Trichodinium hirsutum	X											

C = Cavings/contamination

R/W = Reworking

9-5-85.

Dear Dr Talrassi,

This is a slightly more detailed breakdown of Bellmann's Zonation Scheme, in which possible I have assigned your samples, accordingly.

I have been sick with the flu & have been away from work for a while however, your report will be typed today (I came in especially) and will be passed on to Peter Konley tomorrow. So you should get it early next week. Your other samples are under way.

Today I received confirmation of the identification of the Microplakton in the Green Banks 1 well, shallowest sample, and there is no doubt that it belongs to the T longus Zone

454.0m

Best Wishes

Vivienne Arden.

PALYNOLOGICAL REPORT 2 ON THE GREEN BANKS 1 WELL

FOR BEACH PETROLEUM N.L.

V Archer
July 1983

Palynological Report 2 on the Green Banks 1 Well for Beach Petroleum N.L.

An additional four samples, all cuttings, were examined from the Green Banks 1 well for Beach Petroleum.

The three shallowest samples had previously been examined for micropalaeontological dating by Dr C.Abele, but they yielded only Miocene foraminifera, which were assumed to be present from downhole contamination.

The palynological data for these three samples suggests that they are all of early Eocene age. No evident contamination was recorded in the spore-pollen assemblages and this is presumably because the late Miocene sediments which produced the cavings are marine and contain little in the way of spores and pollen.

A small number of dinoflagellates were recorded in the assemblages, suggesting a minor marine influence for the sediments.

The fourth sample examined at a depth of 510-520 m, is stratigraphically situated between Early Cretaceous and Late Cretaceous sediments. (Refer Report 1).

The assemblage contains no dinoflagellates, unlike the Maastrichtian sample above it at 454.0 m. The spore-pollen species are non-diagnostic but do indicate that the sample is not of an Early Cretaceous age. The maturation of the grains (brownish-yellow in colour) suggests that they are not present from cavings from younger sediments, nor are there any species diagnostic of younger zones.

It seems reasonable to assume that the sample may be of a Late Cretaceous age.

The results are on Attachment 'A', with species lists on Attachment 'B'. The zonation scheme used is that of Stover and Partridge 1973 in 'Tertiary and Late Cretaceous Spores and Pollen from the Gippsland Basin, South-eastern Australia', Proc. R. Soc. Vict. Vol 85 Pt.2, 237-286.

V Archer

Vivienne Archer
PALYNOLOGIST

ATTACHMENT A

RESULTS OF PALYNOLOGICAL EXAMINATION OF THE GREEN BANKS 1 WELL

TYPE	DEPTH (m)	CONFIDENCE RATING	SPORE-POLLEN ZONE	AGE
Cuttings	290	3	Lower-Upper M.diversus Zone	Early Eocene
"	340	3	"	"
"	380	3	"	"
"	510 - 520	4	-	Maastrichtian?

Confidence Ratings

0 = SWC or core, excellent confidence assemblage with zone species of spores, pollen and microplankton

1 = SWC or core, good confidence, assemblage with zone species of spores and pollen or microplankton

2 = SWC or core, poor confidence, assemblage with non-diagnostic spores, pollen and/or microplankton.

3 = Cuttings, fair confidence, assemblage with zone species of either spore and pollen or microplankton, or both.

4 = Cuttings, no confidence, assemblage with non-diagnostic spores, pollen and/or microplankton.

APPENDIX B SPECIES LIST - GREEN BANKS 1

DEPTH (m)	290	340	380	510-520
Alisporites grandis		R/W		
Araucariacites australis		X		
Baculatisporites comaumensis	X			
Camarozonosporites bullatus			X	
Ceratosporites equalis				X
Calvifera triplex	X			
Cyathidites gigantis		X		
C. minor	X	X	X	X
Dictyophyllidites concavus	X			
Dilwynites granulatus	X	X		
Gleicheniidites cercinidites		X		X
Haloragacidites harrisii	X	X	X	
Ilexpollenites anguloclavatus		X		
Kraeuselisporites linearis				Cf.
Latrobosporites crassus	X	X		
Lycopodiumsporites austroclavatidites	X	X		
Lygistepollenites florinii	X	X	X	
Malvacipollis diversus	X			
M. subtilis	X			
Microcachyridites antarcticus	X		X	X
Monosulcites waitakiensis		X	X	
Myrtaceidites parvus/mesonesus	X			
Nothofagidites deminutus	X			
N. emarcidus/heterus	X	X	X	
Osmundacidites wellmanii			X	Cf.
Parvisaccites catastus				X
Periporopollenites demarcatus	X			
P. polyoratus			X	
Phyllocladidites paleogenicus	X			
Podocarpidites spp.	X	X		X
Proteacidites angulatus	Cf.			
P. annularis	X	X		
P. crassus	Cf.			

APPENDIX B (Continued) SPECIES LIST - GREEN BANKS 1

DEPTH (m)	290	340	380	510-520
P. grandis	X	X	X	
P. incurvatus		X		
P. latrobensis	X			
P. leightonii	X			
P. obscurus				Cf.
P. reticuloscabratus	X			
Reticulatisporites pudens			X	
Simplicepollis meridianus	X			
Stereisporites antiquasporites	X	X		
Tricolpites cooksonae		X		
T. fissilis	X			
T. minor		X		X
Tricolporites adelaidensis		X		
Verrucosisporites Kopukuensis		X		
Microplankton				
Crassosphaera concinna	Cf.			
Deflandrea pachyceros	Cf.			
Hystrichosphaeridium sp.	X			
Spiniferites ramosus	X	X	Cf.	

APPENDIX NO. 7

SOURCE ROCK STUDIES

RESULT

BY:

A.C. COOK

GREEN BANKS NO. 1

K.K. No.	Depth (m)	$\bar{R}_v$max	Range	N	Exinite Fluorescence (Remarks)
17720	454 SWC 20	0.21	0.19-0.23	3	Rare to sparse liptodetrinite, greenish yellow to dull orange, rare dinoflagellates, greenish yellow and rare sporinite, orange to dull orange. (Claystone>sandstone. D.o.m. sparse, I>E>V. Vitrinite, inertinite and exinite rare. Common carbonate and pyrite. Abundant ?glauconite.)
17721	527 SWC 19	0.28	0.24-0.36	6	Rare to sparse liptodetrinite, orange to dull orange, rare sporinite, yellow to dull orange, rare cutinite, yellow and rare dinoflagellates, greenish yellow. (Siltstone. D.o.m. sparse, I>E>V. Vitrinite rare. Inertinite and exinite sparse.)
17722	527 Ctgs	0.35	0.25-0.49	10	Rare to sparse dinoflagellates/acritarchs, greenish yellow, rare sporinite, yellowish orange to dull orange and rare resinite, bright yellow. (Claystone> sandstone. D.o.m. common, I>E>V. Vitrinite and exinite sparse. Inertinite common. Abundant sparry carbonate. Abundant pyrite.)
17723	610 SWC 17	0.42	0.37-0.49	3	Rare to sparse liptodetrinite, yellow to orange, rare sporinite, cutinite and resinite, yellow and rare dinoflagellates, orange. (Siltstone>claystone with coaly intraclasts of clarite. D.o.m. sparse, E>I>V. Vitrinite and inertinite rare. Exinite sparse. Common iron oxides.)
17724	755.5 SWC 15	0.42	0.40-0.43	2	Common to abundant dinoflagellates, yellow to orange, rare cutinite, yellow and rare alginite A, bright yellow. (Claystone. D.o.m. common, E>V>or=I. Vitrinite and inertinite rare. Exinite common.)
17725	870 SWC 13	0.38	0.34-0.43	4	Rare sporinite and cutinite and rare to sparse dinoflagellates, yellow to orange. (Claystone with coaly intraclasts of clarite and duorclarite. Sporinite common in coal. D.o.m. sparse, E>I>V. Vitrinite and inertinite rare. Exinite sparse. Sparse iron oxides.)
17726	1000 SWC 11	0.41	0.35-0.45	4	Rare to sparse dinoflagellates, yellow to orange and rare sporinite, orange to dull orange. (Claystone with coaly intraclasts of clarite>siltstone>sandstone. D.o.m. sparse, I>E>V. Inertinite sparse, exinite rare to sparse, vitrinite rare. Common iron oxides. Rare pyrite.)
17727	1100 SWC 8	0.43	0.38-0.47	2	Rare cutinite and sporinite, yellowish orange to orange and rare liptodetrinite, yellow to orange. (Siltstone. D.o.m. rare, E>I>V. Vitrinite, inertinite and exinite rare. Sparse iron oxides.)

GREEN BANKS NO. 1

K.K. No.	Depth (m)	$\bar{R}_v$max	Range	N	Exinite Fluorescence (Remarks)
17728	1204.5 SWC 5	0.47	0.34-0.54	7	Sparse dinoflagellates, greenish yellow to orange, rare to sparse cutinite, orange and rare sporinite, orange to dull orange. (Claystone. D.o.m. common, Vitrinite rare to common. Inertinite and exinite sparse to common.)
* 17729	1207 Ctgs	0.55	0.44-0.66	27	Sample severely heat altered by drying process. Sparse to common sporinite, yellow to dull orange, sparse to common cutinite, yellowish orange to brown, rare resinite, dull orange and rare to sparse suberinite, brown. (Coal>sandstone>shaly coal>claystone. Coal abundant, V>I>E. Duroclarite>clarodurite>vitrite> clarite=fusite. Shaly coal abundant, I>V>E. D.o.m. rare, V=I>E. Rare pyrite.)
* 17776	1207 Ctgs	0.45	0.35-0.57	34	Abundant sporinite and cutinite, yellow to dull orange, rare resinite, yellow, rare fluorinite, green and sparse suberinite, brown. (Coal>siltstone>sandstone> claystone. Coal abundant, V>E>I. Duroclarite>claro-durite>fusite=clarite. D.o.m. common, V>or=E>I. Vitrinite and exinite common. Inertinite sparse. Rare pyrite.)

* These two samples are virtually from the same depth.

- The first sample is a washed and oven-dried cutting sample which was thought to be heat altered by the drying process.

- The other sample is an unwashed air-dried cutting sample which was analysed to determine whether the first sample has been affected by the drying process.

The result confirmed that the drying process has effected both the Vitrinite Reflectance and the type of organics.

GREEN BANKS NO. 1

Sample No.	Depth (m)	Total Organic Carbon
17720	454 SWC 20	0.94
17721	527 SWC 19	1.66
17722	527 Cuttings	0.86
17723	610 SWC 17	0.37
17724	755.5 SWC 15	0.77
17725	870 SWC 13	0.48
17726	1000 SWC 11	0.45
17727	1100 SWC 8	0.44
17728	1204.5 SWC 5	0.98
17729	1207.0 Cuttings	19.40
17766	1207 Cuttings	20.80

APPENDIX NO. 8

BIT RECORD

PRINTED IN U S A

BIT RECORD

COUNTY	FIELD	STATE	SECTION	TOWNSHIP	RANGE	LOCATION	WELL NO
	OTWAY BASIN	VIC		Heywood		GREEN BANKS #1	

CONTRACTOR	RIG NO	OPERATOR	TOOLPUSHER	SALESMAN
PDSA	1	DOACH PETROLEUM N.L.	TSCHACHER	

SPUD	UNDER SURF	UNDER INTER	SET SAND ST	REACHED T.D	PUMP NO 1 LINER	PUMP NO 2 LINER	PUMP POWER	TYPE MUD
4-4-83					OILWELL A600 PT 6½"x8"	DITTO		

DRILL PIPE SIZE TYPE C D	TOOL JOINTS	DRILL COLLARS NUMBER O D I D LENGTH	DRAWWORKS POWER

NO.	SIZE	MAKE	TYPE	JET 32ND IN	SERIAL	DEPTH OUT	FEET	HOURS	FT HR	ACCUM DRLG HRS	WT 1000 LBS KG	RPM	VERT DEV	PUMP PRESS	PUMP OPER. ATION	SPM 1	SPM 2	MUD WT	MUD VIS	MUD W L	DULL. COND. T	DULL. COND. B	DULL. COND. G	DULL. COND. OTHER	FORMAT REMAR
1	17½	SEC	S33S	—	137275	103m	103m	8¾		8¾	2-4	140	½°	150 psi	2	120	NO				1	1	IN		
2	12¼	SEC	S33S	—	276686	406m	303m	13½		22½	5	140	0		1	130					1	1	WT		
3	8½	HTC	XJA	12 12 9	435LK	919m	513m	21		43½	15	120	¾°	1100	1	85					6	4	1/8		PULLED SLOW PE
4	8½	SEC	S84F	3x12	154257	1226m	307m	33½		76¾	20m	60	1°	1350	1	105		146	43	9	6 BT	4	3/8		BJ ASSEM

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nical information and to get your holes down with fewer problems. ce on rock bit perfor- ce, bit selection, drill g analysis, hydraulics rams and recommen- ons on the best bit ht and rotary speed. information is tail- for you, your loca- and your rig.

Hughes Tool Com- representative is your source for drilling mation . . . wherever drill.

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U.S.A.

APPENDIX NO. 9

PETROLOGICAL REPORT

ON

SIDEWALL CORE NO. 20

(454.0 m)

PHILIP E. BOCK
GEOLOGICAL CONSULTANT

PETROLOGY
BIOSTRATIGRAPHY
PETROLEUM GEOLOGY
HYDROGEOLOGY

32 SWAYFIELD ROAD
MT. WAVERLEY
VICTORIA, 3149

TELEPHONE 288 4491

5th July, 1983

Petrological Report for Beach Petroleum N.L.

Sample: Sidewall core from Greenbanks 1.

Name: Clayey greensand.

Megascopic properties: Friable, medium grey-green, poorly sorted; no visible bedding.

Microscopic properties: About 5% terrigenous grains (mainly quartz)
About 45% allochemical grains ('greensand')
About 50% matrix: allochemical (?)
Relative abundance of allochemical grains and matrix is not known accurately; the two materials are similar in composition and appearance; so that grain boundaries are difficult to detect

Fabric: The sample appears to be homogeneous. The porosity is difficult to estimate from thin section, as there may be submicroscopic pores in the clay-size matrix. The permeability is expected to be extremely low.

Grainsize: The sand-size grains are poorly sorted, and generally are in the range ¼mm to 1 mm. The entire sediment is markedly bimodal; with no obvious silt-size material. The sediment is either a clayey sand, or possibly a sandy clay.

Grain shape: The 'greensand' grains are well rounded, and have a moderately high sphericity. Quartz grains are sub-rounded to well rounded.

Mineral composition:

a. Quartz: About 5% of the rock; many of the quartz grains are polycrystalline, or show undulose extinction.

b. Felspar: Comprises only about 1% of the rock; the grains are only slightly altered, suggesting rapid erosion or cool climatic conditions; these may be derived from the Otway Group sediments, although no lithic grains have been' identified, which are also important components of the Otway Group.

c. 'Greensand': This term is used for round grains of green or brown phyllosilicates. The correct mineral name for this material cannot be determined in the thin-sections, without X-ray diffraction study. 'Glauconite' is the term often used for such material. The grains are internally homogeneous, with very few exceptions which have superficial coats of banded material similar to chamosite. It is believed that these grains could be intraclasts, material torn up from previously deposited mudstones, and rolled around to form rounded grains. Some of the grains contain fine crystals of a pale brown carbonate: probably

siderite. A significant proportion of these grains are brown in colour. Some grains show signs of distortion, implying that compaction that has taken place has been uneven.

d. 'Matrix' : This material is mainly brownish-green phyllosilicate, with a trace of mica.

Interpretation: This is a distinctive rock, which was probably deposited in shallow-water marine conditions. The abundance of green phyllosilicates suggests reducing environments, and possibly high deposition rates with a moderate supply of organic material. The sediment shows a marked textural inversion, with well-rounded grains in a fine matrix. As suggested above, it is possible that two source materials, a quartz-rich sand and a previously deposited mudstone, were being eroded under moderately high energy conditions, and that the mudstone broke up to contribute both the 'greensand' grains and the matrix.

Philip E Brady

ENCLOSURES:

PE601279

This is an enclosure indicator page.
The enclosure PE601279 is enclosed within the container PE902562 at this location in this document.

The enclosure PE601279 has the following characteristics:

ITEM_BARCODE	= PE601279
CONTAINER_BARCODE	= PE902562
NAME	= Exlog Mud Log
BASIN	= OTWAY
PERMIT	=
TYPE	= WELL
SUBTYPE	= MUD_LOG
DESCRIPTION	= Exlog Mud Log (from WCR) for Greenbanks-1
REMARKS	=
DATE_CREATED	= 12/04/1983
DATE_RECEIVED	= 25/07/1983
W_NO	= W1162
WELL_NAME	= Greenbanks-1
CONTRACTOR	= EXLOG
CLIENT_OP_CO	= Beach Petroleum NL

(Inserted by DNRE - Vic Govt Mines Dept)

PE601280

This is an enclosure indicator page.
The enclosure PE601280 is enclosed within the container PE902562 at this location in this document.

The enclosure PE601280 has the following characteristics:

ITEM_BARCODE	= PE601280
CONTAINER_BARCODE	= PE902562
NAME	= Composite Well Log
BASIN	= OTWAY
PERMIT	=
TYPE	= WELL
SUBTYPE	= COMPOSITE_LOG
DESCRIPTION	= Composite Well Log (from WCR) for Greenbanks-1
REMARKS	=
DATE_CREATED	= 13/04/1983
DATE_RECEIVED	= 25/07/1983
W_NO	= W1162
WELL_NAME	= Greenbanks-1
CONTRACTOR	= Beach Petroleum NL
CLIENT_OP_CO	= Beach Petroleum NL

(Inserted by DNRE - Vic Govt Mines Dept)

PE601281

This is an enclosure indicator page.
The enclosure PE601281 is enclosed within the container PE902562 at this location in this document.

The enclosure PE601281 has the following characteristics:

ITEM_BARCODE	= PE601281
CONTAINER_BARCODE	= PE902562
NAME	= Dual Laterolog-GR-SP
BASIN	= OTWAY
PERMIT	=
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Dual Laterolog-GR-SP, Run-1, (from WCR) for Greenbanks-1
REMARKS	=
DATE_CREATED	= 07/04/1983
DATE_RECEIVED	= 25/07/1983
W_NO	= W1162
WELL_NAME	= Greenbanks-1
CONTRACTOR	= Schlumberger
CLIENT_OP_CO	= Beach Petroleum NL

(Inserted by DNRE - Vic Govt Mines Dept)

PE601282

This is an enclosure indicator page.
The enclosure PE601282 is enclosed within the container PE902562 at this location in this document.

The enclosure PE601282 has the following characteristics:

ITEM_BARCODE	= PE601282
CONTAINER_BARCODE	= PE902562
NAME	= Borehole Compensated Sonic Log
BASIN	= OTWAY
PERMIT	=
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Borehole Compensated Sonic Log, Run-1, (from WCR) for Greenbanks-1
REMARKS	=
DATE_CREATED	= 07/04/1983
DATE_RECEIVED	= 25/07/1983
W_NO	= W1162
WELL_NAME	= Greenbanks-1
CONTRACTOR	= Schlumberger
CLIENT_OP_CO	= Beach Petroleum NL

(Inserted by DNRE - Vic Govt Mines Dept)

PE601283

This is an enclosure indicator page.
The enclosure PE601283 is enclosed within the container PE902562 at this location in this document.

The enclosure PE601283 has the following characteristics:

ITEM_BARCODE	= PE601283
CONTAINER_BARCODE	= PE902562
NAME	= Dual Laterolog-GR-SP
BASIN	= OTWAY
PERMIT	=
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Dual Laterolog-GR-SP, Run-2, (from WCR) for Greenbanks-1
REMARKS	=
DATE_CREATED	= 13/04/1983
DATE_RECEIVED	= 25/07/1983
W_NO	= W1162
WELL_NAME	= Greenbanks-1
CONTRACTOR	= Schlumberger
CLIENT_OP_CO	= Beach Petroleum NL

(Inserted by DNRE - Vic Govt Mines Dept)

PE601284

This is an enclosure indicator page.
The enclosure PE601284 is enclosed within the container PE902562 at this location in this document.

The enclosure PE601284 has the following characteristics:

ITEM_BARCODE	= PE601284
CONTAINER_BARCODE	= PE902562
NAME	= Borehole Compensated Sonic Log
BASIN	= OTWAY
PERMIT	=
TYPE	= WELL
SUBTYPE	= WELL_LOG
DESCRIPTION	= Borehole Compensated Sonic Log, Run-2, (from WCR) for Greenbanks-1
REMARKS	=
DATE_CREATED	= 13/04/1983
DATE_RECEIVED	= 25/07/1983
W_NO	= W1162
WELL_NAME	= Greenbanks-1
CONTRACTOR	= Schlumberger
CLIENT_OP_CO	= Beach Petroleum NL

(Inserted by DNRE - Vic Govt Mines Dept)

PE902563

This is an enclosure indicator page.
The enclosure PE902563 is enclosed within the container PE902562 at this location in this document.

The enclosure PE902563 has the following characteristics:

ITEM_BARCODE	= PE902563
CONTAINER_BARCODE	= PE902562
NAME	= Synthetic Seismogram - Geogram
BASIN	= OTWAY
PERMIT	=
TYPE	= WELL
SUBTYPE	= SYNTH_SEISMOGRAM
DESCRIPTION	= Synthetic Seismogram - Geogram
REMARKS	=
DATE_CREATED	= 02/05/1983
DATE_RECEIVED	= 25/07/1983
W_NO	= W1162
WELL_NAME	= Greenbanks-1
CONTRACTOR	= Schlumberger
CLIENT_OP_CO	= Beach Petroleum NL

(Inserted by DNRE - Vic Govt Mines Dept)

PE902564

This is an enclosure indicator page.
The enclosure PE902564 is enclosed within the container PE902562 at this location in this document.

The enclosure PE902564 has the following characteristics:

ITEM_BARCODE	= PE902564
CONTAINER_BARCODE	= PE902562
NAME	= Seismic Calibration Log
BASIN	= OTWAY
PERMIT	=
TYPE	= WELL
SUBTYPE	= VELOCITY_CHART
DESCRIPTION	= Seismic Calibration Log
REMARKS	=
DATE_CREATED	= 13/04/1983
DATE_RECEIVED	= 25/07/1983
W_NO	= W1162
WELL_NAME	= Greenbanks-1
CONTRACTOR	= Schlumberger
CLIENT_OP_CO	= Beach Petroleum NL

(Inserted by DNRE - Vic Govt Mines Dept)