



WELL COMPLETION REPORT

KINGFISH-6

Esso Australia Ltd.

July, 1975

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ESSO AUSTRALIA LIMITED

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KINGFISH-6

P.V. KEMP
February, 1975

ESSO AUSTRALIA LIMITED

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KINGFISH-6

LIST OF CONTENTS

SECTION

1. Well Data Record
2. Initial Production Test (Not Applicable)
3. Perforating Record (Not Applicable)
4. Casing Record
5. Cement Record
6. Subsurface Completion Equipment (Not Applicable)
7. Samples, Conventional Cores, Sidewall Cores
8. Wireline Logs and Surveys
9. Formation Tops/Zones
10. Geological Analysis

APPENDICES

1. Sample Descriptions
2. Sidewall Core Descriptions
3. Micro-Palaeontological Report
4. Palynological Report
5. F.I.T. Results
6. Well Log Analysis Report & BAROID Mud Log
7. Core Description, Petrography and Bulk Density
8. Velocity Survey Report

PLATES

- I Structure Map, Top of Latrobe Coarse 'Clastics, Kingfish-6
- II Geological Cross-Section A-A', Post Kingfish-6
- III Time-Depth Curve
- IV Well Velocity Record
- V Well Completion Log
- VI FORMATION TESTER - A, B

COMPLETION REPORT

I WELL DATA RECORD

Date 5/2/75

LOCATION

| | | | | |
|--|--|--|--------------------------------------|---|
| WELL NAME KINGFISH-6 | STATE VIC. OFFSHORE | PERMIT or LICENCE VIC. L/7 | GEOLOGICAL BASIN GIPPSLAND | FIELD KINGFISH |
| CO-ORDINATES Surface & Bottom Hole | | Lat. Long. X Y 38°35'40.016"S 148° 14' 00.839"E 607,426mE 5,727,490mN | MAP PROJECTION AMG/AGD ZONE 55 | GEOGRAPHICAL DESCRIPTION 1.1 miles SSW of Kingfish-5 |
| <u>ELEVATIONS & DEPTHS</u> | | | | |
| ELEVATIONS Mean Sea Level KB 28' RT Braden Head Top Deck Platform | WATER DEPTH 258' PLUG BACK DEPTH 350' | TOTAL DEPTH M.D. 8386' T.V.D. REASONS FOR P.B. Abandonment | Avg. Angle Straight hole | |
| <u>DATES</u> | | | | |
| MOVE IN 30/12/74 | RIG UP 31/12/74 | SPUDED 1/1/75 | | |
| RIG DOWN COMPLETE 28/1/75 | RIG RELEASED 29/1/75 | PROD. UNIT - Start Rigging Up | | |
| PROD. UNIT - Rig Down Complete | | I.P. ESTABLISHED | | |
| <u>MISCELLANEOUS</u> | | | | |
| OPERATOR ESSO | PERMITTEE or LICENCEE ESSO - HEMATITE | ESSO INTEREST 50% | OTHER INTEREST HEMATITE 50% | |
| CONTRACTOR ATWOOD OCEANICS P/L | RIG NAME REGIONAL ENDEAVOUR | EQUIPMENT TYPE FLOATING D/V | | |
| TOTAL RIG DAYS 29.06 | DRILLING AFE NO. 234-106 | COMPLETION NO. | TYPE COMPLETION | |
| LAHEE WELL | Before Drilling | FIELD OUTPOST | | |
| CLASSIFICATION | After Drilling | UNSUCCESSFUL OUTPOST | | |

B A S I C

P. KEMP

Geologist

| II INITIAL PRODUCTION TEST | | | | | |
|----------------------------|---|--|----------------------|--|--|
| Date | WELL COMPLETION AS: Oil Well _____ Gas Well _____ Dry Hole _____ | | | | |
| Choke size, inch | | | Calculated P.I. | | |
| Length of Test | | | Calculated A.O.F. | | |
| Oil, BPD | | | Perforations | | |
| Water, BPD | | | Shut-In BHP | | |
| Gas, MCFD | | | Flowing BHP | | |
| Gas Liquids, BPD | | | Shut-In Tubing Press | | |
| Gas-Oil Ratio | | | Flowing-Tubing Press | | |
| Gravity, API | | | Flowing Temperature | | |

| III PERFORATING RECORD (Prod.test, Completion, DST, FIT) | | | | | | |
|--|-----|-------------|-----------|--------------|-------------------|-------------------|
| INTERVAL | HPF | TOTAL SHOTS | SERV. CO. | DIFF. PRESS. | PERFORATION FLUID | SIZE AND TYPE GUN |
| NOT APPLICABLE | | | | | | |

Engineer

| IV CASING-LINER-TUBING RECORD | | | | | | | |
|-------------------------------|--------------------------------|------------|-------|--------|----------------------------------|---------|---------|
| Type | Size | Weight | Grade | Thread | No. Joints | Amount | Depth |
| | KB ELEVATION ABOVE CASING HEAD | | | | | 277.00 | 277.00 |
| | 24" | Pile Joint | | | | 35.35 | 312.35 |
| | 20" | 129# | X52LP | JV-CC | 1 | 28.75 | 341.1 |
| | 20" | 94# | X52LP | JV | 9 | 310.34 | 651.44 |
| | 20" | 129# | X52LP | JV | 1 casing + shoe | 24.30 | 675.74 |
| | KB ELEVATION ABOVE HANGER | | | | | 283.00 | 283.00 |
| | 10-3/4" | 40.5# | J-55 | Butt | 61 | 2453.81 | 2736.81 |
| | 10-3/4" | 40.5# | J-55 | Butt | 1 + Float Collar + Float Shoe | 40.17 | 2776.98 |
| | 13-3/8"x 10-3/4" | | | Butt | X/Over & Pup | 5.13 | 2782.11 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

B A S I C

| V CEMENT RECORD | | | |
|---------------------------|---|--|--|
| String | 20" | 10-3/4" | |
| Type of Cement | 800 sks Aust. N +160 sks Aust. N+2%CaCl ₂ | 650 sks Aust N + 250 sks Aust. N+1% CaCl ₂ | |
| Number of FT ³ | 1133 | 1062 | |
| Average Weight of Slurry | 15.6 ppg. | 15.6 ppg. | |
| Cement Top | Sea Floor | 1285' calc. | |
| Casing Tested with | 500. psi. | 1500 psi. | |
| Number of Centralizers | 7 | 10 | |
| Number of Scratchers | - | - | |
| Stage Collar, etc. | - | - | |
| Remarks | | Tested formation to 13.5 ppg mud equiv. held. | |

97 W. L. S.
Engineer

WELL KINGFISH-6

| VII SAMPLES, CONVENTIONAL CORES, SW CORES | | | | | |
|---|--|--------------|-----------------------------------|----------|-----------|
| INTERVAL | TYPE | RECOVERED | INTERVAL | TYPE | RECOVERED |
| 790-1420 | 5 sets washed and dried samples and one unwashed sack. | 30' interval | 8312-7419 | 30 SWC's | 29 |
| 1840-2350 | | 30' " | 7612-2857 | 30 SWC's | 30 |
| 2410-2440 | | 30' " | CONVENTIONAL CORE #1 5657-5690 | Cut 33 | 33 |
| 2530-4000 | | 30' " | | | |
| 4000-5655 | | 20' " | | | |
| 5690-7200 | | 20' " | | | |
| 7200-7590 | | 10' " | | | |
| 7600-7700 | | 10' " | | | |
| 7700-8386 | 20' " | | | | |
| 790-8386 | One composite canned cuttings sample | Every 100' | | | |

VIII WIRELINE LOGS AND SURVEYS Incl. FIT)

| Type & Scale | From | To | Type & Scale | From | To |
|------------------------------|--------|--------|--------------|------|----|
| ISF 2" & 5" | - 2815 | - 678 | | | |
| SONIC 2" & 5" | - 2816 | - 678 | | | |
| FDC 2" & 5" | - 2821 | - 678 | | | |
| GR 2" & 5" | - 2812 | - 291 | | | |
| ISF 2" | - 8332 | - 2787 | | | |
| ISF/Sonic 5" | - 8332 | - 2787 | | | |
| FDC/CNL/GR | - 8331 | - 2787 | | | |
| CNL | - 8331 | - 7519 | | | |
| HDT | - 8329 | - 5514 | | | |
| VELOCITY SURVEY 11 levels | 8271 | - 2508 | | | |
| F.I.T. #1 | | 8130 | | | |
| F.I.T. #2 | | 7707 | | | |
| F.I.T. #3 | | 7613 | | | |
| B A S I C | | | | | |

P. KEMP
Geologist

| IX | FORMATION TOPS/Zones | | | | | REMARKS | |
|-------------------------------------|----------------------|-------|---------|---------------------|---------------|---------|-----|
| | NAME | Tops | | Gross Interval (ft) | Net Pay (ft). | | |
| | | M.D. | Sub-sea | | Gas | | Oil |
| GIPPSLAND LST. | 286 | - 258 | 6315 | | | | |
| LAKES ENTRANCE FM. | 6601 | -6573 | 1006 | | | | |
| LATROBE GROUP | 7607 | -7579 | 779+ | | | | |
| LTRB. COARSE CLAST. | 7611 | -7583 | | | | | |
| Mid <u>M. diversus</u> Unconformity | 7646 | -7618 | | | | | |
| T.D. | 8386 | -8358 | | | | | |
| INTERPRETATIVE | | | | | | | |

X GEOLOGIC ANALYSIS (Pre Drilling prognosis Vs actual results)

PRE-DRILL

Kingfish-6 was drilled in a seismically interpreted crestal position on the southern lobe of the eastern extension of the Kingfish field. It was anticipated that Kingfish-6 would intersect approximately 50' of high quality reservoir sands at the top of the Latrobe Group, above the field oil/water contact at 7566 feet subsea.

POST DRILL

The Latrobe Group was penetrated at 7579 feet subsea, 63 feet low to prediction and 13 feet below the Kingfish field oil/water contact 7566 feet subsea. Although this has resulted in a slight reduction of the south-east flank of the Kingfish field, as mapped following the drilling of Kingfish-5, it has established the presence of the East Kingfish extension.

The deviation from pre-drill depths predicted by seismic interpretations is the result of 0.8% error in seismic velocity determination within the complex channelling of the upper Miocene section.

Lithological predictions were generally proved correct with the Latrobe Group consisting of predominantly coarse to very coarse grained, friable sandstones with generally good porosity.

The Mid M. diversus unconformity is interpreted by log character as occurring at 7618 feet subsea, only 39 feet below the top of Latrobe Group. This is significantly thinner than the equivalent sections in Kingfish-5 (150 feet thick) and in Kingfish-1 (155 feet thick). In the east Kingfish area, this unconformity appears to mark the abrupt change from non-marine braided stream deposits immediately below the unconformity, to a more marine-shoreface environment immediately above.

Please note that in the logging of this well Schlumberger have used a cable with incorrectly spaced depth markers. The error was not discovered until after the logging of this well and Flounder-5 was completed. The depths used in this report have been corrected for this error by the addition of 2.5 feet/1,000 feet.

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APPENDIX 1

SAMPLE DESCRIPTIONS

SAMPLE DESCRIPTIONS

7 January, 1975

| DEPTH | % | DESCRIPTION |
|-----------|-----|--|
| 790 - 820 | 100 | Detrital <u>Limestone</u> , shelly and bryozoan fragments, grey to white, sparry calcite few forams. <5% medium to coarse rounded clear quartz. |
| 820-850 | 100 | As above, very coarse |
| 850-880 | 100 | As above |
| 880-910 | 100 | As above |
| 910-940 | 100 | As above Rare rounded brown shale grains. |
| 940-970 | 100 | As above |
| 970-1000 | 100 | As above |
| 1000-1030 | 100 | As above |
| 1030-1060 | 100 | As above |
| 1060-1090 | 100 | Detrital <u>Limestone</u> , shelly and bryozoan, very coarse fragments, grey to white, sparry calcite fragments. Rounded to subangular. <5% coarse rounded clear quartz. |
| 1090-1120 | 100 | As above |
| 1120-1150 | 100 | As above |
| 1150-1180 | 100 | As above |
| 1180-1210 | 100 | As above |
| 1210-1240 | 100 | Detrital Limestone, shelly and bryozoan fragments. Some grey to white sparry fragments, subangular to rounded. Rare rounded coarse quartz grains. |
| 1240-1270 | 100 | As above |
| 1270-1300 | 100 | As above |
| 1300-1330 | 100 | As above |
| 1330-1360 | 100 | As above |
| 1360-1390 | 100 | As above |
| 1390-1420 | 100 | As above |
| 1420-1840 | | No return (too fine?) probably as below |
| 1840-1870 | 100 | Calcarenite medium grained, white to grey, friable, bryozoan fragments common. (5% coarse shelly material and quartz probably cavings). |
| 1870-1900 | 100 | As above |
| 1900-1930 | 100 | As above |
| 1930-1960 | 100 | As above |

| DEPTH | % | DESCRIPTION |
|-----------|----------|--|
| 1960-1990 | 100 | As above |
| 1990-2020 | 100 | As above |
| 2020-2050 | 100 | Calcarenite, white to grey, medium grained, friable, many bryozoan fragments (5% assorted shelly fragments, and rounded quartz probably cavings). |
| 2050-2080 | 100 | As above |
| 2080-2120 | 100 | As above |
| 2120-2140 | 100 | As above |
| 2140-2170 | 100 | As above |
| 2170-2200 | 100 | As above |
| 2200-2230 | 100 | As above |
| 2230-2260 | 100 | As above |
| 2260-2290 | 100 | As above |
| 2290-2320 | 100 | Calcarenite, becoming finer and better consolidated. Shelly cavings. Friable grey-white. |
| 2320-2350 | 100 | Fine grained calcarenite, as above |
| 2350-2410 | | No recovery |
| 2410-2440 | 70 30 | Calcarenite, as above Shell fragments, coarse, subrounded, some forams, quartz grains. |
| 2440-2530 | | Mudded up. Increase mud weight cleaned hole & returns consisted of large quantities of cavings. |
| 2530-2560 | 30 70 | Calcarenite, as above Fragments as above, note comment above, may be cavings. |
| 2560-2590 | 50 50 | Calcarenite, pale grey, fine to medium grained, semiconsolidat (more than before) clay choked. Detritus shell, bryozoan, foram fragments, some sparry calcite, quartz grains, very coarse, subangular, Cavings (?). |
| 2590-2620 | 60 40 | Calcarenite, as above. Detritus as above |
| 2620-2650 | 75 25 | Calcarenite, as above. Detritus as above |
| 2650-2680 | 75 25 | Calcarenite, as above Detritus as above |
| 2680-2710 | 50 50 | Calcarenite, as above Detritus as above |
| 2710-2740 | 50 50 | Calcarenite as above Detritus as above Sample puggy |
| 2740-2770 | | Insufficient sample return - would not separate from puggy matrix, probably as above. |

SAMPLE DESCRIPTIONS

3/18

7 January, 1975

| DEPTH | % | DESCRIPTION |
|-----------|-----|---|
| 2770-2800 | | As above |
| 2800-2830 | A | As above |
| 2830-2850 | | Very poor returns - mostly gumbo like material. |
| 2850-2890 | | As above |
| 2890-2920 | | As above |
| 2920-3010 | | As above, no returns in part. Very poor samples |
| 3010-3040 | | Sample condition still too poor for description, grey gummy mud. |
| 3040-3070 | | As above |
| 3070-3100 | | As above |
| 3100-3130 | | As above |
| 3100-3130 | | As above |
| 3130-3160 | | As above |
| 3160-3190 | | As above |
| 3190-3220 | | As above |
| 3220-3250 | | As above |
| 3250-3270 | | As above |
| 3280-3310 | | As above |
| 3310-3340 | | As above, mostly cavings with gummy mud (probably swollen) |
| 3340-3370 | | As above |
| 3370-3400 | | As above |
| 3400-3430 | | As above |
| 3430-3460 | | As above |
| 3460-3490 | | As above |
| 3490-3520 | 100 | Light grey to brown, calcareous <u>siltstone</u> , few forams, still with gummy mud as above. |
| 3520-3550 | 100 | Light grey-brown, calcareous muddy <u>siltstone</u> , as above |
| 3550-3580 | | As above |
| 3580-3610 | | As above |
| 3610-3640 | 100 | Light brown-grey, calcareous <u>siltstone</u> , firm high clay content, few forams. |
| 3640-3670 | 100 | As above |
| 3670-3700 | 100 | <u>Siltstone</u> , as above |

| DEPTH | % | DESCRIPTION |
|-----------|-----|---|
| 3700-3730 | 100 | As above |
| 3730-3760 | 100 | As above |
| 3760-3790 | 100 | As above |
| 4790-3820 | 100 | As above |
| 3820-3850 | 100 | As above |
| 3850-3880 | 100 | As above |
| 3880-3910 | 100 | Light grey-brown calcareous <u>siltstone</u> firm, few forams, high clay content, varies to fine <u>sandstone</u> . |
| 3910-3940 | 100 | As above |
| 40-3970 | 100 | As above |
| 3970-4000 | 100 | As above |
| 4000-4020 | 100 | As above |
| 4020-4040 | 100 | As above |
| 4040-4060 | 100 | As above |
| 4060-4080 | 100 | As above |
| 4080-4100 | 100 | As above |
| 4100-4120 | 100 | As above |
| 4120-4140 | 100 | As above |
| 4140-4160 | 100 | Light grey-brown, calcareous <u>siltstone</u> , glauconitic, few forams, firm, varies to fine <u>sandstone</u> . |
| 4160-4180 | 100 | As above, glauconite, finely divided, some disseminated pyrite. |
| 4180-4200 | 100 | As above |
| 4200-4220 | 100 | As above |
| 4220-4240 | 100 | As above |
| 4240-4260 | 100 | As above |
| 4260-4280 | 100 | As above |
| 4280-4300 | 100 | As above |
| 4300-4320 | 100 | As above |
| 4320-4340 | 100 | As above |
| 4340-4360 | 100 | As above |
| 4360-4380 | 100 | As above |
| 4380-4400 | 100 | As above |

| DEPTH | % | DESCRIPTION |
|-----------|-----|--|
| 4400-4420 | 100 | Grey to brown <u>siltstone</u> , slightly glauconitic, firm. |
| 4420-4440 | 100 | As above |
| 4440-4460 | 100 | As above |
| 4460-4480 | 100 | As above |
| 4480-4500 | | As above with occasionally more clayey portions. |
| 4500-4560 | | As above |
| 4560-4640 | | As above, with minor amounts of very clayey pale grey <u>siltstone</u> |
| 4640-4660 | | As above, mostly cavings, milling on junk |
| 4660-4720 | 100 | As above, Siltstone, very rare arenaceous marls. |
| 4720-4760 | | As above |
| 4760-4780 | | As above |
| 4780-4820 | | As above |
| 4820-4860 | | As above |

SAMPLE DESCRIPTIONS

| DEPTH | % | DESCRIPTION |
|------------------|---------------|---|
| 4860-4880 | 100 | <u>Siltstone</u> , medium grey, very calcareous, firm, unbedded Trace <u>fossil fragments</u> |
| 4880-4900 | 100 | <u>Siltstone</u> , medium grey, very calcareous, firm Trace <u>fossil fragments</u> |
| 4900-4920 | 100 | <u>Siltstone</u> , as above Trace <u>fossil fragments</u> |
| 4940-4960 | 100 | <u>Siltstone</u> , as above Trace <u>fossil fragments</u> |
| 4960-4980 | 100 | <u>Siltstone</u> , as above Trace <u>Marl</u> , light grey, very calcareous, soft Trace <u>fossil fragments</u> |
| 4980-5000 | 100 | <u>Siltstone</u> , light to medium grey as above, some glauconite Trace <u>fossil fragments</u> Trace <u>Pyrite</u> |
| 5000-5020 | 90 10 | <u>Siltstone</u> , as above <u>Coal</u> , black, dull, earthy, soft Trace <u>fossil fragments</u> , bryzoa Trace <u>Marl</u> , light grey, very calcareous, soft |
| POH 5020-5080 | 80 20 | <u>Siltstone</u> , as above <u>Marl</u> , as above Trace <u>Coal</u> Trace <u>fossil fragments</u> |
| 5080-5100 | 50 50 | <u>Siltstone</u> , as above <u>Marl</u> , light grey, very calcareous, soft, some glauconite Trace <u>Coal</u> Trace <u>fossil fragments</u> |
| 5100-5120 | 15 80 5 | <u>Sandstone</u> , white- light grey, very fine grained glauconitic, very calcareous, firm <u>Siltstone</u> , medium grey, very calcareous, firm, unbedded <u>Marl</u> , light grey, soft, very calcareous Trace <u>Coal</u> , as above Trace <u>fossil fragments</u> , as above |
| 5120-5140 | 20 80 | <u>Sandstone</u> , as above poorly sorted <u>Siltstone</u> , as above Trace <u>Sandstone</u> , fine-medium grained, very glauconitic, calcareous, light grey-green. Trace <u>Marl</u> Trace <u>fossil fragments</u> |
| 5140-5160 | 30 70 | <u>Sandstone</u> , light grey, very fine grained as above <u>Siltstone</u> , as above Trace <u>Sandstone</u> , glauconitic, as above Trace <u>fossil fragments</u> Trace <u>Coal</u> |
| 5160-5180 | 50 50 | <u>Sandstone</u> , very fine grained, poorly sorted, glauconitic, calcareous white-light grey <u>Siltstone</u> , medium grey as above Trace <u>fossil fragments</u> |

SAMPLE DESCRIPTIONS

| DEPTH | % | DESCRIPTION |
|-----------|---------|---|
| 5180-5200 | 50 | <u>Sandstone</u> , as above |
| | 50 | <u>Siltstone</u> , as above Trace <u>Sandstone</u> , fine-medium grained, very glauconitic Trace <u>fossil fragments</u> Trace <u>Coal</u> |
| 5200-5220 | 50 | <u>Sandstone</u> , as above |
| | 50 | <u>Siltstone</u> , as above Trace <u>Marl</u> , light grey, very calcareous, soft Trace <u>fossil fragments</u> , related forams, votaloid bryozoa Trace <u>Sandstone</u> , fine grained, grey green, very glauconitic, calcareous |
| 5220-5240 | 50 | <u>Sandstone</u> , very fine-fine grained, white-light grey, poorly sorted, firm |
| | 50 | <u>Siltstone</u> , as above Trace <u>Marl</u> , as above Trace <u>fossil fragment</u> , as above Trace <u>Sandstone</u> , fine-medium grained, grey green, very glauconitic, calcareous, poorly sorted. |
| 5240-5260 | 40 | <u>Sandstone</u> , as above |
| | 60 | <u>Siltstone</u> , as above Trace <u>Marl</u> , as above Trace <u>fossil fragments</u> , as above, some gastropods Trace <u>Coal</u> |
| 5260-5280 | 50 | <u>Sandstone</u> , as above |
| | 50 | <u>Siltstone</u> , as above Trace <u>Marl</u> , as above Trace <u>fossil fragments</u> , as above Trace <u>Sandstone</u> , very glauconitic, grey green, medium grained Trace <u>Coal</u> |
| 5280-5300 | 50 | <u>Sandstone</u> , as above |
| | 50 | <u>Siltstone</u> , as above Trace <u>Marl</u> , as above Trace <u>Glauconitic Sandstone</u> , as above Trace <u>fossil fragments</u> , as above Trace <u>Coal</u> |
| 5300-5320 | 60 | <u>Siltstone</u> , as before, with carbonaceous specks |
| | 40 | <u>Sandstone</u> , as above, silty-very fine grained, calcareous Trace 5% coarse <u>shell fragments</u> Trace <u>Glauconitic Sandstone</u> , fine-occasionally medium grained, as above |
| 5320-5340 | 70 | <u>Siltstone</u> , as above |
| | 25 5 | <u>Sandstone</u> , as above <u>Coal</u> Trace <u>shell fragments</u> Rare <u>quartz grain</u> , coarse grained, rounded |
| 5340-5360 | 60 | <u>Siltstone</u> , as above |
| | 40 | <u>Sandstone</u> , as above Trace <u>Coal</u> |
| 5360-5380 | 70 | <u>Siltstone</u> , as above |
| | 30 | <u>Sandstone</u> , as above Trace 5% <u>Coal</u> |

SAMPLE DESCRIPTIONS

| DEPTH | % | DESCRIPTION |
|-----------|----------------|--|
| 5380-5400 | 70 30 | <u>Siltstone</u> , as above <u>Sandstone</u> , as above Trace <u>Coal</u> |
| 5400-5420 | 70 25 5 | <u>Siltstone</u> , as above <u>Sandstone</u> , as above <u>Shell fragments</u> , <u>pyrite</u> and occasional <u>quartz</u> grains, coal, as above |
| 5420-5440 | 80 20 | <u>Siltstone</u> , as above <u>Sandstone</u> , as above |
| 5440-5460 | 80 20 | <u>Siltstone</u> , as above <u>Sandstone</u> , as above |
| 5460-5480 | 70 25 5 | <u>Siltstone</u> , as above <u>Sandstone</u> , as above <u>Coal</u> , as above Trace <u>fossil fragments</u> |
| 5480-5500 | 70 30 | <u>Siltstone</u> , medium grey, calcareous, glauconitic, hard <u>Sandstone</u> , white-light grey, calcareous, very fine-fine grained, silty, carbonaceous, glauconitic, subangular |
| 5500-5520 | 60 30 10 | <u>Siltstone</u> , as above <u>Sandstone</u> , as above <u>Coal</u> , black, dull, soft, earthy |
| 5520-5540 | 70 30 | <u>Siltstone</u> , as above, some very glauconitic <u>Sandstone</u> , as above Trace <u>Coal</u> , as above Trace <u>fossil fragment</u> , bryzoa, brivalves |
| 5540-5560 | 70 30 | <u>Siltstone</u> , as above <u>Sandstone</u> , as above Trace <u>Coal</u> , as above |
| 5560-5580 | 80 20 | <u>Siltstone</u> , as above <u>Sandstone</u> , as above Trace <u>Coal</u> Trace <u>fossil fragments</u> , bivalves, benthonic foram |
| 5580-5600 | 60 40 | <u>Siltstone</u> , as above <u>Sandstone</u> , as above Trace <u>Coal</u> Trace <u>fossil fragments</u> , gastropods, bivalves |
| 5600-5620 | 60 40 | <u>Siltstone</u> , as above, some very glauconitic <u>Sandstone</u> , as above |
| 5620-5640 | 70 30 | <u>Siltstone</u> , as above <u>Sandstone</u> , as above Trace ? <u>Limestone</u> , light brown, very hard, dense calcareous, very fine grained |
| 5640-5690 | 30 70 | <u>Sandstone</u> , as above <u>Siltstone</u> , as above |

SAMPLE DESCRIPTIONS

| DEPTH | % | DESCRIPTION |
|-----------|-----|--|
| 5690-5720 | 60 | <u>Siltstone</u> , very calcareous, as above |
| | 10 | <u>Sandstone</u> , very fine grained, silty, very calcareous |
| | 30 | <u>Limestone</u> , silty, very hard as in Core #1, as above |
| 5720-5740 | 60 | <u>Siltstone</u> , as above |
| | 40 | <u>Limestone</u> , as above |
| | | Trace <u>shell fragments</u> and <u>coal</u> |
| 5740-5760 | 60 | <u>Limestone</u> , as above |
| | 40 | <u>Siltstone</u> , as above |
| 5760-5780 | 60 | <u>Siltstone</u> , as above |
| | 40 | <u>Limestone</u> , as above |
| | | Trace <u>Coal</u> and <u>shell fragments</u> |
| 5780-5800 | 60 | <u>Siltstone</u> , as above |
| | 40 | <u>Limestone</u> , as above |
| 5800-5820 | 70 | <u>Siltstone</u> , as above |
| | 30 | <u>Limestone</u> , as above |
| 5820-5840 | 70 | <u>Siltstone</u> , as above |
| | 30 | <u>Limestone</u> , as above |
| 5840-5860 | 30 | <u>Limestone</u> , as above |
| | 65 | <u>Siltstone</u> , as above |
| | 5 | <u>Coal</u> Trace <u>shell fragments</u> |
| 5860-5880 | 100 | Calcareous <u>Siltstone</u> or Silty Micritic <u>Limestone</u> |
| 5880-5900 | 100 | <u>Siltstone</u> , as above |
| 5900-5920 | 100 | <u>Siltstone</u> , as above |
| 5920-5940 | 70 | <u>Siltstone</u> , as above |
| | 30 | <u>Limestone</u> , as above |
| 5940-5960 | 70 | <u>Siltstone</u> , as above |
| | 30 | <u>Limestone</u> , as above |
| 5960-5980 | 60 | <u>Siltstone</u> , medium grey, firm |
| | 40 | <u>Limestone</u> , hard, dense, micritic, silty |
| | | Trace <u>Coal</u> , as above |
| 5980-6000 | 50 | <u>Siltstone</u> , firm, medium grey, calcareous |
| | 50 | <u>Limestone</u> , hard, dense, micritic, silty |
| 6000-6020 | 70 | <u>Limestone</u> , as above) |
| | 30 | <u>Siltstone</u> , as above) ? Base of Channel |
| 6020-6040 | 60 | <u>Limestone</u> , as above |
| | 40 | <u>Siltstone</u> , mixture of hard and soft siltstone, medium grey, calcareous, glauconitic Trace <u>Marl</u> , light grey, soft, glauconitic |

SAMPLE DESCRIPTIONS

| DEPTH | % | DESCRIPTION |
|-----------|----------------|--|
| 6040-6060 | 60 40 | <u>Siltstone</u> , mixture of hard and soft, as above <u>Limestone</u> , as above Trace <u>Marl</u> , as above Trace <u>Coal</u> , as above |
| 6060-6080 | 60 40 | <u>Siltstone</u> , as above <u>Limestone</u> , as above Trace 5% <u>Marl</u> , as above |
| 6080-6100 | 55 30 15 | <u>Siltstone</u> , becoming mainly soft siltstone, medium grey, calcareous glauconitic <u>Limestone</u> , as above <u>Marl</u> , soft, light grey, calcareous, glauconitic |
| 6100-6120 | 70 30 | <u>Limestone</u> , as above <u>Siltstone</u> , as above, firm Trace <u>Marl</u> |
| 6120-6140 | 60 40 | <u>Siltstone</u> , as above <u>Limestone</u> , as above |
| 6140-6160 | 40 40 20 | <u>Marl</u> , as above <u>Siltstone</u> , as above <u>Limestone</u> , as above |
| 6160-6180 | 70 20 10 | <u>Marl</u> , as above <u>Siltstone</u> , as above, firm and soft siltstone <u>Limestone</u> , as above |
| 6180-6200 | 90 10 | <u>Marl</u> , as above <u>Siltstone</u> , as above Trace <u>Sandstone</u> , medium grained very glauconitic, calcareous Trace <u>Limestone</u> , as above |
| 6200-6220 | 10 90 | <u>Siltstone</u> , mainly soft <u>Marl</u> , as above |
| 6220-6240 | 100 | <u>Marl</u> , as above Trace <u>Siltstone</u> , as above |
| 6240-6260 | 90 10 | <u>Marl</u> , as above <u>Siltstone</u> , as above |
| 6260-6280 | 80 20 | <u>Marl</u> , as above <u>Siltstone</u> , soft to firm, calcareous, glauconitic |
| 6280-6300 | 70 30 | <u>Marl</u> , as above <u>Siltstone</u> , as above |
| 6300-6320 | 60 40 | <u>Marl</u> , as above <u>Siltstone</u> , as above Trace <u>glauconitic Sandstone</u> |
| 6320-6340 | 70 30 | <u>Marl</u> , as above <u>Siltstone</u> , as above |
| 6340-6360 | 80 10 10 | <u>Marl</u> , as above <u>Siltstone</u> , as above <u>Shale-Mudstone</u> , subfissile, soft-firm, medium grey, very calcareous slightly silty Trace <u>Coal</u> |

SAMPLE DESCRIPTIONS

| DEPTH | % | DESCRIPTION |
|-----------|----------------------|---|
| 6360-6380 | 70 10 10 10 | <u>Marl</u> , as above <u>Siltstone</u> , as above <u>Shale</u> , as above <u>Coal</u> |
| 6380-6400 | 100 | <u>Shale</u> , medium grey, firm, very calcareous, micromicaceous, subfissile, slightly pyritic, slightly carbonaceous, Trace <u>glauconite</u> , <u>microfossils</u> Trace <u>Coal</u> Trace <u>Foram</u> - round <u>Miliolina</u> ? <u>Glomospira</u> |
| 6400-6420 | 100 | <u>Shale</u> , as above |
| 6420-6440 | 100 | <u>Shale</u> , as above |
| 6440-6460 | 100 | <u>Shale</u> , as above |
| 6460-6480 | 100 | <u>Shale</u> , as above |
| 6480-6500 | 100 | <u>Shale</u> , as above <u>Foram</u> - rotalid |
| 6500-6520 | 100 | <u>Shale</u> , as above |
| 6520-6540 | 100 | <u>Shale</u> , as above <u>Foram</u> , rotalid-benthonic |
| 6540-6560 | 100 | <u>Shale</u> , as above |
| 6560-6580 | 100 | <u>Shale</u> , as above |
| 6580-6600 | 100 | <u>Shale</u> , as above Numerous small calcareous <u>benthonic forams</u> |
| 6600-6620 | 100 | <u>Shale</u> , as above Trace <u>forams</u> , numerous small benthonic forams calcareous |
| 6620-6640 | 100 | <u>Shale</u> , as above Trace <u>Forams</u> , as above |
| 6640-6660 | 90 10 | <u>Shale</u> , as above <u>Siltstone</u> , as above Trace <u>Forams</u> , as above |
| 6660-6680 | 100 | <u>Shale</u> , as above Trace <u>Forams</u> , as above |
| 6680-6700 | 100 | <u>Shale</u> , as above |
| 6700-6720 | 80 20 | <u>Shale</u> , as above <u>Siltstone</u> , as above, firm |
| 6720-6740 | 80 10 10 | <u>Shale</u> , as above <u>Siltstone</u> , as above <u>Sandstone</u> , fine grained, light grey, silty, firm, calcareous |

SAMPLE DESCRIPTIONS

| DEPTH | % | DESCRIPTION |
|-----------|----------------------|---|
| 6740-6760 | 80 10 10 | <u>Shale</u> , as above <u>Siltstone</u> , as above <u>Sandstone</u> , as above |
| 6760-6780 | 60 15 15 10 | <u>Shale</u> , as above <u>Siltstone</u> , as above <u>Coal</u> , black, firm, silty <u>Sandstone</u> , as above |
| 6780-6800 | 80 10 10 | <u>Shale</u> , as above <u>Siltstone</u> , as above <u>Marl</u> , as above Trace <u>Sandstone</u> , as above Trace <u>Coal</u> , as above |
| 6800-6820 | 80 10 10 | <u>Shale</u> , medium grey, subfissile, calcareous, silty, glauconitic, pyritic, carbonaceous, fossiliferous <u>Siltstone</u> , light to medium grey, calcareous, glauconitic <u>Forams</u> , small calcareous benthonic forams some planktonic-like forams, <u>Miliolina</u> |
| 6820-6840 | 90 10 | <u>Shale</u> , as above <u>Siltstone</u> , as above Trace <u>Forams</u> , as above |
| 6840-6860 | 90 10 | <u>Shale</u> , as above, foram rich <u>Siltstone</u> , as above Trace <u>Forams</u> , as above |
| 6860-6880 | 90 10 | <u>Shale</u> , as above <u>Siltstone</u> , as above Trace <u>Forams</u> , <u>Nodosoria</u> , as above |
| 6880-6900 | 100 | <u>Shale</u> , as above Trace <u>Sandstone</u> , fine grained, poorly sorted, slightly glauconitic, calcareous Trace <u>Pyrite</u> Trace <u>Forams</u> , as above |
| 6900-6920 | 100 | <u>Shale</u> , as above Trace <u>Sandstone</u> , as above Trace <u>Forams</u> , as above |
| 6920-6940 | 100 | <u>Shale</u> , as above Trace <u>Sandstone</u> , as above, glauconitic Trace <u>Forams</u> , as above |
| 6940-6960 | 100 | <u>Shale</u> , as above Trace <u>Sandstone</u> , as above Trace <u>Forams</u> , as above with <u>Ammodiscus</u> |
| 6960-6980 | 100 | <u>Shale</u> , medium dark grey, very carbonaceous, foram rich, glauconitic slightly pyritic, subfissile, firm Trace <u>Sandstone</u> , fine grained, light grey, quartz, calcareous Trace <u>Forams</u> , calcareous benthonic? <u>Cibicides</u> |
| 6980-7000 | 100 | <u>Shale</u> , as above Trace <u>Forams</u> , as above, abundant |

SAMPLE DESCRIPTIONS

| DEPTH | % | DESCRIPTION |
|-----------|---------------|--|
| 7000-7020 | 100 | <u>Shale</u> , as above <u>Trace forams</u> - abundant |
| 7020-7040 | 100 | <u>Shale</u> , as above <u>Trace Forams</u> , as above <u>Trace Sandstone</u> , as above |
| 7040-7060 | 100 | <u>Shale</u> , as above, micaceous <u>Trace Forams</u> , as above |
| 7060-7080 | 100 | <u>Shale</u> , as above <u>Trace Pyrite</u> <u>Trace Sandstone</u> , as above <u>Trace Forams</u> , some nodosarids, ? <u>Margulina</u> |
| 7080-7100 | 100 | <u>Shale</u> , as above <u>Trace Sandstone</u> <u>Trace Forams</u> , nodosarids, small calcareous benthonics |
| 7100-7120 | 100 | <u>Shale</u> , as above |
| 7120-7140 | 100 | <u>Shale</u> , as above |
| 7140-7160 | 100 | <u>Shale</u> , as above, some green grey |
| 7160-7180 | 100 | <u>Shale</u> , as above <u>Trace Forams</u> - <u>Milolina</u> , nodosarids, rotalids |
| 7180-7200 | 100 | <u>Shale</u> , as above |
| 7200-7210 | 100 | <u>Shale</u> , as above |
| 7210-7220 | 100 | <u>Shale</u> , as above |
| 7220-7230 | 90 10 | <u>Shale</u> , as above <u>Siltstone</u> , light grey, very calcareous |
| 7230-7240 | 90 10 | <u>Shale</u> , as above <u>Siltstone</u> , as above Abundant loose <u>forams</u> (5%) |
| 7240-7250 | 90 10 | <u>Shale</u> , as above <u>Siltstone</u> , as above |
| 7250-7260 | 85 10 5 | <u>Shale</u> , as above <u>Siltstone</u> , as above <u>Loose forams</u> |
| 7260-7270 | 85 10 5 | <u>Shale</u> , as above <u>Siltstone</u> , as above <u>Forams</u> |
| 7270-7280 | 100 | <u>Shale</u> , as above |
| 7280-7290 | 95 5 | <u>Shale</u> , as above <u>Siltstone</u> , as above |
| 7290-7300 | 100 | <u>Shale</u> , as above <u>Loose Forams</u> |

SAMPLE DESCRIPTIONS

| DEPTH | % | DESCRIPTION |
|----------------|-------|--|
| 7300-7310 | 100 | <u>Shale</u> , as above |
| 7310-7320 | 80 | <u>Shale</u> , as above |
| | 20 | <u>Siltstone</u> , as above |
| 7320-7330 | 80 | <u>Shale</u> , as above |
| | 20 | <u>Siltstone</u> , as above |
| 7330-7340 | 80 | <u>Shale</u> |
| | 15 | <u>Siltstone</u> |
| | 5 | Loose <u>forams</u> |
| 7340-7350 | 75 | <u>Shale</u> , as above |
| | 25 | <u>Siltstone</u> , as above |
| 7350-7360 | 80 | <u>Shale</u> |
| | 20 | <u>Siltstone</u> |
| 7367' CIRC | 75 | <u>Shale</u> |
| | 15 | <u>Siltstone</u> |
| | 10 | Loose <u>forams</u> |
| 7367' NB (XBA) | | |
| 7367-7370 | 100 | <u>Shale</u> , very silty, calcareous, light grey to medium grey, firm, subfissile, trace <u>fossils</u> , tending to calcareous siltstone, trace <u>coal</u> (?), black, granular in part |
| 7370-7380 | 100 | <u>Silty Shale</u> , very silty, pyritic Trace <u>Coal</u> , conchoidal fracture in part Trace <u>Siltstone</u> , quartzose, light brown grey, calcareous |
| 7380-7390 | 100 | <u>Silty Shale</u> , light grey to medium grey, pyritic, calcareous, Trace <u>Coal</u> , as above Trace <u>Siltstone</u> , as above, foraminifera present |
| 7390-7400 | 100 | <u>Silty shale</u> , very silty, very light grey to medium grey, calcareous Trace <u>Coal</u> , as above Trace <u>Siltstone</u> , as above |
| 7400-7410 | 100 | <u>Silty Shale</u> , as above, foraminifera present, slightly pyritic Trace <u>Coal</u> Trace <u>Siltstone</u> , as above |
| 7410-7420 | 80-90 | <u>Silty Shale</u> , as above, trace calcareous <u>fossils</u> |
| | 10-20 | <u>Coal</u> |
| 7420-7430 | 60 | <u>Silty Shale</u> , as above |
| | 20 | <u>Siltstone</u> , as above, single subangular, broken quartz grain |
| | 20 | <u>Coal</u> |
| 7430-7440 | 60 | <u>Silty Shale</u> , as above |
| | 20-30 | <u>Siltstone</u> , as above, rare quartz grain |
| | 10-20 | <u>Coal</u> |
| 7440-7450 | 80 | <u>Silty Shale</u> , as above, rare quartz grain |
| | 10 | <u>Siltstone</u> , as above, rare calcareous fossil |
| | 10 | <u>Coal</u> , as above |
| 7450-7460 | 50 | <u>Silty Shale</u> , as above |
| | 40 | <u>Siltstone</u> , as above, trace <u>pyrite</u> , foraminifera present |
| | 10 | <u>Coal</u> |

SAMPLE DESCRIPTIONS

15/18

| DEPTH | % | DESCRIPTION |
|------------|----------------------|---|
| 7460-7470 | 70 20-30 10-20 | <u>Silty Shale</u> , as above <u>Siltstone</u> , as above <u>Coal</u> |
| 7470-7480 | 60 30 10 | <u>Silty Shale</u> , as above <u>Siltstone</u> , as above <u>Coal</u> |
| 7480-7490 | 60 30 10 | <u>Silty Shale</u> , light to medium grey, sub-fissile, calcareous, firm, foraminifera present <u>Siltstone</u> , light to very light grey, non-fissile, quartzose, calcareous, rare quartz fragments, subangular <u>Coal</u> , conchoidal fracture in part, lignitic in part |
| 7490-7500 | 60 30-40 5-10 | <u>Silty Shale</u> , as above <u>Siltstone</u> , as above <u>Coal</u> |
| 7500-7510 | 60 30-40 0-10 | <u>Silty Shale</u> , as above <u>Siltstone</u> , as above, rare sub-rounded quartz grain, slightly pyritic <u>Coal</u> |
| 7510-7520 | 60 40 | <u>silty Shale</u> , as above <u>Siltstone</u> , as above <u>Trace coal</u> |
| 7520-7530 | 80 20 | <u>Silty Shale</u> , as above <u>Siltstone</u> , as above <u>Trace Sandstone</u> , light grey, quartzose, glauconitic, pyritic, very fine grained <u>Trace Coal</u> |
| 7530-7540 | 60 40 | <u>Silty Shale</u> , as above <u>Siltstone</u> , as above <u>Trace Sandstone</u> , as above |
| 7540-7550 | 50 50 | <u>Silty Shale</u> , as above <u>Siltstone</u> , as above, rare quartz grain <u>Trace Sandstone</u> , as above |
| 7550-7560 | 100 | <u>Silty Shale</u> , tending to <u>siltstone</u> , light to medium grey, sub-fissile in part, trace <u>pyrite</u> <u>Trace Sandstone</u> , as above |
| 7560-7570 | 100 | <u>Silty Shale</u> tending to <u>Siltstone</u> , as above, foraminifera present, glauconitic, rare quartz grain <u>Trace Sandstone</u> , as above |
| 7570-7580 | 100 | <u>Silty Shale</u> , tending to <u>siltstone</u> , as above, foraminifera present, glauconitic, rare quartz grain <u>Trace sandstone</u> , as above |
| 7580-7590 | 100 | <u>Silty Shale</u> , tending to <u>siltstone</u> , as above, glauconitic in part |
| 7600-depth | corr. No | Sample |

SAMPLE DESCRIPTIONS

16/18

| DEPTH | % | DESCRIPTION |
|-----------------------|---------------|--|
| 7600-7610 | 100 | <u>Silty Shale</u> tending to <u>siltstone</u> , very pyritic in part, rare rounded quartz grain, light brown colour Trace glauconitic <u>siltstone</u> tending very fine grained <u>sandstone</u> |
| 7620-7630 | 100 | <u>Silty Shale</u> , tending to <u>siltstone</u> , as above, 10-20 large (approximately 1mm) quartz grains, some with pyrite, white to clear subangular to subrounded Trace <u>Sandstone</u> , very fine grained, glauconitic |
| Drilling | Break Started | 7630' |
| 7630-7640 | 70 | <u>Sand</u> , coarse to very coarse grained (maximum dimension 2mm), frosted to clear, mostly subrounded to well rounded some grains broken, slightly pyritic, grains sub-spherical to elongated |
| | 30 | <u>Shale to siltstone</u> , as above |
| 7640-7650 | 80 | <u>Sand</u> , as above |
| | 20 | <u>Shale to siltstone</u> , as above |
| 7650-7660 | 90 | <u>Sand</u> , as above |
| | 10 | <u>Shale to siltstone</u> , as above Trace glauconitic <u>siltstone</u> |
| 7660-7670 | 80 | <u>Sand</u> , as above, some granule size grains (i.e., 2-4mm) |
| | 20 | <u>Shale to siltstone</u> , as above |
| 7670-7680 | 80 | <u>Sand</u> , as above, trace pink quartz grains |
| | 20 | <u>Shale to siltstone</u> , as above, pyritic |
| 7680-7690 | 90 | <u>Sand</u> , as above, trace <u>glauconite</u> |
| | 10 | <u>Shale to siltstone</u> , as above, trace <u>glauconite</u> |
| 7690-7700 | 90 | <u>Sand</u> , as above |
| | 10 | <u>Shale to Siltstone</u> , as above |
| Change to | 20' samples | |
| 7700-7720 | 90-100 | <u>Sand</u> , as above |
| | 0-10 | <u>Shale to siltstone</u> , as above |
| 7720-7740 | 100 | <u>Sand</u> , quartzose, white, frosted, medium to very coarse and granular rounded to well rounded, unconsolidated <u>No show</u> Trace silty <u>shale</u> cavings |
| 7740-7760 | 100 | <u>Sand</u> , as above Trace <u>glauconite</u> , trace silty <u>shale</u> cavings, slightly pyritic |
| 7760-7780 | 100 | <u>Sand</u> , as above Trace <u>glauconite</u> , trace silty <u>shale</u> cavings |
| NB J-22 | @ 7826 | |
| 7780-7820 (L.A.T.) | 70 | <u>Sand</u> , unconsolidated, medium to granular, quartz, clear to frosted trace <u>pyrite</u> , rare <u>glauconite</u> , subrounded to well rounded, fair to good sorting, no show |
| | 20 | <u>Silty Shale</u>) |
| | 10 | <u>Siltstone</u>) as previously, probably cavings |

SAMPLE DESCRIPTIONS

| DEPTH | % | DESCRIPTION |
|-----------|----------------|---|
| 7820-7840 | 100 | <u>Sand</u> , medium to very coarse, trace <u>pyrite</u> , <u>glauconite</u> , (possible trace <u>greensand</u>), clear, unconsolidated, <u>no show</u> |
| 7840-7900 | 100 | <u>Sand</u> , as above Trace <u>Sandstone</u> , very fine grained, glauconitic, pyritic (possible "greensand") Trace silty <u>Shale</u> , probably cavings |
| 7900-8000 | 100 | <u>Sand</u> , trace grey <u>chert</u> , quartzose, clear to white, subangular to rounded, medium to very coarse grained, loose clean, <u>no show</u> |
| 8000-8020 | 100 | <u>Sand</u> , white to clear, frosted, very coarse to medium granule size, subrounded, sub-spherical to elongate, trace <u>glauconite</u> , loose, <u>no shows</u> . Trace silty <u>Shale</u> - cavings |
| 8020-8040 | 100 | <u>Sand</u> , as above |
| 8040-8060 | 100 | <u>Sand</u> , as above |
| 8060-8080 | 90 10 | <u>Sand</u> , as above <u>silty Shale</u> Trace <u>Sandstone</u> , white to light grey, fine grained, poorly cemented, quartzose, fairly well sorted, poor porosity, <u>no show</u> |
| 8080-8100 | 90 10 | <u>Sand</u> , as above <u>Silty Shale</u> Trace <u>Sandstone</u> , as above |
| 8100-8120 | 80 10 10 | <u>Sand</u> , as above <u>Silty Shale</u> <u>Sandstone</u> , white to medium grey, fine to medium grained, poorly cemented, quartzose, fairly well sorted, poor porosity, <u>no show</u> , subangular to subrounded, moderately firm, Trace <u>Mica</u> Trace <u>Glauconite</u> |
| 8120-8140 | 80 20 | <u>Sand</u> , as above <u>Siltstone</u> , shaly, light brown grey to grey, slightly calcareous, quartzose, moderately firm. Trace <u>Sandstone</u> , as above |
| 8140-8180 | 100 | <u>Sand</u> , quartzose, medium to very coarse grained, subangular to rounded, fair sorting, loose, clean, good porosity, <u>no show</u> , occasional <u>pyrite</u> , cherty quartz Trace <u>Coal</u> , black, lignitic, slightly firm |
| 8180-8200 | 90 5 5 | <u>Sand</u> , as above <u>Silty Shale</u> <u>Coal</u> , lignitic |
| 8200-8220 | 100 | <u>Sand</u> , pyritic in part, clear to grey, slightly cherty in part, coarse to granular, rounded, well sorted, loose, clean, good porosity, <u>no show</u> |
| 8220-8240 | 100 | <u>Sand</u> , medium to very coarse, fair to good sorting, subangular to rounded, good porosity, <u>no show</u> , trace <u>pyrite</u> |
| 8240-8260 | 100 | <u>Sand</u> , medium to very coarse grained, tends to be bimodal with medium grains and very coarse to medium granule grains, fair to good sorting, subrounded to subangular, good porosity, <u>no show</u> Trace <u>Silty Shale</u> |

SAMPLE DESCRIPTIONS

| DEPTH | % | DESCRIPTION |
|-----------|----------------|---|
| 8260-8280 | 100 | <u>Sand</u> , as above Trace <u>Pyrite</u> |
| 8280-8300 | 100 | <u>Sand</u> , very pyritic, more angular, pyritic cement, silty in part, clear to grey |
| 8300-8320 | 80 20 | <u>Sand</u> , pyritic, white to grey <u>Siltstone</u> , shaly, pyritic in part, grey (slight brown-grey and green-grey in part), calcareous |
| 8320-8340 | 80 10 10 | <u>Sand</u> , slightly pyritic, as above <u>Sandstone</u> , slightly silty, fine, moderately cemented quartzose, slightly glauconitic, poor to fair porosity, no show Silty <u>Shale</u> |
| 8340-8360 | 50 50 | <u>Sand</u> , as above <u>Siltstone</u> , very sandy tending to sandstone, brown grey, slightly firm, poor to fair porosity, no shows, quartzose, very slightly calcareous, pyritic in part Trace <u>glauconite</u> |
| 8360-8386 | 60 40 | <u>Sand</u> , clear to grey quartz, medium to very coarse, subrounded to rounded, fair to good sorting, good porosity, common glauconite, trace <u>pyrite</u> , no show <u>Siltstone</u> tending to fine <u>Sandstone</u> , brown grey, slightly firm, glauconitic, slightly calcareous in part, pyritic |
| | | T.D. 8386 feet Circulate BU POOH to log. |

ESSO AUSTRALIA LIMITED

WELL COMPLETION REPORT

KINGFISH-6

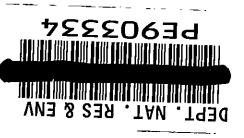
APPENDIX 2

SIDEWALL CORE DESCRIPTION

DATE 24-1-75
SVC RUN NO 1
IES RUN NO 2

| NO. | DEPTH | REC | ROCK TYPE | MODIFIERS | CAL | COLOR | INDUR DEG | GRAIN SIZE | SRTG | RND | DISS CLAY | STAIN | FLOURESCENCE | | | CUT FLUOR. | | CUT RESIDUE | | SHOW | PROB PROD | REMARKS - GAS | |
|---------------|------------------------------|--------|----------------------|--|------|------------------------|---------------------|---------------------|--------------|-----------|-------------|-------|--------------|-------|--------|------------|-----------|--------------|------|------|-----------|---------------|---|
| | | | | | | | | | | | | | % | DISTR | INTEN | COLOR | INTEN | COLOR | QUAN | | | | COLOR |
| 1a | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 1 | 8292 8312 | 3/4" | Silty Sandstone | Quartzose, tr. glauconite, mica, shale streaks | non | medium grey brown clay | sli. firm | silty to fine grain | fair | s.r. | clay matrix | no | --- | --- | --- | --- | | | | | | | Poor-fair porosity |
| 2 | 8260 8281 8137 8117 | 1" | Sandstone | Quartzose, very pyritic quartz, silt matrix | non | light-medium grey | soft-friable | medium-very coarse | poor to fair | s.r. | --- | no | --- | --- | --- | --- | | | | | | | fair to good porosity |
| 3 | 8076 | 1/2" | P.O. Silty sandstone | Quartzose, micaceous, occasional quartz | non | light grey | slightly firm | silty to fine | | | | no | --- | --- | --- | --- | | | | | | | |
| 4 | 8096 | 1/2" | SS | Quartzose glauconitic | slig | light green grey | sli. firm - friable | fine to granular | poor | s.r. to r | minor | no | tr | --- | --- | --- | slow weak | | | | | | fair-good porosity C ₁ - 50ppm |
| 5 | 7956 7976 | 3/4" | Silty sandstone | Quartzose, glauconitic, micaceous | non | gy speckled | sli. firm | fine | fair | minor | no | --- | --- | --- | --- | --- | | | | | | | C ₁ - 200ppm |
| 6 | 7882 7902 | 1" | Sandstone | Quartzose, glauconitic, micaceous, quartz silt matrix, | non | light grey | slightly firm | fine to very coarse | fair-poor | sa-r | minor | no | --- | --- | --- | --- | | | | | | | C ₁ - 200ppm |
| 7 | 7818 7838 | 1 1/2" | Sandstone | Glauconitic, pyritic | non | green grey | slightly firm | fine-very coarse | poor-fair | sa | --- | no | tr | spty | weak | yellow | weak | yellow white | | | | | fair-good porosity C ₁ - 100ppm |
| 8 | 7695 7714 | 3/4" | Sandstone | Qtz silt matrix, tr. glauconite | non | lt gy m | very friable | m-vc | fair | sa-sr | --- | no | patchy | dull | yellow | slow weak | faint | | | | | | |
| 9 | 7684 7703 | 1 1/2" | Sandstone | clean, qtzose | | lt gy | ext. friable | m-vc | fair | sr-r | --- | no | nil | --- | --- | --- | nil | --- | | | | | very good porosity C ₁ - 300ppm |
| 10 | 7675 7694 | 1-3/4" | SS | minor qtz silt ma, tr. glauconite | m | lt gy m | friable | f-vc | fair | sa-sr | minor | no | nil | --- | --- | --- | --- | | | | | | C ₁ - 200ppm |
| 11 | 7630 7649 | 3/4" | Silty SS | qtzose, tr. glauconite, tr. pyrite | non | white -lt gy | sli. firm-friable | f-vc | p-f | sa | --- | no | patchy even | mod. | yellow | weak | faint | | | | | | fair-good porosity C ₁ - 300ppm |
| PLEASE NOTE : | | | | CORRECT DEPTHS UNDERScoreD - CORRECTED FOR SCHLUMBERGER DEPTH ERRORS | | | | | | | | | | | | | | | | | | | |

FORM R 257 3/72



| NO. | DEPTH | REC | ROCK TYPE | MODIFIERS | | INDUR | GRAIN | SRTG | RND | DISS | STAIN | FLOURESCENCE | | | CUT FLUOR. | | CUT RESIDUE | | SHOW | PROB | REMARKS - GAS |
|-----|----------------------|--------|-------------|--|---------|--------------------|---------------------------|---------------|------|-----------|-------|--------------|--------|-----------------|-----------------|-----------------|-----------------|--------|------|--|---|
| | | | | 4 | 5 | | | | | | | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | |
| 13 | 7621 7640 | 3/4" | SS | Qtz, occ. c. qtz grs, pyr. tr. glauc. | v. sli. | lt. gy md. gy | sl. firm friable | v.f. | f | sr- r | no | tr | spotty | --- | --- | nil | | | | | fair porosity C ₁ - 200ppm |
| 14 | 7614 7633 | 1" | SS | qtz. silt. ma | sli. | lt. gy md. gy | v. fri- able | m-vc | f-p | sa sr | mi | no | --- | --- | --- | | | | | fair-good porosity C ₁ - 400ppm | |
| 15 | 7609 7628 | 1" | SS | silty rare c. gr. tr. pyr. tr. glauc. | non | lt.-m gy | v. fri- able | silty - f. | g | sa sr | - | no | spotty | weak | yellow | nil | | | | fair-good porosity C ₁ - 600 ppm | |
| 16 | 7607 7626 | 3/4" | SS | qtzose, tr. pyr. tr. glauc. | non | lt. gy | v. fri- able | f-vc | g | sa | - | | spotty | weak | yellow | nil | | | | fair-good porosity C ₁ - 300ppm | |
| 17 | 7600 7619 | 3/4" | SS | silty rare c. gr, tr. pyr. tr. glauc. | non | lt. gy | sli. firm- friable | silt- m | f-p | sa | minor | tr | | | | | | | | C ₁ -200ppm | |
| 18 | 7597 7616 | 1" | SS | qtz silt ma, tr. glauc, tr. pyr. tr. mica | non | lt. gy | friable - sli. firm | f-vc | p-f | sa- sr | minor | no | tr | spotty | weak | dull yellow | v.sli | | | | fair porosity C ₁ - 100ppm |
| 19 | 7595 7614 | 1" | SS | clean qtz silt matrix, qtzose | non | lt. gy v. lt gy | friable | f-vc | p-f | sr- r | --- | no | - | patchy -even | mod | yellow white | slow weak | yellow | | | good porosity C ₁ - 50ppm |
| 20 | 7590 7609 | 1 1/4" | SS | qtz. silt. ma, tr. py, tr. glaucanite | non | lt.-m gy | sli. firm | m-vc | p-f | sa- sr | minor | no | patchy | mod | yellow white | faint | yellow | | | | fair porosity C ₁ - 100 ppm |
| 21 | 7588 7607 7603 | 3/4" | SLTST | rare m. qtz. grn, heavily glauc. pyr. | highly | grn-lt gy | sli. firm | silt | v.p. | sa | mod | | patchy | mod | yellow white | fair | yellow white | | | | |
| 22 | 7584 | 2" | SLTY SH | s. fissile, silty | mod | ol. gy | sli. firm | silt- clay | p | | | | | | | | | | | | |
| 23 | 7580 7599 | 1 1/2" | SLTY SH | s. fissile, silty | mod | ol. gy | sli. firm | silt- clay | p | | | | | | | | | | | | |
| 24 | 7576 7595 | 1-3/4" | SH | s. fissile, tends to claystone | mod | ol. gy dk. gy | sli. firm | clay | g | | | | | | | | | | | | |
| 25 | 7570 7589 | 2" | SILTY SH | s. fissile, tr. pyr. tends to clyst. | sli | ol. gy dk. gy | mod. firm | silt- clay | f-p | | | | | | | | | | | | |
| 26 | 7562 7581 | 1 1/4" | SLTY SH | s. fissile tends to claystone | mod | md-dk gy | mod. firm | silt- clay | f-p | | | | | | | | | | | | |

FORM R 257 3/72

PLEASE NOTE :- CORRECT DEPTHS UNDERSCORED - CORRECTED FOR SHCLUMBERGER DEPTH ERRORS

| NO. | DEPTH | REC | ROCK TYPE | MODIFIERS | CAL | COLOR | INDUR DEG | GRAIN SIZE | SRTG | RND | DISS CLAY | STAIN | FLOURESCENCE | | | CUT FLUOR. | | CUT RESIDUE | | SHOW | PROB PROD | REMARKS - GAS |
|------|---------------------|--------|---------------|---|-----------------|---------------------|-------------------------|-----------------------|------|-------------|-----------|-------|--------------|----------|----------|------------|----------|-------------|---------|------|-----------|------------------------------|
| | | | | | | | | | | | | | % RK | DISTR 14 | INTEN 15 | COLOR 16 | INTEN 17 | COLOR 18 | QUAN 19 | | | |
| 1a | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | | | | | | | | 23 |
| 27 | 7552 <u>7571</u> | 1 1/2" | SLTY CLYST | non-fissile minor silt | mod | md.gy | mod. firm | silt- clay | f | | | | | | | | | | | | | |
| 28 | 7538 <u>7557</u> | 1 1/2" | SLTY CLYST | non-fissile rare dk ang- ular v.c. qtz. grs. | hi- ghl y | md.gy | mod. firm | clay- silt v.c. | v.p. | | | | | | | | | | | | | |
| 29 | 7500 <u>7519</u> | 1 1/2" | CLYST | non-fissile rare sl.silty forams | hi- hly | m-dk gy | mod firm | clay- silt | f | | | | | | | | | | | | | |
| 30 | 7400 <u>7419</u> | 1 1/2" | SH | sub-fissile sl.silty,tends to clyst. | hi- hly | m.gy lt.ol gy | sli. firm | clay silt | f | | | | | | | | | | | | | |
| Gun2 | | | | | | | | | | | | | | | | | | | | | | |
| 31 | 7593 <u>7612</u> | 1/2" | SS | heavily pyr, tr.glauc. | mod | white m.gy | fria- ble-sh firm | m-vc | p | a- sa | minor | no | --- | --- | --- | --- | --- | --- | --- | --- | --- | good porosity C1 - 100ppm |
| 32 | 7300 <u>7318</u> | 3/4" | SH | sub-fissile, tends to clyst | hi- gh ly | lt.ol gy | sli. firm | clay | g | | | | | | | | | | | | | |
| 33 | 7200 <u>7218</u> | 1" | CLYST | non-fissile rare fgr. qtz.grain | hi- hly | lt.ol gy | mod. firm | clay& f.gr. | f | w.r. qtz | | | | | | | | | | | | |
| 34 | 7100 <u>7118</u> | 1-3/4" | CLYST | sub-fissile tends to sh- rare fgr qtz | hi- hly | lt.ol gy | mod. firm | clay& f.gr. | f | sr qtz | | | | | | | | | | | | |
| 35 | 7000 <u>7018</u> | 1 1/2" | CLYST | non-fissile, tr. mi. | " | lt.ol gy | soft | clay | g | | | | | | | | | | | | | |
| 36 | 6900 <u>6917</u> | 1/2" | CLYST | non-fissile tr.mi, tr. slt, forams present | " | lt.ol gy | mod. firm | clay- silt | f | | | | | | | | | | | | | |
| 37 | 6750 <u>6767</u> | 1 1/2" | CLYST | sub-fissile tends to sh. trace mica | " | lt.ol gy | sli. firm | clay | g | | | | | | | | | | | | | |
| 38 | 6595 <u>6611</u> | 1 1/2" | CLYST | non-fissile sli.silty | " | lt.ol gy | sli. firm | clay- silt | f | | | | | | | | | | | | | |

FORM R 257 3/72

PLEASE NOTE :- CORRECT DEPTHS UNDERScoreD - CORRECTED FOR SCHLUMBERGER DEPTH ERRORS

ESSO AUSTRALIA LTD.
 SIDEWALL CORE DESCRIPTIONS

| NO. | DEPTH | REC | ROCK TYPE | MODIFIERS | CAL | COLOR | INDUR DEG | GRAIN SIZE | SRTG | RND | DISS CLAY | STAIN | FLOURESCENCE | | | CUT FLUOR. | | CUT RESIDUE | | SHOW | PROB PROD | REMARKS - GAS |
|-----|-------------|--------|-------------|---|-----|-----------------|----------------|-------------|------|-----|-----------|-------|--------------|----------|----------|------------|----------|-------------|---------|------|-----------|---------------|
| | | | | | | | | | | | | | % RK | DISTR 14 | INTEN 15 | COLOR 16 | INTEN 17 | COLOR 18 | QUAN 19 | | | |
| 39 | 6575 | 1 1/2" | CLYST | non-fissile, high sli-silty | | lt.ol gy | mod. firm | clay silt | f | | | | | | | | | | | | | |
| | <u>6591</u> | | | | | | | | | | | | | | | | | | | | | |
| 40 | 6500 | 1 3/4" | SH | sub-fissile, tends to dylt | | lt.ol gy-ngy | soft | clay | g | | | | | | | | | | | | | |
| | <u>6516</u> | | | | | | | | | | | | | | | | | | | | | |
| 41 | 6400 | 1 1/2" | CLYST | sub-fissile | | lt.ol gy | mod. firm | clay | g | | | | | | | | | | | | | |
| | <u>6416</u> | | | | | | | | | | | | | | | | | | | | | |
| 42 | 6300 | 1 1/4" | CLYST | non-fissile tr. mi, sli, silty | | lt.ol gy-ol. gy | mod. firm | clay silt | g | | | | | | | | | | | | | |
| | <u>6316</u> | | | | | | | | | | | | | | | | | | | | | |
| 43 | 6200 | 1 1/4" | CLYST | non-fissile tr. mica | | lt.ol gy-ol. gy | mod. firm | clay | g | | | | | | | | | | | | | |
| | <u>6216</u> | | | | | | | | | | | | | | | | | | | | | |
| 44 | 6100 | 1 1/4" | CLYST | non-fissile, sub-fissile | | lt.ol. gy | sli. firm-soft | clay | g | | | | | | | | | | | | | |
| | <u>6115</u> | | | | | | | | | | | | | | | | | | | | | |
| 45 | 5990 | 1 1/4" | CLYST | non-fissile | | " " | mod. firm | clay | g | | | | | | | | | | | | | |
| | <u>6005</u> | | | | | | | | | | | | | | | | | | | | | |
| 46 | 5975 | 1/2" | CLYST | non-fissile silty, tr. glauconite | | " " | mod. firm | clay silt | f | | | | | | | | | | | | | |
| | <u>5990</u> | | | | | | | | | | | | | | | | | | | | | |
| 47 | 5900 | 1 1/4" | CLYST | non-fissile | | " " | sli. firm | clay | g | | | | | | | | | | | | | |
| | <u>5915</u> | | | | | | | | | | | | | | | | | | | | | |
| 48 | 5750 | 3/4" | CLYST | non-fissile tr. glauc. tr. silt | | " " | sli. firm | silt & clay | f | | | | | | | | | | | | | |
| | <u>5764</u> | | | | | | | | | | | | | | | | | | | | | |
| 49 | 5500 | 3/4" | CLYST | sub-fissile tr. glauc. | | " " | mod. firm | clay | g | | | | | | | | | | | | | |
| | <u>5514</u> | | | | | | | | | | | | | | | | | | | | | |
| 50 | 5300 | 1/2" | CLYST | sub-fissile tends to sh tr. glauc. tr. silt | | " " | sli. firm | clay silt | f | | | | | | | | | | | | | |
| | <u>5313</u> | | | | | | | | | | | | | | | | | | | | | |
| 51 | 5000 | 3/4" | SILTY CLYST | sub-fissile v. silty, tr. glauconite | | " " | sli. firm-soft | silt-clay | f-p | | | | | | | | | | | | | |
| | <u>5012</u> | | | | | | | | | | | | | | | | | | | | | |

FORM R 257 3.72

PLEASE NOTE :- CORRECT DEPTHS UNDERSCORED - CORRECTED FOR SCHLUMBERGER DEPTH ERRORS

ESSO AUSTRALIA LTD.
 SIDEWALL CORE DESCRIPTIONS

| NO. 1 a | DEPTH 1 | REC 2 | ROCK TYPE 3 | MODIFIERS 4 | CAL 5 | COLOR 6 | INDUR DEG 7 | GRAIN SIZE 8 | SRTG 9 | RND 10 | DISS CLAY 11 | STAIN 12 | FLOURESCENCE | | | CUT FLUOR. | | CUT RESIDUE | | SHOW 21 | PROB PROD 22 | REMARKS - GAS 23 |
|------------|------------|----------|-------------------|--|----------|------------------------|-------------------|--------------------------|-----------|-----------|--------------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|------------|------------|--------------------|---------------------|
| | | | | | | | | | | | | | % RK | DISTR 14 | INTEN 15 | COLOR 16 | INTEN 17 | COLOR 18 | QUAN 19 | | | |
| 52 | 4825 | 1" | SLTST | v. clayey, tr. glauc. | highly | v.lt. gy | sli. firm | slt- clay | f-p | | mod | | | | | | | | | | | |
| | 4837 | | | | | | | | | | | | | | | | | | | | | |
| 53 | 4560 | 1/4" | SLTST | clayey, tr. glauc. tr. | " | lt.gy- lt.ol. gy | sli. firm | slt- clay | f | | mod | | | | | | | | | | | |
| | 4571 | | | | | | | | | | | | | | | | | | | | | |
| 54 | 4350 | 1/2" | SLTST | clayey, tr. glauc. tr. | " | lt.gy | sli. firm | slt- clay | f | | mod | | | | | | | | | | | |
| | 4361 | | | | | | | | | | | | | | | | | | | | | |
| 55 | 3995 | 1" | CLYST | slty, non- fissile | " | lt.ol. gy-lt. gy | sli. firm | clay- slt | f | | | | | | | | | | | | | |
| | 4005 | | | | | | | | | | | | | | | | | | | | | |
| 56 | 3600 | 3/4" | SLTST | clayey, tr. glauc. tr. | " | " | mod. firm | slt- clay | f | | mod | | | | | | | | | | | |
| | 3609 | | | | | | | | | | | | | | | | | | | | | |
| 57 | 3487 | 3/4" | SLTST | clayey, tr. glauc. tr. | " | " | sli. firm | slt- clay | | | mod | | | | | | | | | | | |
| | 3496 | | | | | | | | | | | | | | | | | | | | | |
| 58 | 3250 | 1 1/4" | SLTST | clayey, tr. glauc. rare fgr qtz. | " | " | sli. firm | slt- clay & f.sand | p | sa qtz | mod | | | | | | | | | | | |
| | 3258 | | | | | | | | | | | | | | | | | | | | | |
| 59 | 3050 | 1" | SLTST | clayey, tr. glauc. tr. | " | " | mod. firm | slt- clay | f | | mod | | | | | | | | | | | |
| | 3058 | | | | | | | | | | | | | | | | | | | | | |
| 60 | 2850 | 1/2" | SLTST | tr. glauc. | " | " | mod. firm | slt | g | | minor | | | | | | | | | | | |
| | 2857 | | | | | | | | | | | | | | | | | | | | | |

FORM R 257 3/72

PLEASE NOTE : CORRECT DEPTHS UNDERSCORED - CORRECTED FOR SCHLUMBERGER DEPTH ERRORS

APPENDIX 3
Micropalaeontology

Foraminiferal Biostratigraphy
and Environmental Analysis
of Kingfish #6

by David Taylor

Paleontology Report 1975/2

February 3, 1975.

By : David Taylor

February 3, 1975.

Forty samples of side wall cores were examined from the Kingfish #6 sequence between 7607' and 2857'*. The "greensand" half of SWC 7607' (this SWC was split as it contained 2 distinct lithologies with "greensand" and calc. shale) was barren of foraminifera, as was the sample at 4571'. The calc. shale at 7607' and the SWC at 7603' contained indeterminate faunas, apparently due to solution, either syngenetic or diagenetic. Two sheets of distribution charts accompany this report; one showing planktonic distribution and biostratigraphy (Sheet 1), whilst the other shows distribution of key benthonic forms and other features which delineate the environmental sequence.

OLIGOCENE to EARLY MIOCENE - 7599' to 6516'

The oldest identifiable fauna was at 7599' containing Globigerina angioporoides which suggests Zone J, but the nondescript associated fauna does not permit further subdivision. The two samples below this, at 7603' and 7607' have poorly preserved planktonic faunas, commented on above. The fauna at 7595' is distinctively Zone J-1, as it includes Globorotaloides testarugosa. The highest J-1 fauna at 7589' is a poor one, while the base of I-1 at 7581' is very clear though more representative of the top of I-1 because of the presence of Globoquadrina dehiscens (S.L.). There may well be a missing time interval between 7589' and 7581'; certainly Zone I-2 is missing as in most deepwater Gippsland sequences. If this break in deposition is real, then it occurred in all the Kingfish sequences I have examined. The sample at 7571' contains an excellent specimen suite of the complex, Globoquadrina dehiscens (S.L.), possibly including G. praedeheiscens.

The top of I-1 and the base of H-2 (at 7419'), are distinctive and characteristic but the higher H-2 faunas are typically poor. The appearance of Globigerina connecta, Globorotalia zealandica, G. praescitula, and G. kugléri dramatically mark the base of H-1 with an increase in specific diversity. Zones G and F are present although there may be some abbreviation. It should be noted that Zones G and F are probably or possibly absent in Kingfish #1, #2, and #5, whilst they are present in Kingfish #3, #A-1, #B-1, and in this sequence.

(Note : * All depths used in this report are corrected sidewall core depths).

LATE MIOCENE (= mid Miocene) - 6416' to 2857'

The base of the late Miocene is taken at the base of Zone E with the appearance of Praeorbulina curva. Both samples at 6416' and 6316' contain this species. However, Orbulina suturalis was not recognised in the sequence although it was probably present in the unsampled interval between 6316' and the appearance of O. universa at 6216'. The interval between 6416' and 6316' obviously represents the basal part of Zone E; i.e., E-2. Zone D-2 has a high specific diversity which decreases at the base of D-1 at 5514'. A problem has arisen regarding the definition of the D-1/C boundary which could be placed at 3258' due to the sudden and abundant appearance of Globorotalia conomiozea. If this is the correct position, then it is lower than that picked in any of the other Kingfish sequences. This whole question must be left in abeyance until the thoroughly sampled Flounder #5 sequence has been analysed. For the present the side wall core at 3496' is definitely D-1, whilst the sample at 2857' is definitely C.

ENVIRONMENTAL SEQUENCE

The environmental trend in Kingfish #6 is broadly similar to that in the other Kingfish sequences I have examined. This trend is from the abrupt transition from a "greensand" to a deepwater carbonate sequence, with up-sequence progradation of the continental slope with heavy scouring and slumping during Zone D times, and finally the ultimate establishment of the continental shelf and stable conditions at the top of D-1 and/or C. The other feature which is obvious in all of the Kingfish sequences is that the earliest calcareous faunas (i.e., Zone J) are heavily corroded and most of the specimens may well have been dissolved as the faunas are dominated by arenaceous foraminifera. This dissolution could be due to the fact that deposition took place at or below the C.C.D. (= Calcium Carbonate Dissolution depth). However, what calcareous faunas there are, are usually encrusted and distorted which implies diagenesis and compaction, thus the significance of these deplete faunas is impossible to interpret for it is difficult to distinguish between the syngenetic and diagenetic cause and effect.

However, there are subtle environmental differences between Kingfish #6 and other Kingfish wells. This applies especially to those wells which have a gap in the sequence with Zones G, F, and E missing; such as Kingfish #1, #2, and #5. For example, in Kingfish #5, there is an outstanding discordance between the benthonic faunas of the continental rise and those of the outer shelf or upper slope, without any evidence of the intervening normal slope environment. Also in Kingfish #5, a continental rise environment is apparent up to the base of Zone G, whilst in Kingfish #6 the continental rise deposits are confined to Zones J and I. This may imply that the progradation of the slope was faster in Kingfish #6 than in #5, and that the slope may have developed as a series of protruding fans. Also the biostratigraphic and environmental discordance in Kingfish #5 could have been due to the fact that the slope was too steep and thus unstable to support a benthonic community or retain any planktonic foraminifera which fell onto it. On the other hand, the discordance could have been due to subsequent slumping and/or canyon cutting. If either surmise is correct, then the continental slope in Kingfish #6 was more gentle and stable, for it certainly sustained a diverse benthonic fauna and retained planktonic assemblages.

Benthonic diversity decreases in Zone D, with size and shape sorting of both planktonic and benthonic specimens. These features are also associated with orange stained, reworked planktonic foraminifera and quartz. The interval between 6216' and 4005' in Kingfish #6 has all the indications of slope instability with slumping of sediment from the shelf edge and strong down slope current action. Whether this interval can be described as "canyon fill" is disputable.

Core-1 at 5657' to 5690' within this interval is to be examined in greater detail from an environmental aspect and will be presented as a separate report. This work will not have any effect on the age dating of the section.

BASIN GIPPSLANDBY DAVID TAYLORWELL NAME KINGFISH #6DATE Feb. 28, 1975 ELEV. K.B. +30'Foram Zonules

| | | Highest Data | Quality | 2 Way Time | Lowest Data | Quality | 2 Way Time | |
|----------------|----------------|--------------|---------|------------|-------------|---------|------------|--|
| MIOCENE | A | Alternate | | | | | | |
| | B | Alternate | | | | | | |
| | C | 2857 | 1 | | 2857 | 1 | | |
| | D ₁ | Alternate | *3058 | 2 | | 5514 | 0 | |
| | | Alternate | 3609 | 0 | | | | |
| | D ₂ | Alternate | 5764 | 0 | | 6115 | 0 | |
| | | Alternate | **6215 | 0 | | 6215 | 0 | |
| | E | Alternate | | | | | | |
| | F | Alternate | 6316 | 0 | | 6416 | 0 | |
| | | Alternate | | | | | | |
| | G | Alternate | 6516 | 1 | | 6611 | 1 | |
| Alternate | | | | | | | | |
| H ₁ | Alternate | 6767 | 2 | | 7118 | 0 | | |
| | Alternate | 6917 | 1 | | | | | |
| H ₂ | Alternate | 7218 | 2 | | 7419 | 1 | | |
| | Alternate | | | | | | | |
| OLIGOCENE | I ₁ | 7519 | 0 | | 7571 | 0 | | |
| | I ₂ | Alternate | | | | | | |
| | | Alternate | | | | | | |
| | J ₁ | Alternate | 7581 | 1 | | 7603 | 2 | |
| Alternate | | 7589 | 0 | | 7595 | 0 | | |
| EOC. | K | Alternate | | | | | | |
| | | Pre K | | | | | | |

*The boundary between zones C & D is in process of revision due to Flounder 5. **Zone E is represented by only one sample and this belongs to E₂ the lower subdivision. SWC at 7603' is indeterminate while SWC at 7599' contains only J fauna, but both put in J₁ on spore-pollen.

COMMENTS: SWC at 7607' contained two lithologies; a green-sand with NNF and a calcareous shale with indeterminate fauna.

Note: If highest or lowest data is a 3 or 4, then an alternate 0, 1, 2 highest or lowest data will be filled in if control is available.

If a sample cannot be interpreted to be one zonule, as apart from the other, no entry should be made.

- 0 SWC or Core - Complete assemblage (very high confidence).
- 1 SWC or Core - Almost complete assemblage (high confidence).
- 2 SWC or Core - Close to zonule change but able to interpret (low confidence).
- 3 Cuttings - Complete assemblage (low confidence).
- 4 Cuttings - Incomplete assemblage, next to uninterpretable or SWC with depth suspicion (very low confidence).

Date Revised _____

By _____

APPENDIX 4

PALYNOLOGY REPORT ON KINGFISH-6,

GIPPSLAND BASIN.

by

Alan Partridge

Palaeontology Report 1975/3

March 17, 1975.

SUMMARY

Unfortunately only one sample from the Latrobe Group gave a datable assemblage. This was from SWC-1 at 8312 feet * and it is referable to the Lower *L. balmei* Spore-Pollen Zone and the *Eisenackia crassitabulata* Dinoflagellate Zone. The next datable sample above this was from above the top of Latrobe unconformity at 7603' and referable to the *P. tuberculatus* Zone. This leaves an undatable interval of 700 feet.

The 'coal' fraction, which was separated from the clastic fraction by flotation in carbon tetrachloride from cuttings at 7410-20 feet and 8160-80 feet contained only North American type Tertiary spore - pollen and is thus interpreted as exclusively drilling mud contamination. This interpretation probably applies to all the 'coal' identified in the cutting descriptions.

ANALYSES

1. Lower *L. balmei* Zone

SWC-1 at 8312 feet contains the only fossils extracted from the Latrobe Group in this well and these can be referred to the Lower *L. balmei* Zone and given a confidence rating of one. The sample also contained dinoflagellates referable to the *E. crassitabulata* Dinoflagellate Zone or marine incursion. The assemblage from this sample is listed below:

Spore-Pollen

Australopollis obscurus
Dilwynites australis
Ericipites scabratus
Gleicheniidites circinidites
Ilexpollenites anguloclavidites
Integricorpus antipodus
Lygistepollenites balmei
Lygistepollenites florinii
Nothofagidites brachyspinulosus
Periporopollenites polyoratus
Phyllocladidites mawsonii
Stereisporites antiquisporites
Ttricolpites gillii

Dinoflagellates

Deflandrea dilwynensis
Eisenackia crassitabulata
Epicephalopyxis identata
Spiniferites ramosus

2. Barren Interval

The eleven sidewall cores processed in the interval 7603 to 8312 feet were either barren or contained only black angular pieces of solid organic matter which is known as mineral charcoal. The only exception was SWC 21 at 7607 feet. This SWC at or very close to the actual unconformity contained two lithologies. It was half "greesand" and half calcareous shale and on preparation yielded fairly large fragments of translucent amorphous kerogen but no fossils.

* All depths used in this report are corrected sidewall core depths.

3. P. tuberculatus Zone

Three sidewall cores processed from the Lakes Entrance Formation were referable to this zone. They contained good assemblages including the important indicator species *Cyatheacidites annulatus*. The species identified in these samples are listed below.

| <u>Spores & Pollen</u> | <u>SWC 24</u> <u>7595'</u> | <u>SWC 23</u> <u>7599'</u> | <u>SWC 22</u> <u>7603'</u> |
|--|-------------------------------|-------------------------------|-------------------------------|
| <i>Araucariacites australis</i> | x | x | x |
| <i>Cyatheacidites annulatus</i> | x | x | x |
| <i>Dilwynites granulatus</i> | x | | |
| <i>Foreotriletes lucunosus</i> | | | x |
| <i>Foreotriletes palaequetrus</i> | x | | |
| <i>Haloragacidites harrisii</i> | x | x | x |
| <i>Herkosporites elliottii</i> | | | x |
| <i>Ischyosporites irregularis</i> | x | x | x |
| <i>Lygistepollenites florinii</i> | x | x | x |
| <i>Myrtaceidites parvus</i> | | | x |
| <i>Nothofagidites brachyspinulosus</i> | x | | |
| <i>Nothofagidites emarcidus</i> | x | x | x |
| <i>Nothofagidites falcatus</i> | | | x |
| ' <i>Phyllocladus</i> ' <i>palaeogenicus</i> | x | | |
| <i>Phyllocladidites mawsonii</i> | x | | x |
| <i>Stereisporites antiquisporites</i> | x | | |
| <u>Dinoflagellates</u> | | | |
| <i>Hystriochokolpoma rigaudae</i> | | x | x |
| <i>Lingulodinium machaerophorum</i> | x | x | |
| <i>Nematosphaeropsis sp.1</i> | x | x | x |
| <i>Operculodinium centrocarpum</i> | x | x | x |
| <i>Operculodinium spp.</i> | x | x | x |
| <i>Polysphaeridium fibrosum</i> | x | | |
| <i>Spiniferites spp.</i> | x | x | x |

LIST OF SAMPLES PROCESSED

| <u>Sample</u> | <u>Depth in feet</u> | | <u>Zone</u> |
|---------------|----------------------|----------------------|-----------------------------|
| | <u>Corrected</u> | <u>(Uncorrected)</u> | |
| SWC 24 | 7595 | (7576) | <u>P. tuberculatus</u> Zone |
| SWC 23 | 7599 | (7580) | " |
| SWC 22 | 7603 | (7584) | " |
| SWC 21 | 7607 | (7588) | Unidentifiable Kerogen |
| SWC 20 | 7609 | (7590) | Barren |
| SWC 17 | 7619 | (7600) | Barren |
| SWC 14 | 7633 | (7614) | Barren |
| SWC 13 | 7640 | (7621) | Barren |
| SWC 8 | 7838 | (7818) | Barren |
| SWC 7 | 7902 | (7882) | Barren |
| SWC 6 | 7976 | (7956) | Mineral charcoal only |
| SWC 5 | 8017 | (7997) | Barren |
| SWC 4 | 8096 | (8076) | Mineral charcoal only |
| SWC 2 | 8281 | (8260) | Mineral charcoal only |
| SWC 1 | 8312 | (8292) | Lower <u>L. balmei</u> Zone |

"Coal" fraction extracted from cuttings

at: 7410-20 feet Mud. Contamination
 8160-80 feet " "

BASIN GIPPSLAND

DATE _____

WELL NAME KINGFISH-6

ELEVATION K.B. + 30 feet

| AGE | PALYNOLOGIC ZONES | HIGHEST DATA | | | | | LOWEST DATA | | | | |
|------------------|-------------------------|-----------------|------|-----------------|------|------------|-----------------|------|-----------------|------|------------|
| | | Preferred Depth | Rtg. | Alternate Depth | Rtg. | 2 way time | Preferred Depth | Rtg. | Alternate Depth | Rtg. | 2 way time |
| EOCENE | <u>P. tuberculatus</u> | 7595 | 0 | | | | 7603 | 0 | | | |
| | <u>U. N. asperus</u> | | | | | | | | | | |
| | <u>M. N. asperus</u> | | | | | | | | | | |
| | <u>L. N. asperus</u> | | | | | | | | | | |
| | <u>P. asperopolus</u> | | | | | | | | | | |
| | <u>U. M. diversus</u> | | | | | | | | | | |
| | <u>M. M. diversus</u> | | | | | | | | | | |
| | <u>L. M. diversus</u> | | | | | | | | | | |
| PALEOCENE | <u>U. L. balmei</u> | | | | | | | | | | |
| | <u>L. L. balmei</u> | 8312 | 0 | | | | 8312 | 0 | | | |
| | <u>T. longus</u> | | | | | | | | | | |
| LATE CRETACEOUS | <u>T. lilliei</u> | | | | | | | | | | |
| | <u>N. senectus</u> | | | | | | | | | | |
| | <u>C. trip./T.pach.</u> | | | | | | | | | | |
| | <u>C. distocarin.</u> | | | | | | | | | | |
| | <u>T. pannosus</u> | | | | | | | | | | |
| EARLY CRETACEOUS | | | | | | | | | | | |
| PRE-CRETACEOUS | | | | | | | | | | | |

COMMENTS: Eisenackia crassitabulata Dinoflagellate Zone is present at 8312'; rating (1)

All depths are corrected SWC depths.

- 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.

NOTE: If a sample cannot be assigned to one particular zone, then no entry should be made. Also, if an entry is given a 3 or 4 confidence rating, an alternate depth with a better confidence rating should be entered, if possible.

DATA RECORDED BY: Alan Partridge DATE 28. Feb. 1975.

DATA REVISED BY: _____ DATE _____

ESSO AUSTRALIA LIMITED
WELL COMPLETION REPORT

KINGFISH-6

APPENDIX 5

F.I.T. RESULTS

F.I.T. RECORD

WELL: KINGFISH-6

GEOLOGIST: BRUCE McKAY

DATE: 24th January, 1975

F.I.T. No. 1 @ 8130' FEET (IES LOG DEPTH)

MUD DATA:

Rmf 0.46 @ 75 °F, Equiv. Cl⁻ 7879 ppm (Resistivity)

Cl⁻ _____ ppm, NO₃⁻ _____ ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION.

RECOVERY (MAIN CHAMBER):

_____ cft. GAS
 _____ cc OIL
10500 cc WATER
 _____ cc MUD
 _____ cc SAND

PROPERTIES:

GAS C₁ C₂ C₃ C₄ C₅ H₂S
 _____ M _____ M _____ M _____

OIL _____ °API @ _____ °F

Pour Point _____ °F

G.O.R. _____

WATER Rmf 0.26 @ 73 °F, Equiv. Cl⁻ 13940 ppm (Resistivity)

Cl⁻ 16500 ppm, NO₃⁻ 44 ppm (Titration)

NaCl equiv. 23000 ppm.

PRESSURES:

| | Schlumberger | Amerada Agnew | Amerada | Hewlett Packard * |
|----------------------|--------------|------------------|------------|-------------------|
| Sampling (psi) | <u>3500</u> | <u>3502</u> | <u>NOT</u> | <u>3496</u> |
| Final Shut-in (psi) | <u>3500</u> | <u>3502</u> | <u>RUN</u> | <u>3501</u> |
| Hydrostatic (psi) | <u>4200</u> | <u>4227</u> | | <u>4221</u> |
| Sampling Time (Min.) | <u>4½</u> | | | <u>FINAL 4213</u> |
| Shut-in Time (Min) | <u>9</u> | | | |

*Corrected for Atmospheric pressure.

TEMPERATURES: (max. recorded) _____ °F, _____ °F

MAX. DEPTH TOOL REACHED: _____ Ft.

TIME SINCE CIRCULATION: _____ Hrs.

REMARKS: Surface Pressure 0. Tool open 13½ mins.

Hewlett Packard recorder very successful. Recovered water clean but strong sulphurous odour. 1 glass bottle sample retained.

F.I.T. RECORD

WELL: KINGFISH-6
 GEOLOGIST: BRUCE MCKAY
 DATE: January 24-25, 1975

F.I.T. No. 2 @ 7707' FEET (IES LOG DEPTH)

MUD DATA:

Rmf 0.46 @ 75 °F, Equiv. Cl⁻ 7879 ppm (Resistivity)
 Cl⁻ _____ ppm NO₃⁻ _____ ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION.

RECOVERY (MAIN CHAMBER):

_____ cft. GAS
 _____ cc OIL
10500 cc WATER
 _____ cc MUD
 _____ cc SAND

PROPERTIES:

GAS C₁ C₂ C₃ C₄ C₅ H₂S
 _____ M _____ M _____ M _____ _____

OIL _____ °API @ _____ °F
 Pour Point _____ °F
 G.O.R. _____

WATER Rmf 0.3 @ 79 °F, Equiv. Cl⁻ 11500 ppm (Resistivity)
 Cl⁻ 12700 ppm NO₃⁻ 48 ppm (Titration)
 NaCl equiv. 19000 ppm

PRESSURES:

| | Schlumberger | Amerada | Agnew Amerada | Hewlett Packard * |
|----------------------|--------------|-------------|------------------|-------------------|
| Sampling (psi) | <u>3350</u> | <u>3309</u> | <u>Not</u> | <u>Not</u> |
| Final Shut-in (psi) | <u>3350</u> | <u>3314</u> | <u>Run</u> | <u>Working</u> |
| Hydrostatic (psi) | <u>4000</u> | <u>3998</u> | | |
| Sampling Time (Min.) | <u>6</u> | | | |
| Shut-in Time (Min) | <u>12</u> | | | |

*Corrected for Atmospheric pressure.

TEMPERATURES: (max. recorded) _____ °F, _____ °F

MAX. DEPTH TOOL REACHED: _____ Ft.

TIME SINCE CIRCULATION: _____ Hrs.

REMARKS: Hewlett-Packard did not operate correctly. Successful water test.

1 glass bottle sample. Surface pressure 0. Tool open 18 mins.

F.I.T. RECORD

WELL: KINGFISH-6

GEOLOGIST: BRUCE McKAY

DATE: JANUARY 25, 1975

F.I.T. No. 3 @ 7613 FEET (IES LOG DEPTH)

MUD DATA:

Rmf 0.46 @ 75 °F, Equiv. Cl⁻ 7750 ppm (Resistivity)

Cl⁻ _____ ppm NO₃⁻ _____ ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION.

RECOVERY (MAIN CHAMBER):

| | |
|--------------|----------|
| _____ | cft. GAS |
| _____ | cc OIL |
| <u>10500</u> | cc WATER |
| _____ | cc MUD |
| _____ | cc SAND |

PROPERTIES:

| | | | | | | |
|-----|----------------|----------------|----------------|----------------|----------------|------------------|
| GAS | C ₁ | C ₂ | C ₃ | C ₄ | C ₅ | H ₂ S |
| | _____ | _____ | _____ | _____ | _____ | _____ |
| | M | M | M | | | |

OIL _____ °API @ _____ °F

Pour Point _____ °F

G.O.R. _____

WATER Rmf 0.5 @ 74 °F, Equiv. Cl⁻ 7150 ppm (Resistivity)

Cl⁻ 6300 ppm NO₃⁻ 112 ppm (Titration)

NaCl. 11800 ppm

PRESSURES:

| | | | | |
|----------------------|--------------|-------------|------------------|-------------------|
| | Schlumberger | Amerada | Agnew Amerada | Hewlett Packard * |
| Sampling (psi) | <u>3250</u> | <u>3267</u> | <u>NOT</u> | <u>3266</u> |
| Final Shut-in (psi) | <u>3250</u> | <u>3272</u> | <u>RUN</u> | <u>3272</u> |
| Hydrostatic (psi) | <u>3950</u> | <u>3945</u> | <u>-</u> | <u>3964</u> |
| Sampling Time (Min.) | <u>6</u> | | | |
| Shut-in Time (Min) | <u>2</u> | | | |

*Corrected for Atmospheric pressure.

TEMPERATURES: (max. recorded) _____ °F , _____ °F

MAX. DEPTH TOOL REACHED: _____ Ft.

TIME SINCE CIRCULATION: _____ Hrs.

REMARKS: Tool open 8 min. No trace of fluorescence. Lost seal opening segregator, but main chamber full showed buildup on Hewlett-Packard after 5-6 min. and reached SIP-probably not completely stabilized but within 5 psi 1 glass bottle sample

AGNEW-GO-WESTERN PTY. LTD.
P.O. Box 380
Sale, Victoria, 3850

ESSO AUSTRALIA LIMITED

KINGFISH

KINGFISH NO. 6
January 24, 1975

Purpose: Obtain subsurface pressures with Amerada gauge run in tandem with Schlumberger Formation Interval Tester.

Tools used: Amerada 0-10,500 psi Element Serial No. 9403 12 hour clock
Run in conjunction with Quartz Pressure Gauge.

F. I. T. No. 1 @ 8,130'

| <u>HOURS</u> | <u>PSIG</u> | <u>REMARKS</u> |
|--------------|-------------|---------------------|
| 1821 | | Run in hole |
| -- | 4227.3 | Initial hydrostatic |
| 1957 | -- | Set Packer |
| 1958 | -- | Open Tool |
| 1959 | 3501.7 | |
| 2000 | 3501.7 | |
| 2001 | 3501.7 | |
| 2002 | 3501.7 | |
| 2003 | 3501.7 | |
| 2004 | 3501.7 | |
| 2005 | 3501.7 | |
| 2006 | 3501.7 | |
| 2007 | 3501.7 | |
| 2008 | 3501.7 | |
| 2009 | 3501.7 | |
| 2010 | 3501.7 | |
| 2011 | 3501.7 | |
| 2012 | 3501.7 | Seal tool |
| 2013 | 3501.7 | |
| 2014 | 3501.7 | |
| 2015 | 3501.7 | |
| 2016 | 3501.7 | Unseat packer |
| -- | 4227.3 | Final hydrostatic |

ESSO AUSTRALIA LIMITED

WELL COMPLETION REPORT

KINGFISH-6

APPENDIX 6

WELL LOG ANALYSIS REPORT

AGNEW-GO-WESTERN PTY. LTD.
P.O. Box 380
Sale, Victoria 3850

ESSO AUSTRALIA LIMITED

KINGFISH

KINGFISH NO. 6
January 24-25, 1975

Purpose: Obtain subsurface pressures with Amerada gauge run in tandem with Schlumberger Formation Interval Tester.

Tools used: Amerada 0-10,500 psi Element Serial No. 9403 12 hour clock
Run in conjunction with Quartz Pressure Gauge.

F. I. T. No. 2 @ 7,707'

| <u>HOURS</u> | <u>PSIG</u> | <u>REMARKS</u> |
|--------------|-------------|---------------------|
| 2255 | | Run in hole |
| -- | 4008.0 | Initial hydrostatic |
| 0001 | -- | Set packer |
| 0002 | 3308.7 | Open tool |
| 0004 | 3308.7 | |
| 0006 | 3308.7 | |
| 0008 | 3308.7 | |
| 0010 | 3313.9 | |
| 0012 | 3313.9 | |
| 0014 | 3313.9 | |
| 0016 | 3313.9 | |
| 0018 | 3313.9 | |
| 0020 | 3313.9 | Seal tool |
| 0021 | 3313.9 | |
| 0022 | -- | Unseat packer |
| 0023 | -- | |
| -- | 3997.5 | Final hydrostatic |

F. I. T. No. 3 @ 7,613'

| <u>HOURS</u> | <u>PSIG</u> | <u>REMARKS</u> |
|--------------|-------------|-----------------------|
| 0200 | | Run in hole |
| -- | 3934.9 | Initial hydrostatic |
| 0249 | -- | Set packer |
| 0251 | -- | Open tool |
| 0252 | 3267.0 | |
| 0253 | 3267.0 | |
| 0254 | 3267.0 | |
| 0255 | 3267.0 | |
| 0256 | 3272.2 | |
| 0257 | 3272.2 | |
| 0258 | 3272.2 | |
| 0259 | 3272.2 | Seal tool - lost seal |
| -- | 3945.3 | Final hydrostatic |

WELL LOG ANALYSIS REPORT

OPERATOR ESSO AUSTRALIA LTD.

WELL KINGFISH-6

DATE March 27, 1975

STATE VICTORIA

ELEV. KB +28'

| DEPTH INTERVAL | POROSITY ESTIMATE | WATER SAT. ESTIMATE | REMARKS |
|----------------|-------------------|---------------------|---------|
| 7611-12 (1') | 16.3 | 100% | |
| 7612-16 (4') | 19.1 - 19.9 | | |
| 7616-18 (2') | 20.2 - 21.1 | | |
| 7618-21 (3') | 16.5 - 18.5 | | |
| 7621-24 (3') | 19.1 - 21.6 | | |
| 7624-26 (2') | 23.1 - 23.5 | | |
| 7626-37 (11') | 17.5 - 19.9 | | |
| 7637-41 (4') | 16.1 - 17.1 | | |
| 7641-43 (2') | 13.5 - 14.3 | | |
| 7644-45 (1') | 15.1 | | |
| (7646-54 (8') | 19.0 - 22.8 | | |
| ● 7655-57 (2') | 18.1 - 18.3 | | |
| 7657-59 (2') | 16.5 - 17.4 | | |
| 7659-66 (7') | 18.0 - 19.7 | | |
| 7666-74 (8') | 21.0 - 23.2 | | |
| 7674-78 (4') | 24.2 - 26.8 | | |
| 7679-88 (9') | 19.9 - 24.1 | | |
| 7689-92 (3') | 23.3 - 23.9 | | |
| 7692-96 (4') | 24.6 - 27.0 | | |
| 7696-7700 (4') | 20.7 - 22.7 | | |
| 7700-02 (2') | 23.8 - 24.0 | | |
| 7703-06 (3') | 20.7 - 22.9 | | |
| 7706-15 (9') | 23.0 - 24.6 | | |
| 7715-17 (2') | 21.7 - 22.2 | | |
| 7717-24 (7') | 23.3 - 26.6 | | |
| (7724-27 (3') | 21.5 - 22.5 | | |
| 7727-29 (2') | 23.5 - 23.6 | | |
| ● 7729-38 (9') | 19.6 - 21.7 | | |
| 7738-69 (31') | 20.1 - 24.6 | | |
| 7769-78 (9') | 23.8 - 26.9 | | |

TESTS:

| | | |
|--------|--------|-----------------|
| FIT #1 | 8130) | |
| FIT #2 | 7707) | Recovered water |
| FIT #3 | 7613) | |

FORMATION:

LATROBE GROUP

LOGS:

ISF-SLK
GR-FDC-CNL
HDT
CST
FIT

COMMENTS:

Porosities in this analysis are computer derived from the FDC log. Water saturations are taken at 100%: the actual computer derived values on a foot-by-foot basis range from 79-138%.

NB. Corrected Depths used.

Bruce McKay

BY BRUCE MCKAY

WELL KINGFISH-6

| DEPTH INTERVAL | POROSITY | | WATER SAT. ESTIMATE | REMARKS |
|-----------------------------|----------|--------|------------------------|---------|
| | ESTIMATE | | | |
| 7778-81 (3') | 19.9 | - 21.6 | 100% | |
| 7781-90 (9') | 22.0 | - 27.4 | | |
| 7790-93 (3') | 20.7 | - 21.7 | | |
| 7793-98 (5') | 17.2 | - 19.4 | | |
| 7798-7802 ¹ (4') | 21.0 | - 25.3 | | |
| 7802-19 (17') | 16.2 | - 18.9 | | |
| 7819-25 (6') | 18.9 | - 19.8 | | |
| 7825-28 (3') | 20.9 | - 22.4 | | |
| 7828-31 (3') | 18.4 | - 18.8 | | |
| 7831-34 (3') | 20.8 | - 24.2 | | |
| 7837-38 (1') | 13.8 | | | |
| 7840-44 (4') | 14.5 | - 16.5 | | |
| 7848-57 (9') | 16.9 | - 19.9 | | |
| 7857-58 (1') | 12.7 | | | |
| 7859-60 (1') | 14.2 | | | |
| 7860-72 (12') | 16.9 | - 20.1 | | |
| 7872-76 (4') | 16.0 | - 16.9 | | |
| 7876-79 (3') | 17.8 | - 18.8 | | |
| 7879-84 (5') | 20.3 | - 21.9 | | |
| 7884-87 (3') | 16.9 | - 19.3 | | |
| 7887-96 (9') | 21.5 | - 24.4 | | |
| 7896-7900 (4') | 15.0 | - 18.1 | | |
| 7905-06 (1') | 16.5 | | | |
| 7906-08 (2') | 21.1 | - 21.3 | | |
| 7908-11 (3') | 17.4 | - 18.4 | | |
| 7911-15 (4') | 20.4 | - 22.2 | | |
| 7915-22 (7') | 17.3 | - 19.6 | | |
| 7922-25 (3') | 20.5 | - 21.4 | | |
| 7925-29 (4') | 17.0 | - 19.4 | | |
| 7929-32 (3') | 22.5 | - 23.1 | | |
| 7932-41 (9') | 17.5 | - 19.8 | | |
| 7941-45 (4') | 20.3 | - 20.9 | | |
| 7945-48 (3') | 17.1 | - 18.8 | | |
| 7948-52 (4') | 15.2 | - 16.5 | | |
| 7952-56 (4') | 16.8 | - 17.4 | | |
| 7956-63 (7') | 13.6 | - 15.9 | | |
| 7963-66 (3') | 16.2 | - 18.5 | | |
| 7966-69 (3') | 20.5 | - 20.9 | | |
| 7969-72 (3') | 23.2 | - 26.0 | | |
| 7972-73 (1') | 20.7 | | | |

ESSO AUSTRALIA LIMITED

WELL COMPLETION REPORT

KINGFISH-6

APPENDIX 7

CORE DESCRIPTION, PETROGRAPHY AND BULK DENSITY

ESSO STANDARD OIL (AUSTRALIA) LTD.

CORE DESCRIPTION

Core No. 1

WELL: KINGEISH-6

Interval Cored 5657'-5690' ft., Cut 33 ft., Recovered 33 ft., (100 %) Fm. Lakes Entrance

Bit Type C 20, Bit Size 8-15/32 in., Desc. by DGB/LGE Date 18/1/75

| Depth & Coring Rate (min./ft.) | Graphic (1" = 5') | Shows | Interval (ft.) | Descriptive Lithology |
|--------------------------------|-------------------|-------|--|---|
| 57 | ○ 2 4 6 8 | NIL | 5657-5690' | <u>SILTY MICRITIC LIMESTONE</u> |
| 60 | MM | | | Light grey-medium grey, hard to very hard, uniform lithology with numerous irregular carbonate cemented zones. These zones are the more bioturbated zones, fossiliferous (forams & bivalves) glauconitic, slightly micaceous. |
| 65 | + | | | <u>BEDDING</u> - horizontal - wavy parallel, some contorted. |
| 70 | ∩ | | | <u>STRUCTURES</u> - light grey areas tend to be highly bioturbated, darker areas are less so, load casts, flame structures with some cut and fill are present at the boundaries of the horizontal - wavy parallel bedding and the highly bioturbated areas. |
| 75 | ∩ | | | |
| 80 | ∩ | | | |
| 85 | ∩ | | | |
| 90 | ∩ | | | |
| SYMBOLS | | | REMARKS: | Samples taken for palaeontological examination: at |
| MM | SILTSTONE | | 5657', 5660', 5663', 5666', 5669', 5672', 5675', 5678' | |
| + | CALCAREOUS | | 5681', 5684', 5687', 5690' (Total 12) | |
| ∩ | GLAUCONITE | | | |
| ∩ | PELECYPODS | | | |
| ∩ | FORAMS | | | |

PETROGRAPHY AND BULK DENSITIES OF TWELVE CORE SAMPLES

1. SUMMARY

- (a) The rocks are partially recrystallized, fine-grained foraminiferal mudstones, grainstones and packstones containing minor amounts of phyllosilicates, detrital quartz and feldspar, accessory amounts of zeolite, pyrite and carbonaceous material, and trace amounts of detrital heavy mineral grains.
- (b) The general appearance of the rocks suggests that they probably formed in an "open shelf" type marine environment which was presumably reducing as the rocks also contain accessory amounts of framboidal pyrite and carbonaceous matter.
- (c) The presence of "illitic-micaceous" phyllosilicates, possible glauconite and zeolite in the rocks indicates that they have suffered diagenesis.

Within the suite studied, the degree of dolomitization appears to increase gradually with depth.

Although matrix carbonate is somewhat recrystallized in most sections, it is generally possible to work out whether the rocks were mudstones, packstones or grainstones. Salient features are precied below.

| <u>Thin Section</u> | <u>Rock Type</u> | <u>Comments</u> |
|---------------------|-------------------------|---|
| 13879-80 | mudstone | matrix is somewhat recrystallized |
| 13881-82 | grainstone | crystal regrowths obscure fossil fragments |
| 13883-84 | grainstone | minor matrix recrystallization |
| 13885-86 | packstone | minor matrix recrystallization |
| 13887-88 | packstone or grainstone | packstone suggested by minor patches of un-recrystallized micrite |
| 13889-90 | grainstone | extensively recrystallized |
| 13891-92 | packstone | much evidence of grain to grain pressure solution; contains (?) "horse-tail" stylolites |

| <u>Thin Section</u> | <u>Rock Type</u> | <u>Comments</u> |
|---------------------|------------------|---|
| 13893-94 | packstone | evidence of grain to grain pressure dissolution; broken and skeletal grains present |
| 13895-96 | grainstone | much evidence of pressure solution |
| 13897-98 | packstone | much evidence of pressure solution |
| 13899-900 | packstone | partially recrystallized |
| 13901-02 | packstone | partially recrystallized |

Note: Sections 13895-13902 are moderately dolomitized whereas the other sections are only weakly dolomitized.

The measured bulk densities of the rocks are compatible with their mineralogical compositions if they have porosities of 10-20%. Such porosities are to be expected (see references listed below).

References

- Murray, R.C. (1960). Origin of porosity in carbonate rocks. Jour. Sed. Pet., vol. 30, pp 59-84.
- Weyl, P.K. (1960). Porosity through dolomitization - conservation-of-mass requirements. Jour. Sed. Pet., vol. 30, pp 85-90.

2. PROCEDURES AND ABBREVIATIONS

- (a) Thin sections are labelled "A" and "B". Sections "A" were cut parallel to the bedding and sections "B" were cut perpendicular to it.
- (b) The predominance of calcium carbonate in the samples was confirmed by staining the sections with alizarin red-S solution.
- (c) X.R.D. data indicate that both calcite and dolomite are present in the rocks. The calcite appears to be pure (i.e. it does not contain dolomite in solid solution).
- (d) The following X.R.D. analysis symbols are applied:-

| | | |
|----|---|--------------|
| D | - | dominant |
| SD | - | sub-dominant |
| A | - | accessory |
| Tr | - | trace |

3. PETROGRAPHIC AND X.R.D. DATA

Hand Specimens:

In hand specimen all samples are light grey, fine-grained, weakly laminated limestones.

Rock Names:

All rocks are foraminiferal limestones which have undergone diagenesis.

Sample: S155; TSC13879-80

Thin Section:

An optical estimate of the constituents gives the following:-

| | <u>%</u> |
|-----------------|----------|
| Calcite | 75-80 |
| Dolomite | 5-10 |
| Phyllosilicates | 5-10 |
| Quartz | 3-5 |
| Feldspar | 2-3 |
| Zeolite | ~ 1 |
| Opauques | ~ 1 |

This is a partially recrystallized foraminiferal calcareous mudstone composed largely of calcite and dolomite associated with minor amounts of phyllosilicates, quartz and feldspar, plus traces of zeolite and opaques. Calcareous foraminiferal microfossils make up much of the section.

Calcite and lesser dolomite occur largely as anhedral 0.01-0.05 mm sized grains which make up the bodies of the 0.1-0.4 mm sized microfossils and constitute most of the matrix material between them.

Phyllosilicates, largely forming 0.1-0.3 mm sized anhedral patches and flakes, make up a small proportion of the section. Some of the patches are green to brown in colour and may possibly be glauconitic in nature. Independent X.R.D. analysis indicated the presence of minor amounts of "micaceous and/or illitic" phyllosilicates.

Quartz and lesser feldspar (mainly sodic plagioclase) are present as highly angular, evenly dispersed detrital grains which range in size from 0.01-0.1 mm.

Zeolite (identified by X.R.D. analysis as clinoptilolite) is present in accessory to trace amounts, largely forming microcrystalline 0.01-0.05 mm sized interstitial patches.

Opaques constitute about 1% of the section and occur both as minute (≤ 0.002 mm sized) evenly disseminated spherules and as dusty 0.02-0.2 mm sized patches. In detail the dusty patches represent areas which are heavily seived with extremely fine-grained pyrite and (?) carbonaceous material, whereas the spherules consist of (?) framboidal pyrite (the presence of pyrite was detected in one X.R.D. trace).

Although bedding is quite evident in hand specimen, in the sections it is rather indistinct and mainly recorded by the sub-parallel alignment of elongated microfossil fragments.

Much of the calcareous matrix "mud" has been recrystallized and although the voids in some foram casts are still open, most have been filled with calcite.

X.R.D. analysis of the rock indicated the following:-

| <u>Mineral</u> | <u>Proportion</u> |
|--------------------|-------------------|
| Calcite | D |
| Dolomite | A |
| Mica and/or illite | A |
| Quartz | Tr |
| Feldspar | Tr |
| Clinoptilolite | Tr |

No attempt was made to identify the genera (or species) of forams present; however, if they are benthonic forms an experienced micropalaeontologist may be able to estimate the conditions of deposition.

Sample: S156; TSC13881-82

Thin Section:

An optical estimate of the constituents gives the following:-

| | <u>%</u> |
|------------------------------|----------|
| Calcite plus lesser dolomite | 80-85 |
| Phyllosilicates | 5-8 |
| Quartz, lesser feldspar | 5-8 |
| Zeolite | ~ 1 |
| Opaques | ~ 1 |

Both texturally and mineralogically the sections of this sample very closely resemble those of the above described sample; however, they contain several 0.1-0.3 mm sized snail-like (?) foram shells and a few broken (?) foram shells and a few broken (?) echinoderm spines which range up to 0.5 mm in length. Core zones of the latter have been filled with calcite, whereas the solid parts appear to have been replaced by zeolite.

Sample: S157; TSC13883-84

Thin Section:

An optical estimate of the constituents gives the following:-

| | <u>%</u> |
|------------------------------|----------|
| Calcite plus lesser dolomite | ~ 80 |
| Quartz, lesser feldspar | ~ 10 |
| Phyllosilicates | 5-8 |
| Zeolite | ~ 1 |
| Opagues | ~ 1 |

Both texturally and mineralogically the sections very closely resemble those of the first described sample; however,

- (a) gently curved, elongate foraminiferal microfossils predominate;
- (b) quartz is more abundant.

Sample: S158; TSC13885-86

Thin Section:

An optical estimate of the constituents gives the following:-

| | <u>%</u> |
|-----------------------------|----------|
| Calcite plus minor dolomite | 75-80 |
| Quartz | 3-5 |
| Phyllosilicates | 5-10 |
| Zeolite | 2-3 |
| Opagues | 1-2 |

Both texturally and mineralogically these sections very closely resemble those of the first sample, although foraminiferal microfossils are less abundant.

Sample: S159; TSC13887-88

Thin Section:

An optical estimate of the constituents gives the following:-

| | <u>%</u> |
|-----------------------------|----------|
| Calcite plus minor dolomite | ~ 85 |
| Phyllosilicates | 3-5 |
| Quartz | 3-5 |
| Opagues | 1-2 |
| Zeolite | 1-2 |

Both texturally and mineralogically these sections very closely resemble those of the first described sample.

Sample: S160; TSC13889-90

Thin Section:

An optical estimate of the constituents gives the following:-

| | <u>%</u> |
|-----------------------------|----------|
| Calcite plus minor dolomite | ~ 85 |
| Quartz | 3-5 |
| Phyllosilicates | 3-5 |
| Zeolite | 1-2 |
| Opagues | 1-2 |

Both texturally and mineralogically these sections very closely resemble those of the first described sample.

Sample: S161; TSC13891-92

Thin Section:

An optical estimate of the constituents gives the following:-

| | <u>%</u> |
|-----------------------------|----------|
| Calcite plus minor dolomite | ~ 75 |
| Quartz | ~ 10 |
| Phyllosilicates | 5-10 |
| Zeolite | 2-3 |
| Opagues | 1-2 |

Both texturally and mineralogically the sections resemble those of the first described sample.

Fine bedding is clearly evident in one thin section and this is caused by subtle fluctuations in the proportions of phyllosilicates and (?) carbonaceous opaques.

Sample: S162; TSC13893-94

Thin Section:

An optical estimate of the constituents gives the following:-

| | <u>%</u> |
|-----------------------------|----------|
| Calcite plus minor dolomite | ~ 80 |
| Quartz | 5-10 |
| Phyllosilicates | 3-5 |
| Zeolite | 1-2 |
| Opagues | 2-3 |

Both texturally and mineralogically the sections resemble those of the first described sample, although fine bedding, similar to that seen in one section of Sample S162, is clearly evident.

Sample: S163; TSC13895-96

Thin Section:

An optical estimate of the constituents gives the following:-

| | <u>%</u> |
|-----------------------------|----------|
| Calcite plus minor dolomite | ~ 85 |
| Quartz | 5-10 |
| Phyllosilicates | 3-5 |
| Zeolite | 1-2 |
| Opagues | 2-3 |

Both texturally and mineralogically these sections resemble those of the first described sample; however, opaques are more abundant.

Independent X.R.D. analysis of the sample indicated the following:-

| <u>Mineral</u> | <u>Proportion</u> |
|----------------|-------------------|
| Calcite | D |
| Quartz | A |
| Mica-illite | A |
| Dolomite | A |
| Clinoptilolite | A-Tr |
| Pyrite | Tr |

Sample: S164; TSC13897-98

Thin Section:

An optical estimate of the constituents gives the following:-

| | <u>%</u> |
|-----------------------------|----------|
| Calcite plus minor dolomite | ~ 85 |
| Phyllosilicates | 3-5 |
| Quartz | 3-5 |
| Zeolite | 1-2 |
| Opagues | 1-2 |

Both texturally and mineralogically these sections closely resemble those of the first described sample; however, they are slightly coarser-grained and contain a type of 0.2-0.3 mm sized radial, segmented (?) foram which is not seen in the other sections.

Sample: S165; TSC13899-900

Thin Section:

An optical estimate of the constituents gives the following:-

| | <u>%</u> |
|-----------------------------|----------|
| Calcite plus minor dolomite | ~ 80 |
| Phyllosilicates | 5-10 |
| Quartz plus minor feldspar | 5-8 |
| Zeolite | 1-2 |
| Opagues | 1-2 |

Both texturally and mineralogically these sections closely resemble those of the first described sample, although the proportion of opaques and phyllosilicates is greater.

X.R.D. analysis indicated the following:-

| <u>Mineral</u> | <u>Proportion</u> |
|----------------|-------------------|
| Calcite | D |
| Dolomite | A-SD |
| Mica-illite | A |
| Quartz | A |
| Feldspar | Tr(?) |
| Clinoptilolite | Tr |

Sample: S166; TSC13901-02

Thin Section:

An optical estimate of the constituents gives the following:-

| | <u>%</u> |
|-----------------------------|----------|
| Calcite plus minor dolomite | ~ 85 |
| Quartz plus minor feldspar | 3-5 |
| Phyllosilicates | 5-10 |
| Zeolite | 1-2 |
| Opagues | 2-3 |

Texturally and mineralogically these sections closely resemble the previous two sections.

Footnote:

All sections contain traces of detrital epidote, rutile, sphene, tourmaline and monazite.

4. BULK DENSITY DATA

| <u>Sample No.</u> | <u>Density (gm/cm³)</u> |
|-------------------|------------------------------------|
| S155 | 2.44 ±0.01 |
| S156 | 2.51 " |
| S157 | 2.32 " |
| S158 | 2.29 " |
| S159 | 2.49 " |
| S160 | 2.42 " |
| S161 | 2.05 " |
| S162 | 2.23 " |
| S163 | 2.24 " |
| S164 | 2.11 " |
| S165 | 2.12 " |
| S166 | 2.48 " |

Mean bulk density of the suite = 2.31

5. DISCUSSION ON BULK DENSITY DATA

In the case of a non-porous rock of mean composition:-

| <u>Mineral</u> | <u>%</u> | <u>S.G. (assumed)</u> |
|-----------------|----------|-----------------------|
| Calcite | 68 | 2.7 |
| Dolomite | 10 | 2.8 |
| Phyllosilicates | 8 | 2.8 |
| Quartz | 8 | 2.7 |
| Feldspar | 3 | 2.6 |
| Zeolite | 2 | 2.2 |
| Pyrite | 1 | 4.9 |

The calculated bulk density is about 2.7 gm/cm^3 .

The mean porosity of the suite can be roughly estimated by applying the simple formula:-

$$\text{Porosity (\%)} = \frac{100 (D_1 - D_2)}{D_1 - D_p}$$

D_1 = density of solid parts of rock

D_2 = bulk density of rock

D_p = density of pores

In this case,

$$\text{Porosity (\%)} = \frac{100 (2.7 - 2.3)}{2.7 - D_p}$$

if the pores are devoid of liquid, $D_p = 0$ and porosity = 15%; however, if the pores are half filled with water, $D_p = 0.5$ and porosity = 18.2%. Such values for porosity in carbonate rocks are not unusual, but actual porosity values could be determined at Amdel if required.

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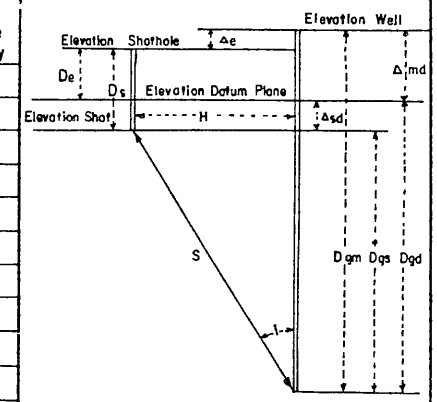
WELL COMPLETION REPORT

KINGFISH-6

APPENDIX 8

VELOCITY SURVEY REPORT

| Shothole information:- Elevation, Distance & Direction from Well | | Company | | Well | | Elevation (Derrick Floor) | Total Depth | LOCATION | | | | | | | | | | | | | | | |
|--|-----------------|---------------------------------|------|------------|------|---------------------------|-------------|-------------------|-------|---------------------------|--------|---------------|-------|------|-----|-------|-----|-------------|------|------|------|----------------------|---------------------|
| | | ESSO EXPLORATION AUSTRALIA INC. | | KINGFISH-6 | | 28' | 8386' KB | Coordinates | | Section, Township, Range | County | Area or Field | | | | | | | | | | | |
| | | | | | | | | 38° 35' 40.545'S | | Gippsland Basin, Victoria | | | | | | | | | | | | | |
| | | | | | | | | 148° 13' 59.733'E | | DATUM : M.S.L. | | | | | | | | | | | | | |
| Record Number | Shothole Number | Time of Shot | Dgm | Ds | tus | tr | T | | | Dgs | H | TAN i | Cos i | Tgs | Δsd | Δsd/V | Tgd | Tgd Average | Dgd | ΔDgd | ΔTgd | Vi Interval Velocity | Va Average Velocity |
| | | | | | | | Reading | Clarity | Grade | | | | | | | | | | | | | | |
| 20 | | 1850 | 2508 | 33 | .007 | .027 | .324 | D | G | 2447 | 133 | .0010 | .9998 | .324 | 33 | .007 | | .331 | 2480 | | | | 7492 |
| 21 | | 1852 | | | | .027 | .324 | D | G | Offset not significant | | | | | | | | | | | | | |
| 18 | | 1840 | 2869 | 33 | .007 | .027 | .358 | D | G | | | | | .359 | | | | .366 | 2841 | | | | 7762 |
| 19 | | 1842 | | | | .027 | .359 | D | F | | | | | | | | | | | | | | |
| 1 | | 1425 | 3493 | 33 | .007 | .026 | .416 | D | G | | | | | .417 | | | | .424 | 3465 | | | | 8172 |
| 2 | | 1428 | | | | .025 | .417 | D | G | | | | | | | | | | | | | | |
| 3 | | 1455 | 5504 | 33 | .007 | .026 | .574 | D | G | | | | | .575 | | | | .582 | 5476 | | | | 9409 |
| 4 | | 1457 | | | | .028 | .575 | D | G | | | | | | | | | | | | | | |
| 16 | | 1818 | 6001 | 33 | .007 | .028 | .616 | D | P | | | | | .616 | | | | .623 | 5973 | | | | 9587 |
| 17 | | 1820 | | | | .027 | .615 | D | G | | | | | | | | | | | | | | |
| 15 | | 1800 | 6601 | 33 | .007 | .028 | .676 | D | G | | | | | .676 | | | | .683 | 6573 | | | | 9624 |
| 14 | | 1755 | 7128 | 33 | .007 | .026 | .730 | D | G | | | | | .730 | | | | .737 | 7100 | | | | 9634 |
| 12 | | 1730 | 7607 | 33 | .007 | .030 | .779 | D | F | | | | | .779 | | | | .786 | 7579 | | | | 9642 |
| 13 | | 1735 | | | | .029 | .781 | D | G | | | | | | | | | | | | | | |
| 5 | | 1518 | | | | .026 | .779 | D | G | | | | | | | | | | | | | | |
| 6 | | 1520 | | | | .027 | .779 | D | G | | | | | | | | | | | | | | |
| 10 | | 1725 | 7644 | 33 | .007 | .030 | .785 | D | G | | | | | .785 | | | | .792 | 7616 | | | | 9616 |
| 11 | | 1727 | | | | .029 | .785 | D | G | | | | | | | | | | | | | | |
| 9 | | 1650 | 7997 | 33 | .007 | .027 | .813 | D | G | | | | | .813 | | | | .820 | 7969 | | | | 9718 |
| 7 | | 1555 | 8271 | 33 | .007 | .027 | .836 | D | G | | | | | .836 | | | | .843 | 8243 | | | | 9778 |
| 8 | | 1558 | | | | .026 | .835 | D | G | | | | | | | | | | | | | | |



Dgm = Geophone depth measured from well elevation
Dgs = " " " " shot "
Dgd = " " " " datum "
Ds = Depth of shot
De = Shothole elevation to datum plane
H = Horizontal distance from well to shotpoint
S = Straight line travel path from shot to well geophone
tus = Uphole time at shotpoint
tr = Observed time from shotpoint to well geophone.
tr = " " to reference geophone.
Δe = Difference in elevation between well & shotpoint.
Δsd = " " " " shot & datum plane
Δsd = Ds - De
Dgs = Dgm - Ds ± Δe; tan i = H / Dgs
Tgs = cos i T = Vert. travel time from shot elev to geophone
Tgd = Tgs ± Δsd / V = " " " datum plane "
Dgd = Dgm - Δmd
Vi = Interval velocity = ΔDgd / ΔTgd
Va = Average = Dgd / Tgd

Surveyed by: Velocity Data
Date: 23.1.75
Weathering Data:

Casing Record
2785 KB

VELOCITY SURVEY REPORT

WELL: Kingfish-6
BASIN: Gippsland

INTRODUCTION

Esso Personnel: J.F. Davis, G.J. Blackburn
Contractor: Velocity Data Pty. Ltd.,
Seismic Observer: J. Larsen
Marine Shooter: M. Reveleigh
Assembled at: Sale, Victoria on 22/1/75
Boarded Rig: "Regional Endeavour" on 22/1/75
Date of Survey: 23/1/75
Casing Depth: 2785' KB
T.D. When Shot: 8386' KB FTD: 8386' KB
Water Depth: 258' KB

SURVEY PROCEDURE

Weather: Sea: Large westerly chop, no swell.
Rig movement slight
Rig noise slight

Hydrophones: Number: 2
Depth below sea-level: 1) 24 ft. 2) 30 ft.
Position: 1) 5' above gun spark, 2) in the moonpool.

Seismic source: Gas Gun: Gas pressures 2:1 ratio
Oxygen 90 psi, Propane 45 psi

Shots: Number of levels shot: 11
Number of shots: 21
Number of pops per level: 2, 4

Time: Time of first shot: 1425 hours
Time of last shot: 1852 hours
Rig time: 4 hours 57 minutes.

RESULTS

Quality of Records: 18 good
2 fair
1 poor

Comparison of Interval Times with Sonic Log:

/Δ/average 10.5 microsec/foot
/Δ/maximum 81.1 microsec/foot
/Δ/average 2.7 microsec/ft. (neglecting max.value)

Refer to attached table for further details.

COMMENTS

In spite of the relatively rough sea conditions, no significant noise occurred on the records, so that seismic events could be determined to an accuracy approaching 1 millisecond. By neglecting the small section between 7560' and 7597' KB the overall average for the sonic-velocity error is 2.7 microsec/foot so that the resulting information is considered reliable. The following delays occurred during the survey:

1. snapped screws on the cable gear shaft drive - delay 20 mins.
2. gas gun misfire due to short-circuiting of the ignition line.
time 1605 delay 25 mins
time 1705 delay 20 mins

As the gas gun was lifted from the water on both occasions slight variations in the observed time from the shot point to reference geophone were recorded but this is unimportant due to the insignificance of the offset.

SPECIAL NOTE

In logging this well Schlumberger used a cable with incorrectly spaced depth markers. This error was not discovered until after the completion of Kingfish-6 and Flounder-5. The depths given in this report are corrected for this error by the factor of +2.5ft/1000ft. from KB (corrected depths greater than original depths).

PE902294

This is an enclosure indicator page.
The enclosure PE902294 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE902294 has the following characteristics:

- ITEM_BARCODE = PE902294
- CONTAINER_BARCODE = PE902291
- NAME = East Kingfish Field Extension
Geological Cross Section A-A'
- BASIN =
- PERMIT = Vic/L7
- TYPE = WELL
- SUBTYPE = map
- DESCRIPTION = East Kingfish Field Extension
Geological Cross Section A-A'
- REMARKS =
- DATE_CREATED = 01/02/1975
- DATE_RECEIVED =
- W_NO = W683
- WELL_NAME = Kingfish-6
- CONTRACTOR = ESSO
- CLIENT_OP_CO = ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE902295

This is an enclosure indicator page.
The enclosure PE902295 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE902295 has the following characteristics:

- ITEM_BARCODE = PE902295
- CONTAINER_BARCODE = PE902291
- NAME = Structure Map Top of Latrobe M-1
Reservoir
- BASIN =
- PERMIT = Vic/L7
- TYPE = WELL
- SUBTYPE = map
- DESCRIPTION = Structure Map Top of Latrobe M-1
Reservoir
- REMARKS =
- DATE_CREATED = 01/02/1975
- DATE_RECEIVED =
- W_NO = W683
- WELL_NAME = Kingfish-6
- CONTRACTOR = ESSO
- CLIENT_OP_CO = ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE903320

This is an enclosure indicator page.
The enclosure PE903320 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE903320 has the following characteristics:

ITEM_BARCODE = PE903320
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Time depth curve
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC/L7
 TYPE = WELL
 SUBTYPE = VELOCITY
DESCRIPTION = Kingfish 6 time depth curve
REMARKS =
DATE_CREATED =
DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = Kingfish 6
 CONTRACTOR = Velocity Data Pty Ltd
 CLIENT_OP_CO = Esso Australia Ltd

(Inserted by DNRE - Vic Govt Mines Dept)

PE902296

This is an enclosure indicator page.
The enclosure PE902296 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE902296 has the following characteristics:
ITEM_BARCODE = PE902296
CONTAINER_BARCODE = PE902291
NAME = Well Velocity Record
BASIN =
PERMIT = Vic/L7
TYPE = WELL
SUBTYPE = graph
DESCRIPTION = Well Velocity Record
REMARKS =
DATE_CREATED =
DATE_RECEIVED =
W_NO = W683
WELL_NAME = Kingfish-6
CONTRACTOR = ESSO
CLIENT_OP_CO = ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE601430

This is an enclosure indicator page.
The enclosure PE601430 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE601430 has the following characteristics:

ITEM_BARCODE = PE601430
CONTAINER_BARCODE = PE902291
 NAME = Well Completion Log
 BASIN =
 PERMIT = Vic/L7
 TYPE = WELL
 SUBTYPE = well log
 DESCRIPTION = Well Completion Log
 REMARKS =
 DATE_CREATED = 29/01/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = Kingfish-6
 CONTRACTOR = ESSO
 CLIENT_OP_CO = ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE601962

This is an enclosure indicator page.
The enclosure PE601962 is enclosed within the
container PE903317 at this location in this
document.

The enclosure PE601962 has the following characteristics:

ITEM_BARCODE = PE601962
CONTAINER_BARCODE = PE903317
 NAME = Kingfish 6 bariod ppm log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC/L7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Kingfish 6 bariod ppm log
 REMARKS =
 DATE_CREATED = 22/01/75
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = Kingfish 6
 CONTRACTOR = Bariod Well Logging Services
 CLIENT_OP_CO = Esso Australia Ltd

(Inserted by DNRE - Vic Govt Mines Dept)

PE603506

This is an enclosure indicator page.
The enclosure PE603506 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603506 has the following characteristics:

ITEM_BARCODE = PE603506
CONTAINER_BARCODE = PE902291
NAME = Kingfish 6 Mud Log
BASIN = GIPPSLAND
ON_OFF = OFFSHORE
PERMIT = VIC L/7
TYPE = WELL
SUBTYPE = LOG
DESCRIPTION = Mud Log for Kingfish-6 2 of 25
REMARKS =
DATE_CREATED = 31/07/1975
DATE_RECEIVED =
W_NO = W683
WELL_NAME = KINGFISH-6
CONTRACTOR = BAROID
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603507

This is an enclosure indicator page.
The enclosure PE603507 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603507 has the following characteristics:

ITEM_BARCODE = PE603507
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 3 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603508

This is an enclosure indicator page.
The enclosure PE603508 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603508 has the following characteristics:

ITEM_BARCODE = PE603508
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 4 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603509

This is an enclosure indicator page.
The enclosure PE603509 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603509 has the following characteristics:

ITEM_BARCODE = PE603509
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 5 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603510

This is an enclosure indicator page.
The enclosure PE603510 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603510 has the following characteristics:

ITEM_BARCODE = PE603510
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 6 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603511

This is an enclosure indicator page.
The enclosure PE603511 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603511 has the following characteristics:

ITEM_BARCODE = PE603511
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 7 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603512

This is an enclosure indicator page.
The enclosure PE603512 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603512 has the following characteristics:

ITEM_BARCODE = PE603512
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 8 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603513

This is an enclosure indicator page.
The enclosure PE603513 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603513 has the following characteristics:

ITEM_BARCODE = PE603513
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 9 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603514

This is an enclosure indicator page.
The enclosure PE603514 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603514 has the following characteristics:

ITEM_BARCODE = PE603514
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 10 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603515

This is an enclosure indicator page.
The enclosure PE603515 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603515 has the following characteristics:

ITEM_BARCODE = PE603515
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 11 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603516

This is an enclosure indicator page.
The enclosure PE603516 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603516 has the following characteristics:

ITEM_BARCODE = PE603516
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 12 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603517

This is an enclosure indicator page.
The enclosure PE603517 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603517 has the following characteristics:

ITEM_BARCODE = PE603517
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 13 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603518

This is an enclosure indicator page.
The enclosure PE603518 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603518 has the following characteristics:

ITEM_BARCODE = PE603518
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 14 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603519

This is an enclosure indicator page.
The enclosure PE603519 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603519 has the following characteristics:

ITEM_BARCODE = PE603519
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 15 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603520

This is an enclosure indicator page.
The enclosure PE603520 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603520 has the following characteristics:

ITEM_BARCODE = PE603520
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 16 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603521

This is an enclosure indicator page.
The enclosure PE603521 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603521 has the following characteristics:

ITEM_BARCODE = PE603521
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 17 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603522

This is an enclosure indicator page.
The enclosure PE603522 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603522 has the following characteristics:

ITEM_BARCODE = PE603522
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 18 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603523

This is an enclosure indicator page.
The enclosure PE603523 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603523 has the following characteristics:

ITEM_BARCODE = PE603523
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 19 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603524

This is an enclosure indicator page.
The enclosure PE603524 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603524 has the following characteristics:

ITEM_BARCODE = PE603524
CONTAINER_BARCODE = PE902291
NAME = Kingfish 6 Mud Log
BASIN = GIPPSLAND
ON_OFF = OFFSHORE
PERMIT = VIC L/7
TYPE = WELL
SUBTYPE = LOG
DESCRIPTION = Mud Log for Kingfish-6 20 of 25
REMARKS =
DATE_CREATED = 31/07/1975
DATE_RECEIVED =
W_NO = W683
WELL_NAME = KINGFISH-6
CONTRACTOR = BAROID
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603525

This is an enclosure indicator page.
The enclosure PE603525 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603525 has the following characteristics:

ITEM_BARCODE = PE603525
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 21 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603526

This is an enclosure indicator page.
The enclosure PE603526 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603526 has the following characteristics:

ITEM_BARCODE = PE603526
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 22 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603527

This is an enclosure indicator page.
The enclosure PE603527 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603527 has the following characteristics:

ITEM_BARCODE = PE603527
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 23 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603528

This is an enclosure indicator page.
The enclosure PE603528 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603528 has the following characteristics:

ITEM_BARCODE = PE603528
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 24 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603529

This is an enclosure indicator page.
The enclosure PE603529 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE603529 has the following characteristics:

ITEM_BARCODE = PE603529
CONTAINER_BARCODE = PE902291
 NAME = Kingfish 6 Mud Log
 BASIN = GIPPSLAND
 ON_OFF = OFFSHORE
 PERMIT = VIC L/7
 TYPE = WELL
 SUBTYPE = LOG
 DESCRIPTION = Mud Log for Kingfish-6 25 of 25
 REMARKS =
 DATE_CREATED = 31/07/1975
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = KINGFISH-6
 CONTRACTOR = BAROID
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE902292

This is an enclosure indicator page.
The enclosure PE902292 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE902292 has the following characteristics:

- ITEM_BARCODE = PE902292
- CONTAINER_BARCODE = PE902291
- NAME = Formation Tester
- BASIN =
- PERMIT = Vic/L7
- TYPE = WELL
- SUBTYPE = tester
- DESCRIPTION = Formation Tester
- REMARKS =
- DATE_CREATED = 26/01/1975
- DATE_RECEIVED =
- W_NO = W683
- WELL_NAME = Kingfish-6
- CONTRACTOR = Schlumberger
- CLIENT_OP_CO = ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE902293

This is an enclosure indicator page.
The enclosure PE902293 is enclosed within the
container PE902291 at this location in this
document.

The enclosure PE902293 has the following characteristics:

ITEM_BARCODE = PE902293
CONTAINER_BARCODE = PE902291
 NAME = Formation Interval Test
 BASIN =
 PERMIT = Vic/L7
 TYPE = WELL
 SUBTYPE = tester
 DESCRIPTION = Formation Interval Test
 REMARKS =
 DATE_CREATED = 24+25/1/75
 DATE_RECEIVED =
 W_NO = W683
 WELL_NAME = Kingfish-6
 CONTRACTOR = Agnew Go Western
 CLIENT_OP_CO = ESSO

(Inserted by DNRE - Vic Govt Mines Dept)