

2.0 CORE DESCRIPTIONS

ESSO STANDARD OIL (AUSTRALIA) LTD.

CORE DESCRIPTION

Core No. 1

WELL: FLOUNDER - 4

Interval Cored 8203-8260 ft., Cut 57 ft., Recovered 57 ft., (100 %) Fm. LATROBE

Bit Type C-22, Bit Size 8 1/32 x 4 in., Desc. by BLACK & SHORT Date 18 JAN 1973

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
03				
05				
10				
15				
20				
25				
30				
35				
40				
43				

NOTE: STRONG GAS ODOR ON FRESHLY BROKEN SURFACES THROUGHOUT CORE. WHERE PYRITE WAS ESPECIALLY ABUNDANT GAS ODOR WAS SOUR (H₂S)

8203-33' SILTSTONE - DK TO MED GRAY, GLAUCONITIC, PYRITIC, V. HARD, INDUR, CARB. IN PLACES, SOME PLATY LAMINAE BUT MOST DESTROYED BY ABUNDANT BURROWING. BURROWS OFTEN RICH IN PYRITE & GLAUCONITE. V. POOR POR & PERM.

8233-39' SILTSTONE - DK GRAY, V. HARD, INDUR., F. MICAC. LESS GLAUC. THAN ABOVE, PYRITE, SIL. CALC. FEW HORIZ. BANDS OF CARB MATERIAL, LESS BURROWING.

8239-41 SILTSTONE - AS ABOVE, LESSENING GLAUC. NO BURROWING, HORIZONTAL BEDS.

2" BANDED BRIGHT YELLOW FLOR. W/ FAINT CUT AT 8241' & 8242'

8241-42 SILTSTONE - AS ABOVE BUT W/ SLUMP STRUCT.

PREPARED BY THE GEOLOGICAL SURVEY OF AUSTRALIA

REMARKS:

← CHIP SPLS FOR PALYNOLOGY

ESSO STANDARD OIL (AUSTRALIA) LTD.

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Core No. 1
(PAGE 2)

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Interval Cored 8203-8260 ft., Cut 57 ft., Recovered 57 ft., (100%) Fm. LATROBE

Bit Type C-22, Bit Size 8 15/32 x 4 in., Desc. by BLACK & SHORT Date 18 JAN 1973

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
43			8242-45'	SILTSTONE - AS ABOVE BUT V. GLAUCONITIC, THIN HORIZ. BED'G., CARB., SOME SCOUR & FILL (?)
45			8245-51'	SILTSTONE - GRAY, V. GLAUC., PYR., HARD, INDUR. SLI. CARB., HIGHLY BURROWED.
50			8251-53'	SANDSTONE - GR WH, VFG., V. SILTY, SLI. CARB. LAMINATED, NO BURROWS.
55			8253-58'	SILTSTONE - GRAY, V. GLAUC., PYR., V. HARD INDUR., HIGHLY DISTORTED W/ BURROW- ING.
60			8258-60	SANDSTONE - GRAY, V.F.g., V. SILTY, W/ CLAY CASTS, RICH GLAUC., SR. QTZ., V. TIGHT POOR POR & PERM. BOTTOM 1/2" HAS WELL ROUNDED PEA SIZE QTZ PEBBS.

REMARKS:

ESSO STANDARD OIL (AUSTRALIA) LTD.

CORE DESCRIPTION

Core No. 2

WELL: FLOUNDER #4

Interval Cored 8260-8318 ft., Cut 58 ft., Recovered 12 ft., (20 %) Fm. LATROBE

Bit Type C.20, Bit Size 8 15/32 in., Desc. by BLACK & SHORT Date 19th JAN. 1973

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
60 65 70 72 Coring Rate mins/foot	[Graphic representation of core with dots and dashes]	← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ←	8260-68.	Sst m-coarse gr. with occasional pebbles; friable; clear qtz, subang. to subround. gr; sli. calc.; spotty fluor; oil odor.
				Sst a.a. some bedding present.
			6268-71	Sst, a.a. slightly dolomitic, considerably harder & more consolidated.
			8271-72	Sst, a.a.; no dolomite, quite friable, good even fluor, good wt.

REMARKS: ← Chips for palynology.
 ← Sample for E.P.R.Co.
 ← Sample for Core Labs.

ESSO STANDARD OIL (AUSTRALIA) LTD.

CORE DESCRIPTION

Core No. 3

WELL: FLOUNDER-4

Interval Cored 8318-8332 ft., Cut 14 ft., Recovered 11 ft., (80%) Fr. LATROBE

Bit Type C-22, Bit Size 8 15/32 x 4 in., Desc. by BLACK & SHORT Date 20 JAN 1973

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
			<p>8318-26' SANDSTONE - WH. M/CRSE & V.CRSE G. QIZ, SA/S.R., UNCONSOL., SCATTERED PEBBS. TO 3/4" DIAM. IN TOP 1 FT, GOOD POR. & PERM., GOOD EVEN YELLOW FLUORESCENCE & GOOD CUT, GOOD ODOR IN TOP PART OF CORE, BUT SOME SOUR (H₂S) ODOR IN LOWER 3 FT.</p> <p>8326-29' SANDSTONE - SAME AS ABOVE BUT CONSOLIDATED, V.V. FRIABLE. LOWER 1 FT. OF CORE HAS MINOR PYRITE.</p>	

REMARKS: BARREL JAMMED

- ← 4" WAX PACKED FOR EPRCO (1/3 SLICE OF REMAINDER FOR FACIES STUDY)
- ← CORE CHIP FOR PALYNOLOGY
- ← 2" PIECE FOR OVER BURDEN ANALYS.

REMAINING 2/3 SLICE OF 8"/FT. WAX PACKED & MARKED ESSO

ESSO STANDARD OIL (AUSTRALIA) LTD.

CORE DESCRIPTION

Core No. 4

WELL: FLOUNDER - 4

Interval Cored 8332 - 8371 ft., Cut 39 ft., Recovered 28 ft., (72 %) Fm. LATROBE

Bit Type G-22 (F.D.), Bit Size 8 1/32 x 4 in., Desc. by BLACK & SHORT Date 21 JAN. 1973

Depth & Coring Rate (min./ft.)	Graphic (1" = 5')	Shows	Interval (ft.)	Descriptive Lithology
32			8332-33 1/2'	SANDSTONE - WH., M/CRSE QTZ, FRIABLE, GOOD FLUORESCENCE & CUT, H ₂ S ODOR.
35			8333 1/2-39'	SANDSTONE - BRN'SH WH, M/CRSE SA/SR QTZ V. DOL., V. HARD & INDURATED, DULL GOLD YELLOW MINERAL FLUOR.
40			8339-42	SANDSTONE - WH & BRN'SH WH, MOSTLY M. q. W/ FEW CRSE q.s. QTZ, CONSOL. TO MOD. FRIABLE, SOME PYRITE & SCATTERED CARB. FRAGS. INCREASING DOWNWARD GOOD EVEN YELLOW FLUOR. W/ GOOD CUT, H ₂ S
			8342-43'	SANDSTONE - DOL. AS 8333 1/2-39'
			8343-45'	SANDSTONE - AS AT 8339-42
45			8345-47'	SANDSTONE - AS AT 8333 1/2-39', V. DOL.
			8347-50'	SANDSTONE - BRN'SH WH F/M. q. QTZ, FRIAB GOOD FLUOR & CUT W/ LT BRN RESIDUE H ₂ S ODOR.
50			8350-53 1/4"	SANDSTONE - SAME AS ABOVE BUT MORE CARB. MATTER, BURROWED, SPOTTY FLUOR, GOOD CUT, STRONG H ₂ S, V. PYRITIC

PENETRATION AVE. 27 MIN/FT

REMARKS:

- ← 4" WAX PACKED SPL FOR EPRCO (REMAINING 8" WAXED AFTER SLABBING 1" SLICE)
- ← CORE CHIP FOR PALYNOLOGY
- ← 2" SPL FOR OVER BURDEN ANALYS.

2.1 SAMPLE DESCRIPTIONS

BASIC
SAMPLE DESCRIPTIONS
FLOUNDER-4

1 of 14 662
9th January, 1973.
Andy Rigg/W. Fischer

- 7000'-7020' 50% Sandstone: generally unconsolidated; very coarse grained to coarse grained, subangular to rounded (predominantly subrounded) clear to white quartz grains. Trace coating pyrite. Some massive pyrite. Trace fine to medium grained consolidated sandstone. No shows.
- 20% Siltstone: carbonaceous to very carbonaceous, dark brown to brown.
- 10% Shale - dark grey, hard
- 20% Coal: black, shiny, conchoidal fracture.
- 7020-7030' 90% Sandstone: as above. All very coarse grained to coarse grained.
- 10% Siltstone: as above.
- Trace coal and pyrite
- 7030-7040' 70% Sand: as above, trace pebbly grains
- Trace pyrite. Some quartz grains fractured. Moderately well sorted.
- 20% Siltstone: as above
- 10% Coal: as above
- 7040-7050 80% Sand: as above
- 10% Siltstone: as above
- 10% Coal: as above
- 7050'-7060' 80% Sand: as above
- 20% Siltstone: as above
- Trace coal
- 7060-7070' 90% Sand: unconsolidated, medium to coarse grained, subangular to subrounded (trace rounded), clear to white (some smokey) quartz grains, moderately to well sorted, good porosity and permeability. Trace pyrite. No shows
- 10% Siltstone: Carbonaceous, dark brown to brown.
- Trace coal.
- 7070-7080' 90% Sandstone:
Consisting of:
70% Sand - generally medium to coarse grained, trace pebbles, clear to white quartz grains. Good porosity and permeability. Unconsolidated. Trace pyrite coating. No shows. Moderate sorting.
- 20% Sandstone - fine to medium grained, consolidated, firm sandstone. Trace fines, argillaceous. Poorly sorted, poor porosity and permeability.
- 10% Siltstone: light brown to dark brown, carbonaceous, argillaceous. Trace coal.
- 7080-7090' 80% Sandstone: medium to coarse grain, subangular to subrounded, clear to white moderately sorted, unconsolidated, no shows. Trace consolidated sandstone, fine to medium grain.
- 20% Siltstone: light brown to light grey, argillaceous, Trace coal.
- 7090-7100' 90% Sandstone: coarse to very coarse grain, clear to white, trace pebbles, well sorted. No shows, subangular to subrounded, unconsolidated. Moderate porosity and permeability. Trace consolidated sandstone, fine to medium grain.
- 10% Siltstone: dark brown to light grey, argillaceous, carbonaceous.
- Trace pyrite. Trace coal. Trace dolomite.

Circulate sample up at 7077 - Drilling Break -550'/hr for 5'

- 7100-7110' 100% Sandstone: unconsolidated, generally coarse to very coarse, moderately well sorted, clear to white (trace smoky) quartz grains. Est. good porosity and permeability. Trace coal and pyrite. Trace carbonaceous siltstone. No shows.
- 7110-7120' 90% Sandstone: generally as above - less well sorted, medium to very coarse grained.
10% Siltstone: light brown to dark brown. Moderately carbonaceous
Trace coal.
- 7120-7130' 100% Sandstone: coarse grain, clear to white quartz, unconsolidated, moderately well sorted, est. reasonable porosity and permeability, trace coarse grains, trace consolidated sandstone, medium to coarse grains.
No shows, grains subangular to subrounded.
Trace coal, trace siltstone.
- 7130-40' 100% Sandstone: as above except medium to coarse grain, well sorted. Trace consolidated sandstone, fine to medium grain.
- 7140-50' 70% Coal:
30% Sandstone: coarse to very coarse grain, clear to white quartz grains, subrounded, moderately well sorted. No shows.
Trace siltstone. Trace glauconitic siltstone.
- 7150-60' 90% Sandstone: coarse to very coarse, clear to white quartz grains, subrounded to rounded, moderately well sorted, est. moderate porosity and permeability, unconsolidated. No shows. Trace consolidated sandstone, fine to medium grains.
10% Siltstone: medium brown to light grey, trace of glauconite, carbonaceous.
Trace coal.
- 7160-70' 90% Sandstone: coarse to very coarse grain, clear to white quartz grains, unconsolidated, subangular to rounded, moderately sorted, est. moderate porosity and permeability. One grain of consolidated, fine to medium grain sandstone, spotty fluorescence, poor cut.
10% Siltstone: dark brown to light grey, calcareous, argillaceous.
Trace coal.
- 7170-80' 80% Sandstone: coarse to very coarse grains, clear to white quartz grains, trace pebbles, subangular to rounded, moderately sorted, unconsolidated, moderate porosity and permeability
Trace consolidated sandstone, fine to medium grain, show weak fluorescence, poor cut.
20% Siltstone: dark brown to light grey, micaceous, some carbonaceous
Trace coal.
- 7180-90' 100% Sandstone: coarse grains, trace very coarse grain, clear to white quartz grains, subrounded to rounded, moderately well sorted, est. moderate porosity and permeability, unconsolidated, No shows. Trace pyrite coating. Trace consolidated sandstone, fine to medium grain. Trace siltstone. Trace coal.
- 7190-7200' 100% Sandstone: Generally coarse to very coarse, angular to subrounded fractured quartz grains, clear to white, well sorted, occasional pyrite. Trace very coarse/pebbly rounded to subrounded smokey/white quartz grains. No shows.
Trace coal and carbonaceous siltstone.

FLOUNDER-4

A.J. Rigg/W. Fischer
9th January, 1973

- 7200-10' As above
- 7210-20' As above
- 7220-30' 90% Sandstone: generally coarse to very coarse grains, clear to white quartz grains, well sorted, unconsolidated, angular to subrounded, trace pyrite coating. Trace consolidated sandstone, fine to medium grains, subangular to subrounded, moderate fluorescence, no cut (caving?) calcareous cement.
10% Siltstone: micaceous glauconitic, dark brown to medium grey, carbonaceous. Trace coal.
- 7230-40' 60% Sandstone: clear to white quartz grains, subangular to rounded, moderately sorted, unconsolidated, some grains fractured. Trace consolidated sandstone, fine to medium grain, weak fluorescence, calcareous cement.
40% Coal: trace siltstone
- 7240-50' 60% Sandstone: clear to white quartz grains, some grains fractured, angular to subrounded, moderately well sorted, unconsolidated, trace pyrite coating. Trace consolidated sandstone, fine to medium grains. No shows.
30% Siltstone: dark brown to brown, micaceous, carbonaceous.
10% Coal:
- 7250-60' 90% Sandstone: clear to white quartz grains, angular to subrounded, moderately well sorted, coarse grains, trace very coarse grains, fractured quartz grains, unconsolidated. Trace consolidated sandstone, fine to medium grains, subangular to subrounded, fluorescence, calcareous cement.
10% Siltstone: micaceous, medium brown to light grey, glauconitic traces, trace coal.
- 7260-70' 100% Sandstone: angular to subangular, clear to white quartz grains, very well sorted, unconsolidated, coarse grains, trace rounded very coarse grains, grains quite fractured in general, trace consolidated sandstone, fine to medium grains, moderate fluorescence (calcareous cement?)
Trace coal. Trace siltstone.
- 7270-80' 100% Sandstone: as above, unconsolidated, coarse to very coarse grain, angular to subangular, clear to white quartz grains. Trace consolidated sandstone, fine to medium grain.
Trace coal and siltstone as above.
- 7280-90' 100% Sandstone: as above, unconsolidated, coarse to very coarse grained, angular to subangular, clear to white quartz grains. Trace consolidated sandstone, fine to medium grained. Trace coal and siltstone, as above.
- 7280-90' 90% Sandstone: as above. Trace fine to medium consolidated sandstone, argillaceous - poorly sorted.
10% Siltstone: light brown to dark brown, some very carbonaceous, very pyritic.
Trace coal.

Circulate Sample up at 7207' - drilling break - 52'-120'/hr for 15'.

A.J. Rigg/W. Fischer.
January 9, 1973

- 7290-7300' 90% Sandstone:
70% coarse to very coarse grain, unconsolidated, fractured, subrounded to angular, clear to white quartz grains, moderate to well sorted. No shows.
20% fine to medium grained, well rounded, consolidated, subrounded to rounded, argillaceous, poorly sorted. No shows.
- 10% Siltstone: dark brown to light brown, firm to hard, pyritic, occasionally very carbonaceous.
- 7300-10' 60% Sandstone:
50% coarse to very coarse grained, unconsolidated, as above
10% fine to medium grained, consolidated, as above
30% Siltstone: as above
10% Coal
- 7310-20' 100% Sandstone: generally very coarse to coarse grained, as above.
Trace consolidated fine to medium grained sandstone.
Trace coal and siltstone
- 7320-30' 50% Sandstone: as above
50% Coal
Trace siltstone
- 7330-40' 80% Sandstone
50% unconsolidated very coarse to coarse grained, subangular to subrounded, no shows.
30% consolidated, fine to medium grained, subrounded to rounded, trace fines, calcareous (probably dolomitic) cement. Fluorescence (mineral), and no cut.
10% Siltstone
10% Coal
- 7340-50' 80% Sandstone: as above, consolidated sandstone has (dolomitic) fluorescence - no cut.
20% Siltstone: generally light to medium brown, firm to hard, occasionally carbonaceous.
Trace massive pyrite.
- 7350-60' 60% Sandstone:
30% unconsolidated, very coarse to coarse grained, angular to subrounded, no shows.
30% consolidated, fine to medium grained, subrounded to rounded, calcareous (dolomitic) cement. Mineral fluorescence. No cut.
30% Siltstone: light brown to brown black. Some very carbonaceous, firm to hard.
10% Coal.
- 7360-70' 90% Coal
10% Siltstone: as above
Trace coarse grained unconsolidated and fine to medium grained, consolidated sandstone (fine to medium grained has mineral fluorescence).
- 7370-80' 60% Coal
20% Sandstone: both loose unconsolidated sandstone and consolidated fine to medium grained (+fluorescence)
20% Siltstone: as above
- 7380-90' 50% Coal
50% Sandstone: predominantly unconsolidated, coarse to very coarse grained, subangular to subrounded, fractured, white to clear quartz grains. No shows. Trace consolidated fine to medium grained sandstone. Trace siltstone.

- 7390-7400' As above
- 7400-10' 30% Sandstone: as above. Trace fine to medium grained consolidated sandstone with mineral fluorescence. (cavings?)
40% Siltstone: as above
30% Calcareous mudstone? Cavings - very hard, trace coal
- January 10, 1973.
- 7410-20' As above
- 7420-30' 40% Sandstone:
20% very coarse to coarse unconsolidated subangular, No shows.
20% consolidated, fine to medium subrounded. No shows.
40% Calcareous shale: light grey to green-grey, firm, very calcareous (abundance may preclude cavings)
20% Carbonaceous siltstone: light brown to brown black, some very carbonaceous
Trace Coal and Pyrite (massive)
- 7430-40' 60% Sandstone: predominantly coarse grained, unconsolidated, trace fine grained, consolidated.
20% Siltstone: carbonaceous as above
10% Calcareous shale: as above
10% Coal: as above
- 7440-50' 50% Sandstone: as above
40% Coal
10% Siltstone: as above
- 7450-60' 50% Sandstone: predominantly coarse to very coarse grained, subangular to subrounded, (some angular) fractured unconsolidated, white to clear quartz grains. No shows.
30% Coal: as above
20% Siltstone: light brown to dark brown, very carbonaceous, in part.
Trace Calcareous Shale
- 7460-70' 70% Sandstone: as above
20% Coal as above
10% Siltstone: as above
- 7470-80' 90% Sandstone: as above
10% Siltstone: as above
Trace coal
- 7480-90' 90% Sandstone:
70% coarse to very coarse grained (some pebbly) unconsolidated, generally fractured, subrounded to angular, (large grains rounded), clear to white quartz.
20% consolidated, fine to medium grained sandstone.
10% Siltstone: light brown to dark brown, argillaceous, carbonaceous
- 7490-7500' 20% Sandstone:
10% coarse to very coarse grained. As above
10% fine to medium grained, consolidated. As above
80% Coal
Trace siltstone

FLOUNDER-4

A.J. Rigg/
W. Fischer

January 10, 1973

- 6 of 14
- 7500-10' 10% Sandstone: both coarse to very coarse grained. As above both fine to medium grained, as above (some very fine)
10% Siltstone: as above
80% Coal: as above
- 7510-20' 50% Siltstone: light brown - buff, granular, some sand sized grains.
50% Carbonaceous Siltstone: dark brown to brown, carbonaceous stringers - generally fine grained.
Trace sand. Trace calcareous shale
- 7520-30' 20% Sandstone:
10% coarse grained, unconsolidated
10% fine to very fine grained, consolidated.
80% Carbonaceous Siltstone: as above
Trace pyrite and glauconite (cavings?)
- 7530-40' 90% Sandstone: clear to white quartz grains, unconsolidated, angular to subrounded, general fracturing displayed, coarse grain, trace very coarse grains.
10% Siltstone: carbonaceous, dark brown to grey, carbonaceous
Trace pyrite coating, trace coal
- 7540-50' 10% Sandstone: clear to white quartz grains, subangular to subrounded, unconsolidated, some fractured grains, coarse grains, trace consolidated sandstone, fine to medium grain, angular to subangular.
90% Siltstone: dark brown to medium grey, carbonaceous, generally fine grained, micaceous,
Trace pyrite. Trace coal. No shows.
- 7550-60' 80% Sandstone: as above except unconsolidated grains, angular to subrounded, trace very coarse grains. Trace min. fluorescence.
20% Siltstone: carbonaceous, dark brown to grey, trace of calcareous siltstone.
Trace coal. Trace pyrite coating.
- 7560-70' 70% Sandstone: clear to white quartz grains, angular to subrounded, unconsolidated, 10% rounded grains, coarse to very coarse grains, moderately sorted.
20% Siltstone: dark brown to light brown, micaceous, fine grained.
10% Coal. No shows.
- 7570-80' 80% Sandstone: coarse to very coarse grains, angular to subrounded, clear to white/smokey, moderately sorted, quartz grains quite fractured, unconsolidated. Trace fluorescence (cavings?)
20% Siltstone: medium brown to light grey, carbonaceous, micaceous, some pieces granular. Trace coal. Trace pyrite.
- 7580-90' 80% Sandstone: medium to very coarse quartz grains, 40% very coarse, 30% coarse, 10% medium grained, clear to white, unconsolidated, subangular to rounded, moderately sorted.
Trace consolidated sandstone, fine to medium grains, argillaceous, glauconitic.
20% Siltstone: dark brown to medium grey, carbonaceous, fine grained. Trace coal. Trace pyrite and pyrite coating.
No shows.
- 7590-7600' 70% Sandstone: medium to coarse grains, well sorted, clear to white quartz grains, subangular to subrounded,
30% Siltstone: dark brown to light grey, carbonaceous.
Trace coal. Trace pyrite, no shows.

FLOUNDER-4

A.J. Rigg/W. Fischer
January 10, 1973

- 7600-10' 50% Sandstone: coarse to very coarse quartz grains, clear to white, poorly sorted, angular to subrounded, unconsolidated, grains quite fractured.
Trace consolidated sandstone, fine to medium grain, argillaceous, no shows.
- 50% Siltstone: dark brown to light grey, granular, micaceous, carbonaceous, calcareous (cavings?)
Trace coal.

- 7610-20' 50% Sandstone: clear to white quartz grains, angular to subrounded, generally fracturing, poorly sorted, unconsolidated. No shows.
Trace consolidated sandstone, fine to medium grain, glauconite traces.
- 30% Siltstone: dark brown to grey, granular in some cases, carbonaceous stringers.
Trace calcareous (cavings?)
- 20% Coal

- 7620-30' 10% Sandstone: medium to coarse grains, clear to white quartz grains, angular to subrounded. Trace very coarse grains, no shows.
- 90% Siltstone: dark brown to light grey, carbonaceous stringers, calcareous in some fragments.
Trace coal.

- 7630-40' 70% Siltstone: as above, micaceous traces. No shows.
- 30% Coal
Trace sandstone

- 7640-50' 10% Sandstone: unconsolidated, medium to coarse grains, trace very coarse grains, angular to subrounded, quartz grains, generally fracturing. No shows. Trace consolidated sandstone, fine to medium grain.
- 90% Siltstone: dark brown to dark grey, carbonaceous, stringers, some calcareous, trace glauconite, trace coal.

- 7650-60' 100% Siltstone: as above plus argillaceous, trace granular siltstone
Trace coal. Trace sandstone. No shows.

- 7660-70' 100% Siltstone: as above. No shows. Trace sandstone. Trace coal.
Trace pyrite.

- 7670-80' 10% Sandstone: unconsolidated, medium to coarse grains, trace very coarse, angular to subrounded, clear to white. Trace consolidated sandstone, fine to medium grain, subangular to subrounded, pale fluorescence. (calc. cement)
- 90% Siltstone: carbonaceous stringers, dark brown to medium grey, calcareous fragments sometimes, generally granular. trace argillaceous.
Trace glauconite. Trace coal. Trace pyrite.

- 7680-90' 50% Sandstone: medium to coarse quartz grains, trace very coarse, subangular to subrounded, clear to white grains, unconsolidated, moderately well sorted, generally grains fractured.
Trace consolidated, sandstone, fine to medium grain, subrounded grains, glauconitic traces, trace pale mineral fluorescence.
- 50% Siltstone: dark brown to grey, argillaceous, occasionally granular, carbonaceous, calcareous in some cases (cavings?)
Trace pyrite. Trace coal.

- 7690-7700' 40% Sandstone: angular to subangular, clear to white quartz grains, moderately well sorted, unconsolidated, coarse grains, trace very coarse grains, most grains severely fractured. No shows.
- 60% Siltstone: dark brown to light grey, granular in general, carbonaceous, occasionally calcareous, trace argillaceous.
Trace pyrite, Trace coal.

FLOUNDER-4

- 7700-10' 20% Sandstone: as above. No shows.
70% Siltstone: as above except not as granular
10% Coal
- 7710-20' 90% Sandstone: unconsolidated, subangular to subrounded, coarse to very coarse grained, well sorted quartz grains, clear to white (some smokey) - some fractured grains.
No shows.
Fair porosity and permeability. Trace pyrite.
10% Siltstone: very carbonaceous with carbonaceous stringers. Generally dark brown to brown
Trace Coal and Pyrite
- 7720-30' 100% Sandstone: as above. Trace pyrite. No shows.
Trace massive pyrite and siltstone
- 7730-40' 100% Sandstone: as above. Good porosity, fair permeability.
Massive pyrite and coarse pebbles/ subrounded to rounded quartz
- 7740-50' 100% Sandstone: as above. Trace fine to medium grained, consolidated sandstone.
Trace massive pyrite.
- 7750-60' 100% Sandstone: as above. Trace fine grained consolidated sandstone.
Trace pyrite, trace siltstone
- 7760-70' As above
- 7770-80' As above
Trace Carbonaceous Siltstone; Pyrite (massive) and Coal
- 7780-90' As above
Trace Carbonaceous Siltstone
- 7790-7800' As above
Increase in Carbonaceous Siltstone. Trace pyrite
- 7800-10' As above
Slight increase in pyrite
- 7810-20' As above. Most grains with pyrite coating.
- some massive pyrite.
Trace Carbonaceous Siltstone
- 7820-30' As above. Slight decrease in pyrite.
- 7830-40' As above
- 7840-50' As above
- 7850-60' As above, slight pyrite coating
Trace of siltstone, non carbonaceous.
- 7860-70' As above. No pyrite coating, trace massive pyrite, clean, well sorted, subangular to subrounded.
- 7880-80' 100% Sandstone: unconsolidated, very coarse to coarse grained, fractured quartz grains, subangular to subrounded, clear to white. No shows. Increase in carbonaceous siltstone.
- 7880-90' As above
- 7890-7900' As above
- 7900-10' As above: except 90% coarse grains, 10% very coarse grains.
Trace carbonaceous siltstone, Trace massive and coating pyrite.
Trace glauconite.

Trip at 7910 - bit torqued up. Samples logged before trip.

January 11, 1973

- 7910-20' 90% Shale: sample probably contaminated with cavings, dark brown to grey, generally fine grained, trace of calcareous shale, trace glauconitic siltstone, some shale fragments quite argillaceous.
10% Sandstone: coarse grained, clear to white quartz grains, angular to subrounded, generally grains fractured, no shows. Trace coal.
- 7920-30' 90% Shale: as above
10% Sandstone: hard, well consolidated, fine grained quartz, milky colour, grains subangular to subrounded, fragments are angular, no shows. Trace coal.
- 7930-40' 10% Sandstone: as above plus trace consolidated sandstone, very fine to fine grained, shows weak fluorescence (mineral probably dolomitic cement)
90% Shale: as above
Trace siltstone, trace coal.

SAMPLE DESCRIPTIONS

FLOUNDER-4

January 11, 1973.
Andy Rigg
Wolfgang Fischer

7940-50' 10% Sandstone: coarse grained, clear to white quartz grains, angular to subrounded, unconsolidated. Trace consolidated sandstone, very fine to medium grain, subangular to subrounded, hard.
90% Shale: As above, plus traces of granular siltstone. Trace coal. Trace glauconite.

7950-60' 20% Sandstone: As above plus generally grains fractured
80% Shale: generally as above except some fragments argillaceous. Trace glauconite, Trace coal. Trace tan dolomite

Trip at 7955' - bit torqued up badly (? dolomite)
Drilled 7' while reaming - recovered samples, very contaminated predominantly calcareous siltstone. Ran junk basket at 7962'. from bottom of junk basket recovered SANDSTONE as described below plus DOLOMITE and CALCAREOUS SHA LE. SANDSTONE thought to come originally from this depth.

January 15, 1973.

SHALE: calcareous, dark grey, argillaceous, moderately hard.

DOLOMITE: dark tan colour, hard.

SANDSTONE: consolidated, medium to coarse grained quartz, angular to subrounded, clear coloured in general but occasionally white, grains held together with calcareous cement, quite hard, Matrix a medium grey colour, to medium brown, fine to very fine grained, spotty yellow fluorescence, good cut (blue-yellow) shows spheroidal type fracturing into layers approximately 0.25 inches thick; probably due to effect of weight of drill pipe on rock which was cored (Baroid measured \pm 1% porosity zero perm.)

7962-7965' 50% Sandstone: consolidated, poorly sorted, subangular to subrounded, quartz grains, clear to white, some smokey. Dolomite cemented. Poor spotty fluorescence - no cut. Trace fine grained moderately well sorted consolidated sandstone.
30% Siltstone - light brown - dark brown, granular in part.
20% Shale: dark grey - light grey, hard, calcareous.

Trip at 7974 (?) bit torqued up - little penetration.

16th January, 1973
J. Black/G. Short

7980 - checked depth with strap in (adj. down 6')

7965-7970' No reliable samples

7970-7980' 40% Sandstone: consolidated, clear and frosty quartz, medium to coarse, subangular to angular, calcareous, very dolomitic, hard tight. Spotty to fair fluorescence, fair cut, no show on chromatograph due to slow drilling, trace pyrite.
60% Shale: with some siltstone (cavings?)

7980-85' 90% Sandstone - clear and frosty white quartz, consolidated, very hard, tight, well indurated, medium to very coarse poorly sorted, slightly calcareous, dolomitic, even, fair fluorescence, faint cut, no show on chromatograph due to slow drilling. Few shards of shattered quartz from pebbles, Some unconsolidated, subrounded coarse grains.
10% Shale - light grey to greenish grey, very silty.

FLOUNDER-4

16th January, 1973.
J.R. Black/G. Short

- 7985-90' 80% Sandstone - as above, fair fluorescence with faint cut, good mineral fluorescence.
20%: Shale - as above (probable cavings)
- 7990-95' 50% Sandstone - mostly mineral fluorescence, faint fluorescence.
20% Siltstone - grey, firm
30% Shale
- 7995-8000' 70% Sandstone: mostly unconsolidated, coarse, subrounded, clear and frosty white quartz, some consolidated sandstone with mineral fluorescence, no show
30% Shale
- 8000-05' 80% Sandstone: as above, very little of sandstone is consolidated, mineral fluorescence in consolidated sandstone
20% Shale
- 8005-10' 90% Sandstone - coarse grained, subangular to subrounded, clear, frosty white quartz, minor consolidated, but most unconsolidated, no fluorescence in unconsolidated, minor mineral fluorescence in consolidated. No show
10% Shale
- 8010-13' 70% Sandstone: as above, traces of pyrite
Circulation 20% Shale
Sample 10% Siltstone, grey brown, firm, dolomitic.

January 17, 1973

- 8013-20' 40% Sandstone: unconsolidated, and consolidated, as above, mineral fluorescence.
30% Siltstone, grey, sandy, firm.
30% Shale, medium grained, silty
- 8020-25' 60% Sandstone, consolidated, mainly, low porosity and permeability
20% Siltstone
20% Shale
- 8025-30' 20% Sandstone, medium grained, unconsolidated, and consolidated.
50% Siltstone, grey brown, firm, pyritic
30% Shale
- 8030-40' 30% Sandstone
20% Siltstone
50% Shale: grey, silty firm, - trace coal (?)
- 8040-52' 40% Sandstone: as above, both unconsolidated, and consolidated
Circulation 30% Siltstone: as above with trace glauconite
Sample 30% Shale - as above
- 8052-55' 20% Sandstone, brown white matrix, medium to very coarse, consolidated, hard.
20% Siltstone
60% Shale
- 8055-60' 10% Sandstone
70% Siltstone: brownish grey, hard, indurated, slightly sandy
20% Shale
- 8060-70' 20% Sandstone
10% Siltstone
70% Shale
- 8070-80' 10% Sandstone- pyritic
30% Siltstone as above with trace glauconite
60% Shale: medium grey, silty

FLOUNDER-4

January 1973.
J. Black/G. Short

8080-90'	10% Sandstone - pyrite 30% Siltstone - traces of glauconite 60% Shale
8090-8100'	30% Siltstone 70% Shale
8100-8110'	40% Siltstone Traces of glauconite, sand and coal 60% Shale
8110-20'	30% Siltstone - as above with <u>slightly spotty fluorescence faint cut</u> . Small show on chromatograph C ₁ - C ₃ 70% Shale
8120-25'	10% Sandstone, medium - coarse grained, quartz, angular to subrounded. Most consolidated - low porosity and permeability <u>slightly spotty fluorescence, faint cut</u> 50% Siltstone, brown-grey, moderately firm, pyritic. 40% Shale
8125-30'	30% Siltstone: as above with <u>trace fluorescence</u> , faint cut 70% Shale
8130-40'	50% Siltstone as above, trace sandstone and coal 50% Shale
8140-50	40% Siltstone: grey brown, firm, pyritic, glauconitic (traces) trace of sand and coal 60% Shale
8150-60'	20% Siltstone as above with increase in glauconite 80% Shale - medium grey to light brown, firm, fissile with trace glauconite
8160-70'	20% Siltstone: as above 80% Shale
8170-75	10% Siltstone 90% Shale increase in glauconite
8175-80'	10% Sandstone, glauconitic 40% Siltstone 50% Shale, trace coal
8180-87'	70% Siltstone, brownish grey, sandy, firm very glauconitic, <u>trace fluorescence, faint cut, good gas chromatograph show.</u> 30% Shale
8187-90	90% Siltstone - as above, more glauconite, pyrite, <u>trace show</u> 10% Shale
8190-95'	20% Sandstone - white very fine to fine grained, consolidated, with some unconsolidated subrounded, scattered medium coarse, unconsolidated. 70% Siltstone - very glauconitic, brownish grey, sandy, firm 10% Shale
8195-8200'	40% Sandstone - fine to medium greenish, white quartz consolidated with some unconsolidated medium to coarse subrounded quartz, trace glauconite, good chromatograph shows 40% Siltstone, very glauconitic, brown, sandy, firm 20% Shale
8200-03 Circulation Sample	30% Sandstone 50% Siltstone 20% Shale

FLOUNDER-4

January 17, 1973.
J.R. Black/G. Short

8203-8260' Cut Core #1 Recovered 57' (100%)

Siltstone - medium to light grey, very hard, indurated, very pyritic, glauconitic, sandy near base, no show. of fluorescence but good gas show on chromatograph.

8371 - Base of core #4.

January 21, 1973.

8371-8380' 50% Sandstone, medium/coarse grained, subrounded grains of frosted quartz, mainly unconsolidated, minor consolidated, good cut and fluorescence - (probably cavings)
50% Shale, grey, fissile, slightly silty, traces coal

8380-90' 60% Sandstone as above, traces of pyrite, spotty fluorescence, traces glauconite.
40% Shale

8390'8400' 60% Sandstone
40% Shale

8400-10' 80% Sandstone, medium to coarse, subrounded, quartz frosted, mainly unconsolidated, very minor fluorescence
20% Shale, sub fissile, some trace of dolomite and coal

8410-20' 90% Sandstone as above, reasonably well sorted
10% Shale - as above quite silty

January 22, 1973

8420-30' 80% Sandstone of this sand 40% is as above, 40% has a different character, it is fine grained, reasonably well rounded, quartz sand with a dolomitic cement.- The dolomite has good mineral fluorescence. No fluorescence in other sand, no cut in either
20% Shale as above, silty, trace of coal

8430-40' 70% Sandstone as above
30% Shale, grey - grey brown, silty, sub fissile, micaceous, pyritic trace coal

8440-50' 60% Sandstone as above
40% Shale

8450-60' 60% Sandstone as above (15% dolomitic)
40% Shale quite silty

8460-70' 70% Sandstone as above
30% Shale

8470-80' 90% Sandstone - most unconsolidated, medium coarse grained, frosted subrounded quartz, reasonably well sorted. Minor dolomitic cemented finer sandstone - trace glauconite
10% Shale

8480-90' 60% Sandstone as above, but about 25% is finer grained with dolomite cement.
40% Shale often silty

8490-8500' 40% Sandstone, light brown to white, fine to coarse grained, approximately half (the coarser fraction) is unconsolidated subrounded grains while the finer fraction also quartz is dolomite cemented.
30% Siltstone, grey, pyritic, firm.
30% Shale

8500-10' 40% Sandstone - partly dolomitic
40% Shale
20% Coal, black, bituminous, hard, brittle

FLOUNDER-4

January 22, 1973.
J.R. Black/G. Short

- 8510-20' 40% Sandstone, minor dolomitic cement, very pyritic
30% Shale, trace coal
30% Siltstone
- 8520-30' 30% Sandstone, white, coarse, subrounded quartz, unconsolidated,
but predominantly tan, fine to medium grained, very dolomitic
with mineral fluorescence
50% Siltstone - brownish grey, fine, micaceous, slightly carbonaceous
20% Shale
- 8530-40' 30% Sandstone - as above, tan dolomitic
40% Siltstone
30% Shale
- 8540-50' 50% Sandstone, white, fine grained unconsolidated with few coarse
subrounded quartz grains and abundant tan consolidated dolomitic
hard fine grained sandstone with mineral fluorescence.
30% Siltstone - pyritic
20% Shale
- 8550-60' 50% Sandstone grey white, very fine to fine grained, subrounded grains,
some tan dolomitic sand and few coarse subrounded quartz grains
30% Siltstone
20% Shale
- 8560-70' 30% Sandstone
30% Siltstone
40% Shale - with trace coal
- 8570-80' 30% Sandstone - abundant dolomitic fine grained, hard, mineral
fluorescence
20% Siltstone
50% Shale with trace coal
- 8580-90' 40% Sandstone - mostly tan dolomitic, fine grained, hard, indurated
30% Siltstone
30% Shale
- 8590-8606' 10% Sandstone
20% Siltstone
60% Shale dark grey and brown carbonaceous, silty
10% Coal, black, brittle.

2.2 SIDE WALL CORE DESCRIPTIONS

LITHOLOGICAL DESCRIPTIONS of SIDEWALL CORES

from FLOUNDER-4

by David Taylor.....1-2-73

Page. 1 of 2 pages

Sidewall Core No.	Depth	Description of untreated core	Description of residue
60	3258	Light grey micritic limestone	Fine grained calcite
59	3450	" " " "	" " "
58	3616	" " " "	" " "
57	3906	" " " "	" " "
56	4068	" " " "	" " " + rare ang. qtz.
55	4586	" " " "	" " " + biogenic debris
54	4870	" " " "	" " " + rare ang. qtz.
53	4966	" " " "	" " " + siliceous sponge spicules
52	5100	" " " "	" " " " " "
51	5500	" " " "	" " " " " + rare ang qtz
50	5774	" " " "	" " " "
49	6150	Medium grey calcareous clay	Clay fragments + globigerinids
48	6200	" " " "	" " " "
47	6230	" " " "	Globigerinid ooze + clay fragments
46	6260	" " " "	" " " " " + Rare ang. qtz. + pyrite
45	6290	" " " " + glauconite	" " " " " + glauconite moulds
44	6320	" " " "	" " " " " + rare ang. qtz.
43	6335	" " " "	" " " " "
42	6345	" " " "	Recrystallized globigerinid ooze
41	6360	Silty qtz. glauconite sandstone	f-m ang. qtz., ang. glauconite, fragments brown sandstone ? siderite
40	6386	" " " "	" " " " " + mica
39	6400	" " " "	" " " " " , fragments brown sandstone ? siderite

181

LITHOLOGICAL DESCRIPTIONS of SIDEWALL CORES

from FLOUNDER-4

by. David Taylor.....1-2-73

Page 2 of 2 pages

Sidewall Core No.	Depth	Description of untreated core	Description of residue
38	6410	Light grey silty sand	f-m ang. clear qtz
37	6460	medium grey mudstone + 2mm lamination of	f-m ang. qtz., abundant glauconite pellets, rare mica, <u>Bathysiphon</u>
36	6510	Laminated light grey siltstone and brown sandstone	f ang qtz., + rare pyrite & mica
35	6560	Dark grey mudstone	f ang qtz., + rare disseminated & disc pyrite, rare glauconite. <u>Bathysiphon</u>
34	6610	" " " " + pyrite & visible <u>Bathysiphon</u>	f ang qtz., + disseminated & disc pyrite, rare glauconite. <u>Bathysiphon</u>
33	6660	As above + mica	as above + abundant mica
32	6705	As above but no mica	as above but no mica
31	6748	As above	as above
30	6774	Dark grey mudstone with single lamination of white sand. Visible <u>Bathysiphon</u>	F. ang. qtz. <u>Bathysiphon</u>
29	6806	Laminations of dark grey mudstone & brown fine sandstone	f-m ang qtz.; mudstone fragments with carbonaceous matter <u>Bathysiphon</u>
28	6836	as above + pyrite	f-m ang qtz., abundant disseminated pyrite
27	6914	Laminated brown sandy siltstone	f-m ang qtz., disseminated pyrite, mica, rare glauconite.

N.B. The characteristic constituents of the Flounder Formation are pyrite discs (.3mm diameter, probably of biogenic origin and probably 3 distinct "species") and Bathysiphon angleseaensis - a tubular siliceous foraminifera of up to 10mm long and visible with naked eye.

1 of 3

WELL ... LINDER-4
 GEOLOGIST J. Black
 SERVICE COMPANY Schlumberger
 BASIC ESSO AUSTRALIA LTD. SIDEWALL CORE DESCRIPTIONS
 PAGE 1 OF 3
 ATT 60 REC 56
 DATE 25/1/73
 SWC RUN NO 1

NO. 1a	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						
													% RK	DISTR 14	INTEN 15	COLOR 16	INTEN 17	COLOR 18	QUAN 19	COLOR 20			C ₁	C ₂	C ₃	C ₄	C ₅		
1	8560	1"	SS	Qtzs,carb.	-	Wh.	Fri.	vf/m	mod.	sr	+15%	-	-	-	-	-	-	-	-	-	-	wtr.	300-175-100-100						
2	8498	3/4	Sh	F. micac.	-	Dk.Gr	Frm	-	-	-													-200-						
3	8422	5/8	Sltst	Sdy.	-	Gr.Wh	Frm	vf	-	-	30%	-	-	-	-	-	-	-	-	-	-								
4	8330	7/8	Ss.	Qtzs.	Sl.	Wh.	Fri	f/c	P	sr/sa	-	tan	100	ev.	Bri.	Lt.Yel	Bri.	Lt.yel	Hvy.	Lt.Brn	0	Oil	600-200-200-700						
5	8314	3/4	Ss	Qtzs.	-	Wh.	V.Fri	m/c	P	sr	-	lt.tan	100	ev.	Bri.	Lt.Yel	Bri.	Lt.yel	Hvy	Lt.Brn	0	Oil	2500-9000-3M-9M						
6	8304	7/8	SS/cg	Qtzs.	-	Wh.	Uncon	vc/pbl	P	sr/r	-	tan	100	ev.	Bri.	Lt.Yel	Bri.	Lt.yel	M.	Lt.Brn	0	Oil	4.6M-12M-3.5M-						
7	8294	7/8	SS	Qtzs.	-	Wh.	Uncon	c/vc	P	sr	-	tan	100	ev.	Dul	Yel.	Dul.	Yel.	M.	Clear	GC	G/O	2.1M-2.5M-1M-3.2M-						
8	8274	3/4	SS	Qtzs.	-	Wh.	Uncon	m/pbl	P	sr/sa	-	tan	100	ev.	Dul	Yel.	Dul.	Yel.	Lt.	Clear	GC	G/O	9M-2M-1.5M-6M-						
9	8257	3/4	SS	Qtzs.	-	Wh.	Uncon	m/pbl	P	sr/sa	-	tan	100	ev.	Dul	Yel.	Dul.	Yel.	Lt.	Clear	GC	G/O	600-600-300-1.6M-						
10	8252	3/4	Sltst	Sandy	-	Gr.	Frm	-	-	-	+15%	-	-	-	-	-	-	-	-	-	-	-	-	600-400-100-500					
11	8248	-	-	NO RECOVERY																									
12	8187	7/8	SS	V. glauc.	V	LtBrn	Frm	vf	mod.	sr	+20%	-	15	Spty	Fnt	DkYel	Dul	Dk.Yel	Tr.	Dk.Yel	-	-	-	300-2.8M-2.4M-8M-					
13	8096	1/2	Sh	Silty,F.mica	-	dk.gr.	Frm	-	-	-																			
14	7984	7/8	Sh	Sli.silty.	-	dk.gr.	Frm	-	-	-																			
15	7972	-	-	NO RECOVERY																									
16	7940	-	-	NO RECOVERY																									
17	7920	5/8	Sltst	Sandy	Sl.	Gr.	M.Frm	vf	-	-	25	-	100	ev.	Dul.	Org. Yel.	Min.	-	-	-									
18	7778	3/4	Sh	sli. carb.	-	DkGr	M.Frm	-	-	-																			
19	7611	1"	Sh	f. mica	-	Dk Gr	M.Frm	-	-	-																			
20	7501	1 1/2	Coal	Shaly	-	Blk.	Frm	-	-	-																			
21	7408	1"	Sh	Hrz Str. Sltts.	-	Gr.	Frm	-	-	-																			
22	7236	1"	Sst.	Qtz. Silty	-	Gr/Wh	Frm	vf/m	P	sa	20	-	-	-	-	-	-	-	-	-	-	Wtr.							
23	7113	1"	Sst.	Silty,Mica	Sl.	Gr/Wh	Fri	vf/c	P	sa/sr	+15%	-	100	ev.	Dul.	Gold	Min.	-	-	-	-	Wtr.	300-200-100-200						
24	7104	1 1/2"	Sh	F. micac.	-	Dk.Gr	-	-	-	-																			
25	7008	1"	Sst.	Qtz.Carb.	-	Brn Wh	Fri	vf/c	P	sa	+15%	brn.	100	ev.	Dul.	Yel.	Bri.	Yel.	Tr.	Clear	GC	G/C	28M-300-100-500						
26	6989	-	-	NO RECOVERY																									
27	6914	1 1/2	Sh.	Foss.	-	Brn/Gr	Frm	-	-	-																			
28	6836	1 1/2	Sh	Pyr.	M	Brn.	Frm.	-	-	-																			

2.3 CORE / WELL LOG ANALYSIS REPORT

WELL LOG ANALYSIS REPORT

TO WELL FILE

c.c. B.R. GRIFFITHS(2)
W.F. Threlfall

INTERPRETATIVE

OPERATOR ESSO AUSTRALIA

WELL FLOUNDER-4

DATE 25th JAN, 1973.

STATE VICTORIA

ELEV. 32'KB

DEPTH INTERVAL	POROSITY ESTIMATE	WATER SAT. ESTIMATE	REMARKS
6408-10 (2)	17-18.3	85.92	Shaley sand, possible show
6418-25 (5)	16.2-18.3	78-82	" " " "
6426-28 (2)	18.8-20	91-100	" " " "
6441-45 (4)	17.6-18.8	87-91	" " " "
6786-88 (2)	23-24.3	73-77	" " " "
6799-6803 (4)	23-24.3	78-83	" " " "
6819-21 (2)	19.5-20.6	93-100	" " " "
6841-58 (17)	25.5-27.3	100	Clean, water sand
8184-88 (4)	12.7-14.5	37-43	Shaley sand, probable show
8188-89 (1)	11-12.2	-	Too thin for resolution
8254-58 (4)	21.3 - 22.5	7	Gas Productive
8258-65 (7)	24.9-26.1	6	" " " "
8259-69 (4)	27.3-28.5	3-4	" " " "
8269-73 (4)	20.6-21.8	4-5	" " " "
8273-77 (4)	24.3-25.5	4-5	" " " "
8277-87 (10)	21.3-22.5	4-5	" " " "
8287-93 (6)	24.9-26.1	4	" " " "
8293-96 (3)	14-15.5	7-8	" " " "
8296-8301 (5)	25.5-26.7	6	" " " "
8301-06 (5)	21.8-23.7	6-7	Gas and/or oil productive
8306-11 (5)	25.5-26.7	7-8	" " " " " "
8311-19 (8)	24.3-25.5	14	" " " " " "
8319-24 (5)	23-24.3	18-19	Oil productive
8324-31 (7)	22.5-23.7	29-31*	" " " " " "
8335-40 (5)	21.3-22.5	44-47 *	" " " " " "
8340-42 (2)	11-12.2		To thin for resolution
8342-45 (3)	20-21.3	62-66*	Effectiveness questionable
8345-47 (2)	17-18.3	77-83*	" " " "
8347-50 (3)	19.5-21.3	70-77*	" " " "
8360-63 (3)	14-15.2	90-100	Water productive
8364-77 (3)	19.5-20.6	83-89 *	" " " "
8372-85 (3)	23.24.3	100 *	" " " "
8387-89 (2)	17.6-18.8	100 *	" " " "
8393-96 (3)	17.6-18.8	84.90	" " " "
8396-8403 (7)	25.5-27.3	100	" " " "
IES DEPTHS			*Silty sands not noted in remarks

TESTS:

FORMATION:

LATROBE

LOGS:

ISF. BHC.
CNL-FDC-GR.

COMMENTS:

All sands from the top of the Latrobe to the first massive clean water sand are listed. Water sands are then skipped until the first recognized hydrocarbon show. A gain all sands are listed until no show is recognized.

R. B. Stang

3.0 PALYNOLOGY OF FLOUNDER-4
GIPPSLAND BASIN

THE PALYNOLOGY OF
FLOUNDER-4,
GIPPSLAND BASIN

by

A.D. Partridge

Palaeontological Report: 1973/3

March 1973

SUMMARY

The following spore-pollen zones are recognised in Flounder-4.

<u>Zone</u>	<u>Depth in Feet & Rating</u>		<u>Age</u>
	<u>Highest Data</u>	<u>Lowest Data</u>	
<u>Proteacidites tuberculatus</u>	6335 (2)	6400 (0)	Oligocene-Miocene
----- UNCONFORMITY -----			
<u>Proteacidites asperopolus</u>	6460 (1)	6550 (3)	Early Eocene
Upper <u>Malvacipollis diversus</u>	6560 (0)	6748 (0)	Early Eocene
----- DISCONFORMITY -----			
Lower <u>Malvacipollis diversus</u>	6774 (1)	6914 (0)	Early Eocene
----- UNCONFORMITY -----			
<u>Lygistepollenites balmei</u>	7008 (1)	8096 (2)	Paleocene
<u>Tricolpites longus</u>	8232 (1)	8560 (1)	Paleocene

The following two Wetzeliella dinoflagellate zones are also present in the Flounder Formation in Flounder-4.

<u>Zone</u>	<u>Highest Data</u>	<u>Lowest Data</u>
<u>Wetzeliella thompsonae</u> Zone	6450 (3)	6550 (3)
<u>Wetzeliella brachycysta</u> Zone	6560 (1)	6748 (0)

These two dinoflagellate zones represent finer subdivisions of the P. asperopolus and Upper M. diversus Zones.

SIGNIFICANT POINTS

1. Age of greensand

The sidewall cores between 6360 and 6400 feet from a greensand unit at the top of the Latrobe Group contain both spore-pollen and dinoflagellates diagnostic of the P. tuberculatus Zone, and are equivalent in age to the foraminiferal zone J1. The palynology assemblages also contain, reworked spore-pollen and dinoflagellates from the L. balmei Zone and from the immediately underlying Flounder Formation as well as reworked Middle Eocene (Lower N. asperus Zone A subdivision) dinoflagellates. Because these latter Middle Eocene dinoflagellates are characteristic of the greensands of the Gurnard Formation it is suggested that the greensand in Flounder-4 was originally deposited in the Middle Eocene and later reworked during the early Oligocene.

2. Wetzeliella Zones

Flounder-4 has only the middle two of the four Wetzeliella zones identified in the adjacent Flounder-3 well. The two zones missing are the W. edwardsii Zone the youngest zone recognised in Flounder-3 and the W. parva Zone the oldest zone recognised. The W. edwardsii Zone shows a marked thinning from west to east from Flounder-1 to Flounder-3, so it is not surprising that it is absent in Flounder-4. The zone could possibly be present in the 40 feet sampling gap at the top of the Flounder Formation, between 6410 and 6450 feet, but this is considered unlikely as the zone species has not been observed in any of the cuttings examined. The W. parva Zone is absent because of a disconformity between the Upper M. diversus and Lower M. diversus Zones in Flounder-4.

3. Lower M. diversus Zone in the Flounder Formation.

Flounder-4 contains the oldest sediments which fall within the concept of the Flounder Formation. These sediments are referred to the Lower M. diversus Zone (6774 - 6914 feet) and are represented by similar lithologies and environments to the younger parts of the Flounder Formation belonging to the Upper M. diversus and P. asperopolus Zones. Dinoflagellates are found in all samples in the Lower M. diversus Zone in similar abundance to the younger parts of formation, and foraminifera were found in the sidewall cores at 6774 and 6806 feet. It is not possible to determine whether this Lower M. diversus section is from the upper or lower part of the zone. However its general similarity to the Lower M. diversus section in Tuna-3 raises the question of whether in that well the Lower M. diversus section is also part of the Flounder Formation.

4. Unconformities

The following unconformities are recognised in Flounder-4:

- a) At the base of the Tuna-Flounder Channel between the Lower M. diversus Zone and the 'Lower' subdivision of the L. balmei Zone representing the loss of part of the Lower M. diversus Zone and the 'Upper' L. balmei Zone.
- b) Within the Flounder Formation between the Lower M. diversus and Upper M. diversus Zones, between 6748 and 6774 feet, with the loss the lower part of the Upper M. diversus Zone.
- c) At the top of the Flounder Formation between 6400 and 6460 feet between Early Oligocene and Early Eocene.
- d) Between the foraminifera zone F and J1 at 6335 and 6345 feet respectively representing the loss of most of the Oligocene and early Miocene.

5. Reworking.

Aside from reworking found within the Early Oligocene greensand and already discussed, reworked Permian spore-pollen are present sporadically in the Flounder Formation and younger marine section and Early Cretaceous spores are present through the L. balmei and T. longus Zones.

COMMENTS ON ZONES

The top of the T. longus Zone (8232-8560 feet) is identified by the extinction of the species Proteacidites otwayensis, P. gemmatus, P. reticuloconcavus, Tricolpites longus, T. waiparaensis, T. confessus and Tricolporites lilliei which occur in the highest two samples referred to this zone. Samples from near the base of the overlying L. balmei Zone are very poorly preserved so it was not possible to find any of the species whose first appearance in the section can be taken as diagnostic of the L. balmei Zone. These latter samples are referred to the L. balmei Zone on the negative evidence of the lack of T. longus Zone indicator species. The L. balmei Zone also, is represented only by the 'Lower' subdivision.

The samples from the Flounder Formation, from the Lower M. diversus to P. asperopolus Zones all contain good spore-pollen and dinoflagellate assemblages. The only exception is that the zone fossil Wetzeliella thompsonae is only found in cuttings from 6450 - 60 feet and 6550 - 60 feet and not in the sidewall cores in this interval.

The P. tuberculatus Zone is identified principally by the presence of the spore Cyatheacidites annulatus. The highest sample from this zone lies within the foraminiferal zonule F which is usually referred to the T. bellus spore-pollen zone. However in this well no spore-pollen species were found that are diagnostic of the T. bellus Zone.

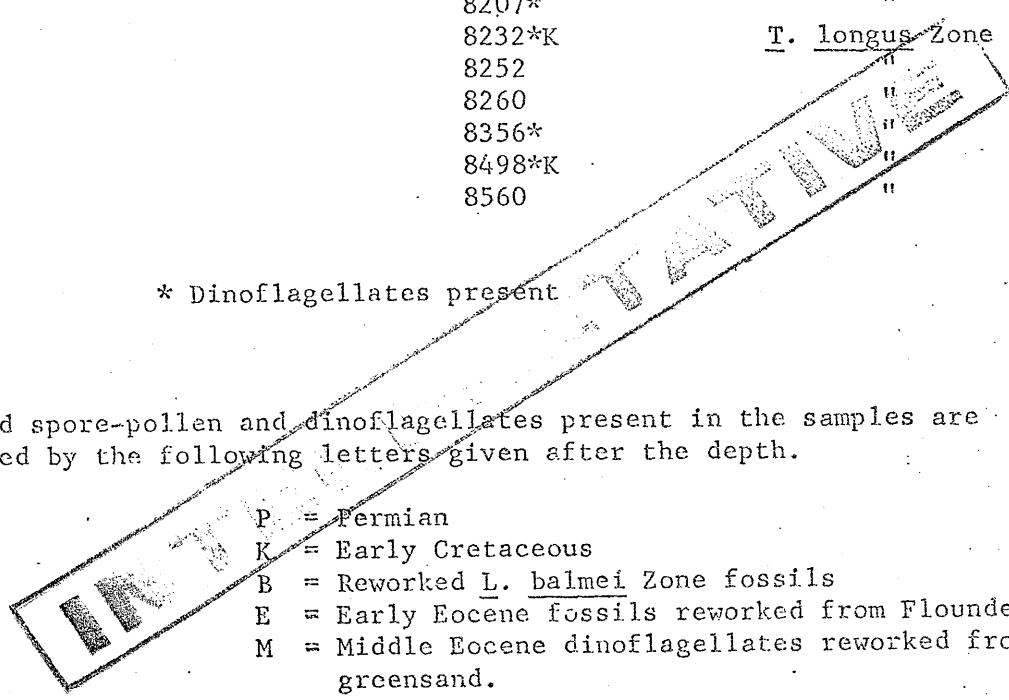
SAMPLE	DEPTH IN FEET	ZONE
Cuttings	6140-60*	<u>T. bellus</u> Zone
"	6240-60*	"
SWC 43	6335* P,B	<u>P. tuberculatus</u> Zone
Cuttings	6340-60*	"
SWC 42	6345*	"
SWC 41	6360* E,M	"
SWC 40	6386* B,E,M	"
SWC 39	6400* P,B,E	"
SWC 38	6410	Indeterminant
Cuttings	6450-60*	<u>P. asperopolus</u> / <u>W. thompsonae</u> Zones
SWC 37	6460* P,B	<u>P. asperopolus</u> Zone
SWC 36	6510*	"
Cuttings	6550-60*	<u>P. asperopolus</u> / <u>W. thompsonae</u> Zones
SWC 35	6560*	Upper <u>M. diversus</u> / <u>W. brachycysta</u> Zones
SWC 34	6610*	Upper <u>M. diversus</u> Zone
SWC 33	6660*	"
Cuttings	6660-70*	"
SWC 32	6705*	"
SWC 31	6748*	Upper <u>M. diversus</u> / <u>W. brachycysta</u> Zones
Cuttings	6750-60*	"

SAMPLE	DEPTH IN FEET	ZONE
SWC 30	6774*	Lower <u>M. diversus</u> Zone
SWC 29	6806* K,B	"
SWC 28	6836* B	"
Cuttings	6870-90*	Indeterminant
SWC 27	6914*B	Lower <u>M. diversus</u> Zone
Cuttings	6960-70	Indeterminant
SWC 25	7008* K	<u>L. balmei</u> Zone
Cuttings	7010-20	"
SWC 24	7104*	"
SWC 22	7236	Barren
Cuttings (coal)	7360-70	<u>L. balmei</u> Zone
SWC 21	7408*K	"
SWC 20 (coal)	7501	"
SWC 19	7611*	"
Cuttings	7660-70	"
SWC 18	7778*	"
SWC 14	7984	"
SWC 13	8096*K?	"
SWC 12	8187*	Indeterminant
Core-1	8207*	"
Core-1	8232*K	<u>T. longus</u> Zone
SWC 10	8252	"
Core-1	8260	"
Core-3	8356*	"
SWC 2	8498*K	"
SWC1	8560	"

* Dinoflagellates present

Reworked spore-pollen and dinoflagellates present in the samples are indicated by the following letters given after the depth.

- P = Permian
- K = Early Cretaceous
- B = Reworked L. balmei Zone fossils
- E = Early Eocene fossils reworked from Flounder Formation
- M = Middle Eocene dinoflagellates reworked from Eocene greensand.



BASIN

GIPPSLAND

DATE

22nd FEBRUARY, 1973

WELL NAME

FLOUNDER-4

ELEVATION

+ 32 feet.

AGE	PALYNOLOGIC ZONES	HIGHEST DATE				LOWEST DATA				
		Preferred Depth	Rtg.	Alternate Depth	Rtg.	Preferred Depth	Rtg.	Alternate Depth	Rtg.	2 way time
OLIGO-MIOC.	<u>T. bellus</u>									
	<u>P. tuberculatus</u>	6335	2			6400	0			
Eocene	<u>U. N. asperus</u>									
	<u>L. N. asperus</u>									
	<u>P. asperopolus</u>	6460	1			6550	3	6510	1	
	<u>U. M. diversus</u>	6560	0			6748	0			
	<u>L. M. diversus</u>	6774	1			6914	0			
PALEO-CENE	<u>L. balmei</u>	7008	1			8096	2	7611	1	
	<u>T. longus</u>	8232	1			8560	1			
LATE CRETACEOUS	<u>T. lilliei</u>									
	<u>N. senectus</u>									
	<u>C. trip./T.pach.</u>									
	<u>C. distocarin.</u>									
EARLY CRETACEOUS	<u>T. pannosus</u>									
	<u>C. paradoxa</u>									
	<u>C. striatus</u>									
	<u>U. C. hughesii</u>									
	<u>L. C. hughesii</u>									
	<u>C. stylosus</u>									
Pre-Cretaceous										

COMMENTS: Wetzeliella thompsonae Zone Top 6450 (3) - Bottom 6550 (3)

Wetzeliella brachycysta Zone Top 6560 (0) - Bottom 6748 (0)

The W. edwardsi and W. parva Zones are not present in this well!

- 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 spores 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.

DATE RECORDED BY:

A.D. PARTRIDGE

DATE

22 February, 1973

DATA REVISED BY:

DATE

BASIN GIPPSLAND

BY David J. Taylor

WELL NAME FLOUNDER-4

DATE 5/2/73 ELEV. +32

Foram Zonules :

		Highest Data	Quality	2 Way Time	Lowest Data	Quality	2 Way Time
MIOCENE	A	Alternate					
	B	Alternate					
	C	Alternate					
	D	3258	1		5100	1	
	D ₁	Alternate					
	D	5500	2		5774	1	
	D ₂	Alternate	5774	1			
	E	6150	1		6200	1	
	E	Alternate					
	F	6230	0		6335	1	
	F	Alternate					
G	Alternate						
H	Alternate						
H ₁	Alternate						
H ₂	Alternate						
OLIGOCENE	I	Alternate					
	I ₁	Alternate					
	I ₂	Alternate					
	J	6345	1		6345	1	
J ₁	Alternate						
J ₂	Alternate						
ECC.	K	Alternate					
	Pre K *	6610	1		6748	1	

COMMENTS: * Equals Lower Eocene determined on planktonic fauna, on benthonic foraminifera the Lower Eocene interval is probably between 6460 - 6806 feet.

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 _____

BASIN

GIPPSLAND

DATE

WELL NAME

FLOUNDER - 4

ELEVATION

+32 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
IG-IO. EOCENE	<u>P. tuberculatus</u>	6335	2				6400	0			
	<u>U. N. asperus</u>										
	<u>M. N. asperus</u>										
	<u>L. N. asperus</u>										
	<u>P. asperopolus</u>	6460	1				6550	3	6510	1	
	<u>U. M. diversus</u>	6560	0				6748	0			
	<u>M. M. diversus</u>										
	<u>L. M. diversus</u>	6774	1				6914	0			
PALEOCENE	<u>U. L. balmei</u>	7008	1				7778	1			
	<u>L. L. balmei</u>	7984	2				8096	2			
	<u>T. longus</u>	8232	1				8560	1			
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: DINOFLAGELLATE ZONES:
Wetz. thompsonae Zone 6450(3) - 6550(3)
Wetz. ornata Zone 6560(0) - 6748(0)
Note: in comparison to Flounder 1,2 & 3 the W. edwardsii & W. waiparaensis Zones are absent in this section !!
Wetz. homomorpha Zone 7008(1) - 7778(0)

- 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: ADP DATE Feb. 1973.

DATA REVISED BY: ADP DATE Jan. 1975.

3.1 FORAMINIFERAL DISTRIBUTION

FLOUNDER - 4, FORAMINIFERAL DISTRIBUTION

by D.J. Taylor

12 February, 1973

SUMMARY OF BIOSTRATIGRAPHY

		<u>Top</u>	<u>Bottom</u>
Upper	ZONE D-1	3258	5100
Miocene	ZONE D-2	?5500	5774
	ZONE E	6150	6200
Lower			
Miocene	ZONE F	6230	6335
Oligocene	ZONE J-1	6345	6345
LowerEocene		6610	6748

BASE OF FORAMINIFERAL SEQUENCE = 6806

DISTRIBUTION SHEETS

Sheet - 1 - Distribution of planktonic foraminifera and biostratigraphy.

Sheets - 2 & 3-Distribution of benthonic foraminifera.

Sheet - 4 - Statistical & environmental log.

KEY TO DISTRIBUTION SHEETS

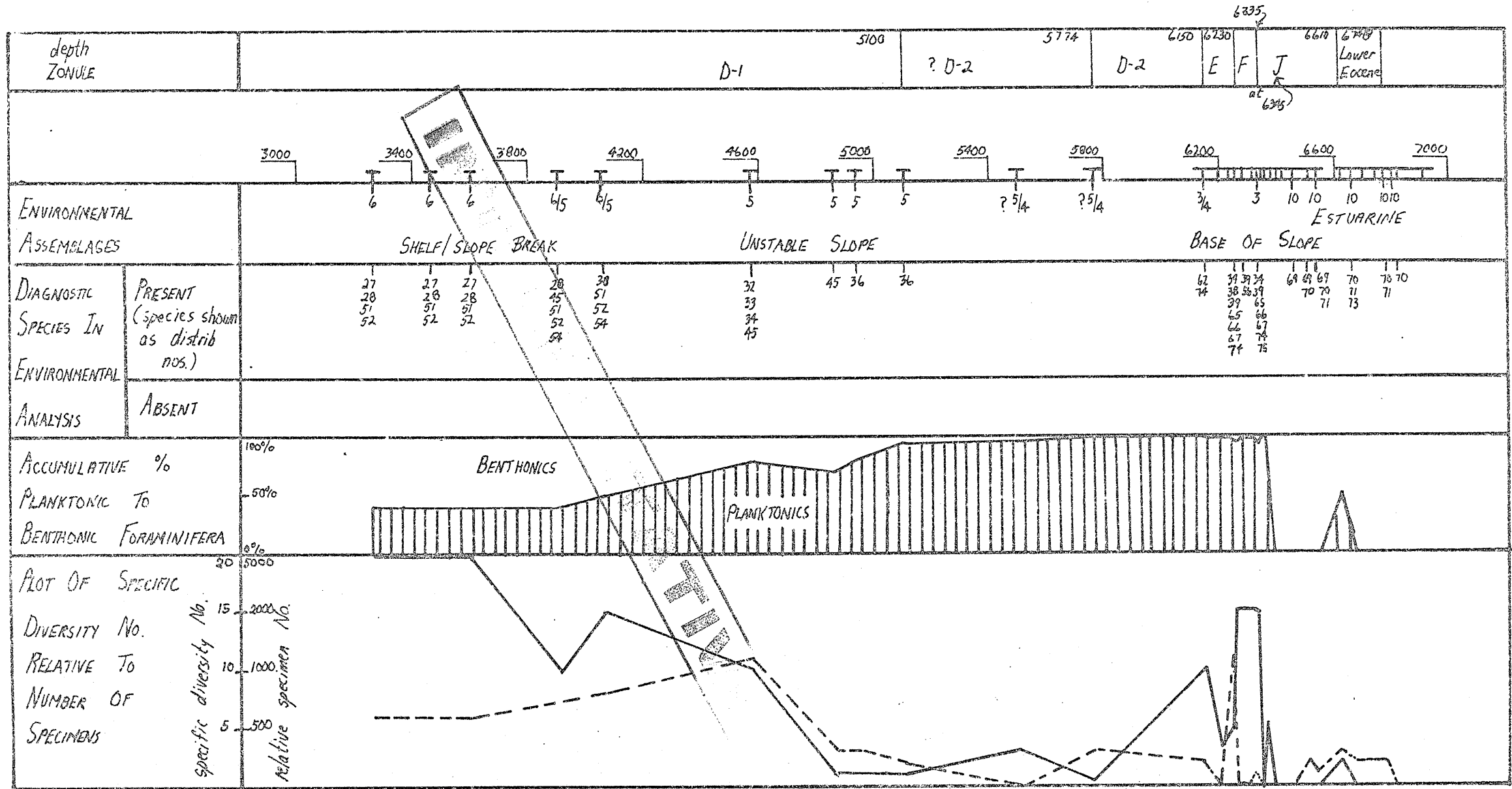
T = side wall cores at 3258; 3450; 3616; 3906; 4068; 4586;
4870; 4966; 5100; 5500; 5774; 6150; 6200; 6230; 6260;
6290; 6320; 6335; 6345; 6360 (N.F.F.); 6386; (N.F.F.);
6400; 6410; (N.F.F.); 6460; 6510; 6560; 6610; 6660;
6705; 6748; 6774; 6806; 6836; (N.F.F.); 6914 (N.F.F.)

N.F.F. = no foraminifera found.

Not rotary cutting samples or conventional cores were examined.

• = 1 - 20 specimens

! = over 20 specimens



specimen number

specific diversity

4.0 F.I.T. DATA.

BASIC

GEOLOGIST J. Black

FIT # 1 @ 8338 FEET (FDC Log Depth)

DATE: 24th January, 1973.

DATA: Rmf .45 @ 70 °F Equiv. Cl⁻ 8400 ppm (Resistivity)

Cl⁻ 5000 ppm NO₃⁼ 140 ppm (Titration)

) SAMPLE TAKEN AT
) END OF LAST
) CIRCULATION.

MAIN CHAMBER

<u>Recovered</u>	<u>1</u>	cft	GAS
(MAIN CHAMBER)	<u>scum</u>	icc	OIL
	<u>8,200</u>	cc	WATER Filtrate
	<u>0</u>	cc	MUD
	<u>500</u>	cc	SAND

Properties: GAS C₁ C₂ C₃ C₄ C₅ H₂S CO₂
(MAIN CHAMBER) (ppm) .31 M 70 M 80 M 35M 4600 0 0

OIL °API @ °F, Pour Point °F, GOR °F

WATER Cl⁻ 4500ppm NO₃⁼ 187 ppm (By Colorimeter)

Rrf .67 @ 70 °F, Equiv. Cl⁻ 5500ppm (By Resistivity)
Baroid 6,540

Pressures: Schlumberger Agnew (Dual Ameradas)
(MAIN CHAMBER) Initial Shut-In - 0 Gauge 1,800 Gauge 8,500
Sampling 1700 psi 1446.5 psi, 1443.7 psi
Final Shut-in - psi psi, psi
Hydrostatic 4660 psi Init. 4499.6 psi, 4522.9 psi
Sampling Time 5 min Final 4481.2
Shut-in Time min

<u>Recovered</u>		cft	GAS
(SEGREGATOR)		cc	OIL
Number		cc	WATER
		cc	MUD
		cc	SAND

Properties: GAS C₁ C₂ C₃ C₄ C₅ H₂S
(SEGREGATOR) (ppm) M M M psi psi psi
OIL °API @ °F, Pour Point °F, GOR °F
WATER Cl⁻ ppm NO₃⁼ ppm (By Titration)
Rrf @ °F, Equiv. Cl⁻ ppm (By Resistivity)

Pressures: Schlumberger Agnew (Dual Ameradas)
(SEGREGATOR) Gauge psi Gauge psi
Sampling psi psi, psi
Final Shut-in psi psi, psi
Hydrostatic psi psi, psi
Sampling Time min
Shut-in Time min

Temperatures 181 °F, 181 °F (Max. Depth Tool Reached ft.)
(Max. Recording) (Time since circulation hours)

Remarks: Circulated on clean out trip till 7 am. 24 January

Tool open 0 - Fired charge. Flared 2 min. & lost seal. Recovered cup of, unconsolidated medium grained sand in flow lines.

SEGREGATOR

FIT RECORD

WELL: FLOUNDER-4

249

GEOLOGIST J. Black,

FIT 2 @ 8338 FEET (IES Log Depth)

DATE: 24th January, 1973

DATA: Rrf .452 @ 70 °F Equiv. Cl⁻ 8400 ppm (Resistivity)

Cl⁻ 5000 ppm NO₃ = 140 ppm (Titration)

) SAMPLE TAKEN AT
) END OF LAST
) CIRCULATION.

MAIN CHAMBER

Recovered (MAIN CHAMBER) cft GAS
cc OIL Misrun
cc WATER (Segregator seal valve not open)
cc MUD
cc SAND

Properties: (MAIN CHAMBER) GAS C₁ C₂ C₃ C₄ C₅ H₂S
(ppm) M M M

OIL °API @ °F, Pour Point °F, GOR

WATER Cl⁻ ppm NO₃ = ppm (By Titration)

Rrf @ °F, Equiv. Cl⁻ ppm (By Resistivity)

Pressures: (MAIN CHAMBER) Schlumberger Agnew (Dual Ameradas)
Gauge 8500 Gauge 11,800
Sampling psi 3660.4 psi, 3653.7 psi
Final Shut-in psi 3690.6 psi, 3678.2 psi
Hydrostatic psi Int. 4548.8 psi, 4493.4 psi
Sampling Time min Final 4510 4493.4
Shut-in Time min

Recovered (SEGREGATOR) cft GAS
Number cc OIL
cc WATER
cc MUD
cc SAND

Properties: (SEGREGATOR) GAS C₁ C₂ C₃ C₄ C₅ H₂S
(ppm) M M M

OIL °API @ °F, Pour Point °F, GOR

WATER Cl⁻ ppm NO₃ = ppm (By Titration)

Rrf @ °F, Equiv. Cl⁻ ppm (By Resistivity)

Pressures: (SEGREGATOR) Schlumberger Agnew (Dual Ameradas)
Gauge Gauge
Sampling psi psi, psi
Final Shut-in psi psi, psi
Hydrostatic psi psi, psi
Sampling Time min
Shut-in Time min

Temperatures 182 °F, 184 °F (Max. Depth Tool Reached 8677 ft.)
(Max. Recording) (Time since circulation 13 hours)

Remarks: Valve in chamber failed - misrun

Good seat. Action of top section was perfect. Valve was not opened during servicing of segregator.

SEGREGATOR

FIT 3 @ 8338 FEET (IES Log Depth)

DATE: 24th January, 1973.

DATA: Rmf .45 @ 70 °F Equiv. Cl⁻ 8400 ppm (Resistivity)

Cl⁻ 5000 ppm NO₃⁻ 140 ppm (Titration)

SAMPLE TAKEN AT
END OF LAST
CIRCULATION.

MAIN CHAMBER

Recovered	0	cft	GAS
(MAIN CHAMBER)	0	cc	OIL
	0	cc	WATER
	4000	cc	MUD
	100	cc	SAND

Properties: (MAIN CHAMBER)

GAS	C ₁	C ₂	C ₃	C ₄	C ₅	H ₂ S
(ppm)	M	M	M			

OIL °API @ °F, Pour Point °F, GOR _____

WATER Cl⁻ ppm NO₃⁻ ppm (By Titration)

Rrf @ °F, Equiv. Cl⁻ ppm (By Resistivity)

Pressures: (MAIN CHAMBER)

Schlumberger	Agnew (Dual Ameradas)
Gauge _____	Gauge _____
Sampling _____ psi	_____ psi , _____ psi
Final Shut-in _____ psi	_____ psi , _____ psi
Hydrostatic 4590 psi	_____ psi , _____ psi
Sampling Time 2.5 min	
Shut-in Time _____ min	

Recovered (SEGREGATOR)

_____	cft	GAS
Number _____	cc	OIL
_____	cc	WATER
_____	cc	MUD
_____	cc	SAND

Properties: (SEGREGATOR)

GAS	C ₁	C ₂	C ₃	C ₄	C ₅	H ₂ S
(ppm)	M	M	M			

OIL °API @ °F, Pour Point °F, GOR _____

WATER Cl⁻ ppm NO₃⁻ ppm (By Titration)

Rrf @ °F, Equiv. Cl⁻ ppm (By Resistivity)

Pressures: (SEGREGATOR)

Schlumberger	Agnew (Dual Ameradas)
Gauge _____	Gauge _____
Sampling _____ psi	_____ psi , _____ psi
Final Shut-in _____ psi	_____ psi , _____ psi
Hydrostatic _____ psi	_____ psi , _____ psi
Sampling Time _____ min	
Shut-in Time _____ min	

Temperatures 196 °F , 196 °F (Max. Depth Tool Reached 8550+ ft.)
(Max. Recording) (Time since circulation 16 hours)

Remarks: Lost seal - mud run, ports and flow line had about teacup of
unconsolidated sand from seal rupture.

SEGREGATOR

FIT RECORD

WELL: FLOUNDER-4

499

GEOLOGIST J. Black

FIT @ 8325 FEET (IES Log Depth)

DATE: 25th January, 1973.

DATA: Rmf .45 @ 70 °F Equiv. Cl⁻ 8400 ppm (Resistivity)

Cl⁻ 5000 ppm NO₃⁻ .140 ppm (Titration)

SAMPLE TAKEN AT
END OF LAST
CIRCULATION.

MAIN CHAMBER

Recovered	26.2	cft	GAS
(MAIN CHAMBER)	3100	cc	OIL
	14700	cc	WATER Filtrate 1400 Surface shut-in
	0	cc	MUD
	50	cc	SAND

Properties: (MAIN CHAMBER)

GAS	C ₁	C ₂	C ₃	C ₄	C ₅	H ₂ S	CO ₂
(ppm)	170 M	130 M	40 M	14M	1900	0	1400

OIL 43.6°API @ 64 °F, Pour Point 56 °F, GOR 1,200.

WATER Cl⁻ 4600 ppm NO₃⁻ 200 ppm (By Titration)

Rrf .560 @ 74 °F, Equiv. Cl⁻ 6050 ppm (By Resistivity)

Pressures: (MAIN CHAMBER)

Schlumberger	Agnew (Dual Ameradas)
Surface Shut-In	Gauge 11,800 Gauge 8,500
Sampling 900 psi	3592.5 psi, 3,587.0 psi
Final Shut-in 3440 psi	3623.1 psi, 3621.5 psi
Hydrostatic 4380 psi Init.	4493.4 psi, 4535.9 psi
Sampling Time 30.5 min	Final 4481.3 4492.8
Shut-in Time 1 min	

Recovered (SEGREGATOR)

Number #5	cc	OIL
MONEL	cc	WATER
	cc	MUD
	cc	SAND

Properties: (SEGREGATOR)

GAS	C ₁	C ₂	C ₃	C ₄	C ₅	H ₂ S
(ppm)	M	M	M			

OIL °API @ °F, Pour Point °F, GOR

WATER Cl⁻ ppm NO₃⁻ ppm (By Titration)

Rrf @ °F, Equiv. Cl⁻ ppm (By Resistivity)

Pressures: (SEGREGATOR)

Schlumberger	Agnew (Dual Ameradas)
	Gauge Gauge
Sampling psi	psi, psi
Final Shut-in psi	psi, psi
Hydrostatic psi	psi, psi
Sampling Time min	
Shut-in Time min	

Temperatures 198 °F, 198 °F (Max. Depth Tool Reached 8550 ft.)

(Max. Recording) (Time since circulation 19 hours)

Remarks: Charged choke size .030 to .020. Better test.

SEGREGATOR

FIT # 5 @ 8260 FEET (IES Log Depth)

DATE: 25th January, 1973.

DATA: Rmf .45 @ 70°F Equiv. Cl⁻ 8400 ppm (Resistivity)

Cl⁻ 5000 ppm NO₃⁻ .140 ppm (Titration)

SAMPLE TAKEN AT
END OF LAST
CIRCULATION.

MAIN CHAMBER

Recovered	162.7	cft	GAS	
(MAIN CHAMBER)	1850	cc	CONDENSATE	2,000 [#] psi
	0	cc	WATER	
	450	cc	MUD	
	50	cc	SAND	

Properties: (MAIN CHAMBER)

GAS	C ₁	C ₂	C ₃	C ₄	C ₅	H ₂ S	CO ₂
(ppm)	170 M	130 M	42 M	20M	4M	0	5,000+

OIL 60.4°API @ 54°F, Pour Point °F, GOR 14,000

WATER Cl⁻ ppm NO₃⁻ ppm (By Titration)

Rrf @ °F, Equiv. Cl⁻ ppm (By Resistivity)

Pressures: (MAIN CHAMBER)

Schlumberger	Agnew (Dual Ameradas)
Gauge 11,800	Gauge 8,500
Sampling 3500 psi	3653.7 psi, 3647.4 psi
Final Shut-in 3500 psi	3659.9 psi, 3651.7 psi
Hydrostatic 4290 psi	Init. 4468.9 psi, 4475.6 psi
Sampling Time est. 12 min	Final 4444.3 4432.5
Shut-in Time est. 3.5 min	

SEGREGATOR

Recovered (SEGREGATOR)

Number 24	cft	GAS
	cc	OIL
	cc	WATER
	cc	MUD
	cc	SAND

Properties: (SEGREGATOR)

GAS	C ₁	C ₂	C ₃	C ₄	C ₅	H ₂ S
(ppm)	M	M	M			

OIL °API @ °F, Pour Point °F, GOR

WATER Cl⁻ ppm NO₃⁻ ppm (By Titration)

Rrf @ °F, Equiv. Cl⁻ ppm (By Resistivity)

Pressures: (SEGREGATOR)

Schlumberger	Agnew (Dual Ameradas)
Gauge	Gauge
Sampling psi	psi, psi
Final Shut-in psi	psi, psi
Hydrostatic psi	psi, psi
Sampling Time min	
Shut-in Time min	

Temperatures 200 °F, 200 °F (Max. Depth Tool Reached 8500+ ft.)
(Max. Recording) (Time since circulation 22 hours)

Remarks: Condensate is light yellowish white

FIT RECORD

WELL: FLOUNDER-4

6 of 9

GEOLOGIST J. Black

FIT # 0 @ 8187 FEET (IES Log Depth)

DATE: 25th January, 1973.

D DATA: Rmf .45 @ 70 °F Equiv. Cl⁻ 8400 ppm (Resistivity)

Cl⁻ 5000 ppm NO₃⁻ 140 ppm (Titration)

) SAMPLE TAKEN AT
) END OF LAST
) CIRCULATION.

MAIN CHAMBER

Recovered	<u>.4</u>	cft	GAS	
(MAIN CHAMBER)	<u>0</u>	cc	OIL	
	<u>2,500</u>	cc	WATER Filtrate	Surface Chamber 0
	<u>0</u>	cc	MUD	
	<u>50</u>	cc	SAND	Very very fine grained quartz and silt

Properties:

(MAIN CHAMBER)	GAS	C ₁	C ₂	C ₃	C ₄	C ₅	H ₂ S
	(ppm)	<u> </u> M	<u> </u> M	<u> </u> M	<u> </u>	<u> </u>	<u> </u>

OIL °API @ °F, Pour Point °F, GOR .

WATER Cl⁻ 4300 ppm NO₃⁻ 106 ppm (By Titration)

Rrf .63 @ .70 °F, Equiv. Cl⁻ 5600 ppm (By Resistivity)

Pressures:

(MAIN CHAMBER)	<u>Schlumberger</u>	<u>Agnew (Dual Ameradas)</u>
		Gauge <u>11,800</u> Gauge <u>8,500</u>
	Sampling <u>0</u> psi	<u> </u> psi, <u> </u> psi
	Final Shut-in <u> </u> psi	<u>3617.0</u> psi, <u>3617.2</u> psi
	Hydrostatic <u> </u> psi Int.	<u>4407.5</u> psi, <u>4419.6</u> psi
	Sampling Time <u> </u> min	Fin. <u>4370.7</u> <u>4367.9</u>
	Shut-in Time <u> </u> min	

SEGREGATOR

Recovered	<u>Trace</u>	cft	GAS
(SEGREGATOR)	<u>0</u>	cc	OIL
Number	<u>350</u>	cc	WATER filtrate
	<u>0</u>	cc	MUD
	<u>0</u>	cc	SAND

Properties:

(SEGREGATOR)	GAS	C ₁	C ₂	C ₃	C ₄	C ₅	H ₂ S
	(ppm)	<u> </u> M	<u> </u> M	<u> </u> M	<u> </u>	<u> </u>	<u> </u>

OIL °API @ °F, Pour Point °F, GOR .

WATER Cl⁻ ppm NO₃⁻ ppm (By Titration)

Rrf @ °F, Equiv. Cl⁻ ppm (By Resistivity)

Pressures:

(SEGREGATOR)	<u>Schlumberger</u>	<u>Agnew (Dual Ameradas)</u>
		Gauge <u> </u> Gauge <u> </u>
	Sampling <u> </u> psi	<u> </u> psi, <u> </u> psi
	Final Shut-in <u> </u> psi	<u> </u> psi, <u> </u> psi
	Hydrostatic <u> </u> psi	<u> </u> psi, <u> </u> psi
	Sampling Time <u> </u> min	
	Shut-in Time <u> </u> min	

Temperatures 200 °F, 200 °F (Max. Depth Tool Reached 8500+ ft.)

(Max. Recording) (Time since circulation 26 hours)

Remarks: Tight test

FIT 7 @ 8290 FEET (IES Log Depth)

DATE: 25th January, 1973.

MUD DATA: Rmf .45 @ 70 °F Equiv. Cl⁻ 8400 ppm (Resistivity)

Cl⁻ 5000 ppm NO₃⁻ 140 ppm (Titration)

SAMPLE TAKEN AT
END OF LAST
CIRCULATION.

MAIN CHAMBER

Recovered	158.4	cft	GAS	
(MAIN CHAMBER)	2,300	cc	OIL Condensate	2,100 psi on Main Chamber
	0	cc	WATER	
	0	cc	MUD	
	50	cc	SAND	

Properties:

(MAIN CHAMBER)	GAS	C ₁	C ₂	C ₃	C ₄	C ₅	H ₂ S	CO ₂
	(ppm)	175 M	125 M	45 M	33M	5,500	0	5000+

OIL 61.5 °API @ 50 °F, Pour Point °F, GOR 11,000

WATER Cl⁻ ppm NO₃⁻ ppm (By Titration)

Rrf @ °F, Equiv. Cl⁻ ppm (By Resistivity)

Pressures:

(MAIN CHAMBER)	Schlumberger	Agnew (Dual Ameradas)
		Gauge 11,800 Gauge 8,500
	Sampling 3640 psi	3635.4 psi , 3630.1 psi
	Final Shut-in 3640 psi	3647.6 psi , 3647.4 psi
	Hydrostatic 4440 psi	Int. 4468.9 psi , 4475.6 psi
	Sampling Time 12 min	Fin. 4462.8 4462.7
	Shut-in Time 3.5 min	

Recovered (SEGREGATOR)

Number 16	cft	GAS
	cc	OIL
	cc	WATER
	cc	MUD
	cc	SAND

Properties: (SEGREGATOR)

GAS	C ₁	C ₂	C ₃	C ₄	C ₅	H ₂ S
(ppm)	M	M	M			

OIL °API @ °F, Pour Point °F, GOR

WATER Cl⁻ ppm NO₃⁻ ppm (By Titration)

Rrf @ °F, Equiv. Cl⁻ ppm (By Resistivity)

Pressures: (SEGREGATOR)

	Schlumberger	Agnew (Dual Ameradas)
		Gauge Gauge
	Sampling psi	psi , psi
	Final Shut-in psi	psi , psi
	Hydrostatic psi	psi , psi
	Sampling Time min	
	Shut-in Time min	

Temperatures 202 °F , 202 °F (Max. Depth Tool Reached 8550 ft.)

(Max. Recording) (Time since circulation 29 hours)

Remarks:

SEGREGATOR

FIT #8 @ 8306 FEET (IES Log Depth)

DATA: Rmf .45 @ 70 °F Equiv. Cl⁻ 8400 ppm (Resistivity)

Cl⁻ 5000 ppm NO₃⁻ 140 ppm (Titration)

) SAMPLE TAKEN AT
) END OF LAST
) CIRCULATION.

MAIN CHAMBER

Recovered	<u>107.6</u>	cft	GAS	
(MAIN CHAMBER)	<u>13,900</u>	cc	OIL	Oil set up as wax when exposed to air.
	<u>0</u>	cc	WATER	
	<u>0</u>	cc	MUD	Surface chamber 1900 psi
	<u>50</u>	cc	SAND	

Properties: (MAIN CHAMBER)

GAS	C ₁	C ₂	C ₃	C ₄	C ₅	H ₂ S
(ppm)	M	M	M			
OIL	<u>43.9</u> °API @ <u>71</u> °F, Pour Point <u>60</u> °F, GOR <u>1230</u> .					
WATER	Cl ⁻ _____ ppm NO ₃ ⁻ _____ ppm (By Titration)					
	Rrf _____ @ _____ °F, Equiv. Cl ⁻ _____ ppm (By Resistivity)					

Pressures: (MAIN CHAMBER)

<u>Schlumberger</u>	<u>Agnew (Dual Ameradas)</u>
	Gauge <u>11,800</u> Gauge <u>11,800</u>
Sampling <u>3360</u> psi	<u>3635.4</u> psi, <u>3638.8</u> psi
Final Shut-in <u>3480</u> psi	<u>3635.4</u> psi, <u>3656.0</u> psi
Hydrostatic <u>4340</u> psi	Init. <u>4462.8</u> psi, <u>4540.2</u> psi
Sampling Time <u>12</u> min	Fin. <u>4425.9</u> <u>4467.0</u>
Shut-in Time <u>2.5</u> min	

Recovered (SEGREGATOR)

Number <u>27</u>	_____	cft	GAS
	_____	cc	OIL
	_____	cc	WATER
	_____	cc	MUD
	_____	cc	SAND

Properties: (SEGREGATOR)

GAS	C ₁	C ₂	C ₃	C ₄	C ₅	H ₂ S
(ppm)	M	M	M			
OIL	_____ °API @ _____ °F, Pour Point _____ °F, GOR _____.					
WATER	Cl ⁻ _____ ppm NO ₃ ⁻ _____ ppm (By Titration)					
	Rrf _____ @ _____ °F, Equiv. Cl ⁻ _____ ppm (By Resistivity)					

Pressures: (SEGREGATOR)

<u>Schlumberger</u>	<u>Agnew (Dual Ameradas)</u>
	Gauge _____ Gauge _____
Sampling _____ psi	_____ psi, _____ psi
Final Shut-in _____ psi	_____ psi, _____ psi
Hydrostatic _____ psi	_____ psi, _____ psi
Sampling Time _____ min	
Shut-in Time _____ min	

Temperatures 202 °F, 202 °F (Max. Depth Tool Reached 8480+ ft.)
(Max. Recording) (Time since circulation 31 hours)

Remarks: Good test, used .020" choke

SEGREGATOR

FIT RECORD

WELL: FLOUNDER-4

9 of 9

GEOLOGIST J. Black

FIT #9 @ 8348 FEET (IES Log Depth)

DATE: 25th January, 1973.

DATA: Rrf .45 @ 70 °F. Equiv. Cl⁻ 8400 ppm (Resistivity)

Cl⁻ 5000 ppm NO₃⁻ 140 ppm (Titration)

) SAMPLE TAKEN AT
) END OF LAST
) CIRCULATION.

MAIN CHAMBER

Recovered 0 cft GAS
 (MAIN CHAMBER) 0 cc OIL Surface Chamber 0 psi
 0 cc WATER
 0 cc MUD
 0 cc SAND

Properties: GAS C₁ C₂ C₃ C₄ C₅ H₂S
 (MAIN CHAMBER) (ppm) M M M
 OIL °API @ °F, Pour Point °F, GOR
 WATER Cl⁻ ppm NO₃⁻ ppm (By Titration)
 Rrf @ °F, Equiv. Cl⁻ ppm (By Resistivity)

Pressures: Schlumberger Agnew (Dual Ameradas)
 (MAIN CHAMBER) Gauge 11,800 Gauge 8,500
 Sampling 0 psi 8653.7 psi, 3647.4 psi
 Final Shut-in - psi 3659.9 psi, 3664.7 psi
 Hydrostatic - psi Init. 4487.3 psi, 4553.1 psi
 Sampling Time - min Fin. 4438.2 4462.7
 Shut-in Time - min

Recovered (SEGREGATOR) _____ cft GAS
 Number _____ cc OIL
 _____ cc WATER
 _____ cc MUD
 _____ cc SAND

Properties: (SEGREGATOR) GAS C₁ C₂ C₃ C₄ C₅ H₂S
 (ppm) M M M
 OIL °API @ °F, Pour Point °F, GOR
 WATER Cl⁻ ppm NO₃⁻ ppm (By Titration)
 Rrf @ °F, Equiv. Cl⁻ ppm (By Resistivity)

Pressures: (SEGREGATOR) Schlumberger Agnew (Dual Ameradas)
 Gauge _____ Gauge _____
 Sampling _____ psi _____ psi, _____ psi
 Final Shut-in _____ psi _____ psi, _____ psi
 Hydrostatic _____ psi _____ psi, _____ psi
 Sampling Time _____ min
 Shut-in Time _____ min

Temperatures 202 °F, 202 °F (Max. Depth Tool Reached 8500+ ft.)
 (Max. Recording) (Time since circulation 34 hours)

SEGREGATOR

Remarks: Valve failed to open in segregator, no recovery. O ring failure
 Accidentally fired shot and took 2 min. to fill flow lines (approx. 200 cc.)
 indicates tight test.

BASICAGNEW-RO-WESTERN PTY. LTD.
532 ST. KILDA ROAD
MELBOURNE, VICTORIA 3004

1 of 6

ESSO AUSTRALIA LIMITED

FLOUNDER

FLOUNDER No. 4
JANUARY 24, 1973PURPOSE: OBTAIN SUBSURFACE PRESSURES WITH AMERADA GAUGES RUN IN
TANDEM WITH SCHLUMBERGER FORMATION INTERVAL TESTER.TOOLS USED: 1 AMERADA 11,800 PSI ELEMENT SERIAL No. 8282-N 12 HOUR CLOCK
1 AMERADA 8,500 PSI ELEMENT SERIAL No. 9391 12 HOUR CLOCKF.I.T. TEST No. 1 @ 8338' M.D.

<u>HOURS</u>	<u>PSIG</u> 8,500	<u>PSIG</u> 11,800	<u>REMARKS</u>
1551			RUN IN HOLE
1711	4522.9	4499.6	SET PACKER - INITIAL HYDROSTATIC
1715			OPEN TOOL
1716	42.1	42.0	
1717	42.1	42.0	
1718	42.1	42.0	
1719			FIRE SHAPE CHARGE
1720	1547.2	1523.9	
1721	1443.7	1446.5	
1722			LOST SEAL - SEAL SEGREGATOR
1723	4510.7	4481.2	FINAL HYDROSTATIC

F.I.T. TEST No. 2 @ 8338' M.D.

<u>HOURS</u>	<u>PSIG</u> 8,500	<u>PSIG</u> 11,800	<u>REMARKS</u>
1935			RUN IN HOLE
2010	4548.8	4493.4	SET PACKER - INITIAL HYDROSTATIC
2014			OPEN TOOL
2015		3047.7	
2016	3660.4	3647.6	
2017	3660.4	3653.7	
2018	3660.4	3653.7	
2019	3660.4	3653.7	
2020	3660.4	3653.7	
2021	3660.4	3653.7	
2022	3660.4	3653.7	
2023	3660.4	3653.7	
2024	3660.4	3653.7	
2025	3660.4	3653.7	
2026	3660.4	3653.7	
2027			OPEN SEGREGATOR
2028	3690.6	3684.3	
2029	3690.6	3678.2	CLOSE SEGREGATOR
2030			UNSEAT PACKER
	4510.0	4493.4	FINAL HYDROSTATIC

ESSO AUSTRALIA LIMITED

FLOUNDER

FLOUNDER No. 4
JANUARY 24-25, 1973

PURPOSE: OBTAIN SUBSURFACE PRESSURES WITH AMERADA GAUGES RUN IN
TANDEM WITH SCHLUMBERGER FORMATION INTERVAL TESTER.

TOOLS USED: 1 AMERADA 11,800 PSI ELEMENT SERIAL No. 8282 -N 12 HOUR CLOCK
1 AMERADA 8,500 PSI ELEMENT SERIAL No. 9391 12 HOUR CLOCK

F.I.T. TEST No. 3

NO RESULTS - MUD RUN

F.I.T. TEST No. 4 @ 8325' M.D.

<u>HOURS</u>	<u>PSIG</u> 8,500	<u>PSIG</u> 11,800	<u>REMARKS</u>
0027			RUN IN HOLE
0138	4535.9	4493.4	SET PACKER - INITIAL HYDROSTATIC
-0140			OPEN TOOL
0145	903.3	908.1	
0150	811.7	804.0	
0155	1292.7	1297.2	
0200	2497.7	2515.3	
0205	3336.3	3359.8	
0210	3543.8	3574.1	
0211	3587.0	3592.5	
0212			SHUT TOOL - OPEN SEGREGATOR
0213	1517.6	1493.2	
0214	2035.2	2068.7	
0215	2744.1	2778.4	
0216	3621.5	3623.1	
0217			SHUT SEGREGATOR
0218			UNSEAT PACKER
	4492.8	4487.3	FINAL HYDROSTATIC

ESSO AUSTRALIA LIMITED

FLOUNDER

FLOUNDER No. 4
 JANUARY 25, 1973

PURPOSE: OBTAIN SUBSURFACE PRESSURES WITH AMERADA GAUGES RUN IN TANDUM WITH SCHLUMBERGER FORMATION INTERVAL TESTER.

TOOLS USED: 1 AMERADA 11,800 PSI ELEMENT SERIAL No. 8282 -N 12 HOUR CLOCK
 1 AMERADA 8,500 PSI ELEMENT SERIAL No. 9391 12 HOUR CLOCK

F.I.T. TEST No. 5 @ 8260' M.D.

HOURS	PSIG 8,500	PSIG 11,800	REMARKS
0430			RUN IN HOLE
0548	4475.6	4468.9	SET PACKER - INITIAL HYDROSTATIC
0550	3215.3		OPEN TOOL
0552	3587.0	3072.2	
0554	3587.0	3598.6	
0556	3647.4	3598.6	
0558	3647.4	3647.6	
0600	3647.4	3653.7	
0602	3647.4	3653.7	
0604	3647.4	3653.7	
0606			CLOSE TOOL - OPEN SEGREGATOR
0608	3651.7	3659.9	
0609	3651.7	3659.9	
0610	3651.7	3659.9	SEAL SEGREGATOR
0612			UNSEAT PACKER
	4432.5	4444.3	FINAL HYDROSTATIC

F.I.T. TEST No. 6 @ 8187' M.D.

HOURS	PSIG 8,500	PSIG 11,800	REMARKS
0748			RUN IN HOLE
0841	4419.6	4407.5	SET PACKER - INITIAL HYDROSTATIC
0844			OPEN TOOL
0845			PRESSURE TOO SMALL TO MEASURE FIRE SHAPE CHARGE OPEN SEGREGATOR CLOSE SEGREGATOR
0846			
0847			
0852			
0857			
0859	1098.8	1119.6	
0901	3236.9	3231.3	
0903	3539.4	3531.3	BUILD UP IN FLOW LINE ONLY
0905	3604.2	3598.6	
0907	3617.2	3617.0	
	4367.9	4370.7	UNSEAT PACKER - FINAL HYDROSTATICS

AGNEW-OC-WESTERN PTY. LTD.
582 ST. KILDA ROAD
MELBOURNE, VICTORIA 3004

ESSO AUSTRALIA LIMITED

FLOUNDER

FLOUNDER No. 4
JANUARY 25, 1973

PURPOSE: OBTAIN SUBSURFACE PRESSURES WITH AMERADA GAUGES RUN IN
TANDEM WITH SCHLUMBERGER FORMATION INTERVAL TESTER.

TOOLS USED: 1 AMERADA 11,500 PSI ELEMENT SERIAL No. 8282 -N 12 HOUR CLOCK
1 AMERADA 8,500 PSI ELEMENT SERIAL No. 9391 12 HOUR CLOCK

F.I.T. TEST No. 7 @ 8290' M.D.

<u>HOURS</u>	<u>PSIG 8,500</u>	<u>PSIG 11,500</u>	<u>REMARKS</u>
1103			RUN IN HOLE
1148	4475.6	4468.9	SET PACKER - INITIAL HYDROSTATIC
1149			OPEN TOOL
1151	3608.5	3617.0	
1153	3608.5	3623.1	
1155	3630.1	3623.1	
1157	3630.1	3641.5	
1159	3630.1	3635.4	
1201	3630.1	3635.4	
1203	3630.1	3635.4	
1205			SEAL TOOL - OPEN SEGREGATOR
1206	3647.4	3635.4	
1207	3647.4	3647.6	
1208	3647.4	3647.6	SEAL SEGREGATOR
1209			UNSEAT PACKER
1210	4462.7	4462.8	FINAL HYDROSTATIC

ACNEW-GO-WESTERN PTY. LTD.
582 ST. KILDA ROAD
MELBOURNE, VICTORIA 3004

ESSO AUSTRALIA LIMITED

FLOUNDER

FLOUNDER No. 4
JANUARY 25, 1973

PURPOSE: OBTAIN SUBSURFACE PRESSURES WITH AMERADA GAUGES RUN IN TANDEM WITH SCHLUMBERGER FORMATION INTERVAL TESTER.

TOOLS USED: 1 AMERADA 11,300 PSI ELEMENT SERIAL No. 8282 -N 12 HOUR CLOCK
1 AMERADA 8,500 PSI ELEMENT SERIAL No. 9391 12 HOUR CLOCK

F.I.T. TEST No. 8 @ 8306' M.D.

<u>HOURS</u>	<u>PSIG 8,500</u>	<u>PSIG 11,800</u>	<u>REMARKS</u>
1348			RUN IN HOLE
1427	4540.2	4462.8	SET PACKER - INITIAL HYDROSTATIC
1429			OPEN TOOL
1431	3517.8	3506.8	
1433	3517.8	3512.9	
1435	3517.3	3598.6	
1437	3638.8	3635.4	
1439	3638.8	3635.4	
1441	3638.8	3635.4	
1443	3638.8	3635.4	
1444			OPEN SEGREGATOR
1446	3656.0	3635.4	
1448	3656.0	3635.4	
1450	3656.0	3635.4	
1451			UNSEAT PACKER
	4467.0	4425.9	FINAL HYDROSTATIC

AGNEW-GO-WESTERN PTY. LTD.
352 ST. KILCA ROAD
MELBOURNE, VICTORIA 3004

ESSO AUSTRALIA LIMITED

FLOUNDER

FLOUNDER No. 4
JANUARY 25, 1973

PURPOSE: OBTAIN SUBSURFACE PRESSURES WITH AMERADA GAUGES RUN IN TANDUM WITH SCHLUMBERGER FORMATION INTERVAL TESTER.

TOOLS USED: 1 AMERADA 11,800 PSI ELEMENT SERIAL No. 8282 -N 12 HOUR CLOCK
1 AMERADA 8,500 PSI ELEMENT SERIAL No. 9391 12 HOUR CLOCK

F.I.T. TEST No. 9 @ 8348' M.D.

<u>HOURS</u>	<u>PSIG</u> <u>8,500</u>	<u>PSIG</u> <u>11,800</u>	<u>REMARKS</u>
1625			RUN IN HOLE
1714	4553.1	4467.3	SET PACKER - INITIAL HYDROSTATIC
1716			OPEN TOOL
1713	3647.4	3653.7	
1720	3647.4	3653.7	
1722	3647.4	3653.7	
1724	3647.4	3653.7	
1726	3647.4	3653.7	
1727			OPEN SEGREGATOR FIRED SHAPED CHARGE
1728	3621.5	3653.7	
1729	3638.8	3659.9	
1730	3643.1	3659.9	<i>Build up in flowline</i>
1731	3651.7	3659.9	
1732	3664.7	3659.9	OPEN SEGREGATOR
1734	4462.7	4438.2	UNSEAT PACKER FINAL HYDROSTATIC

Note: Segregator was never opened.
Pressure of 3659 = MAX SIP
in flowline
A.P. WING

5.0 ENCLOSURES