T/17P Part 6

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T/17P Part 6

ANNUAL REPORT, YEAR 3,

T17P

OTWAY BASIN, TASMANIA

FOR

VAN DIEMENS LAND RESOURCES N.L.,

CONSORTIUM.

OCTOBER, 1983.

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INTRODUCTION

This report relates to work carried out by Van Diemen's Land Resources N.L. for the consortium which holds title to T17P for the third-annual period from 9 August, 1982 to 8 August, 1983.

GEOLOGICAL PROGRAMS

Van Diemen's Land Resources N.L. in association with Bass Strait Oil & Gas (Holdings) N.L. conducted a burial and thermal geohistory study in the central Otway Basin region and encompassing the Prawn -1 well in the permit T17P. Samples were collected and submitted to Keiraville Konsultants (Prof. A. Cook, Woolongong University) for vitrinite reflectance determination and Paltech Pty. Ltd. (Dr. I. Deighton) for geohistory studies. The vitrinite reflectance data for the Prawn -1 wells were included in the annual report for Year 2 for the permit. Paltech's report on the Burial and Thermal Geohistory Analysis in the Otway Basin is included in Appendix 1. While they studied ten wells witihin the Central Otway Basin only information for the wells included in Tasmanian waters are included. Their general conclusions based on all wells are presented.

The most important conclusion of their report is that the Belfast Mudstone is only transitionally mature. Although Paltech attributed this to "shallow depth of burial", Petrecon feels that the unit was deposited during or even after the first appearance of oceanic crust (according to the latest model of Cande et. al., 1982), their being insufficient heat for hydrocarbon generation since then. Their conclusion is relevant to the T17P permit. The stratigraphic table combined with the vitrinite reflectance data (Appendix 2) for the Prawn -1 well show that the Lower Upper Cretaceous and Lower Cretaceous Otway Group are within the oil generating window (the onset of which is taken as having a vitrinite reflectance value of 0.7), and that the best source rock, the Belfast Shale is immature. The Belfast Shale would need to be buried a further 500m to be mature.

GEOPHYSICAL PROGRAMS

During the last quarter of the second permit year 22.5 line kilometres of 48 fold seismic reflection data were gathered in the north of the permit, over a large structure which also encompasses the T20P and Vic P16 permits. A total of three hundred and three kilometres of data were collected over the prospect. Seismic processing and interpretation of this data were completed during the permit year. A copy of the final structure map at the near Base Sherbrook Group, and corresponding to the Waarre Sandstone Formation, accompanies this report.

VAN DIEMENS LAND RESOURCES N.L.

YEAR	EXPENDITURE required	actual	WORK PROGRAM
First	$60,000	$81,768	Preliminary Investigations
Second	$100,000	$47,461	Inital Seismic Program
Third	$45,000	$6,256	Interpretation and Seismic Reprocessing.
		$135,485	

T17P

Exploration Expenditure Permit Year 3

	Office Studies and Admin.	Geological Geophysical	Rental	Total
Quarter ended 8.11.82	1,500	2,464	100	4,064
Quarter ended 8.2.83	600	692		1,292
Quarter ended 8.5.83	300	175		475
Quarter ended 8.8.83	300	125		425
	$2,700	$3,456	$100	$6,256

WORK PROGRAM FOR YEAR 4.

The geological and geophysical data search and collection which was programmed for the first year has been accomplished. Interpretation and evaluation of data enabled the company to prepare a traverse grid for the initial marine seismic survey planned for the second year but not in the first year. A total of 137kms of 48 fold seismic data was collected between February 1 and February 2, 1981. These data were subsequently processed and interpreted during the second permit year and several leads defined. The most significant lead traversed neighbouring permits Vic P16 and T20P. In order to delineate this structure an extra 22.6kms of 48 fold data were gathered in T17P during the second permit year and were subsequently processed and interpreted in year 3. Geological evaluation, particularly of heat flow and geochemical data was completed in year 3.

During the first half of year 4 the permit is to be remapped with the view of delineating deep prospects. A farmout package outlining new and existing prospects and a geological evaluation will be distributed with the view of finding a farminee to participate in the programmed year 4 well.

REPORTS SUBMITTED DURING THE THIRD PERMIT YEAR

First Quarter Report, Year 3, T17P

Second Quarter Report, Year 3, T17P

Third Quarter Report, Year 3, T17P.

113009 APPENDIX 1

BURIAL AND THERMAL GEOHISTORY ANALYSIS OF

FLAXMANS - 1
MUSSEL - 1
NAUTILUS A-1
NERITA - 1
PECTEN 1-A
PORT CAMPBELL -1
PRAWN A-1
SHERBROOK - 1
SNAIL - 1
WHELK - 1

OTWAY BASIN
VICTORIA.

For: GENERAL GEOLOGICAL SERVICES

August 20th, 1982.

Paltech Report
1982/27

PALTECH PTY LTD
MARINE MICROPALEONTOLOGISTS
SYDNEY NEW SOUTH WALES
MIDLAND WESTERN AUSTRALIA

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1 Age vs Biostratigraphic Datums and Conventional Stages. Pages 7 & 8.

FIGURES

1 to 10 BURIAL AND THERMAL GEOHISTORY DIAGRAMS:-

Scale	1:10 000	1:30 000	
Location	(map roll or back pocket)		
	FIGURE		WELL
	1A	1B	FLAXMANS-1
	2A	2B	MUSSEL-1
	3A	3B	NAUTILUS A-1
	4A	4B	NERITA-1
	5A	5B	PECTEN 1-A
	6A	6B	PORT CAMPBELL-1
	7A	7B	PRAWN A-1
	8A	8B	SHERBROOK-1
	9A	9B	SNAIL-1
	10A	10B	WHELK-1

11 BASEMENT SUBSIDENCE CURVES after page 17

N.B. FIGURES 1A TO 10A MISSING

SECTION I - INTRODUCTION.

PREVIOUS WORK.

Useful syntheses of the geology and petroleum prospectivity of the Otway Basin have been presented by Denham & Brown (1976), and Wopfner et al (1971).

The primary conclusions have been that:-

- *The prime source in the Otway Basin for fluid hydrocarbons is the Belfast Mudstone.
- *Other stratigraphic units including the Otway Group are fair to good source rocks for gas.

AIMS OF THIS STUDY.

The aim of this study is to determine the timing of maturation of prospective source rocks in 10 wells in the Otway Basin:-

FLAXMANS - 1
MUSSEL - 1
NAUTILUS A-1
NERITA - 1
PECTEN 1-A
PORT CAMPBELL - 1
PRAWN A-1
SHERBROOK - 1
SNAIL - 1
WHELK - 1

BURY II

The computer program BURY II (copyright D.A. Falvey, 1982) constructs a burial history diagram by successively stripping off sedimentary layers according to age. It then calculates the thermal maturation of each sedimentary layer through time in terms of vitrinite reflectance.

A full discussion of the theory of burial and thermal geohistory analysis is contained in Falvey & Deighton (1982).

Using BURY II, geohistory diagrams have been constructed for 10 wells drilled in the Otway Basin (including the Torquay Embayment). Discussion of the factors used in the construction of the diagrams (Section II), a discussion of each well diagram (Section III) and general conclusions (Section IV) follow.

SECTION II - CONSTRUCTION OF BURIAL AND THERMAL GEOHISTORY DIAGRAMS FOR THE OTWAY BASIN.

DATA INPUT

The data required for BURY II is as follows:-

*Basement depth - BMT

*Bottom hole temperature - BHT

*Sea bottom temperature - SBT

*Depth-age-paleowater depth data for biostratigraphic or stratigraphic datums.

*Depth - Observed Thermal Maturation Indices.

A list of the input data for each well is given in Appendix 1. A brief discussion of the source and quality of this data follows.

Basement Depth - BMT

Apart from WHELK - 1 which terminated in basement, all other basement depths are interpreted from general basin configuration as discussed by Deighton et al (1976). In their view and those of later authors, the Otway Group depocentre is north of the Sherbrook Group depocentre, see Boeuf & Doust (1975).

Bottom Hole Temperature.

Where possible, the bottom hole temperature was estimated from the empirical observation method of Dowdle & Cobb (1975). In many cases this resulted in unrealistically low values of heatflow for which the regional average is about 1.3 to 1.4. BHT's were generally raised to bring the heatflow between these values except for WHELK - 1 (higher conductivity due to shallow basement)

Discussion later shows the basic similarities between the basement subsidence histories of all wells in this study. This coupled with the fact that most of the wells are from the one embayment in the Otway Basin, indicates that heatflows for the wells should be fairly similar.

Sea Bottom Temperature.

Sea bottom temperature has been assumed constant at 15°C.

Depth - Age - Paleowater Depth

This information has been gleaned from various sources. In general, foraminifera provide control in the marine sequence. These are supplemented by palynologic data for the Belfast Mudstone. Palynologic data provides the control for the terrestrial parts of the sequence.

The sources for all data are presented in Appendix 1.

The biostratigraphy and palynostratigraphic vs age correlations are shown as Table 1.

Depth - Observed Thermal Maturation Indices.

A comprehensive study of vitrinite reflectances in the wells was specifically undertaken by A.Cook (Keiraville Konsultants) to provide data for geohistory analysis.

These are supplemented by some data from Middleton and Falvey (in press).

No thermal alteration index measurements were available for this study.

MODELLING PROCEDURE.

Because of the lack of comparable information for all wells, porosity changes and thermal conductivities were generally modelled identically for all wells except NAUTILUS A-1 (lower conductivity for Oligocene marl deposition) and WHELK - 1 (higher conductivities due to shallow basement).

Thus the variables which can cause differential thermal maturation between wells were restricted to:-

*Basement subsidence

*Paleo-heatflow

*Basement Subsidence.

Basement subsidence is quantified by the depth-age-paleowater depth data for all levels intersected by drilling. For levels deeper than T.D., a subsidence pattern was modelled according to the subsidence pattern for Fergusons Hill No.1, based on palynologic data presented by Evans (1966). Fergusons Hill No.1 penetrated basement below Otway Group and should be a fair indication of Otway Group subsidence.

*Paleo-heatflow.

Basement subsidence patterns for all wells are essentially exponential from 85-90 m.y. to present (Figure 11). This suggests that breakup in the eastern part of the Otway Basin occurred at about 85-90 m.y. This is supported by a recent re-identification of sea-floor spreading anomalies between Australia and Antarctica by Cande & Mutter (1982). Cande & Mutter (l.c.) found that a very slow period of spreading may have occurred from about 85 m.y. (possibly as early as 110 m.y. in the Great Australian Bight Basin) to about 45 m.y. when rapid spreading to form the Southern Ocean commenced.

Accordingly, paleo-heatflows were modelled as increasing from slightly less than the present day value at 131 m.y. to a maximum (during 80 to about 50 m.y.) then declining to the present day value. Paleo-heatflow increments were generally modelled as higher to the southwest (closer to the spreading ocean) during the 80-50 m.y. period.

TABLE 1(a) - AGE (M.Y.) VERSUS BIOSTRATIGRAPHIC DATUMS AND CONVENTIONAL STAGES - PLEISTOCENE TO EOCENE.

Boundary Age (m.y.)	Stage	Foram Zone	Boundary Age (m.y.)*
5.2	PLIO/PLEISTOCENE	A	4.5
10.4	LATE MIOCENE	B	10.4
	MID MIOCENE	C	12.0
		D	14.5
15.0		E-1	15.0
	EARLY MIOCENE	E-2	15.5-16.0
		F	17.5-18.0
		G	22.5
24.0		H-1	24.0
	LATE OLIGOCENE	H-2	25.0
		I-1	28.0
		I-2	30.0
32.0			
	EARLY OLIGOCENE	J-1	34.5
37.0		J-2	37.0
	LATE EOCENE	K	

*This column used for Data Input

from Taylor (in prep).

TABLE 1(b) - AGE (M.Y.) VERSUS BIOSTRATIGRAPHIC DATUMS AND CONVENTIONAL STAGES - EOCENE TO CRETACEOUS.

Boundary Age (m.y.)	Stage	Forams Zones/ Datums	Boundary Age* (m.y.)	Spore/Pollen Zones	Dinoflagellate Zones
37.0	L. Eocene				
40.0		Base L	40.0		
	Middle Eocene		45.0	early *P.pachpolus* =early *N.asperus*	
49.0			48.0		
		Top R	50.0		
	Early Eocene		52.0	*D.orthoteichus*	
			53.0		
53.5		Top S-T	53.5		
	Paleocene		55.0-55.5	*L.balmei, G.edwardsii*	
65.0			65.0		
	Maastrichtian		69.0	*T.longus*	
70.0			72.5	*T.lillei*	
	Campanian		73.0	*N.senectus*	
			76.0		*X.australis*
78.0			78.0		
	Santonian	XA-1	80.0	*T.pachyexinus*	*N.aceras*
82.0	Coniacian		84.0		*D.cretaceum*
86.0		XA-2	86.0		?
	Turonian		87.0	*C.triplex*	
		XB - - ? - -	91.0		
92.0			92.0	*A.distocarinatus*	*A.parvum*
	Cenomanian		99.0	*P.pannosus*	
100.0			100.0		
	Albian		104.0	K2b / *C.paradoxa*	
			106.0	K2a	
108.0			107.0	*C.striatus*	
	Aptian/ Neocomian		109.0		
135.0			131.0 Assumed base of E.Otway Basin deposition		

*This column used for Data Input

© *Paltech* 1981, Modified from Partridge(1976), McGowran et al (1971), Douglas et al (1976, Table 7.12).

SECTION III - BURIAL AND THERMAL GEOHISTORY DIAGRAMS FOR THE OTWAY BASIN.

For each well two Burial and Thermal Geohistory Diagrams have been provided. One at 1: 10,000 scale may be used for measuring, plotting and comparing with standard 1: 10,000 scale summary well logs produced by most oil exploration companies. A summary lithostratigraphic log has been provided. The source of the litholog is given in the discussion of each well. Hydrocarbon shows are after Wopfner et al (1971).

The other, at 1: 30,000 scale is in A-4 fold-out format and shows, in addition, the computer predicted vitrinite reflectance/depth curve and the observed values (log scale above horizontal axis, linear scale below). Assuming the observed values are accurate, this diagram is an indication of the validity of the thermal modelling.

This section of the report discusses the Burial and Thermal Geohistory diagrams for each well. The following points are emphasised:-

*Temperature models for BHT

*Tectonic development where different from normal Otway Basin development (see Section IV for a discussion of general Otway Basin tectonic vs stratigraphic development).

*Thermal maturation discussing the predicted vs observed maturation levels, hydrocarbon shows (if any) and general significance as far as hydrocarbon generation.

*Lithostratigraphic comments.

PRAWN A-1 BURIAL AND THERMAL GEOHISTORY DIAGRAM.

(Figures 7A & 7B).

BHT Model.

A nominal 6% was added to the observed BHT which brought the heatflow to 1.36 H.F.U.

Tectonic Development.

Abnormally high subsidence rates are indicated for Prawn A-1 during Waarre & Flaxmans deposition (Figure 11) and also a comparatively thin Belfast Mudstone. This pattern may be related to Mussel - 1 (Figure 2A). Subsequent tectonic development is normal for the basin area.

Thermal Maturation.

A good fit was obtained between predicted and observed reflectance values.

The reflectance lines indicate the Belfast Mudstone is transitionally mature while the Otway Group is mature below ∿2750 metres.

No hydrocarbon shows were recorded during drilling.

Lithostratigraphy.

After ESSO (Well Completion Report) except the Belfast Mudstone is indicated to be thinner by foraminiferal data.

WHELK - 1 BURIAL AND THERMAL GEOHISTORY DIAGRAM.

(Figures 10A & 10B).

BHT Model.

A nominal 5% has been added to the observed BHT. The heatflow is high because basement is very shallow.

Tectonic Development.

A fairly normal basement subsidence curve is observed, apart from an increased subsidence rate at 60 m.y.

Thermal Maturation.

Whelk - 1 was designed to test an updip pinchout of Waarre Formation on basement. It is not surprising that the predicted and observed reflectances are less than 0.5.

Lithostratigraphy.

After ESSO (Well Completion Report) but no Belfast Mudstone indicated by foraminiferal study.

SECTION IV - GENERAL CONCLUSIONS.

BASIN DEVELOPMENT.

FIGURE 11 shows a plot of Basement Subsidence curve for all wells in this study, compared with the rock stratigraphy observed in the Otway Basin. A correspondence between subsidence pattern and stratigraphy is apparent.

1. Otway Group. (131 to 100 m.y.).

Subsidence during Otway Group deposition was very rapid, characteristic of rift valley deposition. Sediments are poorly sorted, dominantly arkosic in character.

2. Waarre Sandstone (100 to 90 m.y.).

Subsidence during Waarre Sandstone deposition was very slow - a complete change in tectonic character from the previous Otway Group style. This slow subsidence is related to incipient spreading of the Southern Ocean and may thus be the expression of break-up. (Now considered to be somewhere between 110 and 85 m.y. by Cande & Mutter (1982)).

3. Post Waarre Sandstone (90 m.y. to Present).

This period is characterised by exponentially decreasing rates of subsidence. A minor increase in subsidence rates at about 55 to 45 m.y. may reflect a comtemporaneous increase in spreading rates in the Southern Ocean (Cande & Mutter, 1982). A minor inflection at about 30 m.y. is due to unloading of the shelf during the Oligocene sea level low (see Vail et al, 1977). Uplift at the margins in the late Tertiary (20 m.y. to present) may be seen in the curves for PORT CAMPBELL - 1 and SHERBROOK - 1.

Stratigraphic development during this time may be primarily determined by sea level fluctuations. However the minor tectonic influences mentioned in the preceding paragraph may be responsible for the breaks between the Wangerrip and Nirranda Groups (increase in subsidence at 55 to 45 m.y.), between the Nirranda and Heytesbury Groups (Oligocene sea level drop ~30 m.y.).

The break between the Sherbrook and Wangerrip Groups may be due to a combination of "moderate structural deformation" (Boeuf & Doust, 1975) and a sea level low in the Paleocene (Vail et al, 1977). The lack of change in

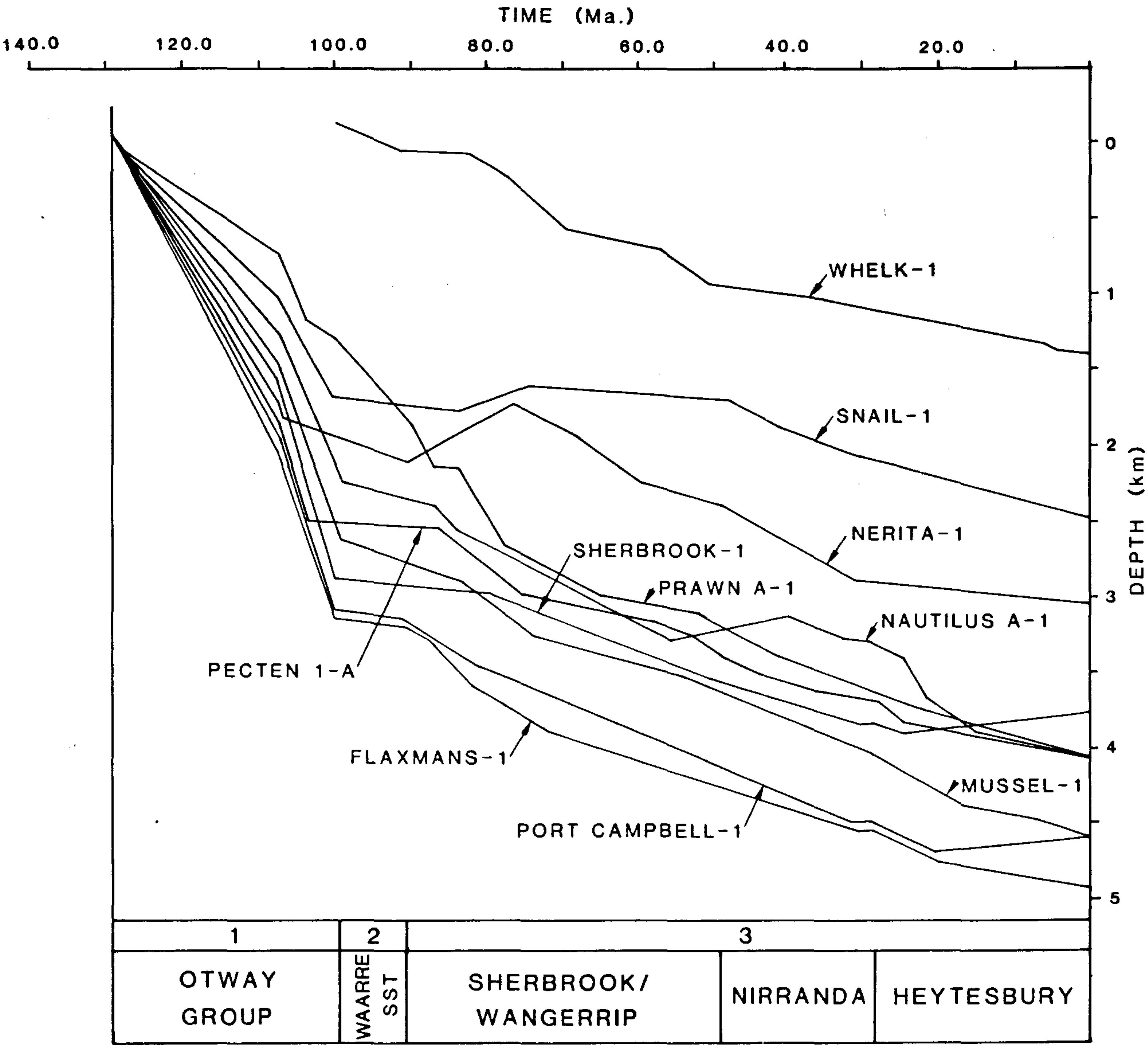

FIGURE 11 BASEMENT SUBSIDENCE CURVES PALTECH REPORT 1982/27

5 cm

sedimentological character at the Sherbrook/Wangerrip contact has been pointed out by many authors (refer Glenie, 1971 for discussion).

Major faulting during this time is generally stated not to continue into the Tertiary. However, McPhee et al (1981), while making this statement, show the major Timboon Fault as extending into Nirranda levels (l.c., Fig.7).

Discussion.

The observation that the subsidence curves for all wells are very similar means that enhanced reliability is available for plotting paleo-migration potential between wells. This may be coupled with seismic stratigraphy to determine migration directions throughout the basin.

MATURATION OF SOURCE ROCKS.

Belfast Mudstone.

In all wells in this study, the prime Otway Basin source rock for liquid hydrocarbons, the Belfast Mudstone, is only transitionally mature. This is primarily because of its shallow depth of burial. Greater maturation levels for the Belfast Mudstone may obtain in the area south of NAUTILUS A-1 and west of WHELK -1 *if the Belfast Mudstone thickens in this direction.* Previous workers in the Otway Basin differ in their opinions on this matter.

Falvey (1974), Boeuf & Doust (1975) and Deighton et al (1976) all inferred that the Belfast Mudstone would thin to the south since, during the rift valley phase axial uplift should take place. This interpretation was strongly dependant on the assumption that sea-floor spreading commenced in the late Paleocene.

The geohistory curves presented herein suggest however that spreading first occurs in the Southern Ocean in the eastern Otway Basin area between 90 and 80 m.y. The revised spreading model of Cande & Mutter (1982) opens the possibility of rapid post-breakup subsidence at the continental margin during Belfast Mudstone deposition.

In this respect, it is notable that Denham & Brown (1976) show marked thickening of the Belfast Mudstone south of NAUTILUS A-1 in their "Voluta Trough". If this is the case, then primary generation of liquid hydrocarbons could take place in the "Voluta Trough" with subsequent migration towards the margins.

A synthetic geohistory diagram for a theoretical well site in the "Voluta Trough" would ascertain the timing of likely generation. Subsequent migration and entrapment models would need to take account of seismically determined structuring coupled with the paleodepths to migration horizons as quantified by the geohistory diagrams in this study.

Otway Group.

In most wells in this study the Otway Group is in the mature phase of hydrocarbon generation. Source rock analysis and observed shows indicate gas generation from the Otway Group has and is currently taking place.

Plays for gas discoveries may be generated throughout the Otway Basin, though it should be remembered that the thickest Otway Group sequences are probably to be found in the onshore and inner offshore areas.

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Sources of Input Data.

The following pages give the data lists for each well used as input for BURY II. The sources are coded according to the following:-

SOURCE	CODE
WELL COMPLETION REPORT (including Appendices)	WCR
SPECIFIC REPORTS/PAPERS	
Evans (1961)	E1
Evans (1962)	E2
Evans (1966)	E3
Cook (1982)	C
Middleton & Falvey (in press)	M & F
Deighton (1974)	D
Taylor (1971)	T
OTHER	
Interpretation of this report	Interp.

WHELK - 1.

Depth to Basement: 1270 metres

K.B.: 30.5 metres

Bottom Hole Temperature: 62.0°C at 1466 metres

Sea Bottom Temperature: 15.0° C.

STRATIGRAPHIC DATA.

Depth (K.B.)	Age	Paleowater Depth	Source
134.0	0.0	103.5	
302.0	22.5	50.0	
325.0	25.0	30.0	
343.0	30.0	20.0	
393.0	40.0	10.0	
425.0	48.0	10.0	
440.0	50.0	10.0	WCR
486.0	52.0	10.0	
628.0	55.5	10.0	
729.0	58.5	10.0	
769.0	69.0	0.0	
1096.0	78.0	0.0	
1208.0	81.0	20.0	
1286.0	84.0	40.0	
1308.0	92.0	20.0	
1403.0	99.0	0.0	Interp.

THERMAL MATURATION DATA.

Depth	R_o Mean	R_o Min.	R_o Max.	
1091.0	0.39	0.31	0.49	
1131.0	0.41	0.25	0.50	
1250.0	0.45	0.36	0.58	C
1292.0	0.58	0.53	0.65	
1309.0	0.48	0.32	0.60	
1314.0	0.44	0.34	0.54	
1368.0	0.47	0.39	0.55	

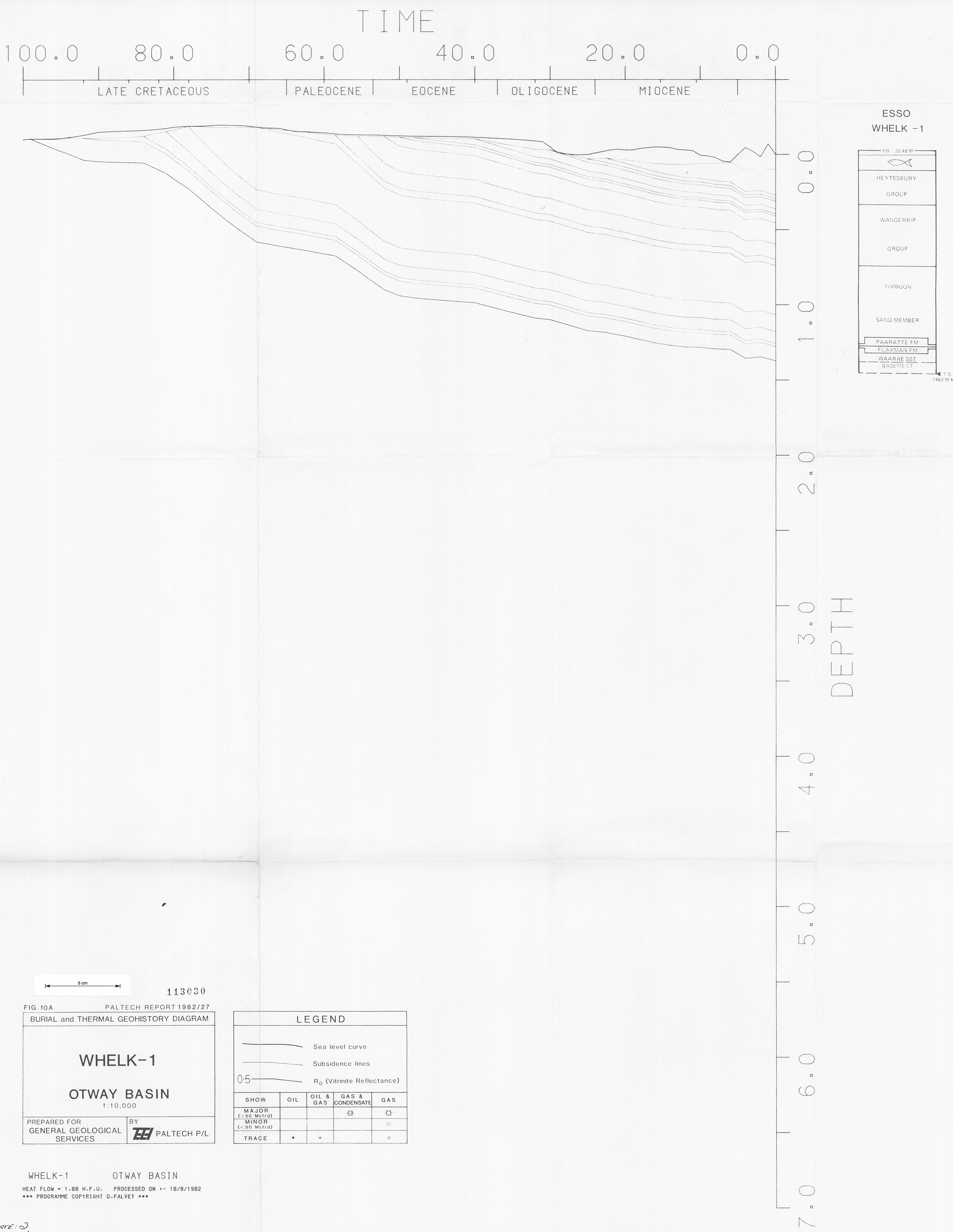
Appendix 2. STRATIGRAPHIC TABLE PRAWN A - 1

Water depth 108m

Depths are relative to R.T. (subtract 27m for M.S.L.)

Age and Formation	Depth	Thickness	Lithology	Depth	Vitrinite Reflectance	Range
Miocene-Oligocene:						
Gellibrand Marl	108 - 735	627	Marl interbedded with limestone: calcareous sandstones and siltstones.			
Oligocene:						
Clifton limestone	735 - 752	17	Skeletal Limestone: Slightly sandy.			
Upper Eocene:						
Narrawaturk Marl	752 - 922	170	Marl interbedded with limestone			
Eocene-Paleocene:						
Mepunga and Dilwyn	922 - 1186	264	Sand and sandstone: pyritic, carbonaceous.			
Paleocene:						
Rivernook	1186 - 1206	20	Silty mudstone			
Pebble Point	1206 - 1265	59	Sand and conglomerate			
Unconformity						
Upper Cretaceous:						
Sherbrook Group						
Curdies-Paaratte	1265 - 2175	910	Sandstone with occasional thin interbeds of shale.	1306	0.35	0.22 - 0.47
Belfast	2175 - 2228	53	Shale			-
Belfast-Flaxmans	2228 - 2857	628	Calcareous sandstones	2343	0.49	0.44 - 0.61
Waarre	2857 - 2444	88	Conglomerate	2831	0.75	0.62 - 0.82
Unconformity						
Lower Cretaceous:						
Otway Group	2944 - 3193	249+	Lithic sandstones	3008 3190	0.94 0.90	0.73 - 1.10 0.79 - 1.10

113029 APPENDIX 2



113030

FIG. 10A PALTECH REPORT 1982/27

BURIAL and THERMAL GEOHISTORY DIAGRAM

WHELK-1

OTWAY BASIN

1:10,000

PREPARED FOR GENERAL GEOLOGICAL SERVICES

BY PALTECH P/L

LEGEND

Sea level curve

Subsidence lines

0·5 R_0 (Vitrinite Reflectance)

SHOW	OIL	OIL & GAS	GAS & CONDENSATE	GAS
MAJOR (>50 Mcf/d)			☼	☼
MINOR (<50 Mcf/d)				☼
TRACE	•	⌄		◇

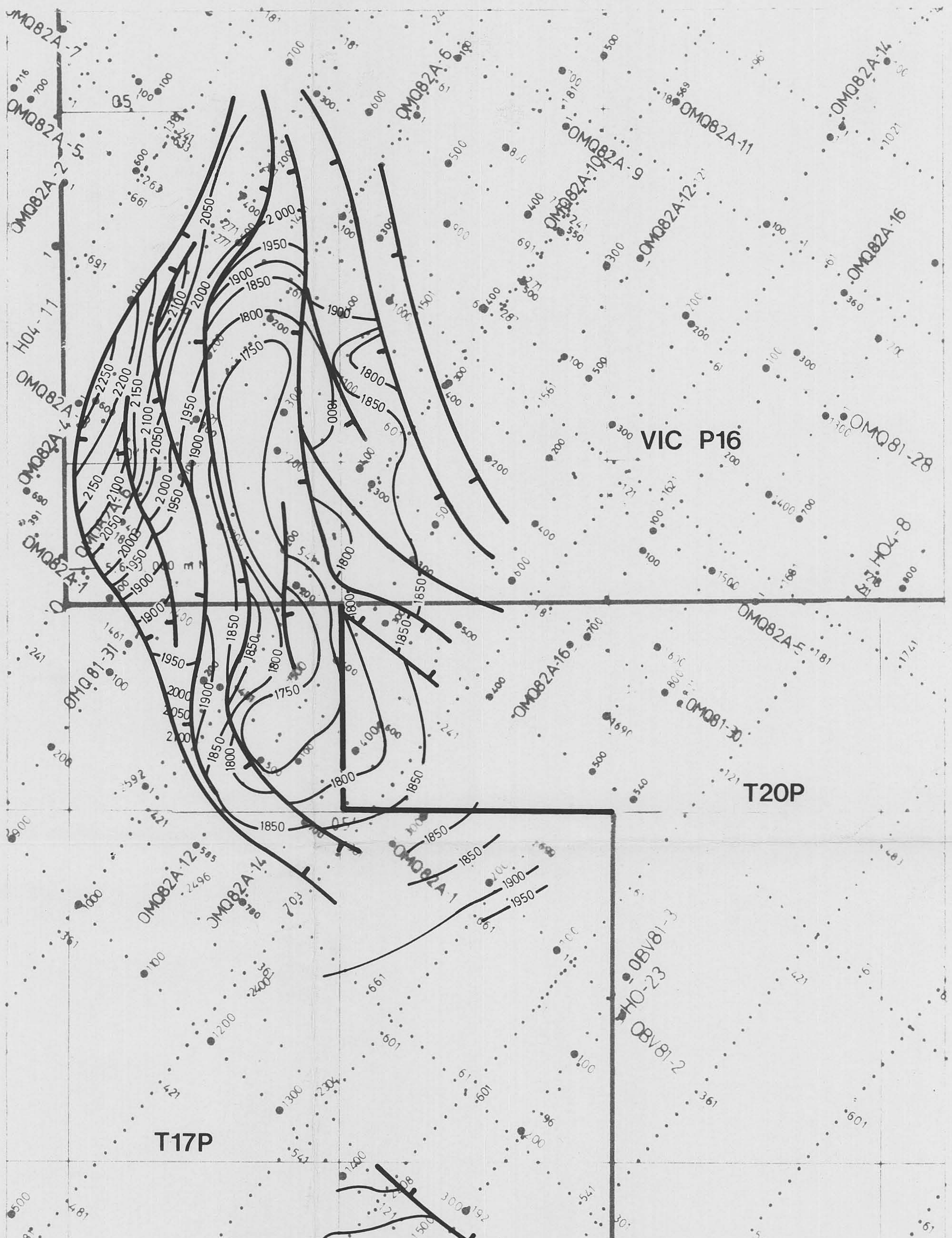
WHELK-1 OTWAY BASIN

HEAT FLOW = 1.88 H.F.U. PROCESSED ON :- 18/8/1982

*** PROGRAMME COPYRIGHT D.FALVEY ***

Plate: 2.

CR-117 VOL 1



PETRECON AUSTRALIA PTY LTD

PLATE: 3.

113031

5 cm

OTWAY BASIN (BASS STRAIT OIL & GAS (HOLDINGS) N.L.)	83/1
VIC P16 TIME STRUCTURE MAP NEAR BASE SHERBROOK GROUP (WAARRE)	G.J.B. M.R.D. 11-1-'83 1:100 000

OR-117 VOL 1.

PETRECON AUSTRALIA PTY LTD
Petroleum Exploration Consultants

SECOND QUARTER REPORT

YEAR 3

T17P

FOR

VAN DIEMENS LAND RESOURCES N.L.

T/17P Part 5

113033

PETRECON AUSTRALIA PTY. LTD.

Petroleum Exploration Consultants

192 Macquarie Street
Hobart 7000 Australia
Ph. (002) 31 0122
Telex: AA58209

D of M	A.O.	C.G.	E.O.	D.S.M.E.
				Registrar
Received Answered 24 MAR 1983				E & IL
DEPT. OF MINES REF. No. 2363/83				

21st March, 1983.

Van Diemens Land Resources N.L.

The Director,
Department of Mines,
P.O. Box 56,
ROSNY PARK
TASMANIA. 7018

Dear Sir,

Re: Second Quarter Report, Year 3, T17P.

This report covers the period 8th November, 1982 till 7th February, 1983.

Geophysical

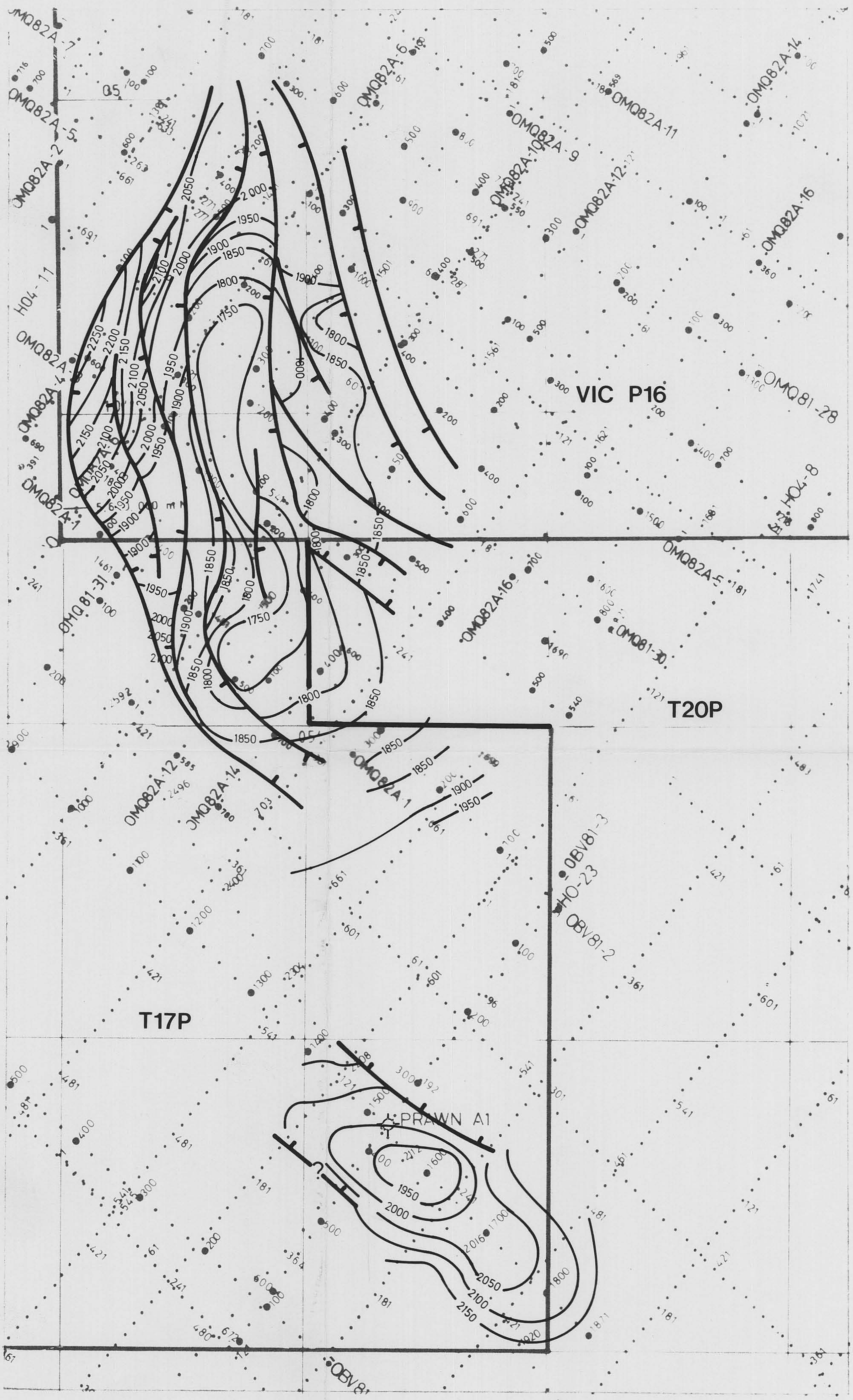
Delineation and interpretation of the prospect, which overlaps the permits T17P, T20P and Vic P16 was finalised during the report period. Accompanying this report is a map at the Near Base Sherbrook horizon.

An operator with a rig in the southwest coastal area is presently reviewing the data over this feature.

Yours faithfully,

J.K. Davidson

J.K. DAVIDSON
for:
E. G. ALBERS
CHAIRMAN.



5 cm

113034

PETRECON AUSTRALIA PTY LTD

OTWAY BASIN (BASS STRAIT OIL & GAS (HOLDINGS) N.L.)	83/1
VIC. P16 TIME STRUCTURE MAP NEAR BASE SHERBROOK GROUP (WAARRE)	COMPILED G.J.B. DRAWN M.R.D. DATE 11-1-'83 SCALE 1:100 000 FIGURE

OR-117 VOL 2.