

# **REVIEW AND COMPILATION OF OPEN FILE MICROPALAEONTOLOGY AND PALYNOLOGY DATA FROM OFFSHORE TASMANIA**

**An Output of the Western Tasmanian Regional Minerals Program**

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# 1. EXECUTIVE SUMMARY

The Bass Basin is a moderately explored Cretaceous to Cainozoic intracratonic rift basin on Australia's southeastern margin (Figure 1). The basin contains proven commercial reserves of gas and condensate that are soon to be developed (Yolla gas field, Origin Energy-operated BassGas Project). Other discoveries in the basin include the White Ibis and Pelican gas fields. To date, exploration drilling has targeted Late Cretaceous to Middle Eocene reservoirs within fault blocks and anticlinal structures. The targeted succession comprises interbedded fluvio-deltaic and lacustrine sandstones, siltstones and shales. The principal source rocks in the Bass Basin are interbedded coals (ranging from 5 to 25 m thick) and lacustrine shales of Early Tertiary age. Geochemical analyses show these source rocks have generated liquid and gaseous hydrocarbons, with the coals being the dominant source for the liquids (Boreham et al., 2003). Volcanic rocks are common throughout the basin as sills and flows, often associated with large rift faults and accommodation zones.

As part of the Commonwealth-funded *Western Tasmanian Regional Minerals Program*, Mineral Resources Tasmania (MRT) initiated a collaborative study of the Bass Basin, in partnership with Geoscience Australia (GA) and the National Centre for Petroleum Geology and Geophysics (NCPGG). Commercial inputs into the project were sought from Biostrata Pty Ltd, SRK Consulting, Fugro MCS and CSIRO. The aim of this work was to enhance the petroleum prospectivity of the northern and western regions of offshore Tasmania through an improved understanding of basin geology, an integrated petroleum systems analysis and enhanced access to basic datasets critical to the exploration industry.

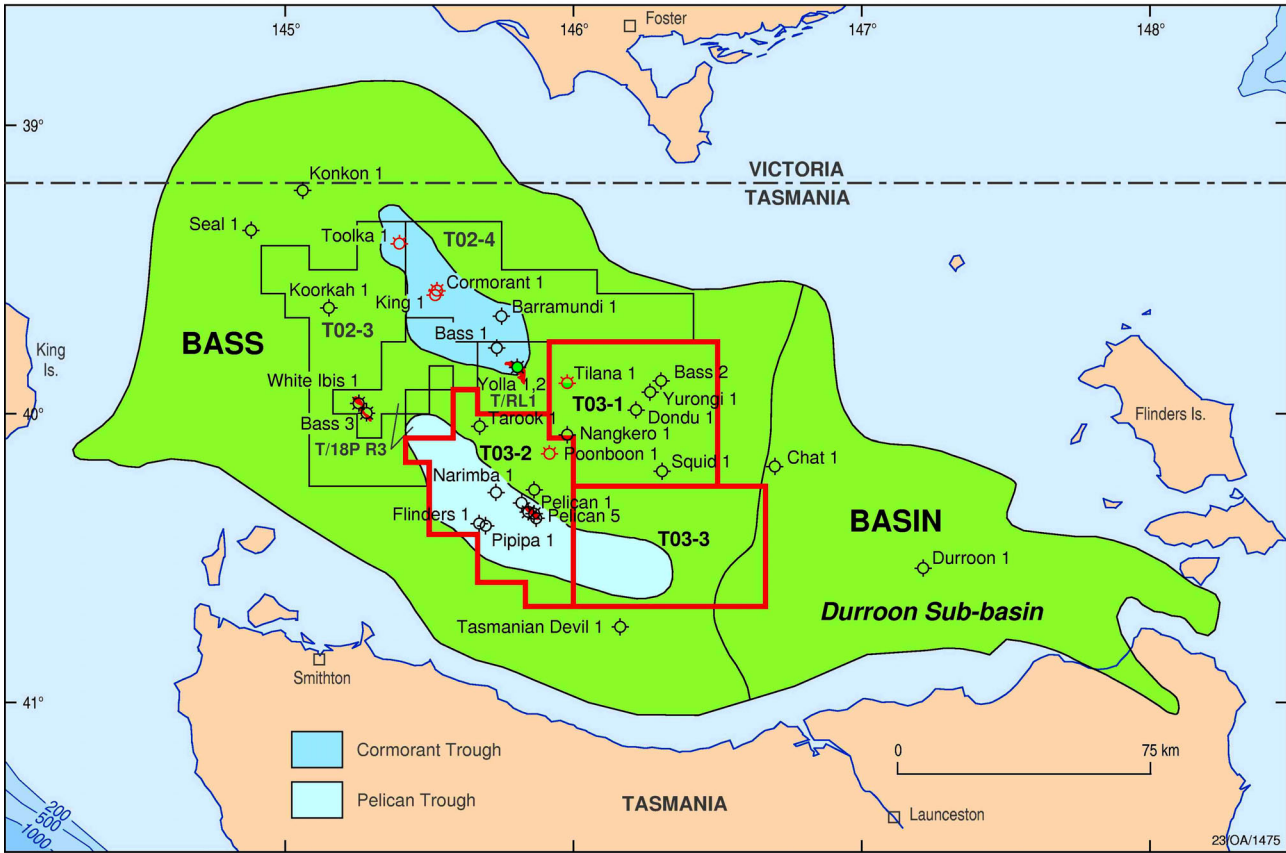
This Record presents a compilation of all the open-file micropalaeontology and palynology reports for wells drilled in the Bass Basin between 1965 and 1998. These reports (Table 1) were digitally reproduced (Adobe PDF file format) from well completion reports submitted under the Petroleum Submerged Lands Act (PSLA) 1967. These reports are lodged at the Petroleum Data Repository (Geoscience Australia) and Petroleum Data Management Section (Mineral Resources Tasmania). Some reports are from post-drill destructive analyses and other reviews submitted to Geoscience Australia and Mineral Resources Tasmania. A few wells from the nearby Otway, Sorell and Gippsland basins are included for reference.

The hardcopy compilation of these reports was undertaken by Dr. Alan Partridge, Biostrata Pty Ltd, as part of a technical report on the Bass Basin (Partridge, 1993). This Record builds on his compilation and includes wells drilled in the Bass Basin since 1992. Partridge's (1993) hardcopy compilation utilised materials lodged at the Petroleum Data Management Section, Mineral Resources Tasmania.

Much of the zonation data included in these reports is captured in STRATDAT, Geoscience Australia's Oracle-based biostratigraphic database ([www.ga.gov.au](http://www.ga.gov.au)). However, other useful information, such as range/diversity charts, scientific observations and general comments, is often unable to be stored in the Oracle database format. Thus, the original biostratigraphic reports remain a valuable source of basic interpretative information relating to age determination. A list of references for the reports is shown in Table 2.

In addition to the original biostratigraphic reports submitted by the well operators, four review studies of Bass Basin wells were undertaken by Partridge (1973, 1979, 1993) and Morgan (1985). These reports are included in this Record and provide progressive updates on individual wells (Table 3). They also provide an overview of changes to the biostratigraphic zonation scheme that occurred as knowledge of the basin evolved during on-going exploration.

**Figure 1.** Location map of the Bass Basin and adjacent region, southeastern Australia. The basin outline, permits, well and field locations, including the 2002 (black) and 2003 (red) Acreage Release areas, are also shown.



**Table 1.** Biostratigraphic reports contained in this Record listed by well name. \*The UNO is a unique number given to well reports and related materials that are lodged with the Petroleum Data Repository, Geoscience Australia.

<b>Well Name And Year Drilled</b>	<b>Operator</b>	<b>UNO*</b>	<b>Micropalaeontology Report</b>	<b>Palynology Report</b>
<b>Aroo-1</b> 1974	Hematite Petroleum	W7740001	Taylor, 1974a	Douglas, 1974 Harris, 1974a
<b>Bass-1</b> 1965	Esso Exploration & Production Australia Ltd	W7650001	Taylor, 1965 Brown, 1968	Douglas, 1965 Dettmann, 1965a, b Stover & Morgan, 1966 Evans, Stover & Mulholland, 1970 Stover & Nicholls, 1971
<b>Bass-2</b> 1966	Esso Exploration & Production Australia Ltd	W660001	Taylor & Apthorpe, 1966	Dettmann, 1966 Stover, 1967 Evans, Stover & Mulholland, 1970 Stover & Nicholls, 1971 Macphail, 1988
<b>Bass-3</b> 1967	Esso Exploration & Production Australia Ltd	W7670001	Taylor, 1967	Dettmann, 1967a, b Evans, Stover & Mulholland, 1970 Stover & Nicholls, 1971
<b>Bluebone-1</b> (Gippsland Basin) 1969	Esso Exploration & Production Australia Ltd	W7690004	Taylor, 1969	Evans, 1969a
<b>Cape Sorell-1</b> (Sorell Basin) 1982	Amoco Australia Petroleum Company	W7820002	Hughes et al., 1983	Hedlund, 1983 Micro-Strat Inc., 1989
<b>Chat-1</b> 1986	Bridge Oil Ltd	W7860001		Morgan, 1986a
<b>Clam-1</b> (Otway Basin) 1969	Esso Exploration & Production Australia Ltd	W7690001		Evans & Mulholland, 1969 Stover, 1971
<b>Cormorant-1</b> 1970	Esso Exploration & Production Australia Ltd	W7700003	Taylor, 1971	Stover & Partridge, 1971 Partridge, 1973a
<b>Dondu-1</b> 1973	Esso Exploration & Production Aust Ltd	W7730003		Stover, 1973a
<b>Durroon-1</b> 1972	Esso Exploration & Production Aust Ltd	W7720005	Taylor, 1972a	Partridge, 1973b Morgan, 1985a Morgan, 1991
<b>Flinders-1</b> 1992	SAGASCO Resources	W7920002		Partridge & Morgan, 1993
<b>Konkon-1</b> 1973	Esso Exploration & Production Australia Ltd	W7730005		Stover, 1973b
<b>Koorkah-1</b> 1985	Amoco Australia Exploration	W7850001	Taylor, 1986a	Morgan, 1986b
<b>Mullet-1</b> (Gippsland Basin) 1969	Esso Exploration & Production Australia Ltd	W7690003		Evans, 1969b Stover, 1970
<b>Nangkero-1</b> 1974	Hematite Petroleum	W7740002	Taylor, 1974b	Harris, 1974b
<b>Narimba-1</b> 1973	Esso Exploration & Production Australia Ltd	W7730001	Taylor, 1974c	Stover, 1974a

<b>Pelican-1</b> 1970	Esso Exploration & Production Australia Ltd	W7700002		Partridge & Stover, 1971
<b>Pelican-2</b> 1970	Esso Exploration & Production Australia Ltd	W7700004		Stover & Thompson, 1970
<b>Pelican-3</b> 1972	Esso Exploration & Production Australia Ltd	W7720001	Taylor, 1972b Taylor, 1972c	Partridge, 1972a
<b>Pelican-4</b> 1979	Hematite Petroleum	W7720001	Mallett, 1980	
<b>Pelican-5</b> 1985	Amoco Australia Exploration	W7850004	Taylor, 1987	Morgan, 1987
<b>Pipipa-1</b> 1982	Hematite Petroleum	W7820001		Stacey, Partridge & Stevens 1982
<b>Poonboon-1</b> 1972	Esso Exploration & Production Australia Ltd	W7720002	Taylor, 1972d	Partridge, 1972b
<b>Prawn-1A</b> (Otway Basin) 1968	Esso Exploration & Production Australia Ltd	W7670002	Taylor, 1968	Dettmann, 1968
<b>Sailfish-1</b> (Gippsland Basin) 1971	NSW Oil & Gas Company	W7710001		Bandy, 1972
<b>Seal-1</b> 1986	Bridge Oil Company	W7860002		Morgan, 1986c
<b>Squid-1</b> 1984	Weaver Oil & Gas Corporation Australia	W7840001		Evans, 1984 Martin, 1985a Morgan, 1986d
<b>Tarook-1</b> 1972	Esso Exploration & Production Australia Ltd	W7720008	Taylor, 1972e	Partridge, 1972c
<b>Tasmanian Devil-1</b> 1984	Weaver Oil & Gas Corporation Australia	W7840002		Martin, 1985b
<b>Tilana-1</b> 1985	Amoco Australia Exploration	W7850002	Taylor, 1985	Morgan, 1985b
<b>Toolka-1</b> 1974	Esso Exploration & Production Australia Ltd	W7740003		Stover, 1974b
<b>Whelk-1</b> (Otway Basin) 1970	Esso Exploration & Production Australia Ltd	W7700007		Evans, 1970
<b>White Ibis-1</b> 1998	Premier Oil Australasia	W7980002		Morgan, 1998
<b>Yolla-1</b> 1985	Amoco Australia Exploration	W7850003	Taylor, 1986b	Morgan, 1986e
<b>Yurongi-1</b> 1973	Esso Exploration & Production Australia Ltd	W7730006		Stover, 1973c Stover, 1973d

**Table 2.** A list of references for biostratigraphic reports from Bass Basin wells. Additional wells from the adjacent Otway, Sorell and Gippsland basins are also included for reference. The unpublished well completion reports referred to in this table were submitted to the Petroleum Data Repository, Geoscience Australia, and Mineral Resources Tasmania, in accordance with Australian government legislation. Queries on these reports should be directed to [www.ga.gov.au](http://www.ga.gov.au) (Petroleum Data Repository).

#### **Aroo-1**

Douglas, J.G.G., 1974. Plant macrofossil from Aroo-1, Core No. 2, 9546 feet, KB (Appendix 2). In: Hodgson, E.A., Aroo No. 1, Well Completion Report. Hematite Petroleum Pty Ltd (unpublished).

Harris, W.K., 1974a. The palynology of Hematite Aroo No. 1, Bass Basin, Tasmania (Appendix 2). In: Hodgson, E.A., Aroo No.1, Well Completion Report. Hematite Petroleum Pty Ltd (unpublished).

Taylor, D.J., 1974a. Foraminiferal biostratigraphy, Aroo 1 Well, Bass Basin (Appendix 2). Department of Mines, South Australia, Report Book 74/784. In: Hodgson, E.A., Aroo No.1, Well Completion Report. Hematite Petroleum Pty Ltd (unpublished).

#### **Bass-1**

Brown, N.K., 1968. Environmental interpretation of foraminiferal assemblages in the Nos. 1, 2 and 3 Bass wells, Australia. Esso Production Research Company (unpublished).

Dettmann, M.E., 1965a. Palynological report on Esso Bass No. 1 well at 6130 and 6330 feet. University of Queensland, Department of Geology. In: Esso Bass-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).

Dettmann, M.E., 1965b. Palynological report on Esso Bass No. 1 well at 6740 and 7693 feet. University of Queensland, Department of Geology. In: Esso Bass-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).

Douglas, J.G., 1965. Palynological examination, Esso Bass No. 1 well (Appendix 2). In: Esso Bass-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).

Evans, P.R., Stover, L.E. and Mulholland, R.D., 1970. Review of the stratigraphic palynology of Esso Bass Nos. 1 to 3 wells. Esso Standard Oil (Australia) Ltd, Paleontology Report 1970/3 (unpublished).

Stover, L.E. and Morgan, B.E., 1966. Palynological studies of cores 10 to 15, Esso Bass No. 1, offshore Tasmania. Esso Production Research Company, Report EPR66-ES40 (unpublished).

Stover, L.E. and Nicholls, A.L., 1971. Early Tertiary palynology of the Bass Basin. Esso Standard Oil (Australia) Ltd, Paleontology Report 1971/02 (unpublished).

Taylor, D.J., 1965. The mid-Tertiary foraminiferal sequence, Esso Bass-1 well, Tasmania (Appendix 1). In: Esso Bass-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).

#### **Bass-2**

Dettmann, M.E., 1966. Report on Esso Bass No. 2 well at 3814-16 feet. University of Queensland, Department of Geology. In: Esso Bass-2, Tasmania, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).

Macphail, M.K., 1988. Palynological analyses of two core samples from near total depth, Bass-2, Bass Basin. Consultants report prepared for The Shell Company of Australia Ltd (unpublished).

Stover, L.E., 1967. Palynologic studies of the Esso Bass No. 2, Bass Basin, offshore Australia. Esso Production Research Company, Report EPR67-ES94 (unpublished).

Taylor, D.J. and Apthorpe, M., 1966. The mid-Tertiary foraminifera sequence, Esso Bass-2 well, Tasmania. In: Esso Bass-2, Tasmania, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).

**Note: Additional data on Bass-2 is contained in Brown (1968), Evans et al. (1970) and Stover and Nicholls (1971) under the Bass-1 reference listing.**



**Bass-3**

Dettmann, M.E., 1967a. Palynological report on core samples between 6600 feet and 7976 feet, Esso Bass No. 3 well. University of Queensland, Department of Geology. In: Bass-3, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).

Dettmann, M.E., 1967b. Palynological report on Esso Bass No. 3 well. University of Queensland, Department of Geology. In: Bass-3, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).

Taylor, D.J., 1967. Bass-3 paleontological report (Appendix 1). In: Bass-3, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).

**Note: Additional data on Bass-3 is contained in Brown (1968), Evans et al. (1970) and Stover and Nicholls (1971) under the Bass-1 reference listing.**

**Bluebone-1 (Gippsland Basin)**

Evans, P.R., 1969a. Palynology of Bluebone-1, Palynology Report 1967/17. In: Curnow, C.N., Esso Bluebone-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).

Taylor, D.J., 1969. Bluebone-1, palaeontological report (Appendix II). In: Curnow, C.N., Esso Bluebone-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).

**Cape Sorell-1 (Sorell Basin)**

Hedlund, R.W., 1983. Palynological analysis of cuttings samples from the Amoco Australia Cape Sorell-1, offshore western Tasmania, Technical Services Memo 5371PF. Amoco Production Company (unpublished).

Hughes, G.W., Seymour, W.P., Varol, O. and Chow Y.C., 1983. The biostratigraphy of the Amoco Australia Petroleum Company, Cape Sorell-1 well, offshore west Tasmania, Australia, Project No. S/I/823/41, Report No. 1176. Robertson Research (Singapore) Private Limited (unpublished).

Micro-Strat Inc., 1989. Biostratigraphic, paleoenvironmental and geochemical analysis of the Amoco Australia Petroleum Company Cape Sorell-1 well, offshore west Tasmania, Australia, Project No. MSI 89-10. Micro-Strat Inc., USA (unpublished).

**Chat-1**

Morgan, R., 1986a. Palynology of Bridge Chat-1, Bass Basin. In: Chat-1, Well Completion Report. Bridge Oil Limited (unpublished).

**Clam-1 (Otway Basin)**

Evans, P.R. and Mulholland, R.D., 1969. Palynology of Esso Clam-1, Palynology Report 1969/15 (Appendix 1). In: Lunt, C. K., Clam-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).

Stover, L.E., 1971. Palynologic interpretation for Clam-1 between 1050 and 3164 feet, Paleontology Report, 1971/17. In: Lunt, C. K., Clam-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).

**Cormorant-1**

Partridge, A.D., 1973a. Palynology data sheet, Cormorant-1 well, Bass Basin. In: Cormorant-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).

Stover, L.E. and Partridge, A.D., 1971. Palynology data sheet, Cormorant-1 well, Bass Basin. In: Cormorant-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).

Taylor, D.J., 1971. Palaeontological data sheet, Cormorant-1 well, Bass Basin. In: Cormorant-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).

**Note: Additional data on Cormorant-1 is contained in Stover and Nicholls (1971) under the Bass-1 reference listing.**

<p><b><u>Dondu-1</u></b>  Stover, L.E., 1973a. Palynological interpretations for Dondu-1, Bass Basin, Australia. Esso Production Research Company, Report EPR64-ES73. In: Esso Dondu-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).</p>
<p><b><u>Durroon-1</u></b>  Morgan, R., 1985a. Palynology of Esso Durroon-1, Bass Basin. Consultants report prepared for Bridge Oil Limited (unpublished).</p> <p>Morgan, R., 1991. New palynology of the Durroon Mudstone, Durroon-1, Bass Basin. Consultants report prepared for Bridge Oil Limited (unpublished).</p> <p>Partridge, A.D., 1973b. Palynology of Durroon-1, Bass Basin, Palaeontological Report 1973/1 In: Durroon-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).</p> <p>Taylor, D.J., 1972a. Foraminifera in the Durroon sequence, Bass Basin, Palaeontological Report 1972/22. In: Durroon-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).</p>
<p><b><u>Flinders-1</u></b>  Partridge, A.D. and Morgan, R., 1993. Palynological analysis of cuttings samples from Flinders-1, Bass Basin. Biostrata Pty Ltd, Report 1993/7. In: Flinders-1 Well Completion Report. SAGASCO Resources (unpublished).</p>
<p><b><u>Konkon-1</u></b>  Stover, L.E., 1973b. Palynological determinations for Kon Kon-1 well, Bass Basin, Australia. Esso Production Research Company, Report EPR58-ES73. In: Kon Kon-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).</p>
<p><b><u>Koorkah-1</u></b>  Morgan, R., 1986b. Palynology, Koorkah-1 (Appendix 6). In: Koorkah-1, Final Well Report. Amoco Australia Petroleum Company (unpublished).</p> <p>Taylor, D.J., 1986a. Foraminifera sequence, Koorkah-1 (Appendix 5). In: Koorkah-1, Final Well Report. Amoco Australia Petroleum Company (unpublished).</p>
<p><b><u>Mullet-1 (Gippsland Basin)</u></b>  Evans, P.R., 1969b. Palynological report on Mullet-1, Palynology Report 1969/4. In: Mullet-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).</p> <p>Stover, L.E., 1970. Palynology report on Mullet-1, Palynology Report 1970/25. In: Mullet-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).</p>
<p><b><u>Nangkero-1</u></b>  Harris, W.K., 1974b. The palynology of Hematite Nangkero No.1 well, Bass Basin, Tasmania (Appendix 1). In: Hodgson, E.A., Nangkero No.1, Well Completion Report. Hematite Petroleum Pty Ltd (unpublished).</p> <p>Taylor, D.J., 1974b. Foraminiferal biostratigraphy, Nangkero-1 well, Bass Basin (Appendix 1). In: Hodgson, E.A., Nangkero No.1, Well Completion Report. Hematite Petroleum Pty Ltd (unpublished).</p>
<p><b><u>Narimba-1</u></b>  Stover, L.E., 1974a. The palynology of Narimba-1, Bass Basin. Esso Production Research Company, Report EPR3-ES74. In: Narimba-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).</p> <p>Taylor, D.J., 1974c. Foraminiferal biostratigraphy, Narimba-1, Bass Basin (Appendix 2). In: Narimba-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).</p>

<p><b><u>Pelican-1</u></b> Partridge, A.D. and Stover, L.E., 1971. Palynology of Pelican-1, between 5748 and 10,395 feet, Paleontology Report 1971/15. In: Pelican-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).</p>
<p><b><u>Pelican-2</u></b> Stover, L.E. and Thompson, R.D., 1970. Palynology of Pelican-2 well, Bass Basin, Palynology Report 1970/38. In: Pelican-2, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).</p> <p><b><u>Note: Additional data on Pelican-2 is contained in Stover and Nicholls (1971) under the Bass-1 reference listing.</u></b></p>
<p><b><u>Pelican-3</u></b> Partridge, A.D., 1972a. Palynology of Pelican-3, Bass Basin, Palaeontological Report 1972/13. In: Pelican-3, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).</p> <p>Taylor, D.J., 1972b. Foraminifera in the Pelican-3 sequence, Palaeontology Report 1972/12. In: Pelican-3, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).</p> <p>Taylor, D.J., 1972c. Revised distribution sheets for Pelican-3. In: Pelican-3, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).</p>
<p><b><u>Pelican-4</u></b> Mallett, C.W., 1980. Pelican-4 well, micropalaeontology report. In: Pelican-4, Well Completion Report. Hematite Petroleum Pty Ltd (unpublished).</p>
<p><b><u>Pelican-5</u></b> Morgan, R., 1987. Palynology, Pelican-5 (Appendix 9). In: Pelican-5, Final Well Report, Volume 1, Geology. Amoco Australia Petroleum Company (unpublished).</p> <p>Taylor D.J., 1987. Foraminiferal sequence, Pelican-5 (Appendix 8). In: Pelican-5, Final Well Report, Volume 1, Geology. Amoco Australia Petroleum Company (unpublished).</p>
<p><b><u>Pipipa-1</u></b> Stacey, H.E., Partridge, A.D., and Stevens, J., 1982. Palynological analysis of Pipipa-1, Bass Basin, Esso Palaeontological Report 1982/30 (Appendix 2). In: Pipipa-1, Well Completion Report. Hematite Petroleum Pty Ltd (unpublished).</p>
<p><b><u>Poonboon-1</u></b> Partridge, A.D., 1972b. The palynology of Poonboon-1, Bass Basin, Palaeontological Report 1972/19. In: Poonboon-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).</p> <p>Taylor, D.J., 1972d. Foraminifera in the Poonboon-1 sequence, Bass Basin, Palaeontology Report 1972/18. In: Poonboon-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).</p>
<p><b><u>Prawn-A1 (Otway Basin)</u></b> Dettmann, M.E., 1968. Palynological report on Esso Prawn A-1 well, 3204 - 10,477 feet (Appendix 1). University of Queensland, Department of Geology. In: Prawn-A1, Well Completion Report. Esso Exploration and Production Ltd (unpublished).</p> <p>Taylor, D., 1968. Biostratigraphic summary, Prawn-A1 well, Otway Basin (Appendix 1). In: Prawn-A1, Well Completion Report. Esso Exploration and Production Ltd (unpublished).</p>
<p><b><u>Sailfish-1 (Gippsland Basin)</u></b> Bandy O.L., 1972. Microfossil analysis, Sailfish No. 1, Australia. Consultants report prepared for Magellan Petroleum Australia Ltd. In: Gardner, W.E., Sailfish No. 1, Well Completion Report. N.S.W. Oil and Gas Company N.L. (unpublished).</p>

<p><b><u>Seal-1</u></b> Morgan, R., 1986c. Palynology of Bridge Seal-1, Bass Basin, Australia (Appendix 3). Consultants report prepared for Bridge Oil. In: Furr, B.C., Seal No.1, Well Completion Report. Bridge Oil Limited (unpublished).</p>
<p><b><u>Squid-1</u></b> Evans, P.R., 1984. Palynology of Weaver et al Squid-1. In: Squid No.1 and No.1ST, Well Completion Report. Weaver Oil and Gas Corporation Australia (unpublished).</p> <p>Martin, H.A., 1985a. The stratigraphic palynology of Squid No. 1 and Tasmanian Devil-1, Bass Basin. University of New South Wales, School of Botony, Report prepared for Kimberley Oil and Gas N.L. In: Squid No.1 and No. 1ST, Well Completion Report. Weaver Oil and Gas Corporation Australia (unpublished).</p> <p>Morgan, R., 1986d. Palynology of Weaver Squid-1, Bass Basin, Australia. Consultants report prepared for Bridge Oil Limited (unpublished).</p>
<p><b><u>Tarook-1</u></b> Partridge, A.D., 1972c. The palynology of Tarook-1, Bass Basin, Palaeontological Report 1972/21. In: Tarook-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).</p> <p>Taylor, D.J., 1972e. Foraminifera in the Tarook-1 sequence, Bass Basin, Palaeontological Report 1972/20. In: Tarook-1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).</p>
<p><b><u>Tasmanian Devil-1</u></b> Martin, H.A., 1985b. The stratigraphic palynology of Tasmanian Devil-1. University of New South Wales, School of Botony, Report prepared for Kimberley Oil and Gas N.L. In: Tasmanian Devil-1, Well Completion Report. Weaver Oil and Gas Corporation Australia (unpublished).</p>
<p><b><u>Tilana-1</u></b> Morgan, R., 1985b. Palynology of Tilana-1 (Appendix 8). In: Tilana-1, Final Well Report, Volume 1, Geology. Amoco Australia Petroleum Company (unpublished).</p> <p>Taylor, D.J., 1985. The foraminiferal sequence in Tilana-1 (Appendix 7). In: Tilana-1, Final Well Report, Volume 1, Geology. Amoco Australia Petroleum Company (unpublished).</p>
<p><b><u>Toolka-1</u></b> Stover, L.E., 1974b. Palynological determinations for Toolka-1, Bass Basin, Australia, Paleontology Report 1974/09. In: Isom, J.S., Toolka-1A, Well Completion Report, Bass Basin, Tasmania, Australia. Esso Exploration and Production Australia Ltd (unpublished).</p>
<p><b><u>Whelk-1 (Otway Basin)</u></b> Evans, P.R., 1970. Palynology of Esso Whelk No. 1, Otway Basin, Palynology Report. 1970/8. In: Whelk No. 1, Well Completion Report. Esso Exploration and Production Australia Ltd (unpublished).</p>
<p><b><u>White Ibis-1</u></b> Morgan, R., 1998. Palynology of White Ibis-1, T/18P, Bass Basin Offshore Tasmania, Australia (Appendix 14). Report prepared for Premier Oil by Morgan Palaeo Associates. In: White Ibis-1, Well Completion Report, Premier Oil Australasia (unpublished).</p>
<p><b><u>Yolla-1</u></b> Morgan, R., 1986e. Palynology of Yolla-1 (Appendix 8). In: Yolla-1, Final Well Report, Volume 1, Geology. Amoco Australia Petroleum Company (unpublished).</p> <p>Taylor, D.J., 1986b. The foraminifera sequence in Yolla-1 (Appendix 7). In: Yolla-1, Final Well Report, Volume 1, Geology. Amoco Australia Petroleum Company (unpublished).</p>

**Yurongi-1**

Stover, L.E., 1973c. Palynological interpretations for Yurongi-1, Bass Basin, Australia. Esso Production Research Company, Report EPR67-ES73. In: Yurongi-1, Well Completion Report. Esso Exploration and Production Australia Inc (unpublished).

Stover, L.E., 1973d. Palynological zone determinations for Yurongi-1, Bass Basin, Australia. Esso Production Research Company, Report EPR95-ES73. In: Yurongi-1, Well Completion Report. Esso Exploration and Production Australia Inc (unpublished).

**Table 3.** A list of the summary reports contained on this CD-ROM (Partridge, 1973, 1979, 1993; Morgan, 1985), and the wells reviewed or referenced in these reports.

**Partridge, A.D., 1973. Revision of the spore-pollen zonation in the Bass Basin. Esso Australia Ltd, Palaeontological Report 1973/4 (unpublished).**

Some reference to occurrences in Bass-1, Bass-2, Bass-3, Cormorant-1, Durroon-1, Poonboon-1, Pelican-3, Tarook-1

**Partridge, A.D., 1979. Revision of Bass Basin palynology and micropalaeontology data sheets. Esso Australia Ltd, Palaeontology Report 1979/19 (unpublished).**

Aroo-1, Bass-1, Bass-2, Bass-3, Cormorant-1, Dondu-1, Durroon-1, Konkon-1, Nangkero-1, Narimba-1, Pelican-1, Pelican-2, Pelican-3, Poonboon-1, Snail-1 (Otway Basin), Tarook-1, Toolka-1, Yurongi-1

**Partridge, A.D., 1993. Review and compilation of open-file micropalaeontology and palynology data from offshore wells on the continental shelf of Tasmania. Biostrata Report 1993/9 (unpublished).**

All individual reports compiled in this unpublished review are included in this Record (CD-ROM).

**Morgan, R., 1985. Palynology review of previous oil drilling, Bass Basin, Australia. Consultants report prepared for Amoco Australia (unpublished).**

Aroo-1, Bass-1, Bass-2, Bass-3, Cormorant-1, Dondu-1, Durroon-1, Konkon-1, Nangkero-1, Narimba-1, Pelican-1, Pelican-2, Pelican-3, Pelican-4, Pipipa-1, Poonboon-1, Tarook-1, Toolka-1, Yurongi-1

## 2. INSTRUCTIONS FOR USE OF THIS PRODUCT

This Record opens automatically to an Auto-Run menu (Figure 2) upon inserting the CD-ROM in your computer's CD-drive. The biostratigraphy reports contained on this CD-ROM are in Adobe PDF format, and require an Adobe Acrobat Reader (Version 4 or later) to run. If an Adobe Acrobat Reader is installed on your computer, the Report Menu should automatically open upon selecting the *Bass Basin Biostratigraphic Review* button on the Auto-Run menu.

If the Adobe Acrobat Reader does not automatically display, the user will need to install the software, which is located in the "Adobe" directory on this CD-ROM. This software is for WIN95, 98, NT and XP. For further configuration and technical assistance, please consult the Adobe web site ([www.adobe.com](http://www.adobe.com)).

After opening the report by selecting the *Bass Basin Biostratigraphic Review* button on the Auto-Run menu (Figure 2), a map showing the locations of selected petroleum exploration wells in the Bass Strait region will appear (Figure 3). On the left side of your computer screen, a text list containing the following six directories will also appear – *Basin Summary Reports*, *Bass Basin Wells*, *Gippsland Basin Wells*, *Otway Basin Wells*, *Sorell Basin Wells* and *Executive Summary*. Web-links to *Mineral Resources Tasmania* and *Geoscience Australia* will also appear at the bottom of this list. To see a full list of wells for each basin, click on the "+" symbol to the left of the basin name. To view the report for a specific well, the user may either select from the map (by clicking your cursor on the well name), or from the text list on the left-side of your screen. Upon selection, the well report will open displaying the micropalaeontological and palynological data. The four Summary Reports (Partridge, 1973, 1979, 1993; Morgan, 1985) can be opened through the text directory or by clicking directly on the text title of the appropriate report (see the white text box in the lower half of the map screen; Figure 3). It is not necessary to close a report, before selecting another report.

To select another well report, the user should scroll to the bottom of the bookmark menu (on the left hand side of the screen) and select the *Well Location Map and Links to Other Reports* text link – this will return the user to the regional map. Alternatively, a new report can be selected by using the Back Arrow button on the Adobe Reader toolbar – this will step the user through previously opened reports, then return you to the regional map.

To close the Reports section of the CD, simply close the Acrobat Reader from the Menu Bar. This will return the user to the Auto-Run menu – to close this menu, simply click on the *Exit* button (Figure 2). This will shut down operation of the CD.

For further information about this or any product in this series, please contact:



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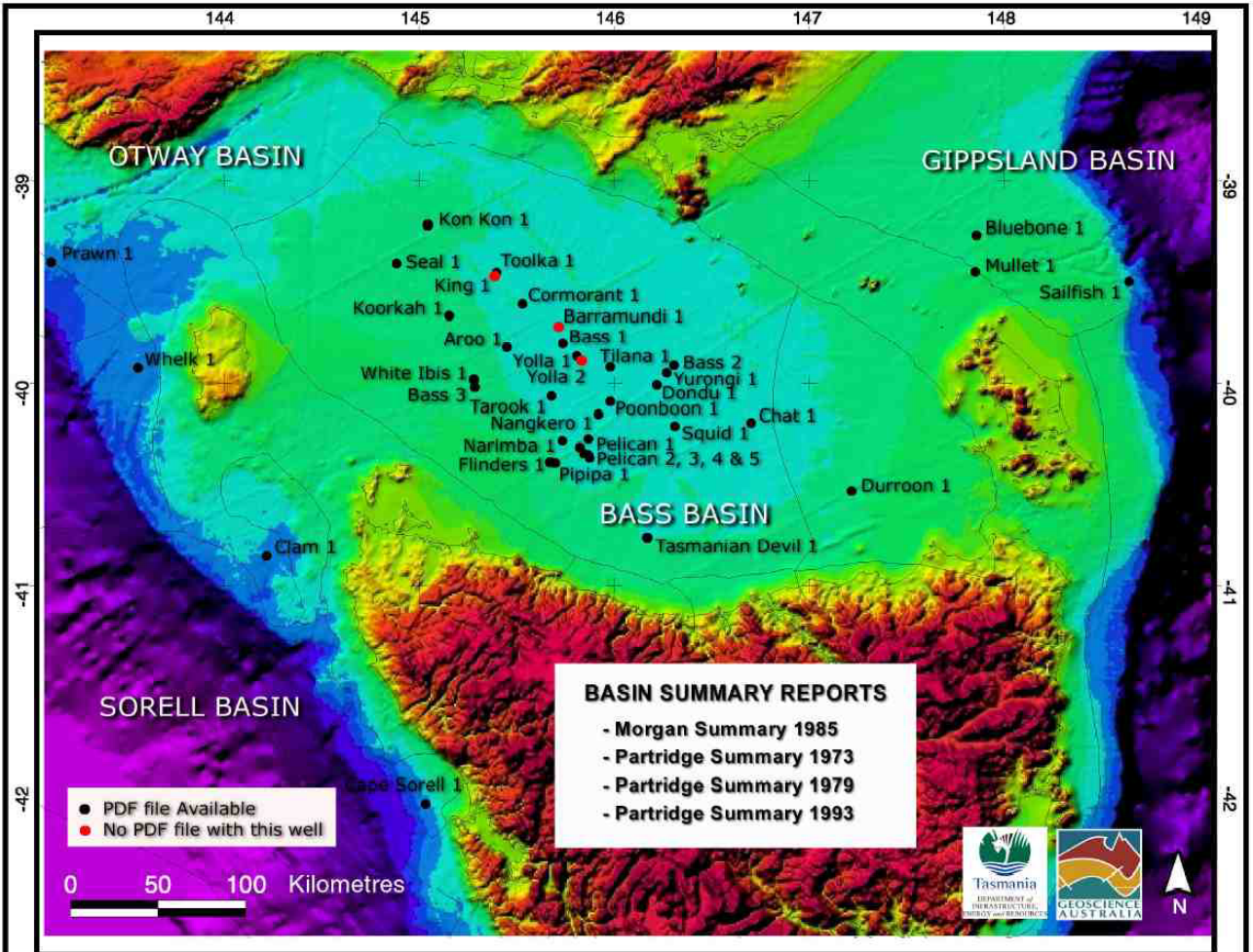
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**Figure 2.** Sample of the CD-ROM auto-run menu.





**Figure 3.** Sample navigation map used on the CD-ROM to access biostratigraphic reports for wells in the Bass Basin (with selected wells in the adjacent Otway, Sorell and Gippsland basins).





### 3. PRODUCTS LIST

PLEASE CONTACT: GEOSCIENCE AUSTRALIA, SALES CENTRE, GPO BOX 378, CANBERRA ACT 2601, AUSTRALIA

#### **PETROLEUM GEOLOGY OF THE BASS BASIN – INTERPRETATION REPORT**

An Output of the Western Tasmanian Regional Minerals Program

Geoscience Australia Record, CD-ROM

Compiler: Blevin, J.E.

#### **BASS BASIN GIS PROJECT**

An Output of the Western Tasmanian Regional Minerals Program

Geoscience Australia Record, CD-ROM

Authors: Blevin, J.E., Boreham, C.J., Lang, S.C., Mitchell, C.H., Nicholson, C.J., Trigg, K.R. & Webster, M.A.

#### **REVIEW AND COMPILATION OF OPEN FILE MICROPALAEONTOLOGY AND PALYNOLOGY DATA FROM OFFSHORE TASMANIA**

An Output of the Western Tasmanian Regional Minerals Program

Geoscience Australia Record, CD-ROM

Authors: Partridge, A.P., Trigg, K.R., Montgomerie, N.R. & Blevin, J.E.

#### **BASS BASIN, BASIC DATA COMPILATION (including bathymetry, gravity, and magnetic images; biostratigraphy, porosity, permeability, geochemistry, checkshot, deviation, and seismic navigation data),**

An Output of the Western Tasmanian Regional Minerals Program

Geoscience Australia Record, CD-ROM

Authors: Blevin, J.E., Montgomerie, N.R. & Nicholson, C.J.

#### **AN AUDIT OF PETROLEUM EXPLORATION WELLS IN THE BASS BASIN, 1965-1999**

An Output of the Western Tasmanian Regional Minerals Program

Geoscience Australia Record, CD-ROM

Authors: Trigg, K.R., Blevin, J.E. & Boreham, C.J.

#### **REGIONAL POTENTIAL FIELD INTERPRETATION REPORT, BASS BASIN**

Bass Basin SEEBASE™ Project, SRK Consulting Report AG701, Commissioned by Geoscience Australia

An Output of the Western Tasmanian Regional Minerals Program

Geoscience Australia Record, CD-ROM

Authors: Teasdale, J.R., L. Pryer, Etheridge, M., Stuart-Smith, P., Loutit, T., Shi, Z., Vizzy, J. & Henley, P.

#### **WESTERN TASMANIA REGIONAL SEISMIC DATA, SELECTED REPROCESSED LINES FROM SEISMIC SURVEYS T69A AND T70A (including SEG Y, navigation and velocity data)**

An Output of the Western Tasmanian Regional Minerals Program

Geoscience Australia Record, CD-ROM

Compilers: Fleming, A. & Blevin, J.E.

## 4. REFERENCES

Boreham, C.J., Blevin, J.E., Radlinski, A.P. and Trigg, K.R., 2003. Coal as a source of oil and gas, a case study from the Bass Basin, Australia. APPEA Journal, 43(1).

Morgan, R., 1985. Palynology review of previous oil drilling, Bass Basin, Australia. Consultants report prepared for Amoco Australia (unpublished).

Partridge, A.D., 1973. Revision of the spore-pollen zonation in the Bass Basin. Esso Australia Ltd, Palaeontological Report 1973/4 (unpublished).

Partridge, A.D., 1979. Revision of Bass Basin palynology and micropalaeontology data sheets. Esso Australia Ltd, Palaeontology Report 1979/19 (unpublished).

Partridge, A.D., 1993. Review and compilation of open-file micropalaeontology and palynology data from offshore wells on the continental shelf of Tasmania. Biostrata Report 1993/9 (unpublished).

*Note: Many of the unpublished references listed in the report are available through the Petroleum Data Repository, Geoscience Australia ([www.ga.gov.au](http://www.ga.gov.au)).*