AUSTRALIAN GEOLOGICAL SURVEY ORGANISATION

Record Number

1993/3

EXPLANATORY NOTES TO ACCOMPANY TECTONIC ELEMENTS MAP AND DATA BASE OF THE NORTH WEST SHELF, AUSTRALIA

H.M.J. Stagg

Marine Geoscience and Petroleum Geology Program

AGSO

AUSTRALIAN GEOLOGICAL SURVEY ORGANISATION

AUSTRALIAN GEOLOGICAL SURVEY ORGANISATION

Marine Geoscience and Petroleum Geology Program

AGSO RECORD 1993/3

EXPLANATORY NOTES TO ACCOMPANY TECTONIC ELEMENTS MAP AND DATA BASE OF THE NORTH WEST SHELF, AUSTRALIA

H.M.J. Stagg

The Tectonic Elements Map and Data Base of the North West Shelf are a joint project of the Australian Geological Survey Organisation and Nopec Australia Pty Ltd

AGSO

AUSTRALIAN GEOLOGICAL SURVEY ORGANISATION

DEPARTMENT OF PRIMARY INDUSTRIES AND ENERGY

Minister for Resources: The Hon. Alan Griffiths
Secretary: Geoff Miller

AUSTRALIAN GEOLOGICAL SURVEY ORGANISATION
(formerly BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS)

Executive Director: Roye Rutland

ISSN: 1039-0073

ISBN: 0 642 19003 8

CONTENTS

CAVEAT

The information contained in the map and data base of the tectonic elements of the North West Shelf has been compiled from a large variety of sources, both published and unpublished, including recent research by the Australian Geological Research Organisation (AGSO) in the region. Because of this range of sources, several *caveats* apply to use of the material:

1. The scale of the source material for the compilation ranges from 1:250 000 to 1:2 500 000 (except for oil and gas field outlines, in which the average compilation scale was about 1:20000). Consequently, caution should be exercised in using the data base at scales larger than about 1:1 000 000. At scales larger than 1:1 000 000, digitising errors or navigation errors (in the case of old data) will become significant.

2. The level of exploration activity along the North West Shelf is highly variable. In well-explored areas, such as the Carnarvon Basin, features are shown in some detail, and their trends are accurately known. In 'frontier' areas, such as the deep-water Rowley Sub-basin, Scott Plateau, and northern Exmouth Plateau, trends are interpreted from widely spaced lines and frequently from data of indifferent quality. Trends in these areas should be accepted with due caution.

3. The vintage of the source material also shows a large degree of variation. Whilst in the most actively explored areas the features shown represent the more recent interpretations of high-quality data, in areas such as the Scott Plateau, no new interpretations have been attempted since the late 1970s.

4. The onshore lineament study was based on AGSO national aeromagnetic and gravity data bases, Landsat imagery, and published geological maps. Coverage of these data sets is not necessarily complete. For instance, aeromagnetic coverage of the Kimberly Basin is incomplete and this is reflected in the absence of aeromagnetic lineations in the map and data base in that area.

These explanatory notes will attempt to indicate the level of reliability of features shown in each area.

INTRODUCTION

The Australian Geological Survey Organisation (AGSO; formerly the Bureau of Mineral Resources, Geology and Geophysics, or BMR) has had a long scientific interest in the North West Shelf, dating back to the earliest systematic surveys of the region, carried out by BMR in 1967. The Continental Margins Survey of 1970-73 was the first systematic survey of the continental margin extending to abyssal depths, and in many areas (eg Scott Plateau, northern Exmouth Plateau) it remains the only regional data set available. Since obtaining and fitting out the research vessel *Rig Seismic* in late 1984/early 1985, BMR/AGSO has carried out two rounds of research on the North West Shelf. The first round (1986) concentrated on heat flow studies on the Exmouth Plateau (Choi, Stagg, & others, 1987) and on multichannel seismic surveying of the margins of the Exmouth Plateau as a precursor to ODP drilling (references). The second round commenced in 1990 and is scheduled to run until late 1993 or early 1994. This round particularly concentrates on deep seismic surveying of the margin with the following general aims:

- To determine the broad regional structural framework of the North West Shelf by examining the relationships between the major structural elements;
- To determine the deep crustal structure of the region;
- To develop models of continental margins formation that apply to the North West Shelf region;
- To assess the influence of deep structure on the development of the major hydrocarbon fields and plays, and in particular the structural and depositional effects resulting from reactivation of these structures; and
- To acquire a set of high-quality seismic tie lines linking the deeper exploration wells throughout the region to allow regional seismic correlations.

In addition to application of the deep seismic technique, AGSO has also applied direct hydrocarbon detection (DHD, or 'sniffing'), high-resolution seismic (using a water gun array), and geological sampling via dredging and coring on the North West Shelf.

During the planning stages of the current round of work, it rapidly became apparent that, while the general locations of deep seismic lines could quite readily be established, the lack of any consistent modern tectonic elements map and data base for the entire North West Shelf made it difficult to locate lines to optimum advantage. The requirement for a digital data base of tectonic elements, as an aid to regional survey planning (and as a basis for subsequent interpretation) was the driving force behind initiation of this project

The first effort in this area came with the digitising of the Woodside tectonic elements map of the offshore Carnarvon Basin (Woodside, 1988) to facilitate planning of the SNOWS-I Survey 101) and SNOWS-II (Survey 110) deep seismic cruises in the area in 1991/92 (Stagg, Brassil

& others, 1991; Stagg & Survey 110 Shipboard Party, 1992). From this, it immediately became apparent that a logical extension of our first attempts at tectonic elements mapping would be to extend the work to as much of the North West Shelf as possible by compiling the existing published data. Such a compilation was seen as having the following value:

1. As a project planning tool for future AGSO work on the North West Shelf;

2. As a regional data base that would give exploration companies access to contemporary regional interpretations outside their areas of immediate interest;

3. As a basic data base of information for overseas exploration companies considering exploring in Australia;

4. As a regional interpretation tool that would allow localised interpretations to be placed in a margin-wide perspective.

In 1992, the petroleum exploration consulting company Nopec agreed to provide funding to assist the production of a full-colour map and comprehensive data base. The opportunity was also taken to extend the map eastwards to 137°E to include the basins of the Arafura Sea (which while not generally considered part of the North West Shelf, are sufficiently closely related to the North West Shelf to justify their inclusion) and to commission a contract study of onshore lineaments in the area adjacent to the North West Shelf (subsequently carried out by Etheridge and Henley Geoscience Consultants). A limited study of onshore lineaments had previously been carried out in the Vulcan Sub-basin area (O'Brien & others, 1993) and was judged to be of high value in generating new ideas on the formation of the adjacent continental margin.

The purpose of this record is to provide background information to the compilation of the map and data base that will allow their use with confidence. Also included in this record as an aid to both new and old explorers in the region is a bibliography for the North West Shelf, including the Arafura Sea and the onshore Canning Basin (principal references only).

Acknowledgements: In the early stages of this project, exploration companies based in Australia were solicited for data. We are grateful to Ampol Exploration Ltd and the Petroleum Division of Western Mining Corporation Ltd for their subsequent contributions.

The basic well information in the data base is extracted from the PEDIN data base, a joint product of AGSO and the Bureau of Resource Sciences (BRS). Reserves data are courtesy of Petroleum Resource Branch, BRS, estimated from Western Australian Department of Minerals and Energy and Northern Territory Department of Mines and Energy publications.

The onshore lineament study, carried out by Drs Paul Pearson and Mike Etheridge of Etheridge and Henley Geoscience Consultants, was primarily based on data from the AGSO national gravity and aeromagnetic data bases. We are indebted to Mr Michael Morse and Dr Chris Tarlowski, respectively, for compiling these gridded data, and to Mr John Creasey and Mr

Matti Peljo of the Image Processing Centre, AGSO, for production of the interpreted images.

Thanks are also due to Jim Colwell for assistance with the editing of the map and record, Jenny Bedford for digitising the onshore lineaments, and to Messrs Chris Fitzgerald, Rainer Swoboda and John Gallagher of the Cartographic Services Unit, AGSO, for the production of the final map.

Coordination between AGSO and Nopec in the funding of the project was handled by Mr Chris Johnston of AGSO and Mr Halfdan Carstens of Nopec.

DATA BASE ORGANISATION

The original North West Shelf tectonic elements data base was digitised and compiled using the PETROSEIS culture data base facility (PETROSEIS exploration mapping system is a product of Petrosys Pty Ltd, Adelaide). The following notes on data base organisation apply particularly to the PETROSEIS implementation. To broaden the value of the data base to users, the tectonic elements are also available in the following formats:

1. PETROSEIS culture data base; VMS implementation; 5 separate files.
2. PETROSEIS culture data base; MS-DOS implementation; 5 separate files.
3. ASCII 'flat' files; magnetic tape or MS-DOS formatted floppy disc; 1 layer per file; PETROSEIS culture data base 'export' format..
4. ArcInfo (ArcInfo is a geographic information system produced by Environmental Systems Research Institute Inc.); 1 coverage for each layer of the data base; produced on a UNIX system.
5. Intergraph design files; design files are only available for the layers included in the map.

The format for the ASCII files is outlined in Appendix 1. All coordinates are specified in decimal degrees, with latitudes being negative in the southern hemisphere.

Each PETROSEIS culture data base contains a maximum of 16 groups (or 'layers'), with each group containing a variable number of data elements. Elements within each group are stored in one of three types, *viz*:

1. Point data - The position of each element in the layer is defined by a single coordinate pair, and each point may have multiple attributes (eg exploration wells, towns).
2. Line data - The position of each element in the layer is defined by a string of latitude/longitude pairs; no attributes are stored with the data (eg depocentres, pipelines). Where the element can sensibly have 'direction' then all elements within a group are digitised consistently (for example, all normal faults are digitised such that the down-thrown block is to the left of the line).
3. Polygon data - These data are stored in similar fashion to the line data, except that the first coordinate pair is repeated at the end of the element, to ensure that the polygon is closed.

The North West Shelf tectonic elements data base is divided into five components - *viz* tectonic elements, minor geological features, geographical and political boundaries, exploration information, and bathymetry. The 'layers' in each component are listed below.

* Layers shown with an asterisk are included in the data base but are not shown in the map.

Geological Features: (culture data base file: TECTONICS.CUL)

All features within each layer have a unique name. This is either the name by which a feature is known in the literature (eg 'Lewis Trough', 'Scholl Island Fault') or a name created only for the data base. For instance, faults in the Timor Sea may be named 'Timor Sea 1', 'Timor Sea 2', etc. The layers are as follows:

1. **Major faults** - faults of major significance (particularly basin-forming faults)

Feature type:	line
Direction of digitisation	down-thrown block to left
ASCII file name:	majorflt.asc
ArcInfo coverage file name:	major_faults.cov
Intergraph design file name:	majorflt.dgn

2. **Minor faults** - lesser faults probably not of basin-forming significance. Note that the division between major and minor faults is rather arbitrary; a full assessment of the relative importance of all the faults on the North West Shelf is far beyond the scope of this project.

Feature type:	line
Direction of digitisation:	down-thrown block to left
ASCII file name:	minorflt.asc
ArcInfo coverage file name:	minor_faults.cov
Intergraph design file name:	minorflt.dgn

3. **Reverse faults**

Feature type:	line
Direction of digitisation:	over-thrust block to left
ASCII file name:	reverse.asc
ArcInfo coverage file name:	reverse_faults.cov
Intergraph design file name:	reverse.dgn

4. **Transfer faults or accommodation zones** - Given that transfer faults and accommodation zones are not readily identified in seismic data, this layer is more interpretive than other layers in the data base. Interpretation of these elements is either from combined interpretation of aeromagnetic and seismic data (eg Vulcan Graben) or from satellite imagery (North West Cape area).

Feature type:	line
Direction of digitisation:	arbitrary
ASCII file name:	transfer.asc
ArcInfo coverage file name:	transfer_faults.cov
Intergraph design file name:	transfer.dgn

5. **Strike-slip faults** - While many faults may have a strike-slip component, particularly during reactivation, this classification includes only those faults identified as primarily of strike-slip origin.

Feature type:	line
Direction of digitisation:	arbitrary
ASCII file name:	strkslip.asc
ArcInfo coverage file name:	strike_slip.cov
Intergraph design file name:	strkslip.dgn

6. **Hinges** (= monocline) - This is a rather ill-defined term used to delineate basement 'edges' where faults cannot obviously be mapped.

Feature type:	line
Direction of digitisation:	down-dip surface to left
ASCII file name:	hinges.asc
ArcInfo coverage file name:	hinges.cov
Intergraph design file name:	hinges.dgn

7. **Positive structural trends** - This layer includes conventional anticlines in sedimentary rocks (eg Barrow Island Anticline) as well as structurally positive areas that do not necessarily have an anticlinal structure (eg Bedout High).

Feature type:	line
Direction of digitisation:	arbitrary
ASCII file name:	positive.asc
ArcInfo coverage file name:	positive_trends.cov
Intergraph design file name:	positive.dgn

8. **Depocentres** - Includes conventional synclines, synclinoria, and general areas of sediment thickening.

Feature type:	line
Direction of digitisation:	arbitrary
ASCII file name:	depocent.asc
ArcInfo coverage file name:	depocentres.cov
Intergraph design file name:	depocent.dgn

9. **Magnetic lineations/fossil ridges** - This layer comprises sea-floor spreading magnetic anomalies, with their identification, and fossil (ie non-active) spreading ridges.

Feature type:	line
Direction of digitisation:	youngest crust to left (magnetic lineations) arbitrary (fossil ridges)
ASCII file name:	spread.asc
ArcInfo coverage file name:	spread.cov
Intergraph design file name:	spread.dgn

10. **Fracture zones** - oceanic fracture zones.

Feature type:	line
Direction of digitisation:	oldest to youngest oceanic crust
ASCII file name:	fracture.asc
ArcInfo coverage file name:	fracture.cov
Intergraph design file name:	fracture.dgn

11. **Anomalous oceanic crust** - areas of anomalously thick oceanic crust.

Feature type:	line
Direction of digitisation:	anomalous crust to right
ASCII file name:	volcanic.asc
ArcInfo coverage file name:	volcanic.cov
Intergraph design file name:	volcanic.dgn

12. **COB** - continent-ocean boundary.

Feature type:	line
Direction of digitisation:	oceanic crust to left
ASCII file name:	cob.asc
ArcInfo file name:	cob.cov
Intergraph design file name:	cob.dgn

Onshore Lineaments (culture data base file: LINEAMNT.CUL)

1. **Lineaments - aeromagnetic** - onshore lineaments interpreted from aeromagnetic data.

Feature type:	line
Direction of digitisation:	arbitrary
ASCII file name:	magline.asc
ArcInfo coverage file name:	magnetic_lineaments.cov
Intergraph design file name:	magline.dgn

2. **Lineaments - gravity** - onshore lineaments interpreted from gravity data.

Feature type:	line
Direction of digitisation:	arbitrary
ASCII file name:	gravline.asc
ArcInfo coverage file name:	gravity_lineaments.asc
Intergraph design file name:	gravline.dgn

3. **Lineaments - Landsat** - onshore lineaments interpreted from Landsat satellite imagery.

Feature type:	line
Direction of digitisation:	arbitrary
ASCII file name:	landsat.asc
ArcInfo coverage file name:	landsat_lineaments.cov
Intergraph design file name:	landsat.dgn

4. **Lineaments - geological** - onshore lineaments interpreted from geological mapping.

Feature type:	line
Direction of digitisation:	arbitrary
ASCII file name:	landmap.asc
ArcInfo coverage file name:	land_mapping.cov
Intergraph design file name:	landmap.dgn

5. **Lineaments - combined** - onshore lineaments that are a coincidence of two or more of the gravity, aeromagnetic, Landsat, or geological mapping lineaments.

Feature type:	line
Direction of digitisation:	arbitrary
ASCII file name:	combined.asc
ArcInfo coverage name:	combined_lineaments.cov
Intergraph design file name:	combined.dgn

<u>Minor Geological Features</u> (culture data base file: DETAIL.CUL)

This component of the data base contains features of lesser geological significance that have been mapped in detail where they are available, and 'miscellaneous features that, while of interest in themselves, do not justify the allocation of an entire data base layer. No features from this component are included in the map.

1. * **Vulcan Sub-basin faults** - This layer comprises fault traces digitised from AGSO's detailed mapping of the Vulcan Sub-basin.

Feature type:	line
Direction of digitisation:	down-thrown block to left
ASCII file name:	vulcan.asc
ArcInfo coverage file name:	vulcan_faults.cov
Intergraph design file name:	not available

2. * **Exmouth minor faults** - minor faults at top Triassic on Exmouth Plateau.

Feature type:	line
Direction of digitisation:	down-thrown block to left
ASCII file name:	exmouth.asc
ArcInfo coverage file name:	exmouth_faults.cov
Intergraph design file name:	not available

3. * **Miscellaneous** - features of geological significance that do not fit under a standard geological classification (eg northerly limit of Barrow Group prograding on the Exmouth Plateau).

Feature type:	line
Direction of digitisation:	arbitrary
ASCII file name:	miscell.asc
ArcInfo coverage file name:	miscellaneous.cov
Intergraph design file name:	not available

Geographical & Political Features (culture data base: GEOGPOLI.CUL)

This component of the data base contains boundaries and points of geographical and political significance. Not all layers are included in the tectonic elements map.

1. **Coastline** - This layer includes all islands, as well as the mainland.

Feature type:	line
Direction of digitisation:	arbitrary
ASCII file name:	coast.asc
ArcInfo coverage file name:	coast.cov
Intergraph design file name:	coast.dgn

2. **Reefs**

Feature type:	line
Direction of digitisation:	arbitrary
ASCII file name:	reefs.asc
ArcInfo coverage file name:	reefs.cov
Intergraph design file name:	reefs.dgn

3. **Political boundaries** - including the Australia-Indonesia and Western Australia-Northern Territory boundaries, Zone of Cooperation, and Western Australia Adjacent Area.

Feature type:	line
Direction of digitisation:	arbitrary
ASCII file name:	politic.asc
ArcInfo coverage file name:	political.cov
Intergraph design file name:	politic.dgn

4. * **Towns** - position of principal population centres adjacent to the North West Shelf.

Feature type:	point
Associated information:	name, latitude, longitude
ASCII file name:	towns.asc
ArcInfo coverage file name:	towns.cov
Intergraph design file name:	towns.dgn

Exploration Information (culture data base: EXPLORE.CUL)

This component of the data base contains exploration-related information. A notable omission from this component is exploration permits. This omission is deliberate and is because of the frequently changing of exploration leases in Australia (currently at least twice per annum).

1. * **Wells** - includes exploration and appraisal wells, both offshore and onshore derived from AGSO's PEDIN data base. This layer includes only basic information for each well.

Feature type:	point
Associated information:	name, latitude, longitude, operator, date, total depth, water depth, status, shows
ASCII file name:	wells.asc
ArcInfo coverage file name:	wells.cov
Intergraph design file name:	not available

2. * **Oil & gas fields** - outlines of oil and gas fields, where such information is available. This information should particularly be treated with caution, since the source is typically published papers of limited drafting accuracy.

Feature type:	polygon
Direction of digitisation:	field to right
ASCII file name:	fields.asc
ArcInfo coverage file name:	fields.cov
Intergraph design file name:	not available

3. **Oil and gas discoveries** - locations of all oil and gas discoveries of 'significance', together with initial reserves, where known. These positions are derived from the 'wells' layer. Where multiple wells have been drilled on a field, the position given is the well nearest to the geographical centre of that field.

Feature type:	point
Associated information:	name, latitude, longitude
ASCII file name:	discover.asc
ArcInfo coverage file name:	discoveries.cov
Intergraph design file name:	discover.dgn

4. * **Production facilities** - locations of oil and gas production facilities. The sources of this information are quite variable, and caution should be used in their use, particularly for survey planning.

Feature type:	point
Associated information:	name, latitude, longitude
ASCII file name:	facility.asc
ArcInfo coverage file name:	facility.cov
Intergraph design file name:	not available

5. * **Pipelines** - locations of known onshore and offshore pipelines. The same provisos apply as for the production facilities.

Feature type:	line
Direction of digitisation:	downstream
ASCII file name:	pipeline.asc
ArcInfo coverage file name:	pipeline.cov
Intergraph design file name:	not available

6. * **ODP & DSDP wells** - locations of Ocean Drilling Program (ODP) and Deep Sea Drilling Program (DSDP) wells. This information was obtained from the initial reports of the Deep Sea Drilling and Ocean Drilling Programs.

Feature type:	point
Associated information:	name, latitude, longitude, operator, water depth, total depth, date
ASCII file name:	odp_dsdp.asc
ArcInfo coverage file name:	odp_dsdp.cov
Intergraph design file name:	not available

Bathymetry (culture data base: BATHYM.CUL)
This component of the data base contains bathymetric contours. The contours include the 200 m isobath, and then every 500 m. Each contour level is included as a separate layer within the data base, thereby allowing selected contours to be plotted. Only the 200 m and 2000 m isobaths are included on the map. As the sources of these data are both varied and at a regional scale, caution should be exercised in their use.

Feature type:	line
Direction of digitisation:	arbitrary
ASCII file name:	*nnnn*m.asc, where *nnnn* is the contour level; eg the file 1500m.asc is the file for the 1500 metre contour level
ArcInfo coverage file name:	*nnnn*m.cov; naming convention as above
Intergraph design file name:	*nnnn*m.dgn; naming convention as above

DATA SOURCES & QUALITY FOR BASIN ELEMENTS

The purpose of this section is to list the data sources used for different parts of the tectonic elements data base, and to provide an estimate of the expected reliability of the data in each area.

Oceanic Crust (including COB)

Includes: Argo, Gascoyne, and Cuvier Abyssal Plains.

Sources: Fullerton & others (1989)

Comments:
While there has been some difference of opinion as to the age interpretation of ages of sea-floor spreading magnetic anomalies in the Wharton Basin (Argo, Gascoyne, and Cuvier Abyssal Plains), the identification of Fullerton & others (1989), which is also used in the AAPG map, is now the most widely accepted. With this identification, the age of inception of spreading in the Argo Abyssal Plain is taken as Oxfordian (Middle Jurassic), while the corresponding age in the Gascoyne and Cuvier Abyssal Plains is Neocomian. This project did not have ready access to the actual magnetic anomaly picks, and the magnetic lineation, oceanic fracture zone, and continent-ocean boundary (COB) locations in the data base have been digitised from the references above. The outlines of the Christmas Rise, Joey Rise, and Roo Rise areas of anomalously thick oceanics crust are taken from the AAPG map. The location of the boundary between the Australian and Eurasian Plates has been taken as the axis of the Java Trench - Roti Basin - Timor Trough.

Overall, the absolute accuracy of features in this area can be considered as fair; however, this is probably quite sufficient for the purposes of the map and data base.

Carnarvon Basin

Includes: Gascoyne, Merlinleigh, Ashburton, Exmouth, Barrow, Dampier, and Beagle Sub-basins; Rankin Platform.

Sources:

Bint (1991)
Blevin & others (1992)
Howell (1988)
McClure & others (1988)
Malcolm & others (1991)
Osborne & Howell (1987)
Parry & Smith (1988)
Symonds & Cameron (1977)
Tait & others (1989)
Veenstra (1985)
Vincent & Tilbury (1988)
Williams (1988)
Williams & Poynton (1985)
Woodside (1988)

Comments:
In addition to the sources listed above, some use was also made of unpublished industry surveys acquired under the Petroleum (Submerged Lands) Act (PSLA). The original data source for the region was the tectonic elements map of Woodside (1988). While this has been refined or replaced in many areas by more detailed studies, the Woodside map remains a valuable starting point.

The Carnarvon Basin (particularly the Barrow and Dampier Sub-basins) is the best-explored region of the North West Shelf, and consequently the accuracy of the data base can generally be considered as good. Those areas where the accuracy is fair to moderate include the onshore Carnarvon Basin, Exmouth Sub-basin (adjacent to the Cuvier Abyssal Plain), and the Beagle Sub-basin.

The age of the structuring represented by the faults is highly variable. In general, faults near the coast are likely to be ?Palaeozoic basin-forming faults, those in and immediately adjacent to the main Mesozoic depocentres are likely to be Jurassic reactivation faults, while the faults beneath the outer margin of the sub-basins were mainly reactivated in the Triassic. It is likely that the Triassic and Jurassic faults of high along-strike continuity are reactivations of basin-forming structures (eg SE flank of the Rankin Trend).

Exmouth Plateau

Sources: Barber (1988)
Esso (1979)
Geophysical Service International (1976)
Exon & Willcox (1980)

Comments:
The shallower parts of the Exmouth Plateau (water depths less than about 2000 m) were extensively explored during the late 1970s and early 1980s when the Exmouth Plateau was divided into 5 large exploration permits. Faulting on this part of the Exmouth Plateau in the data base is largely derived from those surveys and can be considered quite accurately located. The faults shown were generally most recently active in the Late Triassic; how these faults are related to underlying detachments, ramps, or other basin-forming structures is not clear with conventional data. The northern part of the Exmouth Plateau, generally lying in deep water was not explored at the same time as the remainder of the plateau, and the faults shown in the data base are those mapped by Exon & Willcox (1980) using the BMR Continental Margin Survey data together with sparse industry lines; while fault trends in this area are probably broadly correct, more recent data acquired by AGSO using *Rig Seismic* suggests that they generalisations rather than accurate representations.

Canning Basin

Sources: AGSO Canning Basin Study Group (unpublished work)
Stagg & Exon (1981)

Comments:
Onshore Canning Basin structure was provided by M.J. Sexton and R.D. Shaw (Onshore Sedimentary and Petroleum Geology Program, AGSO) as a compilation of AGSO and industry studies during the 1980s and early 1990s. These elements can be considered to be of good quality, reflecting the most recent thinking on the origins of the Canning Basin. In contrast, tectonic elements in the offshore are poorly known and there is no recently available compilation using the best of the existing data.

Browse Basin

Sources: Bint (1988)
Willis (1988)

Comments:
While the Browse Basin has been moderately extensively explored since the early 1970s, the available published maps of the basin generally only show the most significant features, and these have not changed significantly since 1978. This is probably due to two factors: firstly, the post-structuring sedimentary cover is very thick, which means that fault trends (particularly basin-forming fault trends) are very deep in the section; secondly, the thick Tertiary carbonate

section makes it very difficult for good-quality deep seismic profiles to be obtained. If the AGSO deep seismic program in the Browse Basin, scheduled for mid-1993, succeeds in obtaining good-quality deep data, then the tectonic elements of this part of the North West Shelf could be refined in the next few years. The major trends included in the data base are probably of moderate spatial accuracy; however, their relationship to deep basin-forming structures, other than on the basin margins, is entirely unknown at this time.

Scott Plateau

Sources: Stagg & Exon (1981)

Comments:
The Scott Plateau and adjacent areas probably constitute the most poorly known area of the continental margin. The tectonic elements shown in the data base were interpreted in the late 1970s from a combination of early 1970s BMR Continental Margin Survey data and reconnaissance industry lines of about the same vintage. The average line spacing of these data sets is about 30+ km, and the data quality varies from fair to moderate.. Consequently, the accuracy of interpretation and positioning of geological features can only be considered fair. While the Scott Plateau is scheduled to be traversed by deep seismic profiling at the same time as the Browse Basin (see above), it is unlikely that any significant update to the geology of this part of the margin will be made in the forseeable future.

Bonaparte Basin

Includes: Petrel Sub-basin, Malita Graben, Sahul Syncline, Sahul Platform, Londonderry Arch (or Londonderry High), Vulcan Sub-basin, Ashmore Platform.

Sources:
Gunn (1988a)
MacDaniel (1988)
Mory (1988)
O'Brien & others (1992)
Pattillo & Nicholls (1990)
Petroconsultants (1990)

Comments:
By Australian standards, the Bonaparte Basin and environs have been heavily explored since the early 1980s. While the Palaeozoic faulting in the Petrel Sub-basin and the Mesozoic faulting further offshore are now mapped quite accurately, basin forming faults are poorly imaged, except at the extreme basin margins. An improved understanding of the region in terms of detachment models of passive margin formation is now emerging (eg O'Brien & others, 1993); however, it will probably be some time before the tectonic elements can be mapped in a way that fully reflects their origins.

Onshore Basins

Includes: All Precambrian and Palaeozoic provinces (excluding Canning Basin) covered by the 1:1 000 000 sheet areas SD52, SD53, SE51, SE52, SF50, SF51, SF52.

Sources: Contract study carried out for AGSO by Etheridge & Henley Geoscience Consultants.

Comments:
The onshore lineaments in the map and data base were interpreted by Etheridge & Henley Geoscience Consultants, under contract to AGSO. The data sources included the AGSO National Aeromagnetic Data Base (1992) and National Gravity Data Base (1992), Landsat imagery, and published geological maps. The lineaments have been interpreted and digitised in 5 groups, as outline in the section Data Base Organisation. The sources used in the interpretation are not complete for all data sets - for instance, the existing aeromagnetic coverage does not include all of the Kimberley Basin - therefore not all lineament types are present over all areas onshore.

The interpretation was carried out in 2 phases. In the first phase, all possible lineaments were interpreted on a set of 1:1 000 000 compilation sheets, corresponding to the sheet numbers listed above. In the second stage, the raw lineaments were interpreted to produce a set of lineaments that have relatively high continuity. All the interpreted lineaments were digitised into the data base. Lineaments that coincided with previously digitised features on the continental margin and in the onshore Canning Basin have been deleted from the map, though they have been retained in the data base. Where lineaments have been interpreted as broad features (several km in width), they have been digitised as a pair of lines along each edge of the lineament; this particularly applies to the combined lineaments.

The naming convention for lineaments in the data base is, for example:

SD52-nn

where SD52 is the appropriate standard 1:1 000 000 map sheet on which the lineament is found, and nn is a unique sequence number within the map sheet for each lineament type. Where a lineament is digitised as multiple lines (eg for combined lineament pairs), the individual elements have the same sequence number, but with the suffix a, b, c etc.

APPENDIX 1: FORMAT OF ASCII FILES

There are three different ASCII file formats, corresponding to each of the three data types stored in the PETROSEIS culture data base - points, lines, and polygons. The formats are as follows:

1. **POINT data:**
   The file consists of a number of header records, a single record containing a hash ('#') character in column 1, and a number of fixed-format records containing actual data with 1 record per data point. The header records describe the format of the data records, and have the following form:

```
STR 1 15 0 *NAME                        NAME of feature is in columns 1-15
LAT 16 27 0 *LATITUDE                   Latitude in columns 16-27
LON 28 39 0 *LONGITUDE                  Longitude in columns 28-39
STR 40 59 0 *OPERATOR                   Operator columns 40-59 (characters)
NUM 61 65 0 *WATER_DEPTH                Water depth number in columns 65-70
#                                       Header terminator record
North Rankin A -19.586667   116.133333   Woodside              -125
etc
```

2. **LINE data:**
   A line data file consists of a number of segments. Each segment commences with a header record that has and asterisk ('*') in column 1, and then the name of the element. Element names do not have to be unique. Following the header record for each element is a variable number of records containing the coordinates of every point in the element. The positions are stored as a single coordinate pair per record, with coordinates being given as longitude followed by latitude, in decimal degrees, with latitudes being negative in the southern hemisphere.

   An example of a line data file is as follows:

```
*Humongous Fault                        <---   fault name
114.345678  -19.987654                  <---   first coordinate pair
114.456789  -19.876543
114.567899  -19.765432
114.665544  -19.665544                  <---   last coordinate pair
* Caveat Fault                          <---   next fault name
   .
   .                                    <---   more coordinate pairs
   .
   etc
```

3. **POLYGON data:**
   Polygon data are identical to line data, except that the first coordinate pair in each element is repeated at the end of the element to ensure closure of the polygon.

An example of a polygon file is as follows:

```
* Utopia Gas Field                    <---   gas field name
118.049956  -12.123456                <---   first coordinate pair
118.078999  -12.123450                <---   second coordinate pair
118.078996  -12.321987
118.049922  -12.322456
118.049956  -12.123456                <---   last coordinate pair same as
                                             first pair
*Serendipity Gas Field                <---   name of next element
    .
    .
   etc
```

REFERENCES

Aberle, G.E. & Markwell, D.G., 1991 - The Yammaderry and Cowle small offshore field developments. *APEA Journ.*, 31 (1), 359-366.

Alexander, R., Cumbers, K.M., Hartung, B., & Kagi, R.I., 1985 - Petroleum geochemistry of the Canning Basin. *Western Australian Mining & Petroleum Research Institute*, 1-119.

Alexander, R., Cumbers, M., & Kagi, R.I., 1984 - Geochemistry of some Canning Basin crude oils. In Purcell, P.G. (Ed.) *The Canning Basin, W.A.*, Geological Society of Australia/Petroleum Exploration Society of Australia Symposium, Perth, Proceedings, 1984, 353-358.

Alexander, R., Kagi, R.I., Tob, E., & Van Bronswijk, W., 1988 - The use of aromatic hydrocarbons for assessment of thermal histories of sediments. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 559-562.

Alexander, B., Kagi, R., & Woodhouse, G., 1980 - Origin of the Windalia oil, Barrow Island, Western Australia. *APEA Journ.*, 20(1), 250-256.

Allen, G.A., Pearce, L.G.G., & Gardner, W.E., 1978 - A regional interpretation of the Browse Basin. *APEA Journ.*, 18(1), 23-33.

Allen, G.A., Pearce, L.G.G., & Gardner, W.E., 1979. Browse basin: regional interpretation. *Oil & Gas Journal,* 77(10), 200-219.

Allen, T.J., Brown, D., & Wardell, J., 1988 - Shallow water seismic operations on the North West Shelf. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia, Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988*, 517-526.

Anfiloff, V., 1984 - The gravity field of the Canning Basin. In Purcell, P.G. (Ed.) *The Canning Basin, W.A.*, Proceedings Geological Society Australia/ Petroleum Exploration Society Australia Symposium, Perth, 1984, 287-298.

Anfiloff, V., 1988 - Polycyclic rifting - an interpretation of gravity and magnetics in the North West Shelf. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australi,:* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 443-455.

Apthorpe, M., 1979 - Depositional history of the Upper Cretaceous of the North West Shelf, based on foraminifera. *APEA Journ.*, 19(1), 74-89.

Apthorpe, M., 1988 - Cainozoic depositional history of the North West Shelf. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society

Australia Symposium, Perth, 1988, 55-84.

Azim Islam, M., 1988 - Palynological age-dating of seismic horizons D, E and F, Beagle and Dampier Sub-basins. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 599-604.

Baird, R.A. & Philp, R.P., 1988 - Hydrocarbon potential of the Upper Jurassic / Lower Cretaceous of the Australian N.W. Shelf. *Journ. Petroleum Geol.*, 11, 125-140.

Balke, B. & Burt, D., 1976 - Arafura Sea. In Leslie, R.B., Evans, J.H., & Knight, C.L. (eds) *Economic Geology of Australia and Papua New Guinea, 3, Petroleum,* Australasian Institute of Mining & Metallurgy Monograph, 7, 209-212.

Balke, B., Page, C., Harrison, R., & Roussopoules, G., 1973 - Exploration in the Arafura Sea. *APEA Journ.*, 13 (1), 9-12.

Barber, P.M., 1982 - Palaeotectonic evolution and hydrocarbon genesis of the central Exmouth Plateau. *APEA Journ.*, 22(1), 131-144.

Barber, P.M., 1988 - The Exmouth Plateau deep water frontier: a case history. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 173-187.

Barker, G. & Vincent, P., 1988 - Geological and reservoir engineering considerations for the North Rankin gas recycling project. *APEA Journ.*, 28 (1), 54-66.

Barter, T.P., Maron, P., & Willis, I., 1982 - Results of exploration, Browse Basin, North West Shelf, Western Australia. In Watson, S.T. Ed., *Third Circum-Pacific Energy and Minerals Resources Conference, Transactions*, 105-115.

Beales, V. & Howell, E.A., 1992 - Tanami-1 oil discovery: Barrow Sub-basin. *APEA Journ.*,32 (1), 86-93.

Begg, J., 1987 - Structuring and controls on Devonian reef development, northwest Barbwire and adjacent terraces, Canning Basin. *APEA Journ.*, 27(1), 137-151.

Belford, D.J., 1971 - Turonian foraminifera from the Canarvon Basin, Western Australia, and their palaeogeographical significance. *Micropaleontology*, 17: 331-343.

Bentley, J., 1984 - Petroleum geology of the central Broome Platform. In Purcell, P.G. (Ed.) *The Canning Basin, W.A.*, Geological Society of Australia/Petroleum Exploration Society of Australia Symposium, Perth, Proceedings, 1984, 157-168.

Bentley, J., 1988 - The Candace Terrace - a geological perspective. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society

Australia Symposium, Perth, 1988, 157- 171.

Beston, N., 1986 - Reservoir geological modelling of the North Rankin Field, north west Australia. *APEA Journ.*, 26 (1), 375-388.

Bhatia, M.R., Thomas, M., & Boirie, J.M., 1984 - Depositional framework and diagenesis of the Late Permian gas reservoirs of the Bonaparte Basin. *APEA Journ.*, 24(1), 299-313.

Bint, A.N., 1988 - Gas fields of the Browse Basin. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 413-417.

Bint, A.N., 1991 - Discovery of the Wanaea and Cossack oil fields. *APEA Journ.*, 31 (1), 22-31.

Bint, A.N. & Helby, R., 1988 - Upper Triassic palynofacies and environment interpretations for the Rankin Trend, northern Carnarvon Basin, W.A. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 591-598.

Blevin, J.E., Stephenson, A.E., West, B.G., Vuckovic, V., Miyazaki, S., & Lavering, I.H., 1992 - Beagle Sub-basin, northern Carnarvon Basin, petroleum prospectivity bulletin. *Bureau of Resource Sciences, Petroleum Prospectivity Bulletin 1992/1*, AGPS, Canberra.

Blevin, J.E., Stephenson, A.E., & West, B.G., 1993 - The structural and stratigraphic framework of the Beagle Sub-basin, implications for hydrocarbon migration and trap development. *APEA Journ.*, 33 (1).

Boote, D.B.D. & Kirk, R.B., 1989 - Depositional wedge cycles on evolving plate margin, Western Australia. *A.A.P.G. Bull.*, 73: 216-243.

Botten, P. & Wulff, K., 1990 - Exploration potential of the Timor Gap Zone of Co-operation. *APEA Journ.*, 30 (1), 68-90.

Bourne, J.D. & Faehrmann, P.A., 1991 - The Talbot oilfield, Vulcan Sub-basin, Timor Sea: a Triassic oil discovery. *APEA Journ.*, 31 (1), 42-54.

Boutakoff, N., 1963 - Geology of the offshore areas of North-western Australia. *APEA Journ.*, 3, 10-18.

Boyd, R., Williamson, P., & Haq, B., 1992 - Seismic stratigraphy and passive margin evolution of the southern Exmouth Plateau. In von Rad, U., Haq, B.U., & others, *Proc. ODP, Scientific Results*,122, College Station, TX (Ocean Drilling Program), 39-59.

Bradshaw, J., Nicoll, R.S., & Bradshaw, M., 1990 - The Cambrian to Permo-Triassic Arafura

Basin, northern Australia. *APEA Journ.*, 30 (1), 107-127.

Bradshaw, M.T., Yeates, A.N., Beynon, R.M., Brakel, A.T., Langford, R.P., Totterdell, J.M., & Yeung, M., 1988 - Palaeogeographic evolution of the North West Shelf region. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 29-54.

Brady, T.J., Jauncey, C.W., & Stein, C., 1966 - The geology of the Bonaparte Gulf Basin. *APEA Journ.*, 6: 7-11.

Brown, C.M., 1979 - Bonaparte Gulf Basin explanatory notes and stratigraphic correlations. *Bureau of Mineral Resources Australia Record,* 1979/52 (unpubl.).

Brown, C.M., 1979 - Arafura and Money Shoal Basins explanatory notes and stratigraphic correlations. *Bureau Mineral Resources Australia Record*, 1979/51 (unpub.).

Brown, C.M., 1980 - Arafura and Money Shoal Basins. In *Atlas of Stratigraphy II, Mineral Resource Development series VII*, United Nations E.S.C.A.P. 52-57.

Brown, R.G., 1988 - Holocene sediments and environments, Exmouth Gulf, Western Australia. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 85-93.

Brown, S.A., Boserio, I.M., Jackson, K.S., & Spence, K.W., 1984 - The geological evolution of the Canning Basin - implications for petroleum exploration. In Purcell, P.G. (ed.) *The Canning Basin, W.A.,* Proceedings of the Geological Society of Australia/Petroleum Exploration Society Australia Symposium, Perth, 1984, 85-96.

Buffler, R.T., Rowell, P., & Exon, N., 1992 - Seismic stratigraphy of the Site 766 area, western margin of the Exmouth Plateau, Australia. In Gradstein, F.M., Ludden, J.N., & others, *Proc. ODP, Scientific Results,*123, College Station, TX (Ocean Drilling Program), 563-582.

Burdett, J.W., Parry, J.C., & Willmott, S.P., 1970 - Evaluation of the Windalia Sand, Barrow Island: an empirical approach. *APEA Journ.*, 10 (2), 91-96.

Bureau of Mineral Resources, 1976a - Gravity map of Australia, Scale 1:5000000. *Bureau of Mineral Resources Australia*, Canberra.

Bureau of Mineral Resources, 1976 - Magnetic Map of Australia, Scale 1:2500000. *Bureau of Mineral Resources Australia*, Canberra.

Bureau of Mineral Resources, 1988 - Australia's petroleum potential. In *Petroleum in Australia, The First Century*, Australian Petroleum Exploration Association Publication, 48-90.

Burne, R.V., Gorter, J.D., & Saxby, J.D., 1979 - Source rocks and hydrocarbon potential of the Palaeozoic in the onshore Canning Basin, Western Australia. *BMR Journ. Aust. Geol. & Geophys.*, 4, 125-133.

Burne, R.V. & Kanstler, D., 1977 - Geothermal constraints on the hydrocarbon potential of the Canning basin, Western Australia. *BMR Journ. Aust. Geol. & Geophys.*, 2, 271-288.

Butcher, B.P., 1990 - North-west Shelf of Australia. In Edwards, J.D. & Santogrossi, P.A. (Eds), *Divergent/passive margin basins.*, AAPG Memoir, 48, 81-115.

Campbell, I.R. & Smith, D.N., 1982 - Gorgon 1, southernmost Rankin Platform gas discovery. *APEA Journ.*, 22(1), 102-111.

Campbell, I.R., Tait, A.M., & Reiser, R.F., 1984 - Barrow Island oilfield, revisited. *APEA Journ.*, 24(1), 289-298.

Caye, J.P., 1968 - The Timor Sea-Sahul Shelf area. *APEA Journ.*, 8(2), 35- 41.

CGG (Compagnie Generale de Geophysique), 1975 - Geophysical surveys of the continental margins of Australia, Gulf of Papua and the Bismarck Sea, October 1970 to January 1975, operations and techniques, a report by Compagnie Generale de Geophysique for the Bureau of Mineral Resources. *Bureau of Mineral Resources Australia Record,* 1975/151 (unpub.).

Challinor, A., 1970 - The geology of the offshore Canning Basin, Western Australia. *APEA Journ.*, 10(2), 78-90.

Choi, D.R., Stagg, H.M.J., & others, 1987 - Rig Seismic research cruise 6: northern Australia heat-flow - post-cruise report. *Bureau of Mineral Resources Australia Report,* 274.

Chomat, C. & Coisy, P., 1985 - The Tern gas field case history. *Exploration Geophysics*, 16, 186-9.

Cockbain, A.E., 1989 - The North West Shelf. *APEA Journ.*, 29: 529-545.

Colwell, J.B. & von Stackelberg, U., 1981 - Sedimentological studies of the Cainozoic sediments from the Exmouth and Wallaby Plateaus off northwest Australia. *BMR Journ. Aust. Geol. & Geophys.*, 6, 43-50.

Condon, M.A., 1968 - The geology of the Carnarvon Basin, Western Australia. Part 3: Post-Permian stratigraphy; structure; economic geology. *Bureau Mineral Resources Australia Bulletin,* 77.

Conolly, J., Falvey, M., Kingsley, D., Melton, B., & Russell, T., 1984 - Geology and petroleum potential of the southern Canning Basin. In Purcell, P.G. (Ed.) *The Canning Basin,*

W.A.:,Geological Society of Australia/Petroleum Exploration Society of Australia Symposium, Perth, Proceedings, 1984, 137-146.

Cook, A.C. & Kanstler, A.J., 1980 - The maturation history of the epicontinental basins of Western Australia. *UN ESCAP, CCOP/SOPAC*, 3, 171-195.

Cook, A.C., Smyth, M., & Vos, R.G., 1985 - Source potential of Upper Triassic fluvio-deltaic systems of the Exmouth Plateau. *APEA Journ.*, 25(1), 204-15.

Cook, P.J., Veevers, J.R., Heirtzler, J.R., & Cameron, P.J., 1978 - The sediments of the Argo Abyssal Plain and adjacent areas, northeast Indian Ocean. *BMR Journ. Aust. Geol. & Geophys.*, 3, 113-124.

Craig, J., Downey, J.W., Gibbs, A.D., & Russell, J.R., 1984 - The application of Landsat imagery in structural interpretation of the Canning Basin, W.A., In Purcell, P.G. (Ed.) *The Canning Basin, W.A.*, Geological Society of Australia/Petroleum Exploration Society of Australia Symposium, Perth, Proceedings, 1984, 57-71.

Crank, K.A., 1973 - Geology of Barrow Island oilfield. *APEA Journ.*, 13(1), 49-57.

Creevy, K.J., 1971 - Recent information and prospects in the Kidson Sub-basin. *APEA Journ.*, 11, 53-58.

Crist, R.P. & Hobday, M., 1973 - Diapiric features of the offshore Bonaparte Gulf Basin, northwest Australian shelf. *Bull. Aust. Soc. Explor. Geophys.*, 4 (1), 43-66.

Crostella, A., 1976 - Browse Basin. In Leslie, R.B., Evans, H.J., & Knight, C.L. (eds) *Economic Geology of Australia and papua New Guinea, 3, Petroleum*, Australasian Institue of Mining & Metallurgy Monograph, 7, 194-199.

Crostella, A. & Barter, T., 1980 - Triassic-Jurassic depositional history of the Dampier and Beagle Sub-basins, North West Shelf of Australia. *APEA Journ.*, 20(1), 25-33.

Crostella, A. & Chaney, M.A., 1978 - The petroleum geology of the outer Dampier Sub-basin. *APEA Journ.*, 18(1), 13-22.

Davies, T.A., Luyendyk, B.P., Kidd, R.B., & Weser, E.O., 1975 - Unconformities in the sediments of the Indian Ocean. *Nature*, 253, 15-19.

de Boer, R. & Collins, L.B., 1988 - Petrology and diagenesis of the Flag Sandstone, Harriet Field, Barrow Sub-basin. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia*, Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 225-235.

Dedman, R., 1988 - Petroleum in Western Australia, production and development, 1987. *Oil & Gas Australia*, Jan. 1988, 19-25.

Delfos, E. & Dedman, R., 1988 - The petroleum potential of the Peedamullah Shelf. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 147-156.

Dickins, J.M., Roberts, J., & Veevers, J.J., 1972 - Permian and Mesozoic geology of the northeastern part of the Bonaparte Gulf Basin. *Bureau of Mineral Resources Australia Bulletin*, 125, 75-102.

Dietz, R.S. & Holden, J.C., 1971 - Pre-Mesozoic oceanic crust in the eastern Indian Ocean (Wharton Basin)? *Nature*, 229, 309-312.

Dolby, J.H., & Balme, B.E., 1976 - Triassic palynology of the Carnarvon Basin, Western Australia. *Review of Palaobotany & Palynology*, 22, 105-168.

Drew, M.F. & Evans, G.R., 1975 - Recent geological and geophysical results in the northeastern Canning Basin. *APEA Journ.*, 15, 1-11.

Drummond, B.J., Etheridge, M.A., Davies, P.J., & Middleton, M.F., 1988 - Half-graben model for the structural evolution of the Fitzroy Trough, Canning Basin, and implications for resource exploration. *APEA Journ.*, 28(1), 76-86.

Drummond, B.J., Sexton, M.J., Barton, T.J., & Shaw, R.D., 1991 - The nature of faulting along the margins of the Fitzroy Trough, and implications for the tectonic development of the trough. *Exploration Geophysics*, 22, 111-116.

Durrant, J.M., France, R.E., Dauzacker, M.V., & Nilsen, T., 1990 - The southern Bonaparte Gulf Basin - new plays. *APEA Journ.*, 30 (1), 52-67.

Durrant, J. & Young, A., 1988 - A case study of seismic exploration in the offshore Bonaparte Basin. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australi,:* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 490-497.

Edgerly, D.W. & Crist, R.P., 1974 - Salt and diapiric anomalies in the southeast Bonaparte Gulf Basin. *APEA Journ.*, 14(1), 85-94.

Ehrhard, L.W., O'Reilly, J.B., & Wulff, K.J., 1992 - Stratigraphic framework of the Barrow group and implications for the hydrocarbon potential of the west Barrow area. *APEA Journ.*, 32 (1), 123-137.

Ellis, G.K., 1988 - Diagenesis of the Talisman-1 reservoir sequence. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 237- 249.

Ellyard, E.J., 1984 - Oil migration in the northern Canning Basin - a regional review. In

Purcell, P.G. (Ed.) *The Canning Basin, W.A.*, Geological Society of Australia/Petroleum Exploration Society of Australia Symposium, Perth, Proceedings, 1984, 359-375.

Eriyagama, S.C., Collins, L.B., & Hocking, R.M., 1988 - Depositional framework and major lithostratigraphic variations of the Barrow Group. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 189-201.

Exon, N.F., Borella, P.E., & Ito, M., 1992 - Sedimentology of marine Cretaceous sequences in the central Exmouth Plateau (northwest Australia). In von Rad, U., Haq, B.U., & others, *Proc. ODP, Scientific Results,*122, College Station, TX (Ocean Drilling Program), 233-257.

Exon, N.F. & Buffler, R.T., 1992 - Mesozoic seismic stratigraphy and tectonic evolution of the western Exmouth Plateau. In von Rad, U., Haq, B.U., & others, *Proc. ODP, Scientific Results,*122, College Station, TX (Ocean Drilling Program), 61-81.

Exon, N.F., Colwell, J.B., Williamson, P.E., & Bradshaw, M.T., 1991 - Reefal complexes in Mesozoic sequences: Australia's North West Shelf region. *Proceedings of Indonesian Petroleum Association, 20th Annual Convention,* October 1991, 51-66.

Exon, N.F., Haq, B.U., & von Rad, U., 1992 - Exmouth Plateau revisited: scientific drilling and geological framework. In von Rad, U., Haq, B.U., & others, *Proc. ODP, Scientific Results,*122, College Station, TX (Ocean Drilling Program), 3-20.

Exon, N.F., von Rad, U., & von Stackelberg, U., 1982 - The geological development of the passive margins of the Exmouth Plateau off northwest Australia. *Marine Geology*, 47, 131-152.

Exon, N.F. & Willcox, J.B., 1976 - Mesozoic outcrops on the lower continental slope off Exmouth, Western Australia. *BMR Journ. Aust. Geol. & Geophys.*, 1(3), 205-209.

Exon, N.F. & Willcox, J.B., 1978 - Geology and petroleum potential of the Exmouth Plateau area off Western Australia. *AAPG Bulletin*, 62, 40-72.

Exon, N.F. & Willcox J.B., 1980 - The Exmouth Plateau. *Bureau of Mineral Resources Australia Bulletin,* 199.

Exon, N.F., Willcox, J.B., & Petkovic, P., 1975 - A preliminary report of the regional geology of the Exmouth Plateau. *Bureau of Mineral Resources Australia Record,* 1975/158 (unpubl.).

Exon, N.F. & Williamson, P.E., 1988 - Preliminary post-cruise report: Rig Seismic Research Cruises 7 & 8: sedimentary basin framework of the northern and western Exmouth Plateau. *Bureau of Mineral Resources Australia Record,* 1988/30 (unpub.).

Exon, N.F., Williamson, P.E., Haq, B.U., & von Rad, U., 1988 - Sea level, climatic and

tectonic implications of Mesozoic and Cainozoic sedimentary sequences in continuously cored ODP holes on the Exmouth Plateau. In *Palaeogeography, sea level and climate,* Bureau Mineral Resources Australia Research Symposium Record,1988/42, 56-65 (unpub.).

Fairbridge, R.W., 1953 - The Sahul Shelf, northern Australia; its structure and geological relationships. *Journ. Roy. Soc. W. Aust.*, 37, 1-33.

Fairbridge, R.W., 1955 - Some bathymetric geotectonic features of the eastern part of the Indian Ocean. *Deep-Sea Res.*, 2, 161-171.

Fairbridge, R.W., 1966 - Sahul Shelf. In Fairbridge, R.W. (Ed.), *The Encyclopadia of Oceanography*, Reinhold, New York, 1, 755-758.

Falvey, D.A., 1972 - Sea floor spreading in the Wharton Basin (northeast Indian Ocean) and the breakup of Eastern Gondwanaland. *APEA Journ.*, 12, 86-88.

Falvey, D.A., 1974 - The development of continental margins in plate tectonic theory. *APEA Journ.*, 14(1), 95-106.

Falvey, D.A. & Mutter, J.C., 1981 - Regional plate tectonics and the evolution of Australia's passive continental margins. *BMR Journ. Aust. Geol. & Geophys.*, 6, 1-29.

Falvey, D.A., Symonds, P.A., Colwell, J.B., Willcox, J.B., Marshall, J.F., Williamson, P.E., & Stagg, H.M.J., 1990 - Australia's deepwater frontier petroleum basins and play types. *APEA Journ.*, 30(1), 239-262.

Falvey, D.A. & Veevers, J.J., 1974 - Physiography of the Exmouth and Scott Plateaux, Western Australia, and adjacent northeast Wharton Basin. *Marine Geology*, 17, 21-59.

Fittall, A.M. & Cowley, R.G., 1992 - The HV11 3-D seismic survey: Skua-Swift area geology revealed? *APEA Journ.*, 32 (1), 159-170.

Forman, D.J. & Wales, D.W. (Compilers), 1981 - Geological evolution of the Canning Basin, Western Australia. *Bureau of Mineral Resources Australia Bulletin*, 210.

Forrest, J.T. & Horstman, E.L., 1986 - The North West Shelf of Australia geological review of a potential major petroleum province of the future. *AAPG Memoir,* 40, 457-486.

Foster, C.B., O'Brien, G.W., & Watson, S.T., 1986 - Hydrocarbon source potential of the Goldwyer Formation, Barbwire Terrace, Canning Basin, Western Australia. *APEA Journ.*, 26(1), 142-155.

Francis, T.J.G. & Raitt, R.W., 1967 - Seismic refraction measurements in the southern Indian Ocean. *Journ. Geophys. Res.*, 72 (12), 3015-3041.

Fullerton, L.G., Sager, W.W., & Handshumacher, D.W., 1989 - Late Jurassic - Early Cretaceous evolution of the eastern Indian Ocean adjacent to northwest Australia. *Journ. Geophys. Res.*, 94, 2937-2953.

Geary, J.K., 1970 - Offshore exploration of the southern Carnarvon basin. *APEA Journ.*, 10(2), 9-15.

Geological Survey of Western Australia, 1975 - Geology of Western Australia. *Geol. Survey Western Australia Memoir*, 2, 541pp.

Goldstein, B.A., 1989 - Waxings and wanings in stratigraphy, play concepts and perceived prospectivity in the Canning Basin. *APEA Journ.*, 29 (1), 466-508.

Gorman, I.G.D., 1990 - The role of reservoir simulation in the development of the Challis and Cassini Fields. *APEA Journ.*,30 (1), 212-221.

Gorter, J.D., 1978 - Triassic environments in the Canning Basin, Western Australia. *BMR Journ. Aust. Geol. & Geophys.*, 3(1), 25-33.

Gradstein, F.M., 1992 - Legs 122 and 123, northwestern Australian margin - a stratigraphic and paleogeographic summary. In Gradstein, F.M., Ludden, J.N., & others, *Proc. ODP, Scientific Results*,123, College Station, TX (Ocean Drilling Program), 801-816.

Gradstein, F.M., Ludden, J.N., & others, 1992 - *Proceedings of the Ocean Drilling Program, Scientific Results*, 123. College Station, TX (Ocean Drilling Program), 846 pp.

Grant, P.D., 1987 - The geophysical development of the Jabiru Field. *Exploration Geophysics*, 18 (1/2), 75-80.

Grant, P., Rasidi, J., & Ward, I., 1988 - A case study of the development of a seismic streamer for use in the Timor Sea. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 509-515.

Gunn, P.J., 1988 - Bonaparte Basin: evolution and structural framework. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 275-2 85.

Gunn, P.J., 1988 - Hydrocarbon discoveries in the Bonaparte Basin. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 419- 424.

Gunn. P.J., 1988 - Bonaparte rift basin: effects of axial doming and crustal spreading. *Exploration Geophysics*, 19, 83-87.

Gunn, P.J. & Ly, K.C., 1989 - The petroleum prospectivity of the Joseph Bonaparte Gulf area,

northwestern Australia. *APEA Journ.*, 29 (1), 509-526.

Hall, M., 1987 - Basin evolution in the northern Browse Basin, offshore from northwest Australia. In *Extended Abstracts - Applied Extension Tectonics,* Bureau of Mineral Resources Australia Record, 1987/51, 125-130 (unpub.).

Halse, J.W., 1975 - Exploration results and future prospects in the northern Australian region. *9th World Petroleum Congress*, PD7(3), 65-81.

Halse, J.W., 1976 - Beagle Sub-basin. In Leslie, R.B., Evans, H.J., & Knight, C.L. (eds) *Economic Geology of Australia and Papua New Guinea, 3, Petroleum*, Australasian Institute of Mining & Metallurgy Monograph, 3, 188-193.

Halse, J.W. & Hayes, J.D., 1971 - The geological and structural framework of the offshore Kimberley Block (Browse Basin) area, Western Australia. *APEA Journ.*, 11(1), 64-70.

Haq, B.U., Boyd, R.L., Exon, N.F., & von Rad, U., 1992 - Evolution of the central Exmouth Plateau: a post-drilling perspective. In von Rad, U., Haq, B.U., & others, *Proc. ODP, Scientific Results,*122, College Station, TX (Ocean Drilling Program), 801-816.

Haq, B., von Rad, U., & Shipboard Scientific Party, 1988 - ODP Leg 122 looks at Exmouth Plateau. *Geotimes*, 33 (12), 10-13.

Harris, E.J., 1981 - Production geology of North Rankin gas field. In Halbouty, M.T. (Ed.), *Energy Resources of the Pacific Region,* AAPG Studies in Geology, 12, 273-283.

Heath, R.S. & Apthorpe, M.A., 1984 - New formation names for the Late Cretaceous and Tertiary sequence of the North West Shelf. *Geol. Survey Western Australia Record*, 1984/7.

Heirtzler, J.R., Cameron, P., Cook, P.J., Powell, T., Roesser, H.A., Sukhardi, S., & Veevers, J.J., 1978 - The Argo Abyssal Plain. *Earth & Planetary Science Letters*, 41, 21-31.

Hinz, K., Beiersdorf, H., Exon, N.F., Roeser, H.A., Stagg, H.M.J., & von Stackelberg, U., 1978 - Geoscientific investigations from the Scott Plateau off northwest Australia to the Java Trench.. *BMR Journ. Aust. Geol. & Geophys.*, 3, 319-340.

Hocking, R.M., 1988 - Regional geology of the northern Carnarvon Basin. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australi,:* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 97- 114.

Hocking, R.M., Moors, H.T., & van de Graaff, W.J.E., 1987 - Geology of the Carnarvon Basin, Western Australia. *Geol. Survey of Western Australia Bulletin*, 133.

Hocking, R.M. & van de Graaff, W.J.E., 1978 - Cretaceous stratigraphy and sedimentology, northeastern margin of the Carnarvon Basin, Western Australia. *Geol. Survey of Western*

Australia, Annual Report 1977, 36-41.

Hocking, R.M., Voon, J.W.K., & Collins, L.B., 1988 - Stratigraphy and sedimentology of the basal Winning Group, northern Carnarvon Basin. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 203- 224.

Hogan, A.P. & Jacobsen, E.P., 1975 - Geophysical results from the northwest continental margin of Australia. *Bureau of Mineral Resources Australia Record,* 1975/101 (unpub.).

Horstman, E.L., 1984 - Source rocks in the Canning Basin: a review. In Purcell, P.G. (Ed.), *The Canning Basin, W.A.,* Proceedings of the Geological Society of Australia/Petroleum Exploration Society of Australia Symposium, Perth 1984, 23-55.

Horstman, E.L., 1988 - Source maturity, overpressures, and production, North West Shelf, Australia. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 529-537.

Horstman, E.L., Lyons, D.A., Nott, S.A., & Broad, D.S., 1976 - The Canning Basin. In Leslie, R.B., Evans, H.J., & Knights, C.L. (Eds), *Economic Geology of Australia and Papua New Guinea, 3, Petroleum,* Australasian Institute of Mining & Metallurgy, 170-184.

Horstman, E.L. & Purcell, P.G., 1988 - The offshore Canning Basin - a review. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 253-257.

Howell, E.A., 1984 - Petroleum geology of EP's 205 & 252 - south Canning Basin. In Purcell, P.G. (Ed.) *The Canning Basin, W.A.,* Geological Society of Australia/Petroleum Exploration Society of Australia Symposium, Perth, Proceedings, 1984, 147-154.

Howell, E.A., 1987 - The Harriet oilfield case history. *Exploration Geophysics,* 18(1/2), 95-98.

Howell, E.A., 1988 - The Harriet oilfield. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 391-401.

Ingram, B. & Morgan, R., 1988 - The development and status of the Mesozoic palynostratigraphy of the North West Shelf, Australia. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia:,*Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 581-590.

Jackson, M.J., Diekman, L.J., Kennard, J.M., Southgate, P.N., O'Brien, P.E., & Sexton, M.J., 1992 - Sequence stratigraphy, basin-floor fans and petroleum plays in the Devonian-Carboniferous of the northern Canning Basin. *APEA Journ.*,32 (1), 214-230.

Jacobson, T., 1984 - The role of seismic in play type and prospect development: eastern Canning Basin. In Purcell, P.G. (Ed.) *The Canning Basin, W.A.*, Geological Society of Australia/Petroleum Exploration Society of Australia Symposium, Perth, Proceedings, 1984, 121-134.

Jefferies, P.J., 1988 - Geochemistry of the Turtle oil accumulation, offshore southern Bonaparte Basin. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 563-569.

Jelley, P.A. & Sayers, M.J., 1988 - Seismic exploration on Barrow Island. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 4794-87.

Johnson, B.D., Powell, C.McA., & Veevers, J.J., 1976 - Spreading history of the eastern Indian Ocean and Greater India's northward flight from Antarctica and Australia. *Geological Society of America Bulletin*, 87, 1560-1566.

Johnston, C.R. & Bowin, C.O., 1981 - Crustal reactions resulting from the mid-Pliocene to Recent continent-island arc collision in the Timor region. *BMR Journ. Aust. Geol. & Geophys.*, 6, 223-243.

Johnstone, M.H., 1979 - A case history of Rough Range. *APEA Journ.*, 19(1), 1-6.

Jones, H.A., 1971 - Late Cenozoic sedimentary forms on the northwest Australian continental shelf. *Marine Geology,* 19, M61-7.

Jones, H.A., 1973 - Marine geology of the northwest Australian continental shelf. *Bureau of Mineral Resources Australia, Bulletin* 136.

Kaiko, A., 1992 - Regional geohistory of the northern Carnarvon Basin: North West Shelf Australia. *B. Sc. (Honours) thesis,* National Centre for Petroleum Geology and Geophysics, The University of Adelaide, 56 pp, (unpub.).

Karajas, J. & Kernick, C.N., 1984 - A prospective Nita Formation reservoir trend on the Broome Platform. In Purcell, P.G. (Ed.) *The Canning Basin, W.A.*, Geological Society of Australia/Petroleum Exploration Society of Australia Symposium, Perth, Proceedings, 1984,169-177.

Kaye, P., Edmond, G.M., & Challinor, A., 1972 - The Rankin Trend, North West Shelf, Western Australia. *APEA Journ.*, 12(1), 3-8.

Kirk, R.B., 1984 - A seismic stratigraphic case history in the eastern Barrow Sub-basin. In Berg, O.R. & Woolverton, D.G. (Eds) *Seismic Stratigraphy II: An integrated approach to hydrocarbon exploration,* AAPG Memoir, 39, 183-207.

Kirk, R.B., 1991 - Low stand seismic facies: a Carnarvon-Browse Basin comparison. *Exploration Geophysics*, 22, 207-214.

Koop, W.J., 1966 - Recent contribution of Palaeozoic geology in the south Canning basin, Western Australia. *APEA Journ.*, 6, 105-109.

Kopsen, E. & McGann, G., 1985 - A review of the hydrocarbon habitat of the eastern and central Barrow-Dampier Sub-basin, Western Australia. *APEA Journ.* 25(1), 154-176.

Kraus, G.P. & Parker, K.A., 1979 - Geochemical evaluation of petroleum source rock in Bonaparte Gulf-Timor Sea region, northwest Australia. *AAPG Bulletin*, 63(11), 2021-2041.

Larson, R.L., 1975 - Late Jurassic sea floor spreading in the eastern Indian Ocean. *Geology*, 3, 69-71.

Larson, R.L., 1977 - Early Cretaceous breakup of Gondwanaland off Western Australia. *Geology*, 5, 57-60.

Larson, R.L., Mutter, J.C., Diebold, J.B., Carpenter, G.B., & Symonds, P.A., 1979 - Cuvier Basin: a product of ocean crust formation by early Cretaceous rifting off Western Australia. *Earth & Planetary Science Letters*, 45, 105-114.

Lavering, I.H., 1985 - Permian environments and palaeogeography of the onshore Carnarvon Basin and implications for petroleum prospectivity. *PESA Journal*, 7, 40-46.

Lavering, I.H. & Ozimic, S., 1988 - Bonaparte Basin petroleum accumulations. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 331-337.

Lawry, P.J. & Carter, P.A., 1992 - Rivoli-1 gas discovery - Exmouth Sub-basin, Western Australia. *APEA Journ.*, 32 (1), 94-102.

Laws, R., 1981. The petroleum geology of the onshore Bonaparte Basin. APEA Journ., 21, 5-15.

Laws, R. & Brown, R.S., 1976 - Bonaparte Gulf Basin southeastern part. In Leslie, R.B., Evans, J.H., & Knight, C.L. (Eds) *Economic Geology of Australia and Papua New Guinea, 3, Petroleum,* Australasian Institute of Mining & Metallurgy Monograph, 7, 200-208.

Laws, R.A. & Kraus, G.P., 1974 - The regional geology of the Bonaparte Gulf - Timor Sea area. *APEA Journ.*, 14(1), 77-84.

Lee, R.J. & Gunn, P.J., 1988 - Bonaparte Basin. In *Petroleum in Australia: The First Centur,:* Australian Petroleum Exploration Association Limited publication, 252-269.

Lehman, P.R., 1986 - The geology and hydrocarbon potential of the EP 104 permit, northwest Canning Basin, Western Australia. *APEA Journ.*, 26, 261-284.

Lloyd, A.R., 1975 - The geological history of the Carnarvon sedimentary province, Western Australia. *SAPEX Proceedings*, 2, 70-113.

Lorenzo, J.M., Mutter, J.C., Larson, R.L., Buhl, P., Diebold, J.B., Alsop, J., Mithal, R., Hopper, J., Falvey, D., Williamson, P., & Brassil, F., 1991 - Development of the continent-ocean transform boundary of the southern Exmouth Plateau. *Geology*, 19, 843-846.

Lorenzo, J.M. & Vera, E.E., 1992 - Correlation between diverse seismic and physical properties data sets: Site 763, southern Exmouth Plateau. In von Rad, U., Haq, B.U., & others, *Proc. ODP, Scientific Results*,122, College Station, TX (Ocean Drilling Program), 393-409.

Lorenzo, J.M. & Vera, E.E., 1992 - Thermal uplift and erosion across the continent-ocean transform boundary of the southern Exmouth Plateau. *Earth & Planetary Science Letters*, 108, 79-92.

MacDaniel, R.P., 1988 - The geological evolution and hydrocarbon potential of the western Timor Sea region. In *Petroleum in Australia: The First Century,* Australian Petroleum Exploration Association Limited publication, 270-284.

MacDaniel, R.P., 1988 - Jabiru oilfield. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 439-440.

McClure, I.M., Smith, D.N., Williams, A.F., Clegg, L.J., & Ford, C.C., 1988 - Oil and gas fields in the Barrow Sub-basin. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 371-390.

McLennan, J.N., Rasidi, J.S., Holmes, R.L., & Smith, G.C., 1990 - Tectonostratigraphy and petroleum potential of the western Arafura Sea. *APEA Journ.*, 30 (1), 91-106.

McLerie, M.K., Tait, A.M., & Sayers, M.J., 1991 - The Yammaderry, Cowle and Roller discoveries in the Barrow Sub-basin, Western Australia. *APEA Journ.*, 31 (1), 32-41.

Malcolm, R.J., Pott, M.C., & Delfos, E., 1991 - A new tectono-stratigraphic synthesis of the North West Cape area. *APEA Journ.*, 31 (1), 154-176.

Markl, R.G., 1974 - Evidence for the breakup of Eastern Gondwanaland by the Early Cretaceous. *Nature*, 251, 196-200.

Martin, B.A. & Cawley, S.J., 1991 - Onshore and offshore petroleum seepage: contrasting a conventional study in Papua New Guinea and Airborne Laser Fluorosensing over the Arafura Sea. *APEA Journ.*, 31 (1), 333-353.

Martison, N.W., McDonald, D.R., & Kaye, P., 1973 - Exploration on continental shelf off northwest Australia. *AAPG Bulletin*, 57(6), 972-9 89.

Meath, J.R. & Bird, K.J., 1976 - The geology of the West Tryal Rocks gas field. *APEA Journ.*, 16(1), 157-163.

Middleton, M.F., 1984 - Seismic geohistory analysis - a case history from the Canning Basin, Western Australia. *Geophysics*, 49(4), 333-343.

Middleton, M.F., 1987 - Seismic stratigraphy of Devonian reef complexes of northern Canning Basin, Western Australia. *AAPG Bulletin*, 71, 1488-1498.

Middleton, M.F., 1988 - Seismic atlas of the North West Shelf. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 457-478.

Miller, L.R. & Stuart, W.J., 1992 - Seismic stratigraphic evaluation of a Neocomian submarine fan system, Browse Basin, North West Shelf. *APEA Journ.*, 32 (1), 171-182.

Mollan, R.G., Craig, R.W., & Lofting, M.J.W., 1969 - Geological framework of the continental shelf off northwest Australia. *APEA Journ.*, 9(2), 49- 59.

Mollan, R.G., Craig, R.W., & Lofting, M.J.W., 1970 - Geological framework of the continental shelf off northwest Australia. *AAPG Bulletin*, 54, 583-600.

Moore, P.S. & Hocking, R.M., 1983 - Significance of hummocky cross- stratification in the Permian of the Carnarvon Basin, Western Australia. *Journ. Geol. Soc. Aust.*, 30, 323-331.

Moors, H.T., 1986 - The Yellow Drum Formation - a hydrocarbon reservoir, Canning Basin, Western Australia. *APEA Journ.*, 26, 310-318.

Mory, A.J., 1988 - Regional geology of the offshore Bonaparte Basin. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 287- 309.

Mory, A.J. & Beere, G.M., 1988 - Geology of the onshore Bonaparte and Ord Basins. *Geol. Survey Western Australia Bulletin* 134.

Mutter, J.C., Larson, R.L., Buhl, P., Diebold, J.B., Alsop, J., Lorenzo, J., Mithal, R., Hopper, J., Falvey, D., Williamson, P., & Brassil, F., 1989 - Extension of the Exmouth Plateau, offshore northwestern Australia: deep seismic reflection/refraction evidence for simple and pure shear

mechanisms. *Geology*, 17, 15-18.

Nelson, A.W., 1989 - Jabiru field - horst, sub-horst, or inverted graben? *APEA Journ.*, 29 (1), 176-194.

Nicol, G.N., 1970 - Exploration and geology of the Arafura Sea. *APEA Journ.*, 10 (2), 56-61.

Nicoll, R.S. & Gorter, J.D., 1984 - Conodont colour alteration, thermal maturation, and the geothermal history of the Canning Basin, Western Australia. *APEA Journ.*, 24, 243-258.

Norlin, W.K., 1984 - Hydrocarbon potential in the Great Sandy region, W.A. In Purcell, P.G. (Ed.) *The Canning Basin, W.A.*, Geological Society of Australia/Petroleum Exploration Society of Australia Symposium, Perth, Proceedings, 1984,179-186.

O'Brien, G.W., Etheridge, M.A., Needham, D.J., Pridmore, D., Norman, C., & Cowan, D., 1992 - Vulcan Sub-basin, Timor Sea: an integrated structural study of image processed aeromagnetic and selected seismic data. *Bureau Mineral Resources Australia Folio*, 6.

O'Brien, G.W., Etheridge, M.A., Willcox, J.B., Morse, M., Symonds, P., Norman, C., & Needham, D.J., 1993 - The structural architecture of the Timor Sea, north-western Australia: implications for basin development and hydrocarbon exploration. *APEA Journ.*, 33 (1), 44-63.

ODP Leg 123 Shipboard Scientific Party, 1989 - The birth of the Indian Ocean. *Nature*, 337, 506-507.

Osborne, M.O., 1990 - The exploration and appraisal history of Skua Field, AC/P2 - Timor Sea. *APEA Journ.*,30 (1), 197-211.

Osborne, D.G. & Howell, E.A., 1987 - The geology of the Harriet oilfield, offshore Western Australia. *APEA Journ.*, 27(1), 152-163.

Ozimic, S., 1978 - Troubadour field, Bonaparte Gulf Basin, Northern Territory, estimated recoverable reserves. *Bureau of Mineral Resources Australia Recor,d* 1978/27 (unpubl.).

Parry, J.C., 1967 - The Barrow Island oil field. *APEA Journ.*, 7(2), 130-133.

Parry, J.C. & Smith, D.N., 1988 - The Barrow and Exmouth Sub-basins. In *Petroleum in Australia: The First Century*, Australian Petroleum Exploration Association Limited publication, 191-212.

Parry, J.C. & Smith, D.N., 1988 - The Barrow and Exmouth Sub-basins. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 129-145.

Passmore, V.L., 1980 - Browse Basin region explanatory notes and stratigraphic columns.

Bureau Mineral Resources Australia Record, 1980/42 (unpub.).

Pattillo, J. & Nicholls, P.J., 1990 - A tectonostratigraphic framework for the Vulcan Graben. *APEA Journ.*, 30 (1), 27-51.

Percival, I.G. & Cooney, P.M., 1985 - Petroleum geology of the Merlinleigh Sub-basin, Western Australia. *APEA Journ.*, 25(1), 190-203.

Petroconsultants Australasia Pty Ltd, 1990 - Bonaparte Basin. *Northern Territory Geological Survey Petroleum Basin Study* (unpub.).

Petroconsultants Australia Pty Ltd, 1989 - Arafura Basin. *Northern Territory Geological Survey Petroleum Basin Study* (unpub.).

Playford, P.E., 1971 - Petroleum exploration in Western Australia: past, present and future. *Journ. Roy. Soc. Western Australia,* 54, 1-13.

Playford, P.E., 1980 - Devonian "Great Barrier Reef" of Canning Basin, Western Australia. *AAPG Bulletin,* 64(6), 814-840.

Playford, P.E., 1982 - Devonian reef prospects in the Canning Basin: implication of the Blina oil discovery. *APEA Journ.*, 22, 258-272.

Playford, P.E., 1984 - Platform-margin and marginal slope relationships in Devonian reef complexes of the Canning Basin. InPurcell, P.G. (Ed.), *The Canning Basin, W,:* Proceedings of the Geological Society of Australia/Petroleum Exploration Society of Australia Symposium, Perth, 1984, 189-214.

Playford, P.E., Cope, R.N., Cockbain, A.E., Low, G.H., & Lowry, D.C., 1975 - Phanerozoic. In *Geology of Western Australia,* Geol. Survey Western Australia Memoir 2, 223-433.

Playford, P.E., Hurley, N.F., Kerans, C., & Middleton, M.F., 1989 - Reefal platform development, Devonian of the Canning Basin, Western Australia. In Crevello, P.D., Wilson, J.L, Sarg, J.F., & Read, J.F. (Eds), *Controls on Carbonate Platform and Basin Development,* SEPM Special Publication 44, 187-202.

Playford, P.E. & Lowry, D.C., 1966 - Devonian reef complexes of the Canning Basin, Western Australia. *Geol. Survey Western Australia Bulletin,* 118, 150pp.

Posaner, F.M. & Goldthorpe, W.H., 1986 - The development and early performance of the North Rankin Field. *APEA Journ.*, 26(1), 420-427.

Powell, D.E., 1973 - Hydrocarbon occurrences offshore from the Pilbara Block. *Australasian Institute Mining & Metallurgy Conference Papers,* Western Australia, 1973, 193-203.

Powell, D.E., 1976 - Dampier Sub-basin, carnarvon Basin. In Leslie, R.B., Evans, H.J., & Knight, C.L. (Eds) *Economic geology of Australia and Papua New Guinea, 3, Petroleum*, Australasian Institute of Mining & Metallurgy, Monograph, 7, 155-167.

Powell, D.E., 1976 - The geological evolution of the continental margin of northwest Australia. *APEA Journ.*, 16, 13-23.

Powell, T.G., 1975 - Geochemical studies related to the occurrence of oil and gas in the Dampier Sub-basin, Western Australia. *Journ. Geochem. Expl.*, 4, 441-466.

Powell, T.G. & McKirdy, D.M., 1973 - Crude oil correlations in the Perth and Carnarvon basins. *APEA Journ.*, 13(1), 81-85.

Purcell, P.G., (Ed.), 1984 - The Canning Basin, W.A. *Proceedings of Geol. Soc. Aust. / Pet. Expl. Soc. Aust. Symposium*, Perth, 1984, 582 pp.

Purcell, P.G. & Poll, J., 1984 - The seismic definition of the main structural elements of the Canning Basin. In Purcell, P.G. (Ed.), *The Canning Basin, W.A.*, Proceedings of the Geological Society of Australia/Petroleum Exploration Society of Australia Symposium, Perth 1984, 73-84.

Purcell, P.G., & Purcell, R.R., (Eds), 1988 - The North West Shelf, Australia. *Proceedings of Petroleum Exploration Society Australia Symposium*, Perth, 1988.

Purcell, P.G., & Purcell, R.R., 1988 - The North West Shelf, Australia - an introduction. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia*, Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 3-15.

Quilty, P.G., 1974 - Tertiary stratigraphy of Western Australia. *Journal Geological Society Australia*, 21(3), 301-318.

Ramsden, C.R.T., 1985 - The application of high resolution seismic processing to low relief structures - Harriet oil accumulation. *Exploration Geophysics*, 16(4), 335-348.

Ramsden, C.R.T., Hobson, M.R., & Cooper, R., 1988 - The geophysicists' bane: multiple suppression on the North West Shelf. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia*, Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 499-508.

Reeckmann, S.A. & Mebberson, A.J., 1984 - Igneous intrusions in the northwest Canning Basin and their impact on oil exploration. In Purcell, P.G. (Ed.), *The Canning Basin, W.A.*, Proceedings of the Geological Society of Australia/Petroleum Exploration Society of Australia Symposium, Perth 1984, 389-400.

Roberts, J. & Veevers, J.J., 1973 - Summary of BMR studies of the onshore Bonaparte Gulf

Basin 1963-71. *Bureau of Mineral Resources Australia Bulletin,* 139, 29-58.

Robertson, C.S., Cronk, D.K., Nicholas, E., & Townsend, D.G., 1976 - A review of exploration and prospects in the Arafura Sea - Gulf of Carpentaria region. *Bureau of Mineral Resources Australia Record,* 1976/66 (unpub.).

Robertson, G.A., Powell, D.E., & Edmond, G.M., 1975 - Australian northwest continental shelf - results of ten years of exploration. *AAPG Memoir,* 25, 231-238.

Sager, W.W., Fullerton, L.G., Buffler, R.T., & Handschumacher, D.W., 1992 - Argo Abyssal Plain magnetic lineations revisited: implications for the onset of seafloor spreading and tectonic evolution of the eastern Indian Ocean. In Gradstein, F.M., Ludden, J.N., & others, *Proc. ODP, Scientific Results,*123, College Station, TX (Ocean Drilling Program), 659-669.

Scott, J., 1992 - Accurate recognition of source rock character in the Jurassic of the North West Shelf, Western Australia. *APEA Journ.,* 32 (1), 289-299.

Self, R.H. & Macey, D., 1987 - Harriet - one year from approval to production. *APEA Journ.,* 27(1), 345-356.

Shibaoka, M., Bennett, A.J.R., & Gould, K.W., 1973 - Diagenesis of organic matter and occurrence of hydrocarbons in some Australian sedimentary basins. *APEA Journ.,* 13, 73-80.

Smith, B.L. & Lawrence, R.B., 1989 - Aspects of exploration and development, Vulcan Sub-basin, Timor Sea. *APEA Journ.,* 29 (1), 546-556.

Smith, G., 1984 - The tectonic development of the Gregory Sub-basin and adjacent areas, northeastern Canning Basin. In Purcell, P.G. (Ed.) *The Canning Basin, W.A.,* Geological Society of Australia/Petroleum Exploration Society of Australia Symposium, Perth, Proceedings, 1984, 109-120.

Smith, J.G., 1968 - Tectonics of the Fitzroy wrench trough, Western Australia. *American Journ. of Science,* 266, 766-776.

Smith, P.M. & Sutherland, N.D., 1991 - Discovery of salt in the Vulcan Graben: a geophysical and geological evaluation. *APEA Journ.,*31 (1), 229-243.

Smith, P.M. & Whitehead, M., 1989 - Seismic, gravity and magnetics, a complementary geophysical study of the Paqualin structure, Timor Sea, Australia. *Exploration Geophysics,* 20 (1/2), 25-29.

Stagg, H.M.J., 1977 - The Scott Plateau - structure, isopach, and potential field maps. *Bureau Mineral Resources Australia Record,* 1977/43 (unpub.).

Stagg, H.M.J, 1978 - The geology and evolution of the Scott Plateau. *APEA Journ.,* 18(1),

34-43.

Stagg, H.M.J., Brassil, F.M., & Survey 101 Shipboard Party, 1991 - Deep structure of the southern North West Shelf: post-cruise report. *Bureau of Mineral Resources Australia Record,* 1991/79 (unpub.).

Stagg, H.M.J. & Exon, N.F., 1981 - Geology of the Scott Plateau and Rowley Terrace off northwestern Australia. *Bureau of Mineral Resources Australia Bulletin,* 213.

Stagg, H.M.J., & Survey 110 Shipboard Party, 1992 - Deep structure of the southern North West Shelf: SNOWS-II (Survey 110) post-cruise report. *Bureau of Mineral Resources Australia Record,* 1992/60.

Swift, M.G., Falvey, D.A., Graham, T., & Stagg, H.M.J., 1986 - Exmouth Plateau thermal geohistory: implications for further exploration. In *15th BMR Research Symposium Extended Abstracts,* Bureau of Mineral Resources Australia Record, 1986/31 (unpubl.).

Swift, M.G., Stagg, H.M.J., & Falvey, D.A., 1988 - Heat flow regime and implications for oil maturation and migration in the offshore northern Carnarvon Basin. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 539-551.

Symonds, P.A. & Cameron, P.J., 1977 - The structure and stratigraphy of the Carnarvon Terrace and Wallaby Plateau. *APEA Journ.*, 17(1), 30-41.

Symonds, P.A. & Willcox, J.B., 1976 -The gravity field of offshore Australia. *BMR Journ. Aust. Geol. & Geophys.*, 1(4), 303-314.

Tait, A.M., 1985 - A depositional model for the Dupuy Member and the Barrow Group in the Barrow Sub-basin, Western Australia. *APEA Journ.*, 25(1), 282-290.

Tait, A.M., Bartlett, R.M., Sayers, M.J., McLerie, M.K., & McKay, D.M., 1989 - The Saladin Oil Field. *APEA Journ.*, 29 (1), 212-219.

Thomas, B.M., 1978 - Robe River - an onshore shallow oil accumulation. *APEA Journ.*, 18, 3-12.

Thomas, B.M. & Smith, D.N., 1974 - A summary of the petroleum geology of the Carnarvon Basin. *APEA Journ.*, 14(1), 66-76.

Thomas, B.M. & Smith, D.N., 1976 - Carnarvon basin. In Leslie, R.B., Evans, H.J., & Knight, C.L. (Eds) *Economic geology of Australia and Papua New Guinea, 3, Petroleum,* Australasian Institute of Mining & Metallurgy, Monograph, 7, 126-155.

Thompson, M., 1992 - The development geology of the Tubridgi Gas Field. *APEA Journ.*, 32

(1), 44-55.

Tilbury, L.A. & Barter, T., 1992 - New technology - a major impact on a producing field: North Rankin gas field, North West Shelf, Australia. *APEA Journ.*, 32 (1), 20-32.

Tilbury, L.A. & Bush, D., 1991 - Image processing of interpreted 3D seismic data to enhance subtle structural features/lineations. *Exploration Geophysics*, 22 (2), 391-396.

Tilbury, L.A. & Smith, P.M., 1988 - Seismic amplitude analysis: an end to field appraisal? *APEA Journ.*, 28(1), 144-155.

Tilbury, L.A. & Smith, P.M., 1988 - Seismic reflection amplitude (dim spot) study over the Goodwyn Gas Field, North West Shelf, Australia. *Exploration Geophysics*, 19, (1/2), 179-183.

Towner, R.R. & Gibson, D.L., 1983 - Geology of the onshore Canning Basin, Western Australia. *Bureau of Mineral Resources Australia Bulletin*, 215.

Tucker, D.H., Bacchin, M., & Almond, R., 1984 - Significance of airborne magnetic and gamma spectrometric anomalies over the eastern margin of the Canning Basin. In Purcell, P.G. (Ed.), *The Canning Basin, W.A.*, Proceedings of the Geological Society of Australia/Petroleum Exploration Society of Australia Symposium, Perth 1984, 299-318.

van Andel, Tj.H. & Veevers, J.J., 1967 - Morphology and sediments of the Timor Sea. *Bureau of Mineral Resources, Australia Bulletin*, 83.

Veenstra, E., 1985 - Rift and drift in the Dampier Sub-basin, a seismic and structural interpretation. *APEA Journ.*, 18(1), 177-189.

Veevers, J.J., 1967 - The Phanerozoic geological history of northwest Australia. *Geol. Soc. Aus Journ.*, 14(2), 253-271.

Veevers, J.J., 1969 - Palaeogeography of the Timor Sea region. *Palaeogeog., Palaeoclimatol., Palaeoecol.*, 6, 125-140.

Veevers, J.J., 1971 - Phanerozoic history of Western Australia related to continental drift. *Geol. Soc. Aust. Journ.*, 18 (2), 87-96.

Veevers, J.J., 1971 - Shallow stratigraphy and structure of the Australian continental margin beneath the Timor Sea. *Marine Geology*, 11, 209-249.

Veevers, J.J., 1973 -Stratigraphy and structure of the continental margin between North West Cape and Seringapatam Reef, northwest Australia. *Bureau of Mineral Resources Australia Bulletin*, 139.

Veevers, J.J. (Ed.), 1984 - Phanerozoic earth history of Australia. *Oxford University Press*, Oxford, 418pp.

Veevers, J.J., 1988 - Morphotectonics of Australia's northwestern margin - a review. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 19-27.

Veevers, J.J. & Cotterill, D., 1976 - Western margin of Australia - a Mesozoic analog of the East African rift system. *Geology*, 4, 713-717.

Veevers, J.J. & Cotterill, D., 1978 - Western margin of Australia: evolution of a rifted arch system. *Geological Society of America Bulletin*, 22, 337-355.

Veevers, J.J., Falvey, D.A., Hawkins, L.V., & Ludwig, W.J., 1974 - Seismic reflection measurements of northwest Australian margin and adjacent deeps. *AAPG Bulletin*, 58(9), 1731-1750.

Veevers, J.J. & Heirtzler, J.R., 1974 - Tectonic and palaeogeographic synthesis of leg 27. In Veevers, J.J., Heirtzler, J.R., & others *Initial Reports of the Deep Sea Drilling Project*, 27, 1049-1054.

Veevers, J.J. & Johnstone, M.H., 1974 - Comparative stratigraphy and structure of the Western Australian margin and the adjacent deep ocean floor. In Veevers, J.J., Heirtzler, J.R., & others, *Initial Reports of the Deep Sea Drilling Project*, 27, 571-585.

Veevers, J.J., Jones, J.G., & Powell, C.McA., 1982 - Tectonic framework of Australia's sedimentary basins. *APEA Journ.*, 22(1), 283-300.

Veevers, J.J. & Powell, C.McA., 1979 - Sedimentary-wedge progradation from transform-faulted continental rim; southern Exmouth Plateau, Western Australia. *AAPG Bull.*, 63 (11), 2088-2104.

Veevers, J.J, Powell, C.McA., & Roots, S.R., 1991 - Review of seafloor spreading around Australia. I. Synthesis of the patterns of spreading. *Aust. Journ. Earth Sciences*, 38, 391-408.

Veevers, J.J. & Roberts, J., 1968 - Upper Palaeozoic rocks, Bonaparte Gulf Basin of northwestern Australia. *Bureau of Mineral Resources Australia Bulletin*, 97.

Veevers, J.J. & Wells, A.T., 1961 - The geology of the Canning Basin, Western Australia. *Bureau of Mineral Resources Australia Bulletin*, 60.

Vincent, P. & Tilbury, L., 1988 - Gas and oil fields of the Rankin Trend and northern Barrow-Dampier Sub-basin. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 341-369.

von Rad, U. & Exon, N.F., 1982 - Mesozoic-Cainozoic sedimentary and volcanic evolution of the starved passive continental margin off northwest Australia. *AAPG Bulletin*, 66, 253-281.

von Rad, U., Haq, B.U., & others, 1992 - *Procedings of the Ocean Drilling Program, Scientific Results,*122. College Station, TX (Ocean Drilling Program), 934 pp.

von Rad, U., Exon, N.F., & Haq, B.U., 1992 - Rift-to-drift history of the Wombat Plateau, northwest Australia: Triassic to Tertiary Leg 122 results. In von Rad, U., Haq, B.U., & others, *Proc. ODP, Scientific Results,*122, College Station, TX (Ocean Drilling Program), 765-800.

von Stackelberg, U., Exon, N.F., von Rad, U., Quilty, P., Shafik, S., Beiersdorf, H., Seibertz, E., & Veevers, J.J., 1980 - Geology of the Exmouth and Wallaby Plateaus off northwest Australia: sampling of seismic sequences. *BMR Journ. Aust. Geol. & Geophys.*, 5, 113-140.

Warris, B.J., 1973 - Plate tectonics and the evolution of the Timor Sea, northwest Australia. *APEA Journ.*, 13, 13-18.

Warris, B.J., 1976 - Canning Basin, offshore. In Leslie, R.B., Evans, H.J., & Knights, C.L. (Eds), *Economic Geology of Australia and Papua New Guinea3, Petroleum,* Australasian Institute of Mining & Metallurgy, 541.

Weaver, O.D., 1980 - Western Australia's oil and gas potential. *Oil & Gas Journal*, 2, 139-142.

Wellman, P. & O'Brien, G.W., 1990 - Vulcan Graben, Timor Sea: regional structure from a magnetic survey. *Bureau of Mineral Resources Australia Record*, 1990/55 (unpub.).

Wellman, P. & O'Brien, G.W., 1991 - Vulcan Graben, Timor Sea: regional structure from magnetic data. In *Exploration in a Changing Environment*, Exploration Geophysics, 22, 433-438.

Whibley, M. & Jacobson, T., 1990 - Exploration in the northern Bonaparte Basin, Timor Sea - WA-199-P. *APEA Journ.*, 30 (1), 7-25.

Whitworth, R., 1969 - Marine geophysical survey of the north-west continental shelf, 1968. *Bureau of Mineral Resources Australia, Record*, 1969/99 (unpub.).

Wilkins, R.W.T., Wilmshurst, J.R., Hladky, G., Ellacott, M.V., & Buckingham, C.P., 1992 - The suppression of vitrinite reflectance in some North West Shelf wells: Barrow-1, Jupiter-1, and Flamingo-1. *APEA Journ.*, 32 (1), 300-312.

Willcox, J.B., 1981 - Petroleum prospectivity of Australian marginal plateaus. In Halbouty, M.T. (Ed.), *Energy Resources of the Pacific Region,* AAPG Studies in Geology, 12, 245-272

Willcox, J.B. & Exon, N.F., 1976 - The regional geology of the Exmouth Plateau. *APEA*

Journ., 16(1), 1-11.

Willcox, J.B. & Exon, N.F., 1976 - Depth and thickness maps for sedimentary sequences under the Exmouth Plateau. *Bureau Mineral Resources Australia Record,* 1978/107 (unpub.).

Williams, A.J., 1988 - The Rosette discovery, Barrow Sub-basin. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 403-411.

Williams, A.J. & Macey, 1992 - Harriet gas gathering project. *APEA Journ.*,32 (1), 56-66.

Williams, A.J. & Poynton, D.J., 1985 - The geology and evolution of the South Pepper hydrocarbon accumulation. *APEA Journ.*, 25(1), 2352-47.

Williams, C.T., 1977 - An analysis of the production performance of the Windalia sand reservoir of the Barrow Island oilfield. *APEA Journ.*, 17(1), 105-113.

Williams L.W., Forman, D.J., & Hawkins, P.J., 1973 - Sedimentary basins of the Sahul Shelf. *Oil & Gas,* 19(13), 15-21.

Williamson, P.E., 1992 - Seismic characteristics of a Late Triassic carbonate reefal platform on the Wombat Plateau, Australia. In von Rad, U., Haq, B.U., & others, *Proc. ODP, Scientific Results,*122, College Station, TX (Ocean Drilling Program), 23-37.

Williamson, P.E., Exon, N.F., ul Haq, B., von Rad, U., & Leg 122 Shipboard Scientific Party, 1989 - A North West Shelf Triassic reef play: results from ODP Leg 122. *APEA Journ.,* 29 (1), 328-344.

Williamson, P.E. & Falvey, D.A., 1988 - Preliminary post-cruise report: Rig Seismic Research Cruises 7 & 8: deep seismic structure of the Exmouth Plateau. *Bureau of Mineral Resources Australia Record,* 1988/31.

Williamson, P.E., Swift, M.G., Kravis, S.P., Falvey, D.A., & Brassil, F.M., 1990 - Permo-Carboniferous rifting of the Exmouth Plateau region (Australia): an intermediate plate model. In Pinet, B. & Bois, C. (Eds), *The Potential of Deep Seismic Profiling for Hydrocarbon Exploration,* Editions Technip, Paris, 237-248.

Willis, I., 1988 - Results of exploration, Browse Basin, North West Shelf, Western Australia. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 259-272.

Wilson, P., Tapley, I.J., & Honey, F.R., 1984 - Structural observations of the Canning Basin by NOAA-AVHRR satellite imagery. In Purcell, P.G. (Ed.) *The Canning Basin, W.A.*, Geological Society of Australia/Petroleum Exploration Society of Australia Symposium, Perth, Proceedings, 1984, 535-544

Wiseman, J.F., 1979 - Neocomian eustatic changes - biostratigraphic evidence from the Carnarvon Basin. *APEA Journ.*, 19, 66-73.

Woods, E.P., 1988 - Extensional structures of the Jabiru Terrace, Vulcan Sub-basin. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 311-330.

Woods, E.P., 1991 - Eocene seismic velocity anomalies from the Timor Sea. *Exploration Geophysics,* 22 (2), 461-464.

Woods, E.P., 1992 - Vulcan Sub-basin fault styles - implications for hydrocarbon migration and entrapment. *APEA Journ.*, 32 (1), 138-158.

Woodside Offshore Petroleum, 1988 - Petroleum geology and hydrocarbon potential of the Barrow-Dampier Sub-basin and environs. In *Petroleum in Australia: The First Century,* Australian Petroleum Exploration Association Limited publication, 213-231.

Woodside Offshore Petroleum, 1988 - A review of the petroleum geology and hydrocarbon potential of the Barrow-Dampier Sub-basin and environs. In Purcell, P.G. & R.R. (Eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 115-128.

Wormald, G.B., 1988 - The geology of the Challis oilfield - Timor Sea, Australia. In Purcell, P.G. & R.R. (eds), *The North West Shelf, Australia,* Proceedings of Petroleum Exploration Society Australia Symposium, Perth, 1988, 425-440.

Wright, A.J. & Wheatley, T.J., 1979 - Trapping mechanisms and the hydrocarbon potential of the Exmouth Plateau, Western Australia. *APEA Journ.*, 19(1), 19-29.

Wulff, K., 1992 - Depositional history and facies analysis of the Upper Jurassic sediments in the eastern Barrow Sub-basin. *APEA Journ.*, 32 (1), 104-122.

Yeates, A.N., Bradshaw, M.T., Dickins, J.M., Brakel, A.T., Exon, N.F., Langford, R.P., Mulholland, S.M., Totterdell, J.M., & Yeung, M., 1986 - The Westralian Superbasin: an Australian link with Tethys. *International Symposium on Shallow Tethys*, 2, 199-213.

Yeates, A.N., Gibson, D.L., Towner, R.R., & Crowe, R.W.A., 1984 - Regional geology of the onshore Canning Basin. In Purcell, P.G. (Ed.) *The Canning Basin, W.A.,* Geological Society of Australia/Petroleum Exploration Society of Australia Symposium, Perth, Proceedings, 1984, 23-55.