# THE APEA JOURNAL

1980 Volume 20 Part 1

**Australian Petroleum Exploration Association** 

DEMAND

**NEW DECADE - NEW CHALLENGES** 

SUPPLY

PAGE NO. CONTENTS		
1	B.J. BURNS and J. BEIN	REGIONAL GEOLOGY AND HYDROCARBON POTENTIAL OF THE MESOZOIC OF THE WESTERN PAPUAN BASIN, PAPUA NEW GUINEA
16	E.S.T. O'DRISCOLL and S.L. KEENIHAN	THE TOOWOOMBA — CHARLEVILLE LINEAMENT IN SOUTHERN QUEENSLAND
25	A. CROSTELLA and T.P. BARTER	TRIASSIC-JURASSIC DEPOSITIONAL HISTORY OF THE DAMPIER AND BEAGLE SUB-BASINS, NORTHWEST SHELF OF AUSTRALIA
34	C.R. PORTER	GEOCHEMISTRY AND SP-RESISTIVITY CALIBRATION OF SUBSURFACE WATERS — SURAT BASIN AREA
44	A.C. HUTTON, A.J. KANTSLER, A.C. COOK and D.M. McKIRDY	ORGANIC MATTER IN OIL SHALES
68	D.M. McKIRDY and A.J. KANTSLER	OIL GEOCHEMISTRY AND POTENTIAL SOURCE ROCKS OF THE OFFICER BASIN, SOUTH AUSTRALIA
87	H.O. HENDERSON JNR	A GUIDELINELESS TREE AND A FLOWLINE CONNECTION SYSTEM FOR DEEPWATER PRODUCTION
96	S.J. KOROKNAY	NEW DEVELOPMENT TECHNIQUES IN BASS STRAIT
103	M.J. WILTSHIRE	ADVANTAGES OF ENHANCED DATA LOGGING
110	R.J. GRAEBNER, G. STEEL and C.B. WASON	EVOLUTION OF SEISMIC TECHNOLOGY INTO THE 1980'S
121	A.W. NELSON and J.A. BAUER	DENISON TROUGH, QUEENSLAND — NEW SEISMIC INFORMATION AND ITS HYDROCARBON IMPLICATIONS
130	R.C.N. THORNTON, B.J. BURNS, A.K. KHURANA and A.J. RIGG	THE FORTESCUE FIELD — NEW OIL IN THE GIPPSLAND BASIN
143	K.S. JACKSON, P.J. HAWKINS and A.J.R. BENNETT	REGIONAL FACIES AND GEOCHEMICAL EVALUATION OF THE SOUTHERN DENISON TROUGH, QUEENSLAND
159	D.D. BENBOW	THE PETROLEUM PROSPECTS OF THE GREAT BARRIER REEF REGION
176	D.J. MAGUS, T.F. BRATRUD, E.L. MOLNAR and M.J. WILTSHIRE	LOW PERMEABILITY SANDSTONES IN AUSTRALIA CAN BE FRACTURE STIMULATED
191	D.A. SCHWEBEL, S.B. DEVINE and M. RILEY	SOURCE, MATURITY AND GAS COMPOSITION RELATIONSHIPS IN THE SOUTHERN COOPER BASIN
201	W.H. BUTLER	THE HIGH COST OF CARING
204	T. TORMASI	REVIEW OF METHODS FOR FORECASTING ENERGY BALANCES
209	G.M. PITT, M.C. BENBOW and BRIDGET C. YOUNGS	A REVIEW OF RECENT GEOLOGICAL WORK IN THE OFFICER BASIN, SOUTH AUSTRALIA
221	R.P. PHILP and T.D. GILBERT	APPLICATION OF COMPUTERIZED GAS CHROMATOGRAPHY — MASS SPECTROMETRY TO OIL EXPLORATION IN AUSTRALIA
229	B.K. SINHA and J.M. MONTGOMERY	COMPREHENSIVE ANALYSIS OF DRILLSTEM TEST DATA WITH THE AID OF TYPE CURVES
240	L. WHITE	WELLSITE COMPUTER INTERPRETATION USING THE DIRECT DIGITAL LASER LOGGING SYSTEM
250	R. ALEXANDER, R. KAGI and G.W. WOODHOUSE	ORIGIN OF THE WINDALIA OIL, BARROW ISLAND, WESTERN AUSTRALIA
257	R.W. KING	GEOTECHNICAL ASPECTS OF FOUNDATION INVESTIGATIONS FOR PRODUCTION PLATFORMS AT NORTH RANKIN
263	K. MUKHTAR and M.R. MORRISON	FOCUS ON CHINA: JURISDICTIONAL CLAIMS, CURRENT PETROLEUM DEVELOPMENT

APEA acknowledges the support and assistance given to the 1980 APEA conference by members of the Petroleum Exploration Society of Australia by their submission of technical papers for the Conference and the APEA Journal.

#### AUSTRALIAN PETROLEUM EXPLORATION ASSOCIATION LIMITED



## **APEA Journal** 1980

Volume 20, Part 1 Technical Papers

1980 APEA CONFERENCE



Surfers Paradise 23rd-26th March 1980



#### AUSTRALIAN PETROLEUM EXPLORATION ASSOCIATION LIMITED

An Association Not for Gain — Limited by Guarantee (Incorporated under the Companies Act, 1936, of the State of New South Wales)

#### SECRETARY AND REGISTERED OFFICE

Suite 807, 20 Bridge Street, N.S.W., 2000 (Box 3974, G.P.O., Sydney, N.S.W., 2001) Telephone: (02) 27-6718, (02) 27-6847 Telex: AA 23033

#### **APEA 1980 CONFERENCE CHAIRMAN**

V.G. Swindon

#### TECHNICAL PAPERS COMMITTEE

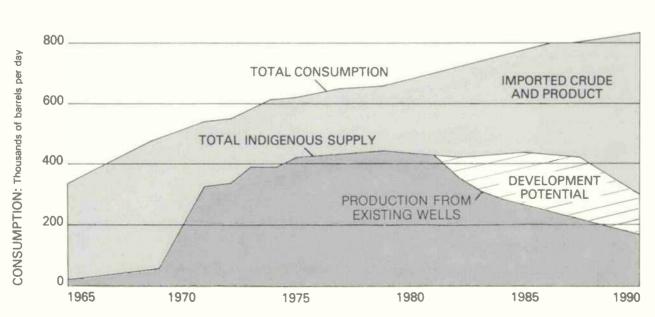
Chairman: R.J. Paten

D.D. Benbow D.W. Imber
J.N. Blackwood L.W. Pfitzner
M.J. Gerrard M. Pyecroft
P.J. Hawkins A.E. Ranson

The Journal is published under the authority of the Council of APEA, by the Conference Technical Papers Committee of the Australian Petroleum Exploration Association. Reproduction of material in whole or part requires customary acknowledgements and prior permission of the Association in writing.

### AUSTRALIA — OIL SUPPLY/DEMAND (NO NEW OIL DISCOVERIES)

1000



Cover: An artistic reproduction of the above graph reproduced from Australian Energy Outlook — An Esso Report dated October 1979.