

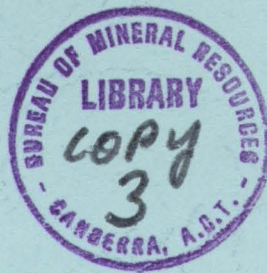
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BULLETIN 83A

**Timor Sea
Continental Shelf Sediments Map**

SCALE 1:1 000 000



H. A. JONES AND W. BURGIS

BMR
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DEPARTMENT OF MINERALS AND ENERGY
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

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TIMOR SEA

CONTINENTAL SHELF SEDIMENTS MAP

SCALE 1:1 000 000

H. A. Jones and W. Burgis

Since the publication in 1967 of the monograph on the marine geology of the Timor Sea,¹ the Bureau of Mineral Resources has initiated a program of systematic reconnaissance geological surveys of the continental shelf. The results of this work are being published in the BMR Bulletin series accompanied by 1:1 000 000 lithofacies maps of the shelf sediments. Three sheets (Rowley Shoals, W.A.²; Scott Reef, W.A.²; and Arafura Sea, N.T.³) have been printed by early 1974, and work on two further sheets covering part of the east Australian continental shelf is well advanced.

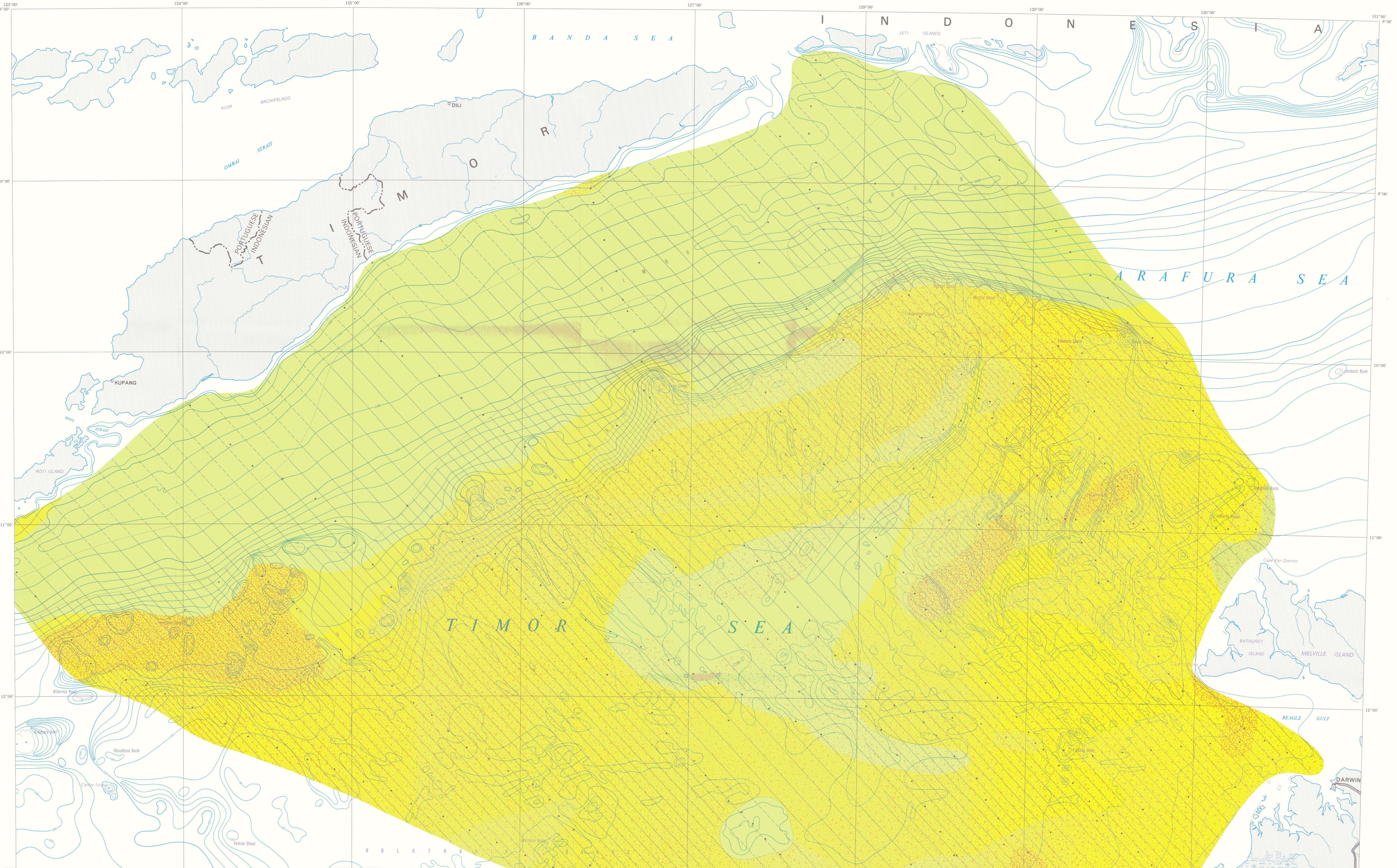
The enclosed map of the Timor Sea sediments is at the same scale and uses the same scheme for portraying facies variations as the map sheets already printed; it has been produced to achieve uniformity of presentation of the geology of the superficial sediments of the continental shelf. Only data from BMR Bulletin 83 have been used in compiling the sheet. The basic colour scheme depicts the grain-size of the -2 mm fraction of the sediments according to the 10-compartment triangular diagram classification with sand, silt, and clay end-members. The percentage gravel component and the calcium carbonate content are represented by overprinted patterns, and bathymetric contours are shown.

Users of the map should refer to Bulletin 83 to assist in interpretation. For instance, wide areas of the shelf are non-depositional, or even subject to erosion, and therefore the variations in lithology portrayed are not exclusively the result of variations in the modern depositional regime. Also the map does not distinguish sediments which are relics of earlier regimes from modern ones; however, some information of the distribution of these older sediments can be obtained from Bulletin 83 and inferred from a study of the gravel content in relation to the bathymetry.

¹ Van Andel, Tj. H., and Veevers, J. J., 1967—Morphology and sediments of the Timor Sea. *Bur. Miner. Resour. Aust. Bull.* 83.

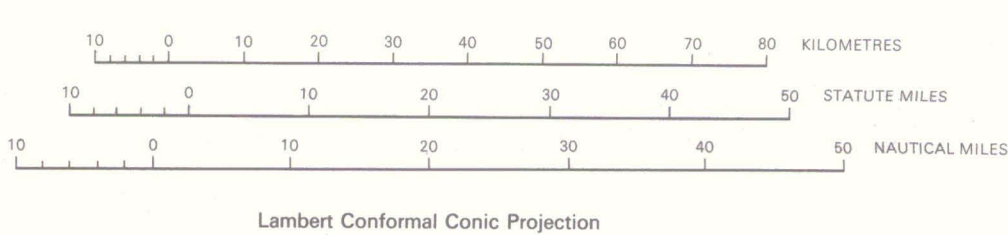
² Jones, H. A., 1973—Marine geology of the northwest Australian continental shelf. *Bur. Miner. Resour. Aust. Bull.* 136.

³ Jongsma, D., 1974—Marine geology of the Arafura Sea. *Bur. Miner. Resour. Aust. Bull.* 157.



CONTINENTAL SHELF SEDIMENTS
TIMOR SEA
WESTERN AUSTRALIA AND NORTHERN TERRITORY
1974

Scale 1:1 000 000



Lambert Conformal Conic Projection

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Geology 1960-63 by T. H. van Andel, J. J. Veevers
Compiled 1973 by H. A. Jones, W. A. Burgin, M. R. Moffett
Cartography by Geological Branch, BMR
Drawn 1975 by M. R. Moffett
Printed by Mercury-Watch Pty Ltd, Hobart, Australia

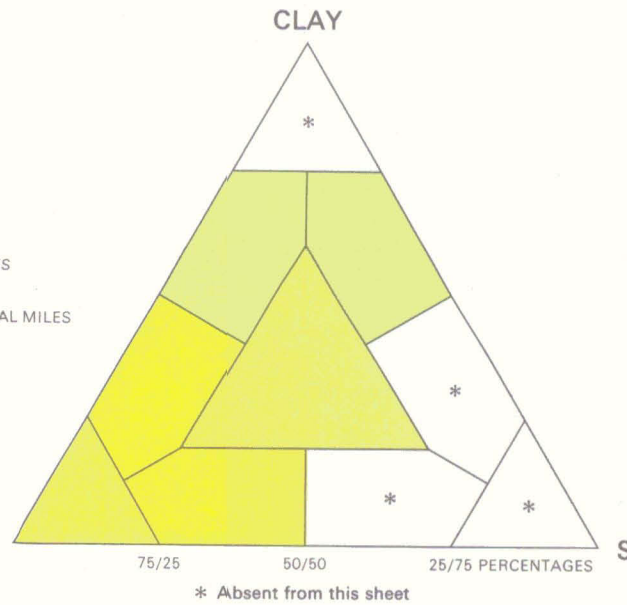
Bibliographic reference: T. H. Van Andel and J. J. Veevers, 1967, Morphology and sediments of the Timor Sea, Bur. Miner. Resour. Aust. Bull. 85A.

Copies of this map may be obtained from the Bureau of Mineral Resources, Geology and Geophysics, Canberra, A.C.T.

Geological reliability: The distribution of sediments is based on analyses of sea bed samples from 342 stations, 31 are anomalous. Extrapolation between stations has been guided by bathymetry.

Bathymetric reliability: Bathymetric contours have been compiled from published and unpublished R.A.N. Hydrographic Service charts and from soundings obtained by BMR and the Scripps Institution of Oceanography.

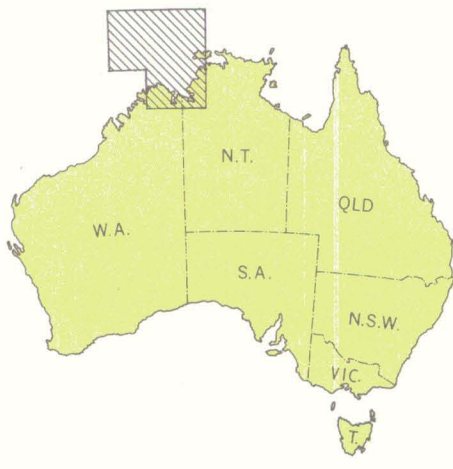
NOT TO BE USED FOR NAVIGATION



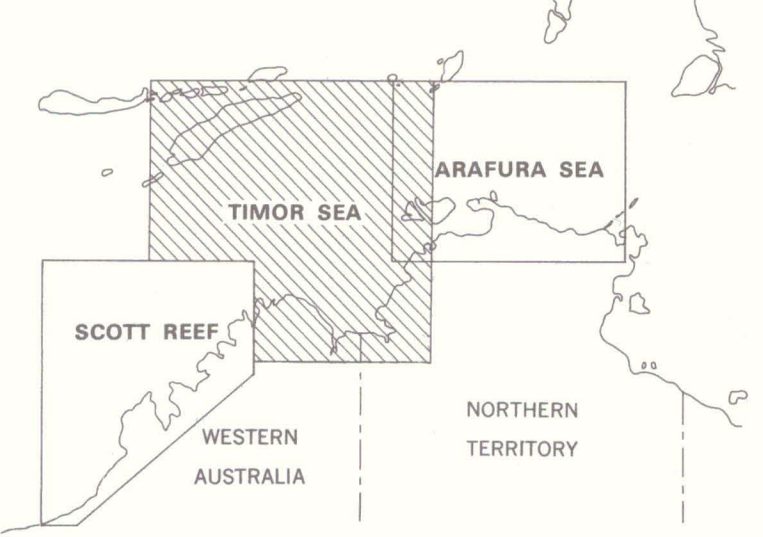
SEDIMENT CLASSIFICATION

Note: The triangular diagram classifies the sediments according to the proportion of sand, silt, and clay-sized particles they contain. The Wentworth scale is used. The corners of the inner triangle represent 60/20/20 percentages.

- Sand
- Silty sand
- Silty clay
- Sandy clay
- Clayey sand
- Sand silt clay
- >30% gravel
- 1-30% gravel
- >50% carbonate
- 60-80% carbonate
- 30-60% carbonate
- 0-30% carbonate



INDEX TO ADJOINING MAPS



- See bed sample station
- Too coarse
- Too fine
- Anomalous samples

Bathymetric contour in metres. Contour intervals 20m (0-20m), 100m (20-100m), 500m (100-500m). Some contours have been omitted in areas of steep submarine topography.

Swamp

Coral Reef

Highway, road

Railway

