(i) General Comments.

The Department is concerned with teaching and research in the field of the geological sciences. Its aim in undergraduate teaching is to study and discuss the nature, origin, and constitution of our planet, so that students may enter the geological profession with a broad-based training in Geology and related sciences, or proceed to advanced research in other institutions of higher learning.

(ii) Courses.

The courses for the three-year B.Sc. pass degree and the four-year B.Sc. (Geology) degree have remained similar to those provided in 1973, except for some wider choices of subject made available in alternate years.

We gratefully acknowledge the assistance of members of staff of the Bureau of Mineral Resources and the Research School of Earth Sciences in conducting some of our courses. We are especially grateful to Dr Germaine Joplin who kindly undertook the teaching program on metamorphism in the Geology C18 course (advanced Petrology). Mr D. Stapledon of Coffey & Hollingsworth Ltd of Adelaide for his contribution to the Geology C20 course (Engineering), and to Mr H.J. Shalley of Carpentaria Exploration Pty Ltd for his instruction in industrial geophysics in the Geology C04 course (Geophysics). It is only through the generosity of these extra-Departmental specialists that we are able to provide what is probably still the best undergraduate course in Australia.

We also express our sincere gratitude to Ampol Exploration Ltd, Esso Australia Ltd, and the Western Mining Corporation for continuing financial support and assistance with our activities, academically and in the field.

(iii) Enrolments and Examination Results.

The first-year enrolments in 1974 were far below those that might have been expected under normal conditions, and the number of candidates sitting the finals examinations was fewer than in 1963. This lowering in the popularity of Geology is, of course, echoed throughout the Commonwealth and can be reasonably linked with the disastrous policies or lack of same followed by the present Minister of Fuel and Energy with respect to mineral exploration and industry.

There has also been a marked decline in applications for post-graduate work in the Department.
The following students were awarded the Ph.D. Degree:

Mr G.E. Reinson
Mr R. Marjoribanks

The W.B. Clarke Prize was awarded to Miss S.H. Rigden.

The first University Medal in Geology has been awarded to Mr J.H. Kennard who also held a National Undergraduate Final Honours Year Scholarship during the year.

(iv) Student Participation.

The Students' Geological Society continued an active role throughout the year and its Executive acted as the student liaison group in Departmental matters. Owing to the severe petrol strike in August, the planned annual field trip had to be cancelled.

(v) Work of Graduate Students.

Mr R.S. Landrum has now submitted his Ph.D. thesis on the Silurian-Devonian deposits of the Cobar Region, N.S.W. Supervisor - Dr K.S.W. Campbell.

Mr D.R. Nason suffered a delay owing to illness in completing his work on the Manus Island porphyry-copper deposits (Ph.D.). Supervisor - Dr J.A. McDonald.

Mrs J.A. Owen has also been delayed in completing her work on the spore-pollen assemblages in the upper Tertiary sequences of New South Wales using correlative information from radiogenic dating of associated igneous effusives. (Ph.D.) Supervisor - Professor D.A. Brown.

Mr D. McKirdy, holder of a Public Service Post-graduate Bursary, is well-advanced with his Ph.D. work on the diagenesis and incipient metamorphism of marine organic matter, with particular reference to the pre-Devonian sediments of the Amadeus Basin, Northern Territory. Supervisors - Dr C.E.B. Conybeare and Dr D. McHugh of the Royal Military College, Duntroon (Department of Chemistry).

Mrs L. Wyborn has commenced a Ph.D. project on the sedimentation and low-grade metamorphism of the Tantangara-Tumut region with reference to the Lachlan Geosyncline. Supervisors - Dr K.A.W. Crook and Dr T.G. Vallance, University of Sydney.
(vi) Staff.

Professor:  D.A. Brown, B.Sc. (N.Z.), Ph.D. (Lond.), D.I.C.

         K.A.W. Crook, H.Sc. (Syd.), Ph.D. (N.E.), B.A.
         C.E.B. Conybeare, M.Sc. (Alta), Ph.D. (Wash. State)

Senior Lecturers:  M.J. Rickard, B.Sc., Ph.D. (Lond.), D.I.C.
                  J.A. McDonald, H.Sc. (Manit.), Ph.D. (Wis.)
                  B.W. Chappell, M.Sc. (N.E.), Ph.D.
                  R.A. Eggleton, B.Sc. (Adel.), Ph.D. (Wis.)

                       I.E. Smith, B.Sc. (V.U.W.)

Head Technician:  R.A. Cliff

Research Assistants:  L. Belbin, B.Sc. (N.S.W.)
                    P.A. Jell, B.Sc. (Hons.) (Qd), Ph.D.

Visitors:  Professor John Rodgers,
           Yale University, U.S.A.
           (2 months' continuation from 1973)

           Dr J.F. Truswell,
           University of the Witwatersrand, Johannesburg
           (for six months)

Staff Movements

Professor D.A. Brown attended the Council Meeting of the Geological Society of Australia as Vice-President in Brisbane, May 1974. He has also been involved in the work of the Organizing Committee for the 25th International Geological Congress to be held in Sydney in August 1976.

Dr K.S.W. Campbell returned from Study Leave in New Zealand in January 1974. He has successfully completed the task of editing the Proceedings of the 3rd Gondwanaland Conference held in Canberra in August 1973.

Dr M.J. Rickard represented Australia on the Working Party for the Tectonic Map of the World at Zürich, Switzerland in August 1974 and took part in several useful field exercises.

Dr B.W. Chappell departed on Study Leave in December 1973 and has been based mainly at the U.S. Geological Survey, Menlo Park, California where he has been cooperating with Dr Paul C. Bateman on preparations for the 25th International Geological Congress.

Mr I.E. Smith, Senior Demonstrator, was appointed Temporary Lecturer during Dr Chappell's absence, and attended the International Volcanological Conference in Chile in September 1974.
Mr G.H. Taylor, Senior Demonstrator, who suffered severe injuries whilst on duty in August 1973, has now returned to full duties.

Dr P.A. Jell, Research Assistant, left in December 1974 to take up a University Post-Graduate Award at the State University of New York, Stony Brook, Long Island.
BROWN, D.A. (trans.).


CAMPBELL, K.S.W.

The functional morphology of Cryptolithus. Fossilie and Strata, No.4.

CAMPBELL, K.S.W. & HOLLOWAY, D.J. *


CAMPBELL, K.S.W., HOLLOWAY, D.J. * & SMITH, W.D. ‡


CHATTERTON, B.D.E. *


COOPER, J.A. *, DASCH, E.J. ‡ & KAYE, Maureen *


CONYBEARE, C.E.B.


CROOK, K.A.W.


Kratonization of West Pacific type geosynclines. J. Geol., 82, pp.24-36.

DAY, R.W. *


* Former member. Based on work done while a member of the Department.
‡ Not a member of this University.
JELLI, P.A.

Faunal provinces and possible planetary reconstruction of the Middle Cambrian. *J. Geol.*, 82, pp. 319-350.

The abathochroal eye of Pagetia, a new type of trilobite eye. *Fossils and Strata*, No. 4.

JOHNSON, R.W. & SMITH, I.E.


JONES, P.J.; CAMPBELL, K.S.W., & ROBERTS, J.


MARJORIBANKS, R.W.


MCKIRDY, D.M.


POWELL, T.G. & MCKIRDY, D.M.


RICKARD, M.J.

*Geological Map Interpretation*. ANU Department of Geology Publication No. 276, 49 + ix p.

SMITH, I.E.

Obsidian sources in Papua - New Guinea, in 'Archaeology and Physical Anthropology in Oceania' vol. 9, No. 1, pp.18-25.

WARD, G.K. & SMITH, I.E.


WHITE, A.J.R.; CHAPPELL, B.W. & CLEARY, J.R.

Geologic setting and emplacement of some Australian Paleozoic batholiths and implications for intrusive mechanisms. *Pacific Geol.*, 8, pp.159-171.

* Former member. Based on work done while a member of the Department.
† Not a member of this University.
‡ Member of RSES.
+ Member of Department of Prehistory.
### THE AUSTRALIAN NATIONAL UNIVERSITY

#### DEPARTMENT OF GEOLOGY - ANALYSIS OF STUDENT PERFORMANCE

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<th>Subject or unit</th>
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<th>Percentage of Number Sitting</th>
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#### Enrolled (as at 30 April 1974)

- **B.Sc. (Geology)**: 5
- **Final Honours**: 9
- **Masters Degree**: 1 FT; 2 PT
- **Ph.D.**: 5 FT; 3 Staff

#### Sitting

- **5 Pass**
- **2 H1; 2H2A, 1H2B**
- **1 Pass**
- **1 Pass**