



The Consortium for Ocean Geoscience of Australian Universities

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Australian University research on ocean geology and geophysics is characteristically an international activity in which we are forced to assume the role of an underdeveloped nation. While we certainly have our share of scientists of recognised ability in the field, we are severely hampered by a lack of facilities. Australia does not possess an ocean going earth sciences oceanographic vessel. We have to rely almost exclusively on hitching rides on foreign research ships. The Australian Navy provides the only ship time on Australian vessels. The total useful time available annually is very small, and cruises are for specified duration between specified ports. The brevity of most cruises and the restricted number of available ports severely limits the regions which are accessible. Scientific activities on these vessels is severely limited by their design and the nature of their basic equipment. Specialised equipment has to be installed before the commencement of a cruise and removed at its conclusion.

The frequency with which foreign vessels visit our shores is a clear indication of the international recognition of problems of scientific interest in our region. Not only does the lack of our own platform restrict the quantity of data collected, but more importantly, it prevents Australian scientists from designing their own investigations. With the present constraints, we can at best hope to bend a foreign programme towards what we want to do. At worst, we have to beg for data and samples from foreign institutions. Some of these institutions are extremely generous with data collected at great cost, others are notoriously the opposite. To date the only substantial survey carried out by an Australian organization outside the oil industry is the B.M.R. continental margin survey. The survey data which is being progressively released has proved of great value in research on shelf and slope problems.

A limited amount of the high quality seismic reflection data that has been collected by oil exploration companies on the Australian Shelf is also available. Little other than foreign data is

available for the deeper oceanic regions around our continent. In spite of these restrictions work still proceeds: for instance forty five publications on marine geology and geophysics have been produced by the Sydney University group since mid 1972.

Increased interest in marine geology and geophysics has been stimulated by the development of aspects of plate tectonic which describe the seafloor spreading process and the rifting processes leading to the formation of continental margins. The new understanding of sedimentation processes in the oceans opens the possibility of discovery of hydrocarbon and mineral resources in deeper water. In practical terms these features have been investigated by seismic profiling, mapping of magnetic anomalies, surface coring, and deeper drilling in the oceans by the Deep Sea Drilling Project. The latter, which has established beyond all reasonable doubt the reality of seafloor spreading, has been funded from its inception in 1968 until last year by the U.S. National Science Foundation at the cost of some seventy million dollars (U.S.). Although most funds are still provided by the National Science Foundation, financial or equivalent contributions of a million dollars (U.S.) are being made annually by the U.S.S.R. and the Federal Republic of Germany. It is expected that other countries will also contribute as full members when the International Program for Ocean Drilling (IPOD) commences this August. In addition it is expected that smaller contributions (in excess of one hundred thousand dollars, U.S.) will be made by affiliate member countries. During the last year the possibility of Australian affiliation with the project has been discussed. The budget of the five year IPOD programme is expected to be in excess of one hundred million dollars (U.S.).

Given the background of Australian deficiencies in marine geosciences in terms particularly of a vessel, it has been realised for some time that there is a need to co-ordinate university research efforts. This includes research projects, sharing of equipment and

personnel, taking advantage of ships of opportunity, and the cataloguing and compilation of data. There is also a need for a single voice that can speak for the whole university community in this field. The vehicle for these activities, the Consortium for Ocean Geoscience of Australian Universities (COGS) was set up at a meeting in Adelaide on 12th May this year. Representatives of 15 of the 17 Australian university earth science departments attended.

COGS defined as its three principal aims

- (i) the co-ordination of research activities including co-operative research programmes, equipment, manpower and data resources;
- (ii) the assessing of requirements for university based ocean going geoscience; and
- (iii) to pursue the matter of affiliation with IPOD.

It is hoped that through this consortium we will be able to make up for years of gross neglect of a field of investigation of importance in Australia's future.