



Editorial

Geomagnetism in an Australian setting

The importance of the magnetic method in geophysics in Australia has been well demonstrated by many individual articles published previously in this journal, and also by several special issues, such as the "Applied Magnetic Interpretation Symposium" issue of 1979 (Vol. 10 No. 1) and "The Geophysics of the Elura Orebody" issue of 1980 (Vol. 11 No. 4). The magnetic method measures changes in the earth's magnetic field with space, but changes of the field with time are also important, causing, as they do, electric currents in the earth. Indeed, fluctuations of the geomagnetic field cause a background for all the magnetic, electric and electromagnetic methods of geophysics, and in some instances are used as a primary source field.

The study of the earth's magnetic field in space and time forms the subject of geomagnetism, and this issue of *Exploration Geophysics* contains a set of extended abstracts which were the basis of a Workshop on Geomagnetism held in Canberra on 14–15 May 1985. Because of the relevance of much of the material to exploration practice, the editors are pleased to have the opportunity to publish the material in the journal of the Australian Society of Exploration Geophysicists. The meeting was sponsored by the Specialist Group in Solid-Earth Geophysics of the Geological Society of Australia, and thus this issue represents a collaborative effort by the ASEG and the GSA.

On the subject of affiliations we should also mention the International Association of Geomagnetism and Aeronomy (IAGA). Both the IAGA president (Professor D. I. Gough, University of Alberta, Canada) and past president (Professor K. D. Cole, La Trobe University, Australia) participated in the meeting, together with many other members of the IAGA structure. IAGA is one of seven association bodies comprising the International Union of Geodesy and Geophysics, which is itself a member body of the International Council of Scientific Unions.

The Workshop, held at the Australian National University, was attended by some 63 registrants from Australia, New Zealand and elsewhere throughout the world. Within Australia the geomagnetic community was well sampled, with representatives from universities, government research laboratories, and the exploration profession. Emphasis was placed on practical measurements and interpretation, so that some theoretical problems (such as the major question of the origin of the main field) were not represented in full balance. Also the mineralogical aspects of rock magnetism, and paleomagnetism with all its ramifications, were not covered by the scope of the workshop.

The material which follows generally represents the investment of many years of work by the research groups involved, and in most cases indicates research interests which are likely to be pursued for some years. In collating the material for this issue we thank particularly Wendy Prohasky (now Wendy Welsh) and Andrew McEwin. We also thank the Directors of our respective institutions for their support.

Finally the Workshop took place shortly after the retirement, from Reader in Geophysics at the University of Tasmania, of Dr W. D. Parkinson. Dr Parkinson participated in the Workshop and in particular addressed the conference dinner (which took the form of a Magneto-Banquet). It was thus most timely to have a gathering of geomagnetists in Australia, and we note here Dr Parkinson's services to geomagnetism. The accompanying photograph of Dr Parkinson shows him in a typical pose: outdoors, and taking a keen interest in something geomagnetic.

F. E. M. Lilley
C. E. Barton



Dr W. D. Parkinson inspecting buildings on the site of the old Rossbank Magnetic Observatory, Government House grounds, Hobart, in February 1977.