

David Isles & Leigh Rankin

Lindsay Ingall Memorial Award Perth September 2019

CITATION:

The Lindsay Ingall Memorial Award is intended for an Australian resident or former resident for the promotion of geophysics within the non-geophysical community, including geologists, geochemists, engineers, managers, politicians, the media or the general public. The award honours the memory of an ASEG founder, past President and Honorary Member, the late Lindsay Ingall for his capacity to cross geoscience boundaries, his ability to relate technically and effectively with other professionals, regardless of their own understanding of the principles of geophysics, and for his enduring commitment to assist geoscientists across Australia. It is awarded generally to an individual who has actively promoted geophysics to the wider community.

For 2019, the award is made jointly to David Isles and Leigh Rankin. David and Leigh together have devoted substantial time and energy in promoting the use of airborne magnetics and aeromagnetic data interpretation to the broader exploration community. This has been achieved through development and presentation for over 25 years in Australia and overseas of the course "Geological Interpretation and Structural Analysis of Aeromagnetic Data".

David completed a BSc (Hons) in 1975 at Melbourne, and subsequently a PhD in 1983 at Adelaide University, where he was guided and strongly influenced in his studies and early career by the late Professor David Boyd. After seven years as a project geophysicist with BHP Minerals in Perth, he joined the airborne contactor World Geoscience, where he was involved in interpretation, training and R&D in aeromagnetics. He was a director and exploration manager of several ASX-listed companies from 1993 to 2016 while continuing to provide technical and training services, and since 2009, he has maintained a strong affiliation with Southern Geoscience Consultants. Dave has been a member of ASEG since 1976 and is also a member of the Australian Institute of Geoscientists (AIG).

Leigh completed a BSc (Hons) in 1983 at Adelaide University, and joined the Mines Department of South Australia in 1985, where he spent nine years as a geologist in the Regional Mapping Branch. In 1994, he joined World Geoscience, where he spent three years involved with data interpretation, field mapping and training programs internationally. He has worked as a self-employed exploration consultant since 1997. Leigh is a member of the AIG, SEG and GSA.

In 1991, Dave was encouraged to develop a workshop course for staff of World Geoscience, in order to understand and promote the potential of integrating magnetic data with geology, and to create improved opportunities for the utilisation of such data. From this starting point, the workshop course was developed in conjunction with colleagues at World Geoscience and Monash University, for presentation to the broader exploration audience.

Since 1995 David and Leigh further developed and presented this course on numerous occasions globally, targeted at training exploration geoscientists, of all technical disciplines, in the geological relevance of aeromagnetic data sets. They highlighted the key role it can play in the interpretation of lithology and structure and the controls on mineral deposit setting, be it in hard or soft rock geology.

The significance of the work was acknowledged in 2013 when Dave was made an SEG Honorary Lecturer, Pacific South and presented the lecture “Aeromagnetism – A Driver for Discovery & Development of Earth Resources” at a variety of meetings and universities in Australia, New Zealand and Indonesia.

The subsequent publication of the book based on the course has become a practical manual for aeromagnetic interpretation written primarily for geologists, but often referred to by practicing geophysicists. The book carries comprehensive worked examples of aeromagnetic data and a guide to practical interpretation. It has been widely distributed among the earth science community with over 600 copies sold up to mid-2018 and a further 1026 downloaded from 73 countries once it became available for download from the ASEG website.

Dave and Leigh’s endeavours have demonstrated to exploration “decision makers” that much of the geological story of a region is inherent in the aeromagnetic data. Their demonstration of the value of aeromagnetic data to geological mapping and mineral discovery has helped expand the demand for aeromagnetic coverage and the other airborne methods that followed. Together they have helped to establish aeromagnetism as a primary tool for geological mapping and interpretation throughout Australia, as well as in many other countries. It is no longer a “black art” practiced by only specialized geophysicists, but a valuable basic tool and part of most exploration programs.

The contributions by David and Leigh to the understanding and interpretation of aeromagnetic data have had a significant influence on generations of geoscientists in Australia and around the world. Their endeavours have no doubt promoted the use of geophysics to the broader geoscience community, and they are worthy recipients of the Lindsay Ingall award.



Dave Isles receiving the Lindsay Ingall award from ASEG President Ted Tyne