



Doug Morrison

ASEG Lindsay Ingall Memorial Award

Brisbane September 2021

CITATION:

The Lindsay Ingall Memorial Award is intended 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 2021, the award is made to Doug Morrison from Sydney. This award recognizes Doug's active promotion of the science, technology, practice and history of geophysics, particularly airborne geophysical surveying, well beyond the bounds of the exploration geophysics and service industries. The award acknowledges his authorship of many non-geophysical science and aviation histories, and in particular the most recent ASEG 50th Anniversary Special Publication.

For more than 50 years, Doug has been well known and highly regarded in those parts of the international aviation industry that have forged the developments in technologies, practices and innovations used in the wide range of aerial surveying and mapping. He is widely acknowledged and respected as an expert in data processing and technical leadership of airborne geophysical surveying and mapping projects around the world. He has managed or contributed to airborne geophysical survey mapping projects in Australia and overseas.

Doug joined Aero Service in 1962 as a 'trainee cartographer and geophysical data compiler' whilst undertaking night studies in land and engineering surveying at Sydney Technical College. Much of Doug's early training, leading to his unique expertise in aerial geophysical mapping, came from his time with the Aero team and had a major influence on Doug's life direction. Through Aero's inhouse training setup, he quickly became an expert in precision base mapping, transcribing and processing

analogue geophysical data to produce exploration map products that set a world-class standard for that era.

Doug assisted geophysicists on many surveys, including Lindsay Ingall who consulted on some jobs. In 1964 Doug had to make a choice between a six-month contract of the aeromagnetic survey of the Great Barrier Reef, or continuing night college. No one refuses six months paid work on the Great Barrier Reef! He also met his future wife on this survey.

In 1966, at the age of 22, Doug and Brian Lenon arranged with Aero Service to be their sole mapping subcontractors in Australia. After Aero's new parent company, Litton Industries, shut their overseas offices including Sydney at the end of 1966, a group of ex Aero managers formed new groups in competition to Litton. One of these was Geophysical Resources Development Company (GRD) based in Sydney, with Doug retained to manage the data and drafting sections. GRD had five aircraft flying geophysical surveys and over 80 personnel when the mining boom collapsed in 1972, and GRD went into receivership. Californian-based Geometrics formed their own airborne division and took on six ex-GRD Sydney staff including Doug, and two aircraft and crews.

Doug continued with Geometrics until 1980 in various data processing and supervisory roles and later Field Operations Manager. In 1980 Doug resigned from Geometrics and expanded his separate data processing contracting business, Southlands Geophysical Services, carrying out tasks for most airborne contractors in Australia and the Pacific region. In 1994 he joined Geotrex/Dighem as the data production supervisor and quality assurance manager before returning to survey sub-contracting in 1998. In 2006 he was asked to join Fugro Ground Geophysics (later CGG) in Sydney where he remained until his 'retirement' in 2013.

With his deeply embedded background in airborne geophysics, Doug has immersed himself in the history of global exploration and particularly in the detailed history of Australian and international aviation surveying developments, establishing an extensive 'reference' network of aerial survey practitioners and well-known experts in military, aviation and maritime matters. Through their little-known stories and personal reflections, and his international access to personal and official archive material from this network and eminent scientific and history institutions, Doug's most recent book, the ASEG 50th Anniversary Special Publication, has provided the context for specialists and non-specialists to appreciate the evolution of the airborne magnetometer and the early history of geophysical surveying and mapping

In recent years, Doug has written a number of science and aviation histories that have been published in *Historical Records of Australian Science*, the *Transactions of the Royal Society of Victoria* and the *American Aviation Historical Society Journal* and other aviation publications. He has published articles regularly in the ASEG *Preview* magazine covering Australia's early history of geophysical measurement and surveying. His extensive listing of *Preview* articles has captured wider attention in education and community circles, and amongst military, aviation and maritime survey history enthusiasts. Doug's contributions have added significantly to the international standing and recognition of the ASEG and exploration geophysics.

Doug's new book, the ASEG 50th Anniversary Special Publication "*Measuring Terrestrial Magnetism: the evolution of the Airborne Magnetometer and the first anti-submarine & aeromagnetic survey operations, People, Planes, Places & Events 1100s-1949*" was released in 2021. The book covers a global expanse of more than 800 years and recounts the largely untold story of 'measuring terrestrial magnetism' and of the extraordinary 'people, planes, places and events' that have contributed to the evolution of the magnetometer and the first anti-submarine and aeromagnetic geophysical survey operations. It is a unique journey of science and engineering, of inventions, new methods and instruments and a compelling story of how the measurement of terrestrial magnetism has influenced the history of the world. The extraordinary depth and scope of research over many decades, as well as his collection of historic geophysical texts and maps, photos and illustrations, and his astonishing attention to detail serve to make this book an amazing and immersive historical reading experience and a future primary reference work.

In 2012, Doug received an ASEG Service Certificate Award for distinguished service by a member to the ASEG, recognising Doug's service, contributions, loyalty to and promotion of the geophysics profession over 50 years, and to the ASEG over 30 years through his sustained support of NSW Branch activities, his regular contributions to ASEG publications, mentoring junior geophysicists, and promoting the ASEG to young geophysicists in industry.

Doug's many contributions science and practice of geophysics, crowned by his new book, the 50th Anniversary Special Publication of the ASEG, will continue to showcase the ASEG and exploration geophysics to a broad global readership. Because of his consistent long-term promotion of geophysics, particularly airborne geophysical surveying, to the wider community, Doug Morrison is an exemplary recipient of the ASEG's Lindsay Ingall Memorial Award.