OBITUARY

Prof. David M. Boyd
(1926-2016)

Prof. David M. Boyd, an internationally renowned geophysicist, passed away at Adelaide, South Australia on November 2, 2016, at the age of 90 years succumbing to the head injury he sustained when he fell while walking. He leaves behind his wife Jenny Boyd, two sons James and Hugh and a daughter Sarah, besides scores of his students and admirers the world over.

David was born in Scotland on June 26, 1926. He entered Glasgow University (UK) in 1943, after a mildly disrupted secondary education during World War II, and obtained double Honours in Natural Philosophy (Physics) and Geology – a first for Glasgow University. After graduation in 1947, he served as a Lecturer in the new science of Geophysics and spent 9 years teaching and conducting exploration field work in the UK, Iceland, and the Rift Valley in Uganda. After spending 2 years with John Taylor and Sons working on many mines in the UK and also in Cyprus he secured a position of a Chief Geophysicist at Hunting Geology and Geophysics (London) in 1956 and thus began 12 very busy, productive and happy years working predominantly on large airborne magnetic projects worldwide, including Ghana and Uganda. During this period, working directly with the field geologists, he developed the methodology, which may be classed as a pioneering work, for integrating aeromagnetics with geology, that culminated in his classic paper "*The contribution of airborne magnetic surveys to geological mapping"* presented at the Canadian Centennial Mineral and Ground Water Conference in Niagara, 1967, and has helped in training and creating generations of competent interpreters of aeromagnetic data.

Passion for teaching, imbibed during his Glasgow university years, prompted David Boyd to return to academic life joining as inaugural Chairman of Geophysics in the Department of Economic Geology at the University of Adelaide, South Australia in 1969. He retired in 1992. His main focus was nurturing honours graduates who would be sought after by the mining industry. This has resulted in a very competent 'breed' of geophysicists who have become leaders and achievers in the exploration industry in Australia. While best known for his passion for aeromagnetics and the accompanying emphasis on 'hard-rock' geology, many of his graduates have made their mark in the Oil & Gas industry, in seismic research, well logging and as founders and operators of successful exploration companies.

Besides being a Professor of Geophysics, he held positions of Dean of the Faculty of Science; Chairman of the University's Education Committee and further served as Acting Vice-Chancellor in 1982-83. Outside of geosciences, David was Chairman of the Animal Ethics Committee of the Waite Institute (1983-92) and Chairman of the organising committees for ANZAAS congress in 1991 and 1997. His zealous campaign for the Government airborne survey programmes, contributed to the innovations by the South Australian government in launching the 'South Australian Exploration Initiative (SAEI)' and airborne survey funding during 1992-1996 thereby raising exploration profile of South Australia within Australia as well as internationally and becoming a model for other countries to follow. He nurtured relationships with the airborne geophysics industries in Finland, India, China and Africa and was a frequent visitor to these countries, as guest lecturer and counsel. He was key person in initiating courses on '*Geophysics for Geologists'* at the *Australian Mineral Foundation* (AMF) and presented them with zest and zeal, until 1994. From 1997 until his recent passing, he was the key geophysics advisor to 'Archimedes Consulting' and actively working on projects on every inhabited continent of the earth.

His earliest connection with the aeromagnetic survey projects in India goes back to the mid sixties. Interestingly his first contact with Indian programs, as I far as I know, was with the NGRI when, Dr. P.V. Sanker Narayan met him in 1966 at the Hunting Geophysics office in London in connection with the acquiring of a Proton Precision Magnetometer for NGRI's Aeromagnetic Survey Facility project just being started. In 1968 he was associated with the airborne survey in Tamil Nadu by M/s Hunting's (UNDP project) and later in 1972 - 73, in his association with the Mineral Development Teams in Australia and the government geologists from India visiting under a Colombo Plan programme. He was instrumental in setting up the 'India-Australia scientific and technology co-operation program (1975)', which helped finance Indian scientists to come to Australia and vice-versa.

Interactions further strengthened and continued with my going to University of Adelaide on a Colombo plan fellowship spending the years from 1974 to 1976 and conducting post-doctoral research on the Broken Hill, the Middleback and Hamersley aeromagnetic data interpretation projects in Australia. The Broken Hill aeromagnetic data interpretation project was a project close to his heart, in which besides me (Indian), David Isles (Australian), Koya Suto (Japanese) and D.M. Khan (Pakistani), really an international team, participated and successfully completed under his able and inspiring guidance. Later Shanti Rajagopalan, a brilliant student from Osmania University, who did her Ph.D under Prof Boyd's guidance, settled in Australia and played a significant role in the field of airborne geophysics and made invaluable contributions in the development of new interpretation techniques. Even after her premature demise, the Australian geophysical community gratefully remembers her and acknowledges her contributions.

Prof. Boyd's keen interest in espousing the need for development of skilled manpower in the effective interpretation of aeromagnetic data in the developing countries took him on several visits to India, particularly to the government institutions like NGRI, Geological Survey of India centers in Calcutta, Hyderabad and Bangalore, Atomic Minerals Division and, NRSA in Hyderabad, and Universities like the Osmania University, Hyderabad and Andhra University, Visakhapatnam. His lectures and practical demonstrations especially using the Indian data were of particular value and inspiration to the geologists and geophysicists at these institutions. This has encouraged the authorities of some of these institutions to depute their officers for further intensive training to the University of Adelaide! Armed with the command over the subject and with humane approach and personal rapport, he won the hearts of everyone whom he met in India and they all look at him with admiration and reverence.

He is a Foreign Fellow of the Indian Geophysical Union, Fellow of the Geological Society of India and Association of Exploration Geophysicists (India). He was the President of the Geological Society of Australia (1986-87). He was awarded Honorary Membership of the ASEG in 1997. For his achievements in developing a special breed of geophysics graduates and for his successes in promoting the effective integration of aeromagnetics in geological mapping and exploration, the ASEG, at its 25th Conference, honored him with the presentation of the Society's Gold Medal on August 21, 2016, coinciding with his 90th birthday celebrations. This was the auspicious occasion when nearly 60 of his students, including me, from world over, gathered in Adelaide in the celebration and paid respects and conveyed gratitude to their teacher. Prof. Boyd was full of energy, enthusiasm and was extremely happy to be with his students who made him proud, but at the same time he was an embodiment of humility and grace when he said "Learning is a two way business. Learning goes through both for the student and from the student. I am indebted to all of you, although I cannot be specific on what I learnt from you, but I know each one of you have taught me something all the time I have been teaching you. I am greatly honoured. Thank you very much."

After the celebrations everyone left with joy, hope and wish that we all would be meeting again on his 100th birthday. But, alas, fate had a different plan and we had to bear the shocking news of his passing away so soon. He lived a full life, inspiring one and all who came in contact with him, a life to be cherished, emulated and celebrated. We are all very sure, wherever he is, he'll be smiling and will make others smile!

Scientist (Retired), CSIR-NGRI DASU ATCHUTA RAO
F 201, Sri Sairam Aditya Residency
Engineers Colony, Yellareddyguda
Hyderabad - 500 073
Email: araodasu@gmail.com