## Dr Clifford Henry James, B.Sc., D.I.C., F.I.M.M., C.Eng. (1932-2003)



Dr Clifford James, Head of Leicester (UK) University's Department of Geology from 1973-76, died on June 8, 2003, aged 72. In 1965, Cliff was appointed Lecturer in Economic Geology in the Department to plan and develop with Dr. Anthony Evans and Dr. Aftab Khan a new MSc course in Mining Geology and Mineral Exploration. He was responsible for the MSc and BSc courses in Geochemical Prospecting, Mineral Exploration, Photogeology and Remote Sensing, and Mineral Economics, but also contributed to courses in Surveying, Mine Surveying, Mining, Mineral Dressing, and Ore Geology. He led an annual imaginative integrated exploration field course to parts of the UK and, in 1969, to the Republic of Ireland.

The MSc course soon built up an international reputation and attracted students from all over the world. A consequence of the demand was the emergence of separate MSc courses in Mineral Exploration and in Mining Geology and a BSc in Mining Geology. Cliff was promoted to Senior Lecturer in 1970. In 1973 he was made Head of Department, one of the first non-professorial members of staff to be so appointed in the University. He left the University in 1982 to take up an appointment as Head of the Department of Mining Geology in the Western Australia School of Mines in Kalgoorlie.

Cliff attended a number of primary schools as his father was a bank manager with Lloyds and moved often. He went to Worthing High School for Boys and then obtained a choral scholarship to Lancing College where he took his Alevels in physics, chemistry and mathematics. He did two years of national service training as Telecommunication Mechanic with REME and emerged with the rank of Craftsman of the highest class attainable by a National Seviceperson. To pursue his long-standing interest in geology he went to Imperial College to read Mining Geology, and graduated in 1954, winning the Cullis Best Student Award in the process.

He stayed on at Imperial to do a PhD in Applied Geochemistry, a subject in which he was a real enthusiast and in which he had a high international reputation. In 1957 he joined the Rhodesian Selection Trust as a geologist-geochemist for three years, with his first wife Cynthia as an assistant. He set up laboratories for the new exploration section of the company at its bases in Salisbury and Francistown as well as field laboratories near their field operations. He was involved in gold exploration, and masterminded their geochemical exploration programmes for copper and other base metals. He did research on the geochemical dispersion of arsenic and antimony in relation to gold exploration and on prospecting for chromite in the Great Dyke. He returned in 1961 to the flourishing Imperial College Geochemistry group as a DSIR Fellow and also taught and supervised graduates on exploration projects in Australia, the Far East, and Ireland. He did pioneering work on the application of gaseous dispersion in prospecting, and developed and patented a widely used mercury vapour meter able to detect 10<sup>-10</sup> gm per litre of air.

At Leicester he extended his research into the methodology and the interpretation of geochemical data in the exploration for base metals in Greece, Turkey, many parts of the UK, and for bauxites in Guyana. He developed special interests in the errors inherent in geochemical data from a variety of environments and in applying new

statistical methods like Cluster Analysis to aid their interpretation. His memory was phenomenal and his wide knowledge of mineral deposits world wide was a great assett in teaching and in discussions at scientific meetings. He was invited to compile the Annual Review of Exploration for the Mining Journal which he did throughout his time at Leicester. He served for many years on the Editorial Boards of the Journal of Applied Geochemistry and the Applied Earth Science Section of the Institution of Mining and Metallurgy. He became well-known in the mining industry and his advice was sought by many international mining companies and organisations including the World Bank.

Cliff retained a particular interest in the mineral deposits of Western Australia - a part of the world which he liked and where he was well known. In 1982 was delighted to receive an offer to Head the Department of Mining Geology of the Western Australia School of Mines, at Kalgoorlie. He went with his second wife Carmel and stayed until his retirement, after which they returned to reside in the Isle of Wight.

Cliff's sense of fun was greatly missed when he left Leicester. His classes were usually enlivened by amusing stories of his experiences. He loved playing games and organising parties. He was the driving force behind the annual Bennett Balls and Christmas parties, usually with a Jazz Band and a cabaret in which he had a leading role. His performance singing falsetto, and in costume the role of Zerlina, in the seduction scene from Mozart's Don Giovanni, is still talked about. He had a versatile singing voice and was often heard leading his students singing rugby songs in pubs and organising staff-student darts matches after field trips. The team spirit he generated between the various categories of staff and the students contributed in no small way to the success and happy atmosphere of the department.

Cliff is survived by his wife Carmel, and his children Howard and Kate by his first wife Cynthia.

Professor Aftab Khan and Ray Lett