



It is unusual for this column to be devoted to a particular person. Then again, life is full of exceptions, and the person this column pays tribute to is an exceptional person, a miner who was recently awarded the highest honour a South African miner has ever received.

He was born in 1919 in Bothaville in the Free State and matriculated at the age of 15 from Monument High School in Krugersdorp. When he reached 19, the age when many people finish high school, he already had a Wits bachelor's degree in mining engineering under his belt. Unlike what one would expect from a particularly bright young person, he did not join academia but instead turned to industry, Anglo Transvaal, to do the hard yards.

After five years of gaining a wide range of experience as a young postgraduate in the mining industry, he joined the Government Mining Engineer's Department (now the DMR) in what would today be called the Mineral Policy and Promotion Division for eight years.

While there, he designed the uranium pricing formula during contract negotiations with the British and American authorities. This resulted in the very profitable South African uranium industry from the 1950s onwards. He was then barely 30 years old.

During his time with the Government he was also involved in granting mining leases for gold mines. He was concerned about the fact that deep gold mines were established on the basis of very few boreholes without any manner of scientific analysis of the scant data. The risks to profitability were enormous, but there was no real alternative.

He then started applying statistics to the data, taking the early work of Herbert Sichel (also a South African) further, and eventually developed a logical, scientifically-based procedure for evaluating scarce borehole data. This was applied not only to new mines but also ore reserve calculations for existing ones. For this, he was awarded a Master's degree in mining engineering from Wits.

His papers on the subject were translated into French, and this stimulated French thinking on the subject, eventually resulting in the creation of the famous research centre for ore evaluation in Fontainebleau, Le Centre de Geostatistique de l'École des Mines de Paris.

After his eight years with the Government he returned to industry, back to Anglovaal, as Chief Financial Engineer. There he stayed until his retirement in 1981.

But that was not the end of his contribution. After retirement, at the age of 62, he turned to academia at Wits as Professor of Mineral Economics, training the next generation of engineers in specialist topics.

He was awarded a D.Sc. (Engineering) degree by Wits and has received four honorary doctorates, from Pretoria, Unisa, Moscow State Mining University, and Wits. He has received several awards from renowned institutes like the SAIMM, the American SME, the International Association for Mathematical Geology, Die Suid Afrikaanse Akademie vir Wetenskap en Kuns, the International APCOM Council, the University of Antofagasta in Chile, and from South African President (Order for Meritorious Service, Class 1, Gold.)

On Friday 27 April 2012, Danie Krige, now aged 92, was again honoured by the South African President, with the award of the Order of the Baobab (Silver), for exceptional and distinguished contributions in business and the economy, science, medicine, and technological innovation and community service. The only other mining person who has received the award was Cyril Ramaphosa, for his contribution during the democratic transformation negotiations.

And best of all, as always supported by his wife Ansie, Danie is still with us.

One cannot help but wonder what would have happened had he been born later, had he now been sitting in a classroom somewhere, listening to a lecture, wondering how to improve things...

One cannot help but wonder where, in which classroom or underground at which mine, the next Danie Krige is right now thinking about things...



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