

ing to the point where virtually no real cost reductions are achieved. At that point, the operation has reached maturity, and the only way costs will be reduced significantly is by radical changes in the technological or managerial approach.

References

- A1. THE BOSTON CONSULTING GROUP. *Perspectives on experience*. London, 1972.
- A2. HEDLEY, B. A fundamental approach to strategy development. *Long range planning*. Dec. 1976. pp. 2-11.
- A3. ABELL, D.F., and HAMMOND, J.S. *Strategic market planning*. Englewood Cliffs (USA), Prentice-Hall, 1979. pp. 107-109.
- A4. ROBINSON, C.G. Experience curves as a planning tool. *S. Afr. J. Bus. Mgmt*, vol. 13, no. 3. 1982. pp. 101-112.

Introducing new Council members . . .

Mr K.C. Owen started his mining career as a learner official after matriculating at the Parktown Boys' High School, Johannesburg in 1967.

After completing his National Service, he studied at the University of the Witwatersrand, and was awarded the B.Sc. Mining Engineering degree in 1973. He then joined De Beers Consolidated Mines Ltd and, after a year in the Orange Free State, where he did some mining and shift bossing, he was posted to the Premier Diamond Mine for five years. This included a short spell of duty at Letseng in Lesotho.

As a Section Manager, he took a year off in 1980 to gain his M.Sc. degree at the Royal School of Mines, London. On his return to South Africa, he served at the Consolidated Diamond Mines in Namibia, where he was involved in attempts to extend mining seaward, and in early feasibility studies, which culminated in the recent opening of the Auchas and Elizabeth Bay production facilities. In 1988, having been promoted to Consulting Mining Engineer at De Beers, he settled in Johannesburg.

Mr Owen is married and has three children—two teenage sons and a young daughter. He has taken part in two Comrades' Marathons and the Duzi Canoe Marathon.



Mr B.R. Broekman was educated at Dale College in Kingwilliamstown and the University of the Witwatersrand. He holds the degrees of B.Sc. Eng. (Chemical) and M.B.A. (*cum laude*), both from the University of the Witwatersrand.

He started work as a Plant Metallurgist in 1979 at Hartebeestfontein Gold Mine, and then spent the next seven years working on various Anglovaal Group mines, including a spell at Head Office.

In 1986, he was appointed Assistant Consulting Metallurgist at Anglovaal, and was seconded in the following year to Prieska Copper Mines as Concentrator Manager. He



returned to Anglovaal in 1988, and was promoted to Senior Consulting Metallurgist in January 1991, a position that he still holds.

He is a registered Professional Engineer and a Fellow or Member of several professional bodies.

Mr P.J. Knottenbelt, who was born on 25th August, 1946 in Fort Beaufort in the Cape, was brought up in Zimbabwe. He was one of seven children.

He started his mining career as a Learner Mine Official in Zimbabwe in 1964, and obtained the Diploma in Mining in 1966. Later, in England, he attended the Camborne School of Mines, of which he was appointed an Associate in 1969.

In 1970, he returned to South Africa, where he underwent the graduate training programme of the Anglo American Corporation at Western Deep Levels Gold Mine. Four years later he was transferred to the Free State gold mines, and served in various management positions in planning and production.



He was transferred to the coal mines as Senior Technical Assistant in 1977, and was later seconded to the Amcoal/Trans-Natal satellite campus of the Technikon Witwatersrand.

In 1988, he was seconded again, through the Chamber of Mines of South Africa, to the Technikon Witwatersrand as Departmental Chairman in the Mining Department, a position he still occupies.

Mr Knottenbelt is married, and he and his wife, Lucy, have four children—two boys, both of whom are at the University of the Witwatersrand, and two girls, who are still in junior school.

His hobbies include hiking and table tennis, but he finds little time to pursue these interests.

Mr P.R. Janisch obtained his B.Sc and B.Sc. (Survey) degrees at the Natal University.

From 1964 to 1970, he was a Research Officer in the Chamber of Mines, working in particular on advanced methods of mine surveying.

Mr Janisch joined Gold Fields of South Africa in 1970, and was appointed Group Surveyor in 1971. This was followed by various managerial appointments. He is

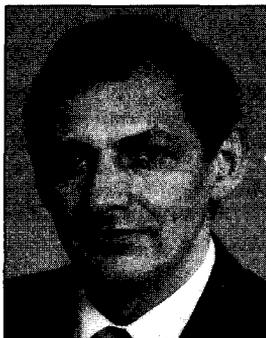
currently General Manager, New Business.

He has a particular interest in scientific publications, and will be drawing on that interest in contributing to the Editorial Committee of The South African Institute of Mining and Metallurgy.

Mr B.R. Fleetwood matriculated at the Belfast High School in 1960, after spending his early years in Springs, eastern Transvaal, where he was born on 10th December, 1942.

He started in the mining industry in January 1961 as a Learner Official with Anglovaal, and completed three years' training and technical training before being appointed as a Shift Boss at Hartebeestfontein Gold Mine.

By 1968 he had obtained his Mine Overseers' Certificate at Hartebeestfontein Gold Mine. After spending a year at Anglovaal Head Office, he moved to the Loraine Gold Mine for a five-year spell. He returned to the Hartebeestfontein Gold Mine as Assistant Manager in 1979. In 1981 he joined Genmin at Buffelsfontein Gold



Mine as Productivity Manager, but returned the following year to Loraine Gold Mine as Mine Manager. Three years later he was appointed Mine Manager of the Hartebeestfontein Gold Mine.

In January 1990 he joined JCI as General Manager Designate to the South Deep Project and, in April 1991, was appointed General Manager of Randfontein Estates Gold Mining Company Limited.

Mr Fleetwood has been a member of The South African Institute of Mining and Metallurgy (SAIMM) for many years, and is a Council Member of the Association of Mine Managers of South Africa (AMMSA), of which Association he was recently elected Vice President. He also serves as the observer for AMMSA on the SAIMM Council.

He has played provincial rugby (under 20) and provincial cricket, and currently keeps fit by jogging and playing squash. He enjoys a game of golf whenever time permits.

He and his wife Dawn have five children—three sons

