

Tuks Mining-50

Half a century is a long time in anybody's language, except if you have been associated for all but four of the fifty years with an institution like the Department of Mining Engineering of the University of Pretoria. However, it seems like just the other day when the new Department was born at Tuks. It is from this perspective that I am privileged to have been asked to write a few introductory words to the 'Tuks Mining-50' edition of the *SAIMM Journal*.

My earliest and lasting memory of the Tuks Department of Mining Engineering dates back to 1965 when, as a wide-eyed, totally overwhelmed first-year student, I met Prof. Jacobus de Villiers Lambrechts, the first Head of the Department and a man who touched and enriched the lives of many mining people in South Africa and abroad. Prof. Lampies, as he was affectionately known among students, was a giant in his field and an appropriate man to lay the foundations of a department that would contribute so handsomely to the wellbeing not only of the mining industry but of South Africa in general.

Prof. Lambrechts was brought in from industry, where he was group ventilation engineer for Anglo American Corporation at the time, to start a mining department at the University of Pretoria to accommodate the growing importance of the Afrikaans community in the mining industry. He was a man of great intellect and integrity, with a wealth of practical experience and the vision to start such a department. At the same time he was a humble person with a demeanour that made him a friend of students, colleagues, and industry leaders alike. From small beginnings in the early 'sixties with a new department with student and graduate numbers in single figures to the formidable department with international standing it is today, his legacy is there for all to see in the quality of the many graduates who have made their mark in South Africa and abroad in the mining industry, as well as many of its support industries. Proof once again that institutions, like structures, built on a solid foundation tend to last for a very long time.

Following the retirement of Prof Lambrechts, his successors all contributed through their individual skills and efforts to the further growth, survival, and ultimate prosperity of the Department of Mining Engineering, namely Profs Frikkie Leiding, Alf Brown, André Fourie, Nielen van der Merwe, and

the current incumbent, Ronny Webber-Youngman.

It was not always plain sailing for the Department of Mining Engineering, as recessionary periods and political turmoil played havoc with student numbers, with 1976 seeing only three students graduating from the Department.

Attracting staff was also difficult, and remains so to this day, in a well-paying industry with many opportunities for mining engineers across the globe. Furthermore, the Department from time to time had to contend with well-intended, albeit fundamentally misguided, efforts to close it down with the intention of creating a single mining school in South Africa. Fortunately, sanity prevailed and the Department survived all of these headwinds, and its current strength and hugely positive contribution to the mining industry are a tribute to the vision and hard work of many members of staff over the years and to the solid foundation that was laid in the early years. What was also very helpful was the academic and moral support the Department had from the broader Faculty of Engineering of the University of Pretoria, the largest and arguably the best engineering faculty in the country.

Many industry leaders and the Chamber of Mines played an important role in supporting the survival and growth of the Department over the years, as they did with other departments and at other universities. To this day the financial support of the industry via the Minerals Education Trust Fund (METF) and the advice of senior industry staff serving on the Advisory Board of the Department play a crucial role in ensuring the continued efficacy of the Department and that it remains relevant to the demands of our time.

The transformation of South Africa in the early 'nineties and the first fully democratic election in 1994 stimulated huge transformation at all our tertiary educational institutions, including the



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University of Pretoria and its component parts such as the Department of Mining Engineering. It was heart-warming and encouraging to see the positive steps that were taken to make, and keep, mining education at Tuks relevant in these changing times. In my view the major visionary step came in the early 'nineties when the Faculty of Engineering, in line with broader university policy, decided to allow English as an alternative means of tuition in several departments, including mining. This was a fundamental step, which enabled black students who, more often than not are more accomplished in English than Afrikaans, to register for mining education at the University of Pretoria. Interestingly, the policy shift by the University as a whole allowed it to move from being perceived as the 'last bastion of white Afrikaner education' to a position where today it is the residential university with the largest number of black students in the country. In line with this the transformation progress of the Department of Mining Engineering has been nothing short of spectacular: from no black students in 1999 and a humble start with 5 black students out of a total of 80 students in 2000, the number has grown to 151 black students out of 220 in 2010. This is a tribute to Prof. Webber-Youngman and his staff for their commitment, dedication, and hard work to bring about meaningful change to the benefit of the Department, the University, and the country.

I will be remiss if I do not touch on two other areas of meaningful change, or progress for that matter, in recent years in the Department, namely gender transformation of the student body in mining engineering and the significant growth in postgraduate students.

From a zero intake of female students in 1999 this number has grown to the point where in 2010 the intake of female students into the Department exceeded 30% of the total intake of new students – true progress indeed in a male-dominated industry.

As regards postgraduate studies, no department can flourish without a good measure of research work and postgraduate studies to underpin, support, and enhance the quality of academic teaching at the undergraduate level. Due to the attractiveness of employment in industry after graduation, coupled with the dire shortage of qualified mining engineers in industry, it has always been difficult to persuade both students and companies to actively support

postgraduate studies in meaningful numbers. It is therefore pleasing to note the strong upward trend in recent years from an average of around 25 postgraduate students per annum for the past decade or more to a record number of 45 students in 2010, including 5 doctoral and 9 master's candidates.

A last and very pleasing development I wish to highlight is the strong teaching support the Department currently enjoys from the mining industry. Over the past few years the Department has developed a *modus operandi* whereby several members from industry participate, with the support of their employers, on a voluntary basis as active part-time lecturers in the Department. Industry has also seconded some middle-management, experienced employees to the Department on a full-time basis to complete their postgraduate studies while at the same time assisting the Department with some of its teaching and research commitments. These initiatives have played a major role in alleviating the excessive burden on full-time staff and have brought additional value to the curricula via the quality and currency of their inputs. For this initiative Prof. Webber-Youngman should get full credit for his dogged and unrelenting efforts to bring the university authorities, industry, and students to the party in a workable model. I see it as a welcome and innovative development to enhance the quality of teaching and to alleviate the chronic shortage of staff always facing the University, particularly in mining engineering.

The Faculty of Engineering, Built Environment and Technology of the University of Pretoria is currently in the midst of a R420 million build programme aimed at doubling the number of engineering students in the Faculty by 2014. In line with this expansion I believe the Department of Mining Engineering will play its part to substantially increase the number of mining engineering graduates our country so desperately needs. At the half-century mark of the Department's history these are certainly exciting developments, and it behoves all of us to say to Tuks Mining: Congratulations on the success of the past 50 years and best wishes for the next 50 years – may the Department go from strength to strength! ♦

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