

“CO-OPERATIVE EDUCATION”

Besides believing in providing education that would optimally prepare students for the world of work, John Orr also laid a foundation of close co-operation between the Witwatersrand Technical College and the industries where students would find employment. According to Jos Lurie, a historian of TWR, the Witwatersrand Technical College's philosophy and that of its School of Mines from the outset was that:

...the function of the School is simply to cater for the training needs of the mining industry. While 'co-operative education' is supposedly a recently conceived concept in South Africa, in fact, this was practised in a fairly advanced way from the time of the establishment of the School and furthermore, the industry always played a part in determining the destiny of the School.⁷

By 1925, there was a severe shortage of trained white men in the surveying and sampling branches of the gold mining industry in the Witwatersrand. At the time, apartheid job reservation legislation restricted black men to mostly manual, unskilled labour. At the local universities, degree courses were sparsely attended and consequently not nearly enough men were trained to perform skilled work on the mines.

In order to fulfil the needs of the industry, the Witwatersrand Technical College formulated training courses that complied with government requirements and provided courses located at trainees' places of work, which

ran concurrently with practical training. Mining companies therefore allowed their learner officials who enrolled for these courses one afternoon off per week to attend classes, while students had to attend courses one evening per week. Employers also paid students' fees if they attended 75% of lectures and showed satisfactory progress. To ease the burden, the Witwatersrand Technical College also ruled that students who were earning their own living and received £15 or less per month would be admitted to the classes for half the fees, i.e. £1 and ten shillings per subject or £3 per course for the whole year.

These courses were intended to provide the groundwork for those miners who wanted to obtain a Mine Overseer's, Mine Manager's or Mine Surveyor's Certificate of Competency, as well as a National Technical Certificate in a specific trade. It was envisaged that these courses would help those who could not afford university courses to further their education and continue with their formal studies.

Classes were held on the mines themselves or at other venues within reach of students and lecturers at the Springs, Modder B and State Mines, the Van Ryn Deep Recreation Hall, the Benoni Intermediate School, the Government Miners' Training School, the Cinderella Mines offices, the Boksburg Manual Training Centre in Germiston, the Robinson Mine in Johannesburg and the Monument High School in Krugersdorp. The Witwatersrand Technical College recruited a host of part-time lecturers, usually qualified miners and other suitably skilled employees from the mining staff, and officials from the Government Mining Engineer's Office. Part-time lecturer numbers grew steadily as enrolments in mining and associated classes increased dramatically. Student numbers rose from 30 in 1926 to 400 in 1929. Mining had 200 students, Surveying had 160 and Assaying had 40. By 1930, the Witwatersrand Technical College's Mining Department had a total of 454 students, two full-time lecturers and 20 part-time lecturers. This system continued until the 1980s, when the courses were still offered at the six remaining centres.

In 1937, Practical Surveying and Practical Geology courses were introduced. The first full-time courses in Mining were also offered at the Witwatersrand Technical College's Eloff Street headquarters that year. These courses were open to students with a Std 10 qualification (now Grade 12) and who were in good health – a precaution required because of hazardous working conditions on the mines. The courses included Practical Welding and Bricklaying. Underground practical sessions were conducted at the Government Gold Mining Areas Mine and the Geldenhuys Deep Mine, where candles were still used for underground illumination. Owing to staff shortages, the course was discontinued after a few years and re-instated in the 1960s. However, during the 1950s more than 7 000 students had registered part-time and attended classes at 14 centres in the Witwatersrand and at 13 branches of the College. A core of three full-time and 50 part-time lecturers ran classes and the mines supplied the required facilities, such as assay laboratories. This system continued during the following decades at more formalised Learner Officials Training Centres situated in the mining areas, where mining groups provided facilities for the Witwatersrand Technical College teaching staff and for the practical training component. By the mid-1960s, Learner Official Training Centres were still in operation at Maraisburg, Venterspost, West Rand Consolidated, Stilfontein, Randfontein, Hartebeestfontein, Welkom, East Geduld and Blinkpan.



RECORD OF SERVICE FOR EMPLOYEES ON MINES.

Name: BERTIE GRAY MORTCROFT EDWARDS

Year of Birth: 1892 Where Born: SOUTH AFRICA.

Last Occupation: _____

Signature of Holder: _____

No. of Certificate (in case of Engine Driver): _____ Date of Issue: _____

No. of Blasting Certificate (in case of Miner): 1725A Date of Issue: 15. 6. 15.

Mines' Physical Bureau Serial No. 22137

FIRST Sheet of Record.†

MINE MANAGERS CERT. NO. 504
MINE OVERSEER CERT. NO. 1132

Engage-ment No. (Type)	MINE (Shop)	Occupation (Type) (No. of Shifts in 24 hours against rock)	Date Entered Service (Type)	Date Left Service (Type)	Total Underground Shifts Worked (No. Worked and Planned)	Checked by (Initials in Red Ink)	Signature of Employer
	BAKERSFONTEIN ESTATES S.A. CO., W.L.T.P.	LEARNER MACHINE STOPPER	28. 3. 11	4. 7. 12			
00.		MACHINE STOPPING	6. 1. 14	22. 1. 14.			
00.		MACHINE STOPPER	20. 5. 17	4. 9. 18.	TWO HUNDRED & THIRTEEN (213)		
00.		MACHINE DEVELOPER	24. 9. 23	26. 1. 24.	ONE HUNDRED & THIRTY-SEVEN (137)		
00.		MACHINE STOPPER	9. 5. 23	TRANSFER	SEVENTY SEVEN (77)		
00.		MACHINE DEVELOPER	14. 6. 23	DO.	THREE HUNDRED AND FIFTEEN (315)		
00.		SHIFT BOSS	15. 9. 24	DO.			
00.		MINE OVERSEER	23. 4. 28	DO.			
00.		ACTG. MANAGER	1. 7. 32	DO.			
00.		MINE OVERSEER	27. 9. 32	16. 9. 33	TWO THOUSAND FIVE HUNDRED & TWENTY ONE (2521) RESIGNED		
	Great Scot Mining Co. (Pty.) Ltd.	Manager	7. 3. 34.	20. 9. 49			
	STAR DIAMONDS (PROPRIETARY) LIMITED	Manager	21. 9. 49	21. 1. 53			

† This Record to be retained by Employer, and returned only on termination of employment.

WARNING—Falsification of Entries on this Record may be met by Refusal of Employment and possible criminal prosecution.

Bertie Edwards' record of service on the Witwatersrand mines offers a rare insight into a mining career. Born in 1892 in South Africa, he became a learner machine stoper in 1911, progressed to machine stoper in 1923, shift boss in 1924 and mine overseer in 1928. He became mine manager in 1938 at the Great Scot Mining Company and in 1949 became manager at Star Diamonds (Prop.) Ltd., a position he held until 1954. In total he spent 42 years on the mines, and between 1911 and 1933 completed 2 521 underground shifts.

