tive deformation, and the 'unreplaced' strike equivalents are the same composition as the enclosing felsic gneiss, therefore suggestive of a lack of chemical control for any replacement process. In some cases, the chemistry of tourmaline can be used to ascertain its origin and it is hoped that the B isotope studies I am currently pursuing do not provide information as equivocal as tourmaline chemistry.

References

Plimer, I.R.: Exhalative Sn and W deposits associated with mafic volcanism as precursors to Sn and W deposits associated with granites. *Mineral. Deposita* 15:275–289 (1980)

Plimer, I.R.: Fundamental parameters for the formation of granite-related tin deposits. *Geol. Rundschau* 76:23–40 (1987a)

Plimer, I.R.: Remobilization in high grade environments. Marshall, B., Gilligan, L.B. (eds.) *Ore Geology Reviews: Mechanical and Chemical Mobilisation of Metalliferous Mineralization*. pp. 231–246. Amsterdam, Elsevier (1987b)

Plimer, I.R.: The association of tourmalinite with stratiform scheelite deposits. *Mineral. Deposita* 22:282–291 (1987c)

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Book review

N. de Kun: Mineral Economics of Africa. Amsterdam: Elsevier 1987. 345 pp., ISBN 0-44442-795-3, US \$ 100.00

Mineral Economics of Africa appeared as Volume 22 in the well-known Elsevier series *Developments in Economic Geology* and, in a broad sense, forms an up-date of de Kun's excellent and much quoted voluminous compendium *The Mineral Resources of Africa* published in 1964. As a result of decolonization, the political and economic scene of Africa has changed considerably since de Kun collected data for his first compendium. These changes also left their mark on the mineral industry, which in many regions had to weather almost insurmountable crises or even suffered total devastation.

A new and comprehensive collection of production figures and reserve and resources data of commodities found in Africa therefore became a necessity and resulted in the reviewed publication which was eagerly awaited by many students of African politics, economics and geology. Despite its title, the publication not only deals with metal and mineral deposits but also contains numerous valuable facts on groundwater and energy resources, including oil, coal and peat deposits and locations with hydro-electric and geothermal potential.

The book is divided into two parts. In the first the various problems which caused the present, often unsatisfactory, state of the commodity industry in many African countries are discussed. An interesting short chapter, in the form of a personal statement, cites a list of most urgent actions needed to improve the situation. Other chapters in this first part are entitled "The African Share of World Resources", "Dependence on Africa", "Distribution of Resources within Africa" and "History and Development of the Industry". These chapters are supplemented by a number of overview maps and statistical tables on commodity production and resources.

In the second and more detailed part of the book the various countries of Africa have been grouped according to their geographic location (i.e. The Maghreb, Northeast Africa, The Sahel, West Africa, Central Africa, East Africa, Southern Africa, and Islands and the Sea), and for each of the 45 countries a detailed survey of its natural resources is given. Generally, the information consists of production and reserve tables, accounts of the most important metal and mineral deposits, energy, fertilizer, water and soil resources as well as of the corporate control of the mineral industry. Of special interest is the introductory paragraph to each of the discussed countries in which the author gives a general outline of the country's mineral policy and of the goals determining the development and management of its natural resources.

Because of its dominating influence as a commodity producer, more than 50% of Africa's mineral production originates from the

Republic of South Africa, this country is dealt with in a separate chapter containing detailed descriptions of a large number of mineral and metal deposits as well as of many industrial processing plants. Of particular interest are the chapters describing the mining financing houses and the influence of the State on the mining industry.

Because of the vast amount of information contained in the reviewed book, the reader is immediately confronted with one of the major but unavoidable drawbacks of such a compendium: the data given is out of date the moment the manuscript goes to press. It means that the figures and tables given must always be treated with a certain amount of caution.

When studying the book one inevitably becomes entangled with the large number of uncommon abbreviations used by the author, e.g. Spac (for superphosphoric acid), p (for planned) or reinj (for reinjected gas). Such abbreviations do not fulfil their purpose but, rather, confuse the reader. The same applies also to the long list of unusual symbols used in the commodity maps. It remains unclear why the author introduced these new symbols when, for most commodities, internationally accepted symbols are available. Therefore, it is the maps and figures which clearly are not of the same high standard as the rest of this otherwise very well organized publication. Instead of assisting the reader, the maps are difficult, in many instances almost impossible, to understand. The situation is further aggravated by the almost total lack of geological information on the maps. An excellent example of this criticism is Fig. 61, the map of the Witwatersrand and the southern Bushveld, which, even for somebody fairly familiar with this area, is almost impossible to understand.

The index given at the end of the book, unfortunately, was found to be inadequate with many important index words missing. The author would be well advised to improve the various maps as well as the index if any further edition of the compendium is planned.

Despite its various shortcomings, the book can be highly recommended for libraries of earth science departments, government agencies dealing with development and aid projects, for schools of economics and political science institutes. The book is also a worthwhile tool for commodity consultants and economic geologists working in Africa. Students interested in the distribution of mineral deposits and its influence on the course of historical and political developments in Africa will find the work most inspiring.

As printing has not been typeset, the price of the book (US \$ 100.00) seems a bit high and without doubt this will have an adverse effect on the wide distribution of the publication, particularly where individual prospective buyers are concerned.

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