

## Books

\**United Kingdom mineral statistics 1977*. Home, D., Squirrel, H. C., and Venkatesan, J. (compilers). London, Her Majesty's Stationery Office, 1978. 156 pp. £10,25.

This document, compiled under the direction of R. A. Healing of the Institute of Geological Sciences, is essentially a detailed, numerative review of the role played by minerals in the economy of the United Kingdom.

Mining in the United Kingdom has held its own as a contributor to the national income, comprising some 2,1 per cent in 1967 and 2,5 per cent in 1976. In 1976, mineral production amounted to £3921 million, a not inconsiderable sum.

The exploitation of indigenous minerals may have fuelled the British industrial revolution but it is largely the importation of minerals that keeps it going, and mineral-based imports comprised some 38 per cent of the total import bill in 1976. Surprisingly perhaps, some 30 per cent of the exports over the same period were also mineral-based.

The 'gee-wiz' figures in the importation field pertain, of course, to such commodities as gold bullion (£736 million), diamonds (£1134 million), and natural uranium and its compounds (some £26,3 million in 1976).

Complex modern industries are not fuelled by such exotica alone, and the important part played by South Africa in the supply of more mundane mineral commodities is reflected in the table below.

SOME MINERAL COMMODITIES SUPPLIED BY SOUTH AFRICA TO THE U.K. IN 1976

Commodity	Value (£ × 10 <sup>3</sup> )	Percentage of total
Sillimanite	1077	60
Clays and refractories	432	12
Asbestos	3898	11
Mica	121	8
Vermiculite	1681	99
Tin	1212	4
Manganese	6487	36
Chromium	3474	67
Non-ferrous metal scrap	874	2
Vanadium oxides	1297	49
Ferromanganese	8709	36
Ferchromium	1465	20
Silver bullion	4657	4
Platinum-group metals	11175	56
Copper (unrefined)	2923	8
Copper (refined)	5149	2

The United Kingdom remains a producer of non-ferrous metals and, in 1976, produced ores containing 552 tons of copper, 7053 tons of lead, 4015 tons of tin, and 4786 tons of zinc. Coal production has continued to decline, and a graph of production over the period 1875 to 1975 rather resembles the bell-shaped curve sometimes used to describe past, present, and future production from a national resource. Thus, the 1976 production level of 123,8 million tons is little different from the 136,2 million tons achieved in 1876, and a significant drop from the peak production of 280,4 million tons achieved in 1923.

In 1976 coal provided some 37 per cent of the United Kingdom's total requirements of energy. This required

the combustion of some 122,1 million tons. Some 2,8 million tons were imported at a cost of £82,6 million.

British iron and steel is now increasingly produced from imported iron ores. In 1967 some 12,8 million tons of iron ore were produced locally and a further 15,4 million tons imported. In 1976 the amounts were 5,2 million and 18,6 million tons respectively. Of the suppliers of iron ore to the United Kingdom, Brazil had shown the greatest market penetration by increasing her share from 2,4 million tons in 1973 to 3,2 million tons in 1976. Over the same period, Canada's share had declined from 5,5 million to 3,8 million tons, Sweden's share from 4,8 million to 3,2 million tons, and the other countries' category from 1,6 million to 0,8 million tons.

A good buy at £10,25, this book deserves more imitators.

H.A.S.

\**Copper mining and management*. Navin, Thomas R. University of Arizona Press, Box 3398, Tucson, Arizona 85722. ISBN 0-8165-0586-1. 426 pp. Illustrated. Price \$9,75 and \$16,50 clothbound. Described, in layman's language, are the competitive strategies of the six largest United States copper companies, and the engineering and business technology of the copper industry. Also included are short histories of 25 of the world's largest copper companies.

\**Metal statistics 1967-1977*. 65th edition. 1978. Metallgesellschaft AG, Reuterweg 14, D 6000 Frankfurt am Main, Fed. Rep. of Germany. 382 pp. Illustrated. Price not quoted. Copyright reserved. This publication may only be quoted with acknowledgement of source. Contents cover production and consumption of aluminium, lead, copper, zinc, tin, antimony, cadmium, magnesium, nickel, mercury, and silver. The production of metals since 1900, detailed statistics by countries, price and currency exchange tables, and price graphics for aluminium, copper, lead, zinc and tin are included.

\**Coal mine ground control*. Peng, Syd S. John Wiley & Sons. ISBN 0-471-04121-1. 450 pp. Illustrated. £19,75 clothbound. Associate Professor and Chairman of the Mining Engineering Programme in the College of Mineral and Energy Resources at West Virginia University has written a comprehensive textbook on roof control of underground coal-mine openings. The practical applications of various techniques are stressed and described.

\**Uranium supply and demand: Proceedings International Symposium, London, July 1978*. Spriggs, Michael J. and Casteel, Kyran D. (editors). Mining Journal Books. ISBN 0 900 1 1 7 15 X. i-xiv and 370 pp. Illustrated. £15 or \$30 (surface mail) £18 or \$36 (air mail), clothbound. Contents of this volume cover the uranium market, technical factors influencing supply, the nuclear controversy, non-proliferation and fuel assurance, a review of the symposium and a list of delegates.

\**Gemorfologiese woordelys/Geomorphological vocabulary*. Van der Merwe, J. S., en De Villiers, A. B. (samestellers). McGraw-Hill, Johannesburg. R3,50. ISBN 0 07 091337 4. 122 pp.