fitted to this task, being a qualified mineralogist and gemmologist who has taken a doctorate in political science and history. Diamond deposits were first worked in India thousands of years ago and indeed India was the only source for diamonds until the eighteenth century, when Brazilian, and later, African deposits were found. The major part of the book is devoted to a detailed critical history of the production and trade in these countries, leading up to the twentieth-century concentration of the industries in monopolies and cartels. The development of the various finishing techniques is also described. But the most fascinating aspect of this book is the author's painstaking efforts to unravel the consolidated balance-sheets of diamond-producing syndicates to obtain the actual cost as opposed to relying on official trade figures. Without exception the fundamental production and market political conceptions of De Beers are shown to be based on Rhodes's dictum that the dominating features should be the continual adaptation of the rough-diamond supply to the fluctuating demand. The average price per carat of rough diamonds appears to stay fairly steady at around 2·8 times the cost of production. The impact of synthetic diamonds is discussed briefly in a postscript: in 1965 the price per carat of synthetic diamonds and that per carat of natural diamonds of mesh size 30–400 were approximately the same at around $2.70. The possibility of synthetic gem diamonds should offer no threat to the diamond trade but it is essential that those in the trade become more familiar than they have been in the past with the expertise and the instruments necessary for their distribution. The book has name and geographical index but sadly lacks a subject index. References are given in the text simply by number and it is infuriating to find that, for example, references 161, 162, and 163 all read 'J. B. Tavernier, l.c., p. 141' which one eventually finds refers back to reference 3, three pages earlier. These points notwithstanding this is a book which should be read and digested by all interested in diamonds.

R. A. HOWIE

HALLIMOND (A. F.). [1890–1968]. *The Polarizing Microscope*, 3rd ed. York (Vickers Instruments), 1970. xii+302 pp., 162 figs., 4 pls. (3 in colour). Price £4. 4*s*.

Although the earlier editions [M.A. **10**–352, **12**–233] contained accounts of the construction and use of a new series of microscopes, the present account relating to an extended series may be applied to polarizing microscopes in general. The subject matter has been almost doubled in length: a useful summary (27 pp.) of the customary crystal optics is given in the last chapter, although it might seem more appropriate to place this nearer the beginning of the book before chapters dealing with such topics as the use of the interference figure and the determination of path difference and of extinction. The use of reflected light is considered in detail, with chapters on the theory for reflected light, the use of reflected polarized light in mineralogy, the theory of measurement of rotation and path difference (in both reflected and transmitted light), and on microphotometry and the determination of reflectance. Microhardness is also dealt with, both from the point of view of its measurement by indentation and of the problems in polishing: as might be expected from this author, the chapter on mounting and polishing specimens is particularly thorough, with detailed descriptions of

techniques and materials. As before, the chapter on the universal stage (40 pp.) concentrates on the three-axis stage, but details of a method for orthoscopic adjustment with the Federov stage [Min. Mag. **32**–245] are included. The book includes appendices with notes on point counters, data for representative ore minerals in reflected light, tables of sine, sine^2, and sine^4, and colour plates showing typical interference colours and optic axial figures. For a work so copiously illustrated the price, although representing a five-fold increase on the previous edition, is still extremely reasonable and this book should be available in all libraries and research laboratories.

R. A. HOWIE

STRAKHOV (N. M.). *Principles of Lithogenesis*, volume 2. New York (Consultants Bureau) and Edinburgh (Oliver and Boyd), 1969. xii+609 pp., 222 figs. Translated from the Russian by J. Paul Fitzsimmons and edited by S. I. Tomkeieff and J. E. Hemingway. Price £10. 10*s*.

Strakhov's three-volume work on the formation of sedimentary rocks is not merely large—volume 2 alone contains over 600 pages—but is written on the grand scale: sentences are rarely interrupted by references, whilst the cover by a single author for the whole subject gives the book a coherence that has become rare in general works. The style is confidently authoritarian, and even if the reader is told on whose work a paragraph is based, only occasionally is a date given, and this does not mean that one will always find the reference in the bibliography. Occasionally one wonders how much is fact and how much is imaginative generalization.

Strakhov is an exponent of the theory that sedimentary facies are controlled by climate and tectonics: the main divisions over the Earth correspond to climatic belts, but within any one climatic belt the variations in the tectonic setting are more important than local variations of climate. Volume 2 covers the formation of sediments in humid climates with much valuable discussion of the geochemistry, more than usual on the stratigraphical distribution, and relatively less emphasis than is currently fashionable in English text-books on the tectonic controls. Volume 3 will be on sediments formed in arid climatic belts, including seas in such regions.

The coverage of western literature is good up to 1962 when the original Russian edition was published, but for many western readers the chief value of this book will be the provision of summaries in English of recent Russian work. This is particularly valuable for subjects such as the work of Botvinkina on the formation of coals, Betekhtin on the Chiaturi manganese ores, Kazakov on phosphate formation, Petelin and Bezrukov on the sediments of the Okhotsk Sea, Bruevich on the Caspian Sea, Strakhov and Knyazeva on authigenic minerals in Lake Baikal and the Black Sea, and a whole range of geologists including Strakhov himself on the sediments of the Black Sea.

In spite of its smooth style, this is a difficult book to read. Much of the translation would seem to be too literal so that the vocabulary includes many words unfamiliar to readers of English, e.g. swale, hydrologic, benthotic (instead of benthic or benthonic), deluvium, proluvium, clarke, oligomict, pelitomorphic. This reviewer does