nating sections. Fig. 2.7 is much less clear than the usual diagrams of the microscope. Fig. 2.20: this mica compensator does not tilt.

Reflected light methods and polishing have been purposely omitted, and there are very few references to artificial products. The book thus retains the petrological trend of the earlier editions and will be chiefly useful to petrologists working with transparent thin sections.

Part II forms an excellent introduction to thin-section petrology. The crisp but small micrographs of the 2nd edition have been replaced by numerous good photographs, with many optical diagrams. Clay minerals are described, with some electron micrographs. References at the end of each chapter include many textbooks and monographs. The somewhat high price reflects the good quality of the production. The inclusion of a general first part follows usual practice, but it may be questioned whether these varied subjects might not now be allotted to separate textbooks.

A. F. H.

Rose (A. J.). *Tables et Abaques.* Paris (Centre National de la Récherche Scientifique), 1957, 141 pp. Price 1500 francs.

Durif-Varambon (A). & Forrat (F.). *Tables numériques de sin θ et de sin$^2\theta$.* Centre National de la Récherche Scientifique, Institut Fourier, Grenoble, France, 1958, 26 pp. Price 250 francs.

Rose's main table (III) lists *d*-values for X-ray powder photographs for Bragg angles, θ, between 0° and 90° at intervals of 0·01°. Values are given for the $K\alpha_1$ wavelengths of the usual radiations (from Cu, Ni, Co, Fe, Cr, and Mo targets). The wavelengths taken (table I) are those of Cauchois and Hulubei, converted to absolute Ångströms; they differ from the usual values by not more than 1 part in 90 000, which is insignificant for most purposes. The tables are thus directly comparable, for example, with those of the National Bureau of Standards (1950, Applied Mathematics Series, 10); random checks show that they agree to the limit above.

A new and valuable feature of this volume is that table III also lists values of $4R\theta$ and $2R\tan\theta$ for each value of θ; $R = 180/2\pi$ or $240/2\pi$ applying to standard American or French cameras of 5·73 cm. or 7·64 cm. diameter respectively. $4R\theta$ represents the distance between powder lines on a cylindrical camera, and can be applied to measurements on a focusing camera; $2R\tan\theta$ gives the corresponding distance measured on a flat-film camera and can be applied to measurements of layer-line repeat distances on rotation photographs taken in either the normal or the Mauguin mode. These quantities can obviously be applied also to cameras of diameter 11·46 cm. or 15·28 cm. diameter by simple proportion; neither quantity gives rounded values at 0·01° intervals of θ, but the intervals are sufficiently short to make interpolation easy.

Both these and the Nat. Bur. Stand. tables list d-values for $K\alpha_1$ wavelengths only, and are hence not strictly applicable to normal powder photographs, for which $K\alpha_m$ wavelengths are required at low Bragg angles. In the present case this is because these tables are intended primarily for users of curved quartz-crystal monochromators (with focusing cameras). They include a useful nomogram relating the radius of curvature of the crystal with its distances from the target-focus and the camera-focus for each of the above wavelengths and for various angles of cut between the crystal surface and the $(10\bar{1}1)$ plane of the quartz crystal.

Table II*a* lists atomic weights and mass absorption coefficients for the elements, while table II*b* gives values of e^{-x} to four decimals in the ranges $x = 0(0{\cdot}01)5{\cdot}50$ and $5{\cdot}50(0{\cdot}10)9{\cdot}90$. The format and legibility of all the tables are excellent.

The tables of Durif-Varambon and Forrat are for users of X-ray powder cameras 'de 240 mm de périmètre' (not 'de diamètre' as stated on the cover). They list θ, $\sin\theta$, and $\sin^2\theta$ for values of $4R\theta$ (see the review above) in the range 20(0·1)240 mm. ($R = 38{\cdot}2$ mm.). Sin θ and $\sin^2\theta$ are given to five decimal places; θ occurs at intervals of $2\frac{1}{4}$ minutes of arc on the above scale. The tables are thus designed for a very narrow public, since this interval of θ is awkward for interpolation by users of other cameras. There is indeed a need for five- (or six-)figure tables of $\sin^2\theta$. It seems a pity that the authors did not adopt the format of Rose's tables, or better that their values of $\sin\theta$ and $\sin^2\theta$ were not incorporated in them. Perhaps this would be possible in a future edition.

R. J. Davis

Borchert (H.). *Ozeane Salzlagerstätten*. Berlin (Gebrüder Borntraeger). 1959, viii+237 pp., 27 text-figs. Price DM. 48.

This book is an excellent successor to Professor Borchert's earlier works on salt deposits. It presents a masterly review of the complex history of marine evaporites, from their initial deposition to their later reconstruction by geothermal metasomatism, leaching by groundwaters, and other processes.

The first part of the book is devoted to depositional factors. A