

MINERALOGICAL SOCIETY (LONDON)

A meeting of the Society was held on Thursday, June 9th, 1955, at 5 P.M., in the apartments of the Geological Society of London, Burlington House, Piccadilly, W.1 (by kind permission).

The following papers were read:

(1) *Okenite and nekoite (a new mineral).*

By J. A. GARD AND H. F. W. TAYLOR

The unit-cell of okenite ($\text{CaO} \cdot 2\text{SiO}_2 \cdot 2\text{H}_2\text{O}$) has been determined for a specimen from Bombay, India, using a combination of *x*-ray, electron-microscope, and electron-diffraction methods. It is triclinic with a 9.84, b 7.20, c 21.33 Å, α 90.0°, β 103.9°, γ 111.5°, elongation b , $Z=9$. These data are compatible with the goniometric results of Böggild (1922) and allow the latter to be interpreted.

A specimen from Crestmore, California, which Eakle (1917) had described as okenite, was also examined. It was found to be a new species, having the same composition as okenite but distinguishable from it by its optical properties, *x*-ray powder data, and unit-cell. The latter is triclinic with a 7.60, b 7.32, c 9.86 Å, α 111°48', β 91°30', γ 103°54', elongation b , $Z=3$. Because of the relation to okenite, the name "nekoite" is suggested.

(2) *X-ray study of raspite (monoclinic PbWO₄)*

By ROSEMARY SHAW AND G. F. CLARINGBULL

The monoclinic form of PbWO_4 , raspite, has been studied by chemical and *x*-ray methods and its relation to stolzite, the tetragonal form of PbWO_4 , investigated. Raspite (Broken Hill, N.S.W.) crystallizes in the space group $P2_1/c$ and has cell dimensions a 5.58, b 5.00, c 13.64 Å, β 107.7°. It has so far been reported from only three localities; and has not yet been prepared synthetically. Natural raspite transforms irreversibly to stolzite at about 400° C.

The Pb and W atoms were located from F_0 -syntheses computed from $h0l$, $h1l$ and $h2l$ reflections but the O atoms could not be detected. Possible positions for the oxygens were found by considering limitations on W—O and O—O bond lengths. These limitations are quite stringent and the proposed oxygen positions are probably near the correct ones. A structure closely related to stolzite has been derived which has reasonable values of bond lengths and angles and which accounts in detail for the observed cleavage and twin laws.

(3) *Cerulite (CuAl₄(AsO₄)₂(OH)₈·4H₂O) from Wheal Gorland, Gwennap, Cornwall*

By ARTHUR RUSSELL AND G. F. CLARINGBULL

Sky blue botryoidal aggregates and spheres, 1–1½ mm. in diameter, occurring on lironite and associated with clinoclase and olivenite or chrysocola are shown to be cerulite. This is the second known occurrence of the mineral.

(4) *The convergent lead ages of the earth's oldest monazites and uraninites (Rhodesia, Manitoba, Madagascar and Klerksdorp, Transvaal).*

By L. H. AHRENS

The lead age distribution

$$\left(\frac{206}{238}, \frac{207}{235}, \frac{208}{232} \text{ and } \frac{207}{206} \right)$$

of three specimens of Rhodesia monazite form a regular pattern. Such an array, produced

evidently by varying lead loss, may be used for a precision estimate of age—the *convergent* age. The convergent age of each Rhodesian monazite is estimated at 2680×10^6 years. The lead age distributions of monazite from Antsirabe, Madagascar, and uraninite from the Huron Claim, south-eastern Manitoba, fit an extension of the Rhodesia age pattern closely ($\pm 10 \times 10^6$ years) and hence their convergent ages are estimated also at 2680×10^6 years; uraninite from Klerksdorp, Transvaal, may have a similar age. The convergent ages of these most primitive specimens are somewhat greater ($50-700 \times 10^6$ years) than previously recommended estimates.

The formation of a well-ordered age array suggests that physical causes, rather than chemical, have controlled lead loss. There is a possibility, however, that other causes—natural fission, for example—could bring about the age array.

The following paper was taken as read:

(1) *Twentieth list of new mineral names*

By L. J. SPENCER

(Titles and abstracts kindly submitted by G. F. Claringbull, General Secretary.)

Dr. Charles P. Berkey, professor emeritus of geology at Columbia University, and one of the nation's foremost geologists in the application of geology to various engineering projects, died on Aug. 23, 1955, after a prolonged illness. He was 88 years old.

The Sixth International Colloquium on Spectroscopy will be held from May 14-19, 1956, at Amsterdam, Holland. As usual the colloquium will cover both emission and absorption spectroscopy, with special stress on their practical applications in analysis. More detailed information may be obtained from the secretary, Mr. F. Freese, Laboratory for Analytical Chemistry, 125 Nieuwe Achtergracht, Amsterdam-C4, Netherlands.

The following are the officers of the Society of Exploration Geophysicists for 1955-1956.
President: R. C. Dunlap, Jr., Dallas, vice-president of Geophysical Service Inc.
Vice-President: Dave P. Carlton, Houston, chief geophysicist of Humble Oil & Refining Co.
Secretary-Treasurer: George A. Grimm, Midland, Texas, district geophysicist for Tide Water Associated Oil Co.
Editor: Norman Ricker, Tulsa, senior research physicist for The Carter Oil Co.

The 1955 annual meeting of the Society for Experimental Stress Analysis will be held on November 16, 17, 18, 1955, at the Hotel Sheraton, Chicago, Illinois. Further information may be obtained by writing to Dr. W. M. Murray, secretary-treasurer, P.O. Box 168, Cambridge 39, Mass.