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NOTES AND NEWS

BASTNAESITE AT CORONA, NEW MEXICO

Information received from R. S. Dean, Assistant Director of the Bureau of Mines, indicates a tentative identification of the mineral bastnaesite, a fluocarbonate of the cerium metals, in the microscopic examination of a sample taken from the Red Cloud fluorite deposit at Corona, New Mexico. The sample was sent to the Rolla, Missouri, laboratory of the Bureau of Mines for ore-dressing tests and the identification was made by Waldemar M. Dressel, Jr., in the course of a routine microscopic examination of the material.

The bastnaesite occurs in small, short prismatic hexagonal crystals with a basal parting. They are yellow to brownish-yellow in color with a waxy to resinous luster. The hardness is 4 and specific gravity 5.018. Optically the material is uniaxial positive with omega slightly below 1.72 and epsilon very close to 1.82.

Qualitative chemical tests showed the presence of the cerium metals. Spectrographic analysis showed strong lines for cerium, praseodymium and lanthanum, with the possibility of neodymium as well.

By microscopic count the composite of the gravity concentrates contained approximately 35% of bastnaesite. On this basis the content of the head sample would be about 2.4%. The tentative identification of this rare mineral will be checked by a quantitative chemical analysis.

The following have been elected officers of the American Society for X-ray and Electron Diffraction: W. H. Zachariasen, department of Physics, University of Chicago, Vice-President for 1944 and President-elect for 1945, and J. D. H. Donnay, Laval University, Quebec, and Hercules Powder Company, Wilmington, Delaware, Secretary-Treasurer for 1944. Dr. L. H. Germer of the Bell Telephone Laboratories at Murray Hill, New Jersey, is president for 1944. The next meeting of the society will be a joint Research Conference with Section C of the American Association for the Advancement of Science next August at Gibson Island, Maryland.

By vote of the Executive Committee of the A.A.A.S., the Association will hold its annual meeting for 1944 in Cleveland, Ohio, during the week of September 11-16.

The Executive Committee passed the following resolution relative to the programs of the meetings:

"It was voted to bring to the attention of the Association and to all of the affiliated societies that in all programs of the September meeting emphasis be placed on the indispensability of science for the future of civilization, both in war and in peace."

The Association extends to all its affiliated and associated societies a cordial invitation to participate in the Cleveland meeting.

Dr. Edward Bennett Mathews, professor emeritus of mineralogy and petrography at Johns Hopkins University, died Feb. 4 at the age of 74 years. Since 1917 he had served as treasurer of the Geological Society of America.

Robert L. Darneal, A.B., San Jose (Calif.) State College, has been appointed Teaching Fellow in Mineralogy at Stanford University.

Professor Benjamin Leroy Miller of the Geology Department of Lehigh University died from a heart attack March 23, 1944, at the age of 69 years.

PROCEEDINGS OF SOCIETIES PHILADELPHIA MINERALOGICAL SOCIETY

The Academy of Natural Sciences of Philadelphia, December 2, 1943

A stated meeting of the Society was held with Dr. W. Hersey Thomas presiding. Sixty-seven persons were present.

Dr. William Parish addressed the Society on "The Role of Crystallography in the Manufacture of Quartz Oscillator Plates." The technique of proper orientation of quartz crystals by optical means and x-rays was described, also the control of the orientation during the manufacture as well as the method of sawing, lapping and finishing the plates to their nominal frequencies. By the newer procedures, the right hand and left hand character and polarity of the quartz are not determined; indeed, "electrical" twinning is so prevalent that such determinations are discouraged. The crystallographic properties of the quartz are used for automatic correct orientation, which at the same time insures maximum utilization of the raw material. The lecture was illustrated with specimens, lantern slides and a sound film prepared by the Reeves Sound Laboratories of N.Y. Quartz mining in Brazil was alluded to, and the methods of inspection for optical and electrical twinning were outlined.

Meeting of Jan. 6, 1944

Dr. W. Hersey Thomas presided, with 42 persons present.

Professor J. D. H. Donnay addressed the society on "The Symmetry of Crystals." He defined symmetry by means of the concepts of singular, polar or homopolar directions and discussed symmetry operations and symmetry elements, using the Hermann-Mauquin notation for symmetry symbols. After recalling the fundamental properties of the stereographic projection, he showed how all the faces of any form can be obtained by the symmetry operations available in the symmetry symbol of the crystal class.

Mr. Fred Oldach reported that the Franklin Graphite Co. had been working the Chester County graphite diggings near Anselma, Pa., and that a production of 350 tons of ore per day had been planned. This ore was expected to average 3 per cent graphite.

Meeting of Feb. 3, 1944

Dr. W. Hersey Thomas presided. Fifty-three members and visitors were present.

Dr. Clifford Frondel of Harvard University addressed the Society on "The Seventh Edition of *Dana's System*." This edition of Dana is to be in three volumes. The first volume which is now in the printer's hands is expected to appear in June.

This volume contains the elements, sulphides, sulpho-salts, oxides, hydrates, and such minerals as the tantalates, columbates and uranates. All data are thoroughly checked and must be of the highest character before they are acceptable. Such properties as variation in chemical composition, habits and twinings of crystals, physical and optical properties are included, together with the types and occurrences of minerals, all of which are adequately described in the new edition. An effort was also made to uncover the origin of the names of minerals, an item which entailed much research work.

J. S. FRANKENFIELD, *Secretary.*