

CERITE FROM MOUNTAIN PASS, SAN BERNARDINO COUNTY,  
CALIFORNIA\*

JEWELL J. GLASS, HOWARD T. EVANS, JR., M. K. CARRON, AND  
HARRY ROSE, JR., *U. S. Geological Survey, Washington, 25, D.C.*

The rare mineral cerite, a silicate of cerium and lanthanum, occurs with bastnaesite in one of the rare-earth-bearing veins of the Mountain Pass district, California. This district is 35 miles east of Baker, California. The deposits of rare-earth minerals are in a mineralized zone in shonkinitic in an area of Precambrian metamorphic rocks. The minerals associated with cerite are: bastnaesite, barite, quartz, chalcedony, calcite, galena, and altered acmite.

Cerite from Mountain Pass is verona brown. The mineral occurs in massive form and in crystals that are pseudo-octahedral and range in size from 2 mm. to 7 mm. The mineral has a resinous luster, a hardness greater than 5, no observable cleavage, and gelatinizes in hot acid. Specific gravity as determined on the Berman microbalance is  $4.78 \pm 0.11$ . The mineral is optically biaxial positive, with a very small optic angle. The indices of refraction are:  $\alpha = 1.806$ ,  $\beta = 1.806$ , and  $\gamma = 1.808$ .

X-ray study of the crystallography of cerite by the Buerger precession method shows that the crystals are monoclinic with the following elements:

Space group:  $I2/n(C_{2h}^6)$  or  $In(C_s^4)$

Cell dimensions:  $a = 17.81 \pm 0.09 \text{ \AA}$ ;  $b = 10.85 \pm 0.06$ ;  $c = 14.10 \pm 0.07$ ;  $\beta = 109^\circ 10' \pm 10'$

Morphological elements:  $a:b:c = 1.641:1:1.300$ ,  $\beta = 109^\circ 10'$ ;  $p_0' = 0.839$ ;  $q_0' = 1.190$ ;  
 $x_0' = 0.348$

Forms:  $a$  (100),  $d$  (011),  $e$  ( $\bar{1}01$ ).

The forms listed above can be identified on the crystals. All forms are about equally developed, giving the crystals a pronounced pseudo-octahedral aspect.

Because of the large size of the unit cell, it is not possible to place any restrictions on the chemical formula. Calculations from the new chemical analysis suggest a possible formula for cerite to be  $Ce_2Ca(SiO_4)_2 \cdot H_2O$ . From optical, x-ray, and chemical evidence, the crystals contain some finely disseminated bastnaesite and possibly other impurities. Therefore, the validity of the proposed formula is inconclusive because of uncertainties due to corrections for these impurities.

A detailed description of cerite from Mountain Pass, California, is in preparation.

\* Publication authorized by the Director, U. S. Geological Survey.

## FIFTH NATIONAL CLAY CONFERENCE

The Fifth National Clay Conference will be held at the University of Illinois, Urbana, Ill., Oct. 8, 9 and 10, 1956. The conference is sponsored annually by the Clay Minerals Committee of the National Academy of Sciences—National Research Council, under the chairmanship of Prof. R. E. Grim of the University of Illinois.

## PEACOCK MEMORIAL PRIZE, 1956

The Walker Mineralogical Club offers The Peacock Memorial Prize of One Hundred Dollars (\$100.00) for the best scientific paper on pure or applied mineralogy (including crystallography, mineralography, petrology, ore genesis, and geochemistry) submitted by any graduate student enrolled in a Canadian university, by a Canadian graduate student enrolled in any university, or by any graduate student on a Canadian subject. The paper will be accepted for competition up to two years after completion of the work even though the author may be no longer enrolled as a graduate student.

Full information on the conditions governing the presentation of this prize may be had by writing: The Secretary, Walker Mineralogical Club, 100 Queens Park, Toronto 5.

All papers for this year's competition must be in the Secretary's hands by October 31, 1956.

The following is a list of the current officers of the *American Crystallographic Association*:

President:	Dr. J. D. H. Donnay, Johns Hopkins University.
Vice-President:	Dr. Elizabeth A. Wood, Bell Telephone Laboratories.
Last Past President:	Dr. W. N. Lipscomb, University of Minnesota.
Treasurer: through 1958	Dr. George A. Jeffrey, University of Pittsburgh.
Secretary: through 1957	Dr. Jurg Waser, Rice Institute.

It is with deep regret that we record the death of Dr. William F. Foshag, head curator of the department of geology at the National Museum, Smithsonian Institution, Washington, D. C. Dr. Foshag died of a heart attack, May 21, 1956, at the age of 62. In 1940 he served as president of the Mineralogical Society of America and in 1953 he was the recipient of the Roebling Medal.

Professor Alexander Köhler of the Technischen Hochschule, Vienna, died Dec. 14, 1955, after a heart attack.

The Fourteenth Annual Pittsburgh Diffraction Conference will be held on Oct. 31, Nov. 1 and 2, 1956, at the Mellon Institute in Pittsburgh, Pennsylvania. This year it is the desire of the Conference Committee to emphasize (1) Small angle scattering, (2) High and low temperature diffraction studies, (3) Structural aspects of solid state physics, (4) Instrumentation and methods, and (5) Neutron diffraction. Titles of papers should be sent to the program chairman, Dr. A. Taylor, Westinghouse Research Laboratories, Beulah Road, Pittsburgh 35, Pa., before Sept. 1, 1956. Abstracts should be submitted by Sept. 20.

## Erratum

An unfortunate misprint occurs on page 536 of the May-June issue; next to last line, "not" should be "now."