QUARTZ FROM IOWA CANYON, NEVADA

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The interesting specimens of quartz described in this paper were sent the writer by Mr. H. G. Clinton, of Manhattan, Nevada. These forms were found in a ledge on the north side of Iowa Canyon, Lander County, about six miles from the mouth. The canyon is located about 30 miles northeast of Austin. The ledge which is about four feet thick stands almost vertically and strikes north-south. The country rock is chiefly diorite.

Radiating Quartz. The nodular forms of radiating quartz were of different types. Some are almost perfect spheres from 1/4″ up to 2″ in diameter with pyramidal terminations protruding from the surface of the sphere. The specimen pictured in figure 1, shows a nucleus of dioritic country rock from which minute prisms of quartz radiate. Four distinct nuclei are present and prisms of quartz radiate from each of these but maintain a common length of half an inch. The spheres arranged around each nucleus are usually tangent to each other although in some specimens a gap of almost a quarter of an inch was noted. Pyramidal terminations of quartz are

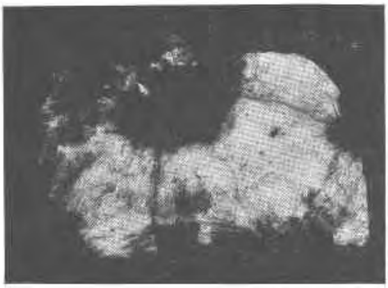

Fig. 1.
Nodular forms of radiating quartz.

Fig. 2.
Solution cavities and grooves in agate.

quite noticeable in these small pits or cavities. Where the diorite is present as the nucleas material the prisms are stained with iron. Green octahedral fluorite over an inch in diameter forms the nucleus in one specimen. The difference in nuclear material has no effect on the radiating structure.

The quartz showing this peculiar radiating form is evidently of primary origin as there is no evidence in the field or microscopic study of any other mineral which might be held accountable for the radiating form.

Solution Cavities in Agate. In a nearby locality Mr. Clinton has found massive agate which occurs in veins instead of in nodules or lenses, the veins averaging from 1/4″ to 4″ in thickness. Deep solution cavities which may reach a depth of 1/2 inch are present on one or both sides of the agate. Octahedral fluorite is commonly found associated with this pitted form of quartz. Figure 2 shows one of these pitted specimens.

The trend of the grooves is quite uniform and parallel. The pits are probably due to the presence of a more soluble mineral and as fluorite is a rather common associate of the quartz and the pittings are more or less octahedral in their outline, one might suggest that the fluorite was originally present as a coating on the agate and has now been partially or completely dissolved.

MILKY QUARTZ CRYSTALS. An interesting occurrence of milky quartz crystals in parallel growths and negative crystals is seen in the same locality. These crystals reach a diameter of six inches and show well-developed pyramid and prism faces. The largest crystals develop caps or hoods over the previously formed crystals with thin clayey layers intervening. A cross-section thru three crystals thus developed would resemble three penetrating inverted V's causing each of the capping crystals to show a negative form on the lower side.

The above is evidently a case of interrupted growth. The clayey material separating the crystals seems always to locate at a definite point regardless of whether the crystals are 2″, 3″, 4″ or 6″ in diameter. It is probable that the quartz solutions penetrated a thin clayey seam, or series of seams definitely spaced, the clay acting as a colloidal medium allowing a slow diffusion of the solution through it and permitting the growth of the crystal to continue.

GEOLOGICAL HAMMERS

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Mineralogists and geologists are, as a rule, very critical in regard to their selection of a geological hammer. Every one has exactly the type of hammer he thinks most useful for his purpose. With a view of crystallizing this opinion, in 1922, when on an excursion of the Belgian Geological Congress in the Ardennes, all the hammers of the party were placed on exhibition and photographed. As so many different types were represented it seemed of sufficient interest to reproduce this photograph in THE AMERICAN MINERALOGIST.

The hammer at the top of the series is not essentially geological, but was the property of an old man, a stone breaker by the roadside, who was engaged in breaking stone for road metal. It was on one of his piles of stone that the photograph was taken.

The writer has just received word that Mr. George Stanton of Franklin, New Jersey, has passed away as a result of an operation at the Franklin Hospital. All mineral collectors who have an interest in Franklin minerals will regret the death of Mr. Stanton. He was a most enthusiastic collector and had done much to bring to light some of the interesting and new species that have been described from there in recent years. As one of the underground shift-bosses, he had opportunity to see minerals in the mine and was in close cooperation with the chemists of the company to whom he brought his rare specimens for identification. The study of the distribution in the Franklin mine of minerals carrying arsenic, lead, and chlorine has become of vital importance to the satisfactory purification of the ore. The minerals in which these elements occur were unknown and a careful search checked by frequent chemical analyses was made to locate them. In this way not only was the lead content of hardystonite established but the nature of several recently described minerals such as chlorophoenicite and cahnite was determined. It was Mr. Stanton who discovered both of the last minerals in the mine. His death will not only be a great loss to the chemical work which the staff is thus doing but also to mineralogists since specimens of many of these rare Franklin species were chiefly collected by Mr. Stanton's care.

CHARLES PALACHE

According to Dr. W. W. Coblentz of the U. S. Bureau of Standards the mineral molybdenite may replace the fragile photoelectric cell for certain scientific work. Molybdenite possesses the property of converting light energy falling upon it into electrical energy. When a properly selected crystal is illuminated a current is produced. By using vacuum tube amplifiers the current may be magnified and the crystal serve as a delicate detector of light.

The following corrections should be made in the memorial of Joseph P. Wintringham as published in the March issue (page 70) of THE AMERICAN MINERALOGIST. Mr. Wintringham died on July 17, 1925 (not 1926). He was elected Fellow of The Mineralogical Society of America, in December 1924.

On invitation of the Departments of Geology and Mineralogy of Western Reserve University and Case School of Applied Science, the next annual meeting of The Mineralogical Society of America will be held at Cleveland, Ohio, in conjunction with that of the Geological Society of America and other affiliated societies. The sessions will start Thursday and continue to Saturday, December 29-31, 1927.