

The orange red crystals are, as above stated, from the Red Cloud Mine. The gangue is a very much crushed silica filling, partly crystallized quartz, partly chalcedony. Calcite also occurs, and the whole is dusted over with brown manganese oxides. The wulfenites are found in the cavities and interstices, loosely attached by edge or corner, so that a sharp blow breaks off many of the larger crystals. The crystals reach a size of 3 cm. or more, are thick tabular and of a brilliant luster. They are simple in habit, the base and pyramid being the usual combination. Excellent specimens and many loose crystals can still be obtained from the pillars in an old stope that has reached the surface. No other mineral of interest was noted at the time of the writer's visit.

The Castle Dome mines are about 35 kilometers east of the Red Cloud Mine. Here are several small mines and numerous prospect holes. The ore is galena, the gangue mainly fluorite. Calcite, barite, and gypsum also form a considerable part of the gangue. The gypsum is later than the other minerals and some veins have but a narrow seam of fluorite on each wall, with the filling completed with gypsum. The fluorite is in green masses; crystals are common. Where this fluorite has been exposed to the sunlight it has lost its green color and taken on a delicate pink hue. The barite occurs as platy masses, but rarely large clear crystals are found in the cavities. The wulfenites are of a bright lemon yellow color, and tho small, are brilliant and well formed. The common habit is first and second order pyramids and a large base. They range up to 1 cm. in size and are profusely scattered over etched crystals of anglesite, making very showy specimens. These wulfenites are not always obtainable, but good specimens of crystallized fluorite and masses of barite are abundant.

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#### NEW BOOKS

- Lectures on the principle of symmetry and its applications in all natural sciences, F. M. Jaeger. Amsterdam and London, 1917. [In English.]
- Manual of the chemical analysis of rocks, by H. S. Washington. 3d edition. Wiley, 1919.
- Mineral deposits, by W. Lindgren. 2d edition. McGraw-Hill, 1919.
- The analysis of minerals and ores of the rarer elements, by W. R. Schoeller. London, 1919.