

CALICO HILLS, SAN BERNARDINO CO., CALIFORNIA

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The borate deposits of the Calico Hills were discovered in 1882, the chief ore being a hydrous calcium borate, named colemanite after William T. Coleman, at that time prominently interested in the borax industry and an associate of F. M. ("Borax") Smith. Because of the beautifully crystallized character of the mineral, specimens soon found their way into all the important mineral collections of the world.

The borate localities are situated in the eastern portion of the Calico Hills, not far from the famous old silver camp of Calico. They are easily reached from Yermo, a division point on the Los Angeles Branch of the Union Pacific Railroad, which may be conveniently reached from San Bernardino by way of Barstow over a highway paved the greater part of the way. From Yermo the road leads east along the railroad for 3 kilometers and then turns north on the Granite Wells road. The first branch road to the west leads to the few remaining cabins of the old camp of Borate. The distance from Yermo to Borate is 13 km. (8 miles). The mines have long since been idle, but surface workings are abundant and yield good mineral specimens.

The borate beds outcrop on both sides of the gulch in which the camp is situated, the south side being more prolific. The ore occurs as lenses in a soft shale.

About $\frac{1}{2}$ km. east of the cabins on the south side of the gulch one will find an old abandoned inclined shaft. The shale face at the point carries a number of geodes which are lined with large, clear crystals of colemanite. These geodes also carry at times beautiful, light blue or colorless prismatic crystals of celestite, often as large as 4 cm. in length. The colemanite bed continues east along the flank of the hill and crystallized colemanite is found in almost all of the workings. At the extreme southeastern part of the ledge crystallized gypsum is associated with the colemanite.

Near the cabins a number of chalky seams are prominent; these are made up of minute flat tabular crystals of howlite. The seams are at times a meter or more thick and specimens can be obtained in abundance. Howlite also occurs sparingly as thin shiny plates on colemanite crystals.

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About 300 meters above the cabin an old road leads out of the gulch over a low saddle. This road continues as a trail over to the west workings. The first workings one meets along this trail contain abundant crystallized gypsum in cavities in a light buff calcareous shale. The crystals are well formed, range up to 6 or 8 cm. in size, and make excellent specimens. They are very abundant and specimens can be obtained in quantity. Specimens of crystallized colemanite are also met with here.

Above the cabins the old railroad roadbed follows along the north side of the hill. In the first workings at the contact of the shales with the andesitic tuff, ulexite of an unusual habit is met with. The ulexite lines cracks in the andesitic tuff and radiated tufts of fine needles can be obtained. These groups are quite different from the usual "cotton-ball" type of ulexite found at other localities.

Further along occasional cuts reveal cavernous limestone carrying colorless, prismatic crystals of celestite up to 3 cm. in length.

The mineral "bakerite" has been described from this locality, but diligent search failed to reveal any, and it is possible that this mineral is an impure form of howlite. The howlite is often called pandermite at the mines, but no true pandermite (priccite) has been found in this district.

PROCEEDINGS OF SOCIETIES

NEW YORK MINERALOGICAL CLUB

Regular Monthly Meeting of October 11, 1922

Dr. George F. Kunz presided at the regular monthly meeting, 31 persons being present. In the absence of the Secretary the reading of the minutes of the previous meeting was dispensed with. George E. Ashby was asked to act as secretary protem.

Miss Florence Miller, 606 West 115 St., New York city, was favorably reported on by the Membership Committee and on motion was unanimously elected to membership. The report of the Committee appointed to arrange a program of meetings for the season of 1922-23 was read by the Secretary.

Dr. Kunz spoke of the coming Pasteur Celebration and outlined the program expected. The Corresponding Secretary (W. G. Levison) sent a letter received from Wm. Niven referring to some of his archaeological explorations in Mexico. J. P. Wintringham exhibited some rock specimens from the drift at Oakland, N. J. and described the iron ore deposits near Pompton Junction. P. Walther exhibited specimens of trona he had received from Narobi, East Africa. Mr. Walther stated that the deposit which was of unknown depth, was 2 miles wide and 22 miles long. The trona contains 98% sodium carbonate. Mr. Walther also described a