

THE OLD TUNGSTEN MINE IN TRUMBULL,
CONNECTICUT

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The old tungsten mine in Trumbull is a locality well known to collectors, especially by reason of the fine large pseudomorphs of wolframite after scheelite which have at times been found there. These are no longer obtainable, but there are numerous other interesting minerals to be found at this locality.

The mine can best be reached by walking north along the railroad from Long Hill station a distance of $1\frac{1}{2}$ kilometer (a little less than a mile). The mine openings and ruins of the mill and equipment are conspicuously visible from the railroad. A train stopping at Long Hill leaves Bridgeport about 9 A.M. The distance is 15 km. (9 miles). Contrary to some published statements, I could find no trolley within reasonable distance of the mine. The mineralogist visiting Long Hill should supply himself in advance with a copy of Hobbs' article on the deposit, which is still obtainable.¹ This contains an excellent large scale map of the locality with all openings, trenches, etc., marked. Points in the following description will be referred to this map.

The tungsten minerals are reported to have occurred along the lower contact of a thick bed of coarsely crystalline white marble which is interbedded with a deep green amphibolite schist. Little can at present be learned regarding the occurrence of the ore, as neither scheelite nor wolframite is now visible in the workings. Some specimens supposed when collected to be wolframite proved upon examination to be a peculiar, very black, sphalerite. The lower opening of the mine is a large quarry-like affair immediately behind the site of the mill, which has been destroyed by fire. The face of the quarry is mostly thin bedded crystalline white marble containing bands rich in green hornblende and the granular pale-green pyroxene known as coccolite. Large nodules and lenses of granular-massive deep red garnet occur. Where these lenses of garnet have been exposed to the weather long enough for the surrounding calcite to be removed they show brilliant little brownish-red dodecahedral crystals.

¹ Hobbs, W. H. The old tungsten mine in Trumbull, Conn. *U. S. Geol. Survey, Ann. Rept.*, 22, 7-22.

The portion of the quarry showing the lower contact of the limestone is filled with water for the most part, but the contact is well exposed at the north end of the pit. Here there apparently is, at the base of the marble bed, a band rich in marcasite, both massive and in fibrous crusts up to 2 cm. in thickness. Small vertical quartz veins up to 3 decimeters (1 foot) in width cut this bed from below and split up and die out on entering the limestone. These veins contain, besides coarsely crystalline vitreous quartz, the black sphalerite mentioned above in cleavable masses up to 5 cm. in diameter, massive greenish to brownish yellow greasy topaz, and foliated and fibrous mica, all of which is probably margarodite. Tungsten minerals were not seen in the exposed portions of these veins but one might expect wolframite and scheelite in this association and these veins probably represent the same period of mineralization as the tungsten ores. In the bottom of the quarry pit at least one dike of normal pegmatite is exposed. This pegmatite is largely composed of quartz and biotite with some feldspar and does not contain any unusual minerals. Some narrow veinlets of a blackish green scaly chlorite occur along joints in the limestone and some of these were collected in the hope that they might prove to be the cronstedtite which has been reported from here.¹ These specimens all seem however to be prochlorite and such free crystals as occur have the curved vermicular form common to several chlorites, rather than the peculiar triangular form of cronstedtite. Large blocks of a rock consisting of quartz and acicular black tourmaline occur in the dump but these were not seen in place.

Around the road which is shown on Hobbs' map are several openings which may be found without difficulty. The tunnel shown on this map has produced nothing of interest. The old pit alongside the lime kiln is opened in laminated impure marble, like that in the main pit, containing lenses of granular red garnet, bands of coccolite pyroxene and in places small copper-red flakes of phlogopite. Some of the marble here is distinctly pink and some blocks are gray and porphyritic-appearing, from the development of larger crystals of calcite in a finer granular ground-mass.

¹ Hoadley, Charles W., An American Occurrence of Cronstedtite, *Am. Min.*, 3, (1), 6, 1918.

Just beyond the lime kiln and below the road is an old trench which proved to be of absorbing interest. This trench was driven for some 20 meters on a vein somewhat less than 1 meter in width. Much of the material which occurs in the dump at the lower end of the trench appears at first glance to be a quartz-muscovite-feldspar pegmatite, but on closer inspection the main bulk of the material is seen to be coarse greasy gray to yellowish massive topaz, and the mica is the silvery foliated "hydromica" known as margarodite. Margarodite is characteristically an alteration product of topaz, and here the fluorine of the topaz has gone to form fluorite which is not uncommon in granular masses or imbedded grains ranging from deep purple thru various shades of pink and salmon to amber in color. The margarodite is mostly in radiate-foliate aggregates of a gray color but deep blue varieties occur. Some masses, very tough, compact fibrous and snowy white, have proved to be margarite. Specimens of the coarser margarodite associated with topaz usually have the topaz bounded by rough crystal planes next the mica.

In the other direction from the main pit along the line marked on the map "projected tramway" (the tramway was subsequently built and is now partly demolished) there are numerous test pits from which the debris consists of marble and rusty quartz with or without poor margarodite and topaz. The Champion Lode, a quartz vein opened by a short tunnel and mined up to the surface forms a dangerous hole and shows nothing of mineralogic interest. At the upper terminus of the tramway is the "Upper Mine." The main pit here is full of water and little is to be seen on the walls of the pit, which are mainly earthy and much weathered from the oxidation of iron minerals. One end of this wall has the crumpled appearance shown in the plate in Hobbs' report on the mine. In the piles of loose rock here were found masses of radiate-fibrous scapolite associated with flesh-colored fluorite, green hornblende and columnar masses of brownish-gray epidote.

PROCEEDINGS OF SOCIETIES

MINERALOGICAL SOCIETY OF AMERICA

The proceedings of the first annual meeting of the Society, which appeared in our February number, have also been published in *Bull. Geol. Soc. Am.*, 32, 163-170, March 31, 1921. The Constitution and By-Laws are included. Copies can be obtained from Herbert P. Whitlock, Secretary.