

deposit of Apatite has been discovered, and is exposed in trenches opened along the outcrop. It conforms to the bedding of the containing rocks, which, however, in one part of its course are much contorted.

At the south-western end of the excavation is seen a vein of crystalline flesh-coloured Calcite, holding crystals of Mica and of pure green Apatite. Its altitude is nearly vertical and its thickness 8 feet. In a large part of this thickness the Apatite is equal to about one-half of the mass, and amounts probably to about one-third of the whole. At about 16 yards to the north-eastward the above vein is seen to be abruptly cut off, apparently by a fault, and beyond this there appears on the same line of strike, four parallel veins of Apatite traversing a hornblendic gneiss and occupying a breadth of about 8 feet. Their aggregate thickness amounts to about $3\frac{1}{2}$ feet of pure crystalline Apatite. Beyond this place for about 80 paces the vein has been exposed at intervals and shows portions with calcareous vein-stone holding Apatite, and other portions containing Apatite alone. In some places it has been much affected by the contortions and faults of the enclosing beds, but preserves its richness; and finally, about 100 paces from the place of beginning it bends suddenly to the north-west, its strike being N. 30° W., and at the same time increases in volume, attaining, at the spot where it has been last observed, a thickness of 11 feet of nearly pure Apatite. At this place the ground descends and the vein has not been traced farther; but there are indications that it returns to its original strike, and extends to the north-eastward, while to the south-east there are also indications of its extension to some distance, but no openings have been made to test its quality.

About 60 tons of very pure green Apatite have been taken out of the openings made to prove this vein. This does not include the crystals imbedded in the calcareous vein-stone, a large proportion of which might be dressed to a high percentage by hand picking. The whole could, how-