

The evidence does show, however, that the conditions necessary for pyrrhotite deposition prevailed at an earlier time than those required for chalcopyrite, pyrite, arsenopyrite and quartz. It is well understood that during the period while heated waters are ascending in the vicinity of cooling eruptive masses the chemical contents of the solutions slowly change and so do the conditions of deposition. For the same flow to first yield pyrrhotite and then so alter as to produce the other minerals is no more exceptional than the well-known excessive deposition in

fault creates a gap or blank in the formation, and to those are added the gaps due to vein displacement. Systematic cross-cutting, aided by diamond drilling, is necessary on account of these displacements, vein-branching, the variations of vein thickness and the shifting of ore from one set of planes to another. If carelessly placed a cross-cut or drill hole encounters so many of these blanks as to afford no information, or what is worse, indecisive results. It is very difficult to make such work efficient, and it calls for every resource of care and skill.



The Big Showing at the Britannia Mine.

veins of the more common minerals. It may be that the only difference between their origin and that of pyrrhotite is that the latter requires exceptional depth, heat and pressure. The heat would be greatest during the earlier stages of circulation, and the great erosion noted by the Geological Survey indicates the prevalence of unusual depth and pressure at the time.

The peculiar difficulties presented to exploration work within an ancient volcano are very apparent. Every dike and every zone of fissures constituting a

In the War Eagle and Centre Star mines structure details are carefully kept up, and it is endeavored so far as possible, to make cross-cutting effective, to avoid work within belts of dike systems or belts of shattered ground, and to direct the principal explorations to the main channels of flow.

THE DEVELOPMENT OF THE BRITANNIA MINE.

A company, which has been named the Howe Sound Mining Company, has been organized for the