district, the amount of gold per ton of quartz of 2,000 lbs. being stated at 11.725 ounces and of silver, 52.323 ounces. The size of the sample from which this assay was made was small, and if the vein from which the specimen was taken could be located there would seem to be a prospect for further developments in this direction.

It may not be out of place here to suggest that the attempts to obtain accurate information as to the quantity of gold contained in the quartz veins, which traverse many of the rocks in the Ottawa district, by mere assay of small samples is never likely to prove satisfactory. This can only be done by submitting a large sample of from one to three tons to a special mill test. Such tests can now be readily made in the new mining schools of Kingston or McGill college, and in this way definite knowledge can be obtained as to the commercial value of the ore, and the possibility of obtaining satisfactory results from its extraction.

It is very interesting to notice in connection with the occurrence of gold in this area that the same agencies which have played so important a part in the development of the deposits of mica and apatite, viz., that of intrusive granite or diorite, have also been exerted here. Thus it has been clearly shown that all the most productive mines are situated in close proximity to igneous masses which have penetrated the country rocks, generally composed of schists and slates, and it may be broadly stated that the same general principle applies to all the valuable mining areas both to the east and west. The productive mineral zones of the Lake Superior district conform to this general rule, and the deposits of copper and nickel at Sudbury are also found in intimate associations with great intrusions of granite and greenstone. It would therefore seem to be a well established fact that these intrusive masses have exercised a direct and favorable influence upon the presence of the economic minerals.

In the new group of mines on the Calumet Island, up the Ottawa, the masses of blende and galena are always found con-