Transcontinental Railway traversing the district is now in operation. The railway authorities should do all in their power to encourage the prospector, for in no way will the country be more quickly opened up.

In this issue we reprint from Government reports some information which is likely to be useful to those who go into the Kowkash country. The maps are merely sketch maps and should not be depended on too implicitly. However, they will serve a purpose until more accurate ones are available.

The Ontario Bureau of Mines has sent a geologist to Kowkash and it is likely that a geological survey will be made. In the meantime the Bureau is preparing a map which will embody the information at present available.

It is reported that the railway officials are aiding the prospectors by providing facilities for reaching desired points on the railway other than established stopping places. Such a policy is to be commended.

PERSISTENCE OF ORE IN DEPTH

In a contribution to the discussion of a paper by Mr. T. A. Rickard presented before the Institution of Mining and Metallurgy, Mr. G. R. Mickle contends that such discussion should be based on recorded observations, and commends Mr. Rickard for so basing his contentions. But who under heaven would think of using any other basis?

Mr. Mickle contends that some commonly accepted theories have failed and that therefore other theories may be expected to fail. Of course they will. There never was a theory that covered every case.

What are theories based on, if not on recorded observations? Why is a theory accepted, if it does not help us to correlate observed facts? Why are theories discarded, if not because they fail to assist as well as some other theory in correlating facts and making predictions based on those facts?

Mr. Mickle states that because a theory based on observations of air pressure and temperature made near the surface of the earth does not adequately explain phenomena observed at an elevation of seven miles and more that therefore other theories may be expected to fail under conditions other than those in which the observations on which they were based were made. Just why Mr. Mickle chooses a particular example to show that theories have failed is not obvious. There is no more common experience in the study of natural phenomena than that theories developed from observations made under certain conditions do not adequately explain phenomena outside the limits set by those conditions.

What has all this to do with persistence of ore in depth? Frankly we do not think it has very much to do with it. Mr. Mickle has apparently introduced it to explain his dislike for "voluminous discussions of the way ore has been formed and the deductions therefrom which are so dear to the hearts of geologists." He seems to fear that someone will be deluded into believing that the persistence of an orebody in depth depends upon a theory. And as a warning to such persons he cites an example of a theory that does not explain phenomena observed by some meteorologists who sent little balloons, nicely fitted out with barometers and thermometers, several miles up into the air.

We agree with Mr. Mickle that the persistence of ore in depth does not depend upon a theory and we hasten to assure him, and our friend Professor Haultain, that geologists are not endeavoring to prove that it does. They are merely striving to interpret observed facts so that they may correlate them and be in a better position to anticipate development of new orebodies.

While Mr. Mickle's comments on theories and geologists do not favorably impress us, his comments on the recording of observations of persistence of ore in depth do. For various reasons such records are commonly not divulged by operating companies. Many companies do not even make systematic records for their own use. Quite often the information is kept simply in the memory of the underground superintendent. A plea for the recording of observations should command the support of all mining men.

Among those in a position to record observations concerning persistence of ore in depth few have such opportunities as Mr. Mickle. As Mine Assessor of Ontario he obtains pertinent information, and there is no doubt he could give to the mining fraternity some very interesting and useful records if he felt free to do so. Unfortunately the very position which enables him to gather the information does not allow him to make the information public. It is to be hoped that the data gathered will eventually be accessible to all interested in the subject.

We assume of course that Mr. Mickle's desire to exclude geological theories from the discussion of persistence of ore in depth does not mean that he would exclude a record of geological facts. It should be a comparatively easy matter to determine the average number of feet below the surface that ore deposits have been mined. But that when determined would be of little assistance. It has already been established that most deposits do not persist more than a few hundred feet. Would it greatly aid us to know that the average of those which have been extracted was 256 feet or 347 feet? It might satisfy some of our mathematical friends; but it would offer little consolation to the perplexed manager who is trying to decide on the most economical plant and the most economical method for mining an ore deposit which has been only partially developed. What he wants to know is how deep have similar deposits been found to persist. And by similar what does he mean but geologically similar? And if geologically similar orebodies have similar origin, is it not possible that a theory of origin may be of some use in classifying deposits in a way useful to the mine manager?

Theories have their uses, though they fail, as facts will fail, to give desired results when in-