being 14 miles to the west of Stackpool at mileage 105 at Sagatosh lake. Here Minneapolis and St. Paul capital has proved up millions of tons by diamond drilling within the past four years, the diamond drilling outfit having gone in from Bisco on the C.P.R. They are well satisfied with their results.

At Kukatush, mileage 133, close to Groundhog river, magnetite, low in phosphorus and sulphur, occurs running in an east and west direction. Diamond drills were working here recently. Magnetite occurs again on the line at Mackay lakes, mileage 91 from Hornepayne, and in larger quantities at Octupus, mileage 109 from Hornepayne on the shores of Little Long lake.

The pyrrhotite ores northeast of Tionaga have on certain analysis yielded 2¼ per cent. nickel, but I was not able to obtain satisfactory results on properties that we optioned in this vicinity and notified the owners that we could not consider them. Were it immediately adjacent to the line of railway this section would warrant investigation for the production of sulphuric acid. Nickel is also reported to me from the Minnipuka vicinity and further west. It is also reported as occurring between our line and the C.P.R. north of Schrieber. I have had no opportunity of investigating this statement, nor to obtain its exact location. Men are now out on the ground acquiring properties.

At Sagatosh lake, 16 miles west of Stackpool reached from Groundhog (Kukatush) American interests have diamond drilled a strong lead zinc vein to 500 feet depth. They are seriously considering taking out ore and hauling it 14 miles to our rail.

SAM DOBIE'S DEALS.

Sam J. Dobie is one of our best known mining men, says the Toronto World. He is always active in the new districts and as a rule comes away with substantial interests in promising properties. But it is rather as a vendor that he is best known to fame. Most of the properties that he has parted with at nominal prices have afterwards turned out veritable bonanzas. At one time he owned a large share of the famous "Croesus" in the Township of Munro, about 30 miles east of Porcupine. Even then there was little or no doubt of the great value of this property. Fabulously rich ore showed in several places, and to protect it from high graders the owners bolted down over the entire surface sheets of solid steel half an inch thick.

The Ontario Government paid $10,000 for a chunk of ore, the dimensions of which were not greater than an ordinary pumpkin. And this was no fancy price. It was barely commensurate with the intrinsic value of the sample. It was easy for the officials to determine this by ascertainng the weight of the entire specimen and the fineness of the gold therein. If free from any alloy, the metal would be 19.3 times heavier than water, while the gangue or quartz is only 2.65. The bulk of the valuable piece could be acertained by measuring its displacement of water, and on these data a calculation of actual value could be made.

The ore acquired by the Government was shown in a safe at the National Exhibition in Toronto. Lumps of pure gold studded the quartz like raisins in a Christmas pudding; not merely here and there, but evenly distributed through the mass and, as nearly as one could judge, taking up more than one-third of the whole.

Sam Dobie sold his interest in the Croesus at the rate of $75,000 for the whole.

But a single generous act of that kind would scarcely be sufficient to establish his reputation as the best man to buy from in the whole of northern Ontario. He also had a large interest in the Davidson, which has very recently come into great prominence in consequence of simultaneous finds on two different veins.

Apparently it is lucky to buy from Sam J. Dobie. Will the Coniagas mines of Cobalt be the next fortunate buyers from him? He and his associate owner have optioned the Anchorite in the northern part of Deloro to the Coniagas, so in the ordinary course, we may expect a big strike on this valuable property.

FLOTATION ROYALTIES.

Air flotation and not oil flotation governs the principles of ore concentration under the process of the Minerals Separation Co., according to its representatives in the United States.

It is estimated that licensees of the Minerals Separation Co. patents handle approximately 30,000,000 tons of ore annually at the present time. Further estimates double this volume to 60,000,000 tons as the amount of ore treated by flotation upon which royalties may at some time be collectible. This includes not only the copper producers operating in the United States, Canada, Mexico and South America, but Russia, Australia and other countries throughout the world.

Royalties range from 12 cents per ton of ore treated to a much lower figure when a large tonnage is handled.

The agreement which Anaconda Copper Mining Co. has with the Minerals Separation Co. covers probably the greatest tonnage of ore of any contract which the latter company has on its books. So far as can be learned the effect of the Bradford decision on the Callow process, if the decision is upheld by the Supreme Court, will probably not restrict the use of Callow machines, but will require users of the Callow machines to pay royalties to the Minerals Separation Co.

To licensees under its patents the Minerals Separation Co. sells its machines at cost, the profit to the licensing company coming entirely from royalties on ore treated.

Much stress has been laid upon the "oil flotation" phase of the process, but it is stated by the Separation Co. that it is in reality an "air flotation." Oil was used in the prior art, but the present discovery, according to its owners, makes it possible to "flotate" the fine particles in air bubbles resulting in much larger extraction and greater profits.

Preparations for carrying its case to the Supreme Court next month have been started by the Minerals Separation Co. Upon the outcome of this appeal, taken from a decision of the Circuit Court in San Francisco in the Hyde-Butte & Superior litigation, will depend the very existence of the company in the United States.

The Minerals Separation Co. has been busy securing new contracts with mining companies desiring to use flotation. Its best contract is understood to be that covering the Anaconda, Inspiration, Greene-Cananea, Arizona Copper Co., Calumet & Arizona Mining Co. and Consolidated Coppermines Co. upon which a minimum rate of four cents a ton prevails and is now being paid as the daily amount treated exceeds 30,000 tons.

It is doubtful if any other company or group of companies will secure such a low figure. The Braden mill has flotation equipment which has increased its saving materially. The Chile Coper Co. is also understood to have made arrangement to operate under the Minerals Separation process.—Boston News Bureau.