Great Britain's sources of supply across the seas are also available owing to the protection afforded by the Allies' fleet. The same is true of France's supply.

On the other hand Germany's sources of supply both by land and sea are being gradually cut off. Germany produces some oil; but depends largely on imports from other countries. The oil fields of Russia and Austria are ordinarily called upon to supply large quantities to Germany. Russia, of course, exports no oil to the enemy, and by the invasion of Galicia is depriving the enemy of the most important source in Austria—the Boryslaw-Tustanowice field.

Ordinarily Germany imported large quantities of oil from overseas. This supply has been completely cut off except for small quantities which reach Germany through neutral ports.

Germany depends largely on oil for her war machines, and it may be taken for granted that she had very large stocks on hand before the Kaiser launched his campaign for the mastership of Europe. However, the celerity with which the Allies have cut off the supply will cause no little embarrassment if the war is prolonged.

CORRESPONDENCE

KIRKLAND LAKE ORES.

To the Editor of The Canadian Mining Journal:

Sir,—I have read with interest the article by Mr. John A. Dawson in your issue of September 1st. I have had the opportunity of inspecting a great many samples of ore from the Tough-Oakes Mines, and have followed very carefully the analyses on the samples of car lots of the Tough-Oakes ore sampled at our works. The possibility that such tests are wrong may not be precluded, but a number of tests, all giving the same results, afford a reasonable check. Almost conclusive evidence is afforded by the agreement of reports from other chemists and petrographers. Without going into a description of the methods used I will say that up till the conclusion of our tests six months ago none of the samples of the shipments and none of the specimens examined contained any graphitic carbon. Molybdenum was present in all samples of the ore in greater or less extent and apparently proportional to the dark colored substance which Mr. Dawson calls graphite.

Notwithstanding this evidence I would be very much surprised if graphitic carbon were not found sometime or other; the nature of the veins is such as to lead one to expect this mineral.

The error into which Mr. Dawson has allowed himself to be drawn is quite easily seen, that of generalizing from insufficient data. It is not an uncommon thing for a chemist to take one sample, and from the analysis thereof to evolve his "system."

I take this opportunity of correcting Mr. Dawson for the reason that the presence of the metal molybdenum in the Tough-Oakes ores was first determined in our laboratories; and owing to the fact that all the analyses that have been published by the Tough-Oakes company have come from our own laboratories.

Incidentally I would take exception to the deduction which Mr. Dawson makes in the next to last paragraph of his article. He constructs the mineral sylvanite by taking all of the available gold, silver and tellurium present in the ore. Inasmuch as all samples examined by myself have contained gold, visible at least under the microscope, it seems that this is an unfair way of determining the presence of sylvanite or any other of the precious tellurides in these ores. It may not be said that there are no precious tellurides present, but after a great many experiments I have concluded that it is probable that hessite is the only one present in economic quantities. If the other minerals do occur they must do so under some microscopic form and in such an event I must confess to be at a loss to know how to settle the question finally.

Two tellurides have been determined definitely, namely, altaite and tetradymite. These two minerals are invariably in intimate association with the native gold, and occur in small veinlets, as individual crystals, or as cavity filling in the nuggets of gold. A remarkable fact with regard to the tellurides found in the cavities of the gold, is that they contain no trace of gold and only a small trace of silver. A similar example is given in the occurrence of a new mineral from Cobalt, presumably of the tetrahedrite group, identified in our laboratory. This has a probable formula of $Sb_2S_3.3\ (Cu_2S)\ 2FeS.$; has a bright metallic lustre resembling specular iron; H.=1.0 to 1.5; and gives a reddish brown streak on paper. Although this mineral is almost invariably found in cavities in the native silver in the Townsite and Nipissing ores, yet the specimens analyzed showed only a trace of silver. The meaning of this physical affinity and chemical antagonism will, no doubt, afford discussion for some one more capable of undertaking it than the writer.

Yours, etc.,

E. G. CAMPBELL.

Cobalt, Sept. 25, 1914.

OIL FIELDS OF EUROPE.

In the British shale oil fields of south-east Scotland about 3,000,000 tons of shale is raised annually, producing about 72,000,000 gallons of crude oil by destructive distillation in retorts. About 75 per cent. of this oil is converted into finished products, notably fuel oil, which is used very successfully by the British navy.

The oil fields of Germany produce 130,000 to 140,000 tons of crude oil per annum. Apart from this, large quantities of soft coal are distilled in Germany, and from the tar oil various products are obtained, including liquid fuel both for consumption under boilers and for operating Diesel, semi-Diesel, and other internal combustion engines. Germany imports about 1,200,000 tons of petroleum products per annum.

Austria has a large oil industry in the north-east part of Austria, known as Galicia. The Galician fields were producing immediately before the war at the rate of about 1,000,000 tons per annum. The Russians are advancing towards these fields from the eastward.

Roumania produces about 1,800,000 tons of crude oil per annum, much of which is very rich in benzine (gasoline, petrol or motor spirit). The mobilization of the Roumanian army has interfered with production.

Italy produces about 10,000 tons of crude oil per annum, including some of very light quality.

Russia produced last year 9,246,942 tons of crude oil. There are four principal producing districts, known as the Baku, Grosny, Maikop and Ural-Emba.