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## The Canadian Mining Journal

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### OPENING GRAPHITE DEPOSIT.

Mr. J. C. Beidelman of Montreal is opening up a graphite deposit in Lyndoch township, Renfrew Co. Ont.

### SHIPPING CHROMITE FROM A NEW MINE IN QUEBEC.

Several car loads of high grade chromite ore have been shipped from a deposit opened last winter near Richmond, Quebec.

### THE MINERALS SEPARATION CORPORATIONS AND THE FLOTATION PROCESS.

During the past two weeks there have appeared in Cobalt and Toronto newspapers a number of articles calculated to arouse public opinion against the Minerals Separation North American Corporation. The refrain of all these articles is that the corporation is a German concern or controlled by Germans, and that its patents in Canada should therefore be cancelled.

It is possible that the authors of these articles believe that the corporation is controlled by Germans, for it is well known that one of the agents of the British corporation, which conducted the business at the time the war began, was the American branch of a German firm. If they do not believe it, they are using methods that are highly discreditable and if the charges cannot be proven, the episode will not reflect any honor on the mining fraternity.

We are not convinced that the charges have, at this date, been amply substantiated by the evidence offered. It is true that the association of the British corporation with Beer, Sondheimer & Co., is enough to arouse suspicion, and it is only reasonable to demand an investigation of the connection between these two firms and the American corporation. We are not overly enthusiastic about the possibility of proving the American corporation to be German and thus so easily disposing in Canada of the flotation patents. The chance of doing this is enough incentive to warrant a great effort; but it would be foolish to assume that the charge can be readily proven. Our own opinion at present is that the charge is false.

The charges made by the "Toronto World" are of such a character that we are doubtful as to their sincerity. Surely no one who had sufficiently investigated the case would state that the flotation process is a German process.

The charges made by the "Northern Miner" have been apparently more carefully considered than those of the "Toronto World" and are more worthy of consideration. We cannot avoid feeling, however, that the investigation made before launching the campaign has not been as complete as it might easily have been and that there seems to be a greater desire to arouse the public than to enlighten it.

Those who are interested in the application of the flotation process to the treatment of Canadian ores, have had plenty of opportunity of familiarizing themselves with the litigation that has accompanied the use of this process in other countries, particularly in the United States. During the past few years flotation and flotation litigation has been a never ending topic of discussion among mining men. Our excellent con-

temporary, the "Mining and Scientific Press," edited by Mr. T. A. Rickard, has published a great quantity of information about the process. Other technical journals have also devoted much space to flotation. At meetings of mining societies, in recent years, the subject has been much discussed. Practically every mine manager has given careful consideration to the possibility of treating some of the products of his mine by flotation and those in charge of concentrating plants in all parts of the country have been using or experimenting with the process. Flotation has been successfully used for several years and there is an abundant literature concerning the process and the litigation that has accompanied its use. Our readers are well aware that the successful application of the process is due to British and American metallurgists. They will therefore be somewhat amazed to read in the "World" that "for this process the world is indebted to Germany." The "World" could not have expected to fool mining men by this statement. We naturally conclude that the misinformation is for public consumption.

It is unfortunate for the Canadian mining industry that the flotation process is patented and it is particularly unfortunate that the Minerals Separation corporations have a reputation for "hoggishness." The validity of the patents has been questioned in the United States, but there is no use blinding oneself to the fact that recent decisions in the United States are in favor of the Minerals Separation corporations. On the other hand, there is every reason to believe that the Minerals Separation corporations have been unreasonable in their demands, particularly as to contracts in reference to discoveries made by the users of the process.

In our opinion the Minerals Separation corporations deserve much of the criticism that they receive. We hope that the American corporation will fail to get favorable decisions in Canadian courts if it attempts to prove infringements here. In the United States, Minerals Separation corporations have proven too selfish and arbitrary for the good of the industry and they do not deserve the good wishes that they would be otherwise entitled to.

We hope that the decisions in Canadian courts, if the claims are pressed, will be so favorable to Canadian operators that even Mr. T. A. Rickard may be able to commend them. But we hope also that the public will be properly informed as to the facts and that the newspapers will not continue to mislead their readers. The object striven for commends itself to us. We are not satisfied with the means.

We do not think that many of our readers will wish us to accuse the men who control the Minerals Separation North American Corporation of being Germans or German agents. It would undoubtedly simplify matters if they were. We have, however, no good reason to suppose that they are. They have been in bad company and they will suffer for it. They have been

greedy and this will not be forgotten. We do not believe, however, that the American corporation is German or that it wishes to retard production.

The character of the campaign being carried on by the "Northern Miner" is indicated by an editorial published in the "Northern Miner" of October 6th, 1917. Our readers will understand the editorial better when they are informed that the telegram sent to the "Northern Miner" has been carelessly copied by that paper. Our copy reads as follows: "Former agents of M. S. Co., German. Corporation itself British. No evidence to contrary."

For those who may be unfamiliar with the organizations referred to, we may state here that Minerals Separation, Ltd., was registered as a British corporation in England in 1903. In 1913 the Minerals Separation American Syndicate, Ltd., was registered in England to acquire the rights of the Minerals Separation, Ltd., in North America. This British corporation's agents in New York when the war began were Dr. S. Gregory and the American branch of the German firm of Beer, Sondheimer & Co.

It was, of course, to the latter firm and not to Dr. Gregory, that we referred to in our telegram.

The "Northern Miner" seems to be of the opinion that the American corporation, formed in December, 1916, is represented by Beer, Sondheimer & Co. Such a belief might explain the distortion of our message. We think that the "Northern Miner" is mistaken in its belief; but we are willing to assume that it has such. The space which is devoted by the "Northern Miner" to prove that Beer, Sondheimer & Co. is a German corporation indicates that it really believes that that is the important point. For our part we have never had any reason to doubt that these former agents of the British corporation are German.

The "Northern Miner" editorial of October 6th, in part, follows:

"When The Toronto World published its first article regarding flotation an error appeared to the effect that Minerals Separation North American Corporation was stated to be the agents of Beer, Sondheimer & Co. This, of course, was putting the cart before the horse. Mr. R. E. Hore, editor of the Canadian Mining Journal, here appeared on the scene. A bold defender of Minerals Separation, he tried desperately to lobby in the interests of this company, but his success thus far has been unnoticed.

"On hearing that Mr. Hore was busying himself in this matter, The Northern Miner wired him as follows:

"If you are sure M. S. Co. is a British concern wire your proof to Northern Miner. Many mine managers in Cobalt think otherwise."

"On the following day we received this reply:

"Former agents of M. S. Co., German corporation, itself British, no evidence to contrary."

"In view of the facts this reply proves that Mr. Hore did not know what he was talking about. In the first instance, Beer, Sonheimer and Company are not former agents, but are the agents to-day. And in the

second instance, Minerals Separation North American Corporation is not a British company, but was incorporated under the laws of the State of Maryland.

"Mr. Hore also went out of his way to discredit the disclosures and befuddle the public by stating the following in the last issue of the Canadian Mining Journal:

"The Toronto 'World' claims that the Minerals Separation Company is controlled by Germans and that the flotation process originated in Germany. The company's methods are such that they have aroused much opposition and criticism is to be expected, but the 'World' is not well informed as to the facts."

"Naturally, we would have expected that an editor of a mining paper would have adopted different tactics. There is absolutely no doubting the facts regarding Beer, Sondheimer and Co. Even if Mr. Hore had been correct in his assertion that the M. S. Co. was a British Corporation it is quite safe to say that their methods are not in the interests of the Allies in this war. But unfortunately for the M. S. Co. apologist, he is the party that is misinformed, and not The Toronto World and The Northern Miner."

To this we say that our telegram gives the facts correctly. It has been misinterpreted by the "Northern Miner," whether purposely or not we do not know.

In December, 1916, an American corporation, known as the Minerals Separation North American Corporation, was formed in Maryland. This Corporation, so far as we know, has never been represented by Beer, Sondheimer & Co. It is an American corporation controlled by three men, two of whom are British and the third an American.

The "Northern Miner" evidently wishes its readers to believe that our objection to the statements of the "Toronto World" is an indication of friendliness for the corporation which wishes to collect royalties from Canadian mining companies. The "Northern Miner" may have some readers that will believe that we "tried desperately to lobby in the interests of this company." As a matter of fact we objected to the statements made by the "World" because we believe them to be incorrect. Our enquiries satisfied us that the newspapers were being used for purposes that are not creditable to the mining industry and we warned the "World" to be more careful in its statements. We may have interfered with plans that have a worthy object; but we have simply urged that there be no misrepresentation of the facts.

Low grade ores have been, and are being, treated profitably at Cobalt by several processes. The flotation process has proven in some cases more profitable than other processes. It is this increase in profit that represents the advantage gained by use of flotation machines, and it is only on this increase that the owners of patents can reasonably claim a royalty, if infringement is proven. They cannot justifiably lay claim to all this increase; but only to a reasonable percentage. There will doubtless be much difference of opin-

ion as to what is a "reasonable" percentage; but there is no room for the opinion that such excessive royalties can be charged that the use of the process would not be warranted.

If it is true that the American corporation threatens Canadian users of the process with claims for excessive amounts, the corporation must be only bluffing. Absurd claims will not be tolerated here, even if some United States courts have made themselves ridiculous. If the bluff is called we may expect that the corporation will offer reasonable terms before initiating litigation in Canada; for if the corporation is well informed it can hardly expect to be as successful in Canadian courts as in United States courts. Our laws allow only a reasonable royalty. Moreover, Canadians are not likely to allow anyone at this time to get away with threats of interference with production.

While we cannot accept the evidence offered by the "Northern Miner" as proof that the Minerals Separation corporations are controlled by Germans, we will be pleased if the agitation results in an investigation of the connection between the British corporation, Minerals Separation American Syndicate, Ltd., and Beer, Sondheimer & Co. The latter firm is unquestionably German. Why then did not the British corporation break off all relations with the American branch of this firm at the outbreak of war? What significance is to be attached to the fact that Mr. N. M. T. Sondheimer was a director of the American Syndicate?

As has been quite properly pointed out by the "Northern Miner," the successful application of the flotation process to the treatment of Cobalt silver ores reflects no credit on the Minerals Separation corporations. For the good results obtained we have to thank the mine managers and their staffs and Mr. J. M. Callow and his assistants. By co-operation between Mr. Callow and the mine managers the silver mining industry has greatly profited. It would be unjust to allow the Minerals Separation corporations to appropriate the profits resulting from the work of the Cobalt metallurgists and Mr. Callow.

One good feature of the campaign of the "Northern Miner" against the Minerals Separation corporations is the publicity it is giving to the ramifications of the German Metal Trust. The campaign will be worth while if it helps to break down German control of the metal industry. This is not the main object of the campaign; but it should prove a valuable by-product. (We assume that our readers are well aware that Beer, Sondheimer & Co. is an American branch of the German Metal Trust that had a strangled hold on the metal industry. The campaign will help to spread the information.

The "Northern Miner," in its issue of October 6th, says that the following list of officers of the Minerals Separation North American Corporation was "furnished by a reliable New York source, was evidently taken from the official records, but we cannot say, as to whether these companies are officered by the same men to-day": President, Beno Elkan; vice-president, Otto Frohnknecht; secretary, Jas. A. Nelson; treasurer, Harry Falck; general manager, Dr. S. Gregory. With the exception of Dr. Gregory, these men are said to be officers of Beer, Sondheimer & Co. Our information is that the only directors of Minerals Separation North American Corporation are John Ballot, Dr. S. Gregory and Frank Altschul, none of whom are Germans. We agree with the "Northern Miner" that if its information is reliable an investigation should be demanded. Our information on this point comes from the corporation and its counsel. Mr. H. D. Williams states that Minerals Separation North American Corporation is not and never has been associated with the German Metal Trust.

The "Northern Miner" evidently wishes its readers to believe that Beer, Sondheimer & Co. are agents for the American corporation "Minerals Separation North American Corporation." The American branch of Beer, Sondheimer & Co. were agents for the British corporation "Minerals Separation American Syndicate"; but, so far as we know, are not and never were agents for the American corporation.

#### EMBARGO HURTS YUKON.

Dawson.—The order of President Wilson of August 2 placing an embargo on the exports of steel, iron, grease and oil is working a hardship on the gold mining industry of the Yukon. This camp being on the Canadian side, material of the kind for the large dredges here is held up en route, and part which are vitally essential to the operation of the dredges cannot be secured. One large express shipment of parts for the Canadian Klondyke company is held at Skagway under the order. Acting Manager J. W. Boyle, Jr., is conferring with the authorities at Ottawa through Dr. Thompson, the Yukon member of parliament, seeking to get a release of the material or waiver of the ruling, especially on this shipment, as it was ordered before the president's decree was promulgated. It is believed that the president did not have in mind the hurting of such an industry as this which contributes so largely to the gold reserves which goes to America and the financial strength of the Allies, and that when he is apprised of the facts, he will remove the disability in so far as it applies to this region.—Dawson News.

Dawson, Y. T., Sept. 18.—The last boat for Dawson from Fairbanks this year leaves Sept. 24. The last boats for Whitehorse from here are expected to leave in about three weeks. The big lower Yukon fleet, which has been handling heavy tonnage from St. Michael for the new American government railway at Henana, is expected here soon and will go into winter quarters at Dawson and Whitehorse.

#### THE CONCENTRATION OF MOLYBDENITE.

To the Editor of the Canadian Mining Journal:

Sir,—In your issue for September 15th, an anonymous correspondent attempted to discredit the work of the Mines Branch, Department of Mines, in the concentration of molybdenum ores. Such unsigned letters are usually not worth answering; but it would seem desirable that in this particular case a few facts concerning the concentration of molybdenite may prove of interest to your readers and possibly of educational value to your correspondent.

The main reasons why the Mines Branch adopted the Wood film flotation apparatus in 1916 were as follows:

1st. The problem confronting the Department was the concentration of various types of molybdenite ores and the Wood apparatus proved its adaptability in the concentration of ores containing an assortment of sulphides.

2nd. The necessary machinery was easily and quickly procurable.

3rd. The process was not difficult to control, and high grade concentrate could be obtained.

In the second paragraph of your correspondent's letter he states as follows:

"The Wood machine or indeed the water film flotation process has proved absolutely unreliable economically wherever used for molybdenite concentrating in Canada, and this process has been discontinued wherever used."

This statement is absolutely untrue as far as this Department is concerned, as up to the present time the Department has concentrated by water film flotation 3,612.9 tons of various molybdenite ores containing an average of 2.125% of molybdenite, and has actually shipped 127,193.8 pounds of molybdenite in the form of concentrates, the actual recovery of molybdenite being 82.8% of the original molybdenite contained in the ore. These figures may be substantiated by inspection of the records of the Department which contain both the weight and the assays of every car of ore treated; daily tailing assays and weights and assays representing each parcel of molybdenite shipped. Furthermore the tailings from these operations have been impounded and accurately sampled and assayed, checking the results of the concentrating laboratories.

The Wood machines were originally installed at the Quyon, Quebec, mines, by the Canadian Wool Molybdenite Company, and these machines were operated for some time by their successors, the Dominion Molybdenite Company. That neither of the above companies understood or appreciated the requirements of the Wood process is well known by anyone who is familiar with operations at Quyon.

The essential point in concentrating ores by the Wood process is that while the ore must be thoroughly dry the drying process should be conducted carefully so as to avoid oxidation of the molybdenite flakes. The slightest film of oxide caused by overheating renders the recovery of such oxidized molybdenite impossible.

Both the Wood Molybdenite Company and the Dominion Molybdenite Company carried out their drying process in such a careless manner that a heavy loss of molybdenite resulted; and although the operators were warned of the cause of this loss by officials of the Department of Mines they were apparently incapable of rectifying the trouble.

The Wood Process has been used in Canada only by the Canadian Wood Molybdenite Company, The Dominion Molybdenite Company, and the Department of Mines. The Dominion Molybdenite Company, successors to the Canadian Wood Molybdenite Company, have, it is true, discontinued the Wood Process and adopted the Callow cells. The Department of Mines, however, has still retained the Wood machine and finds it invaluable in the concentration of molybdenite ores which carry appreciable quantities of other sulphides.

It is a pleasure to learn that the Dominion Molybdenite Company are meeting with success in the operation of their Callow cells; but it should be understood that the concentration of Quyon ore, up to the present, has been one of the simplest problems by either oil froth or water film flotation. The milling problem confronting the Dominion Molybdenite Company would have been somewhat different if Quyon ore had contained a large proportion of pyrite and pyrrhotite or a small percentage of chalcopyrite.

The third paragraph of your correspondent's letter states as follows:

"The Mines Branch could not have spent much time in experimenting with the oil flotation process, or maybe they knew nothing of the application of the process, or they would never have tried the Wood machine."

During the fall of 1915 the Mines Branch installed a standard four cell Mineral Separation machine and operated the same on various Ontario molybdenite ores containing both pyrite and pyrrhotite for a period of eight weeks. These tests resulted in the production of a concentrate containing molybdenite, pyrite and pyrrhotite which required oxidation and subsequent re-concentration for preferential flotation of the molybdenite. Furthermore, this work was conducted some three or four months before the Quyon deposit was even prospected.

While conducting the experiments by Minerals Separation machine the Wood process was investigated and the results obtained by this method on mixed sulphide ores were so much better than had previously been obtained with the Mineral Separation apparatus that installation of the Wood machine was adopted. Subsequently a laboratory type Callow machine was installed. This quickly proved its adaptability in concentrating ores of a siliceous type, such as the Quyon; but yielded results similar to the Minerals Separation machine with ores that contained a large proportion of other sulphides. It is altogether probable that the Mineral Separation machine would prove of equal value with the Callow in concentrating siliceous ores; but as both were surpassed by the Wood machine on mixed sulphide ores the Mines Branch naturally adopted the process of more universal application.

Because the Quyon ore is at present one of the siliceous type, its concentration is comparatively simple, and the success with which the operators are meeting is due more to this fact than to any particular merit attached to the Callow cell.

That the Quyon ore does not fall within this class is simply re-stating that their problem of concentration is comparatively simple, and their success is due more to this fact than to any particular merit attached to the Callow machine.

A "little" knowledge is a dangerous thing, and it may be permissible to advise your anonymous correspondent that a careful study of the various types of molybdenite ores to be met with in Canada and the

United States would lead to considerable enlightenment as regards the respective merits of both the Oil Froth and Water Film flotation methods in their concentration.

Yours, etc.

Geo. C. Mackenzie.

Ottawa, Oct. 2, 1917.

#### MINE OWNERS AGREE TO POOL LEAD.

About four weeks ago Mr. J. J. Warren, of Trail, West Kootenay, B. C., managing director of the Consolidated Mining and Smelting Company of Canada, Ltd., sent to lead producers of the Kootenay districts a circular calling attention to the situation in regard to the sale of lead, and invited those directly interested to meet to discuss the matter. The circular read as follows:

"The Imperial Munitions Board has notified us that on account of a reduction in shrapnel orders, it will not be requiring anything like the quantity of lead per month that it had been purchasing for the past many months. It also asks us to sell it any lead needed for munitions purposes at the price fixed by the United States Government for lead purchased from United States producers.

"As the present commercial needs of Canada do not require anything like the present production of lead, and as there seems to be a certainty of decreased consumption of lead for munitions purposes, the situation is serious and calls for immediate and careful attention."

On Sept. 21, the Nelson Daily News printed the following account of the meeting:

In order to hold the Canadian market against American producers, lead mine operators of Kootenay agreed yesterday to pool their output with that of the mines owned by the Consolidated Company and accept the average price received for the metal.

Up to the present time the Consolidated Company, which operates the lead smeltery at Trail, the only plant of the kind in Canada, has been paying independent producers on a basis of the lowest American price, which is that of St. Louis, plus freight and the Canadian duty of 22½ per cent. The Consolidated Company's own mines supply about one half of the lead produced at the Trail smelting works, the remainder coming from independent producers.

American producers have been selling to the British Government, the chief purchaser of lead, at a price representing a cut on the artificial quotation established by freight and duty plus the St. Louis price. Hence the Consolidated Company, in order to secure the Canadian market, which is largely the market in Canada offered by the Imperial Munitions Board, had to compete. To enable it to do that, it has asked the independent producers to consent to the pooling arrangement.

A meeting attended by most of the larger independent producers took place in Nelson yesterday, when the company's proposal was placed before them. It was unanimously agreed to.

#### THACKERAY GOLD MINING CO.

Cobalt, Oct. 8.—The Smith claim and six others in the immediate vicinity of Lot 4, Con. 3, Township of Maisonville, have been purchased by the Thackeray Gold Mining Company, and active operations are to begin at once. Several promising veins are in evidence on the property just acquired by the company. The company has commenced moving prospecting equipment from claims in Thackeray township to the new location, which is about one mile south of the Murray-Mogridge.

## “Northern Miner” and “Toronto World” Say Minerals Separation N. A. Corporation Is Controlled By Germans

The following is an extract from statements made in the “Northern Miner,” Sept. 29th, and republished in the “Toronto World,” Oct. 4th:

“There is a company known as the Minerals Separation North American Corporation which claims to control patents in this country on a process known as the flotation process which has become one of the most successful methods in use for the extraction of metals from many ores. This company is controlled in North America by Beer, Sondheimer & Company at 61 Broadway, New York City, and, as a number of Canadian mines have adapted flotation to their ore treatment during the past three years, they are now being threatened with litigation which may prove very costly to the mining industry and to the country at this critical time.

“After a thorough investigation into the personnel of Beer, Sondheimer & Company, and discovering that it is German from stem to stern, the Northern Miner urges the protection of the government from these enemies of the empire on the ground that if flotation is controlled by patents held by Minerals Separation North American Corporation or Beer, Sondheimer & Company such patents should be annulled forthwith, as apparently their sole aim is to hold up the production of minerals in Canada, by placing the matter into litigation and thereby tying it up in the courts, such as was done in the United States. It is interesting to note that any decisions upholding the validity of these patents have been purely technical, and have served no other purpose than to continue the obstruction of war metals. To date they have been unable to collect any claims through the American courts.

“We have it on good authority that Beer, Sondheimer & Company of New York City, which is now threatening to hold up the Canadian mines, is in reality Germany’s mining and metal representative on this continent. A chart of the German metal buying organization throughout the world is published by the federal trade commission of the United States, and on this the name of Beer, Sondheimer & Company is prominently mentioned. German influence in the mining world has always been strong. It was deeply entrenched in Australia, where agents of the Kaiser controlled the zinc production until the government very properly confiscated their holdings.

“Considerable suspicion arose in the minds of mine operators in Canada that Beer, Sondheimer & Company were enemies of the empire long before the United States entered the war. Prior to August, 1914, they had been heavy exporters to Germany of ores and metals in different stages of refinement. That they shipped greatly needed metals to Germany, such as lead, zinc, copper and nickel, was generally believed, and later these suspicions were verified when a blacklist was published by the British Government with the name of this company appearing prominently as one of our enemies.

“Now we encounter the peculiar paradox of this Hun-branded outfit about to launch action in the

courts to obtain money alleged to be due as royalties from Canadian mining companies.

“Shortly after the outbreak of the war, at the time when manufacturers were urged to convert their factories into munition works, it was up to the mines to speed production. The flotation process was installed by a number of companies, as it was decidedly more efficient than any method of metal recovery than had hitherto been tried for many ores. Flotation has therefore had a great deal to do with the largely increased mineral output, especially in view of the tremendous scarcity of skilled labor.

“It naturally has always been the aim of Beer, Sondheimer & Co. to discourage as far as possible the production of war metals in the United States and Canada. Being loyal to the Kaiser, they have worked with all their might and main, with the large coterie of pro-Germans in the United States, to help the fatherland. They did not lend the assistance towards the adaptation of the process which good business most assuredly would have justified. The motive is quite clear.

“But American inventors entered the field. They built machinery improving the flotation process. Several large copper companies installed this flotation machinery, and the ratio of recovery of the metal content showed great leaps. But Beer, Sondheimer & Co. were not caught sleeping. They brought action against these copper companies, as they are now contemplating in Canada, claiming such big royalties that many other companies figuring on the installation of the process decided to wait until the litigation was settled. As a result many copper and other mines of the United States and Canada, which could profitably use the process and help relieve the shortage of war materials, are now producing the same quantities as they could if the alleged patents did not exist.

“It is indeed interesting to note how the flotation process happened to be installed in some Canadian mines. At the beginning of flotation history in Cobalt, samples were sent by Cobalt mines to the Minerals Separation American Syndicate Inc., which just a short time ago made a slight change in its name. After testing the samples submitted, Beer, Sondheimer & Co., the German company which were sole agents, turned down the ore on the ground that the flotation process could not successfully treat it. Cobalt mines were bent on producing as never before because of the demand for metals, but it was quite evident that they could expect no help from the German headquarters in America. Later samples were sent to J. M. Callow at Salt Lake City, who, after testing with his machine, reported that Cobalt ores were subject to treatment by flotation. Mr. Callow opened a branch in Cobalt shortly afterwards, and in conjunction with the mine managers, brought about its successful adaptation.

“The Cobalt mine managers were aware that the Minerals Separation American Syndicate Inc., had basic patents which they claimed covered the use of the flotation process in Canada. United States mines, which

were then in the same position as the Cobalt mines are to-day, were fighting the German-controlled company in the courts. At the time that Mr. Callow's experiments were successful the mine managers were on the point of dealing direct with the agents, Beer, Sondheimer & Co. of New York, but before any decision was reached the British Government had blacklisted this company as an enemy of the empire. And now after paying no attention to the Canadian mining field for three years, this German outfit has shown the colossal impudence and gall to demand royalties."

**"WORLD" SAYS PROCESS GERMAN AND CONTROLLED BY GERMANS.**

On Sept. 28, the "Toronto World" published the following:

"The miners of Northern Ontario are finding themselves in the grip of the Metalgesellschaft, the great German metal trust with headquarters at Frankfurt-on-the-Main. This trust, founded by the late Wilhelm Merton, absolutely dominated the metal markets of the world at the outbreak of the war. Its agent, Henry S. Merton Sons, Ltd., of London, England, was the buyer of metals for the British Government, and yet even after the war commenced assisted in smuggling large cargoes of zinc from Australia to Germany. The Metalgesellschaft absolutely controlled the zinc concentrates of Australia, and had a strangle hold on many of the mineral companies of the United States and Canada.

"Quite recently Dr. Christopher Addison, of the British Government, declared that Germany had by no means released her grip on the international metal situation, and we find German influences tying up mineral production in New Ontario, and threatening many Ontario mining companies with ruin.

"Most astonishing of all is the fact that the courts of Canada are to be used to help the Germans curtail our mineral production. Germany naturally does not desire war metals or precious metals to be produced in this country while the war is in progress. The Kaiser himself can scarcely come into a Canadian court and ask for help in blocking the allies, but a German company with an American charter may do this very thing.

"The situation is set forth with great clearness and ability in the last issue of The Northern Miner, of Cobalt, which seems to have all the facts at its finger ends. Many of these facts can be easily established, and they will be found to be confirmed by official reports of the U. S. Government.

"There is a German company in the United States, known as Beer, Sondheimer & Co., with head offices at 61 Broadway, New York City. This concern figures as the right arm of the Metalgesellschaft in the elaborate chart published a year or two ago by the United States Federal Trade Commission. The firm is not only German in personnel and sympathy, but is on the British blacklist. It was blacklisted because, after the war commenced, it succeeded in sending over copper, zinc and nickel to Germany.

"Now this firm is applying to the courts of Canada for writs of injunction and by other legal processes threatens to hold up and virtually paralyze the mining production of our north country. Through its agent, The Minerals Separation North American Corporation, it claims to own and control the process known as "flotation." Its claim is entrenched by patents originally German, secured before the outbreak of the war from the Dominion Government.

"Flotation is a process that has been used in the treatment of ores principally as an auxiliary to the old methods. The ore, as pulp, is mixed with oil and water, and air is then supplied, with the result that the small oil-coated bubbles carry the metallics to the surface. To instal this process at the mines is a matter of only a few thousand dollars, but the extra values recovered from the ores by its use may run into the millions. Also many low-grade deposits have become profitable owing to this wonderful scientific discovery. For this process the world is indebted to Germany, but the owners of the process, instead of collecting a reasonable royalty, are bent upon preventing the use of the process in the United States and Canada, during the war.

"They have been operating with a high hand in the United States. Many copper companies using flotation or an improved process along the same line, of American invention, found themselves held up by injunctions and other vexatious litigation, and sued for fabulous sums by way of damages. Other companies that desired to avoid trouble, and were quite willing to use the process at any reasonable price were asked to pay such ruinous royalties that they preferred to let their mines lie idle until the litigation was ended. The litigation, by the way, has been prolonged by every device known to able lawyers, with the idea of curtailing the production of metal in the States during the war.

"Flotation has been extensively used in our north country during the past three or four years, partly because it rendered valuable many low-grade ores that could not be otherwise profitably worked, and partly because scarcity of skilled labor and engineering talent made its use imperative. Probably no class of men enlisted so freely for service in our armies overseas as the men engaged in or connected with mineral production in Northern Ontario.

"The Minerals Separation North American Corporation has an American charter, and by the comity of nations has an undoubted right to sue in our Canadian courts. It could probably make out a prima facie case for an injunction, and it will endeavor to collect ruinous damages. It is undoubtedly controlled by Beer, Sondheimer & Co., the German-American firm already mentioned, which occupies a prominent place on the British blacklist. But it will come into court without disclosing this fact, and for that matter it may be doubted whether Beer, Sondheimer & Co. could not maintain the suit on its own behalf. That firm is blacklisted, but it may not be technically one of the King's enemies as would be a subject of the German emperor. It might, and probably would be difficult for the miners of New Ontario, without great expense, trouble and delay, to prove that Beer, Sondheimer & Co. is a finger upon the hand of the Metalgesellschaft, although in view of the official publications of the United States Government that fact could be ultimately established.

"But while this litigation is going on and these questions are being investigated, mining production in New Ontario will be checked and so far as some companies are concerned, will be suspended altogether, until the war is over. The litigation will not be brought in good faith to collect money due, or vindicate property rights from aggression, but will be brought solely for the purpose of hindering and delaying the metal production of Canada. The end in view will be to embarrass the allies by curtailing the supply of metals they can receive from Canada and thus help the Kaiser and the Huns.

"There is great excitement, therefore, in our north country, and the miners are about to appeal to Ottawa. They say that these German-American companies can only get a standing in court from the fact that they have Canadian patents. They will therefore demand that the Dominion Government cancel these patents, and in common justice and equity the cancellation should be made effective from the commencement of the war. It would be absurd and indefensible to permit Germany to hold up our mines and seriously curtail the output of our mines by reason of a monopoly in the way of a patent granted to Germans before the war by the Dominion Government. The north country will therefore appeal to Ottawa, and the result of their application will be watched with keen interest, not only by the mine owners directly affected, but by the governments of the entente allies, and by the governments of the central powers as well. Shall this peaceful penetration of Canada by the German metal trust be allowed to impair the efficiency and to some extent destroy the usefulness of Canada in the war?"

#### **MINERALS SEPARATION NORTH AMERICAN CORPORATION DENY CHARGE MADE BY COBALT AND TORONTO NEWSPAPERS.**

In response to enquiries concerning these charges the following statement has been given out by the Corporation:

In behalf of the Minerals Separation North American Corporation, who claim to own and control all of the North American basic patents for the flotation process, you are authorized to publish an absolute and unqualified denial of any and all assertions that this company is a German concern or a pro-German concern or in any way influenced or owned or managed or controlled by any German or alien-enemy interests.

This corporation was organized under the laws of the State of Maryland in December 1916 with the full consent of the British Government, specially had and obtained in September 1916, as the successor of Minerals Separation American Syndicate (1913) Limited, a British company.

The directors of Minerals Separation North American Corporation, since organization, are: John Ballot, chairman and managing director of the parent company Minerals Separation, Limited, and chairman and managing director of the former American Syndicate (1913) Limited, S. Gregory, director of Minerals Separation, Limited, and vice-chairman and managing director of the former American Syndicate (1913) Limited, Frank Altschul, partner of the firm of Lazard Freres and an officer in the American Ordnance. These are the only directors and they have absolute control of the affairs of the company. There is not a single alien-enemy shareholder of the corporation.

Until August, 1916, the British company, Minerals Separation American Syndicate (1913) Limited, was represented in America by Agents with the special authority of the British Government. As an incident of the organization of the present American Corporation that agency and representation were discontinued.

The policy of the company always has been and now is to encourage the production of metals and particularly those needed for war purposes.

With the decisions now in favor of the Corporation and its undoubted right to seek and obtain preliminary injunctions against infringers, it has refrained from doing so, solely for the purpose of not hampering the industry and not reducing the output of metals so

vital to the successful operation of the Allied Powers. A recent example is the consent that has been given to the continuance of infringement by the Butte & Superior Mining Company until the termination of the suit against that company. The court had adjudged the absolute right of Minerals Separation to an injunction; but it was stated by counsel for Minerals Separation that if this injunction would cause a shut down of the defendant's mill the plaintiff would consent to such terms as would permit defendant's infringing operations to continue pending the termination of the suit. The defendant admitted that the injunction would cause a shut down and the only question debated was what these terms should be. The Court ordered the filing of a bond for \$2,500,000 and the monthly deposit in Court of all profits from operations of the defendant. A few days later it was stated by the president of the Butte & Superior Mining Company that the bond ordered by the Court could not be obtained and it was suggested that in lieu of the bond the defendant should submit to an injunction against disposing of its assets otherwise than in the ordinary course of its business pending the termination of the suit. This was consented to by Minerals Separation, although it involved relinquishment of absolute security for \$2,500,000. This consent awaits the approval of the Court and therefore no further particulars can be given at the present time.

The fact that the output of metals in North America, Australia, South America and Russia has been enormously increased by the use of flotation and the cost of production greatly diminished are so well known to the mining and metallurgical world that no further statement in this respect needs to be made.

The company stands ready to license any and every responsible concern to utilize its process for the benefit of the Allies and to increase as much as possible the production of metals.

#### **H. D. WILLIAMS SAYS CHARGES FALSE AND MALICIOUS.**

The following letter, dated Oct. 4, has been received by Messrs. Ridout & Maybee, Toronto, from H. D. Williams, counsel for Minerals Separation North American Corporation:

Your telegram received. Since writing you I have seen and have shown to our client, Minerals Separation North American Corporation, the articles in the "Toronto World" of September 28 and 29 and October 1, charging that our clients are controlled by German interests and are unwilling to grant licenses for the use of their processes in Canada. These charges are wholly false.

In their behalf and largely of my own knowledge I make the following statement for the information of the Canadian public.

When the present war broke out, in 1914, Minerals Separation American Syndicate (1913) Ltd. a British corporation, the predecessor of our company, was represented in America by one of its directors, Dr. S. Gregory, assisted by the American branch of the German firm of Beer, Sondheimer & Co.

Mr. John Ballot, the Chairman of our predecessor as well as the parent British company and the president of the present company, immediately and personally submitted to the British Government in London a statement of all the facts, among which was the agreement imposed upon the American branch of Beer, Sondheimer & Co. that their work as agents of the British

company should be carried on entirely separate and apart from any German connections or interests. The full explanation given, with the relevant agreements exacted, satisfied the British Government, and permission was granted to continue the relationship during the war.

Early in 1915 the American branch of Beer, Sondheimer & Co., incorporated its business under the laws of the State of New York as Beer, Sondheimer & Co. Inc. With this corporation Minerals Separation never had any connection whatsoever. It was insisted that the special agency contract as approved by the British authorities be kept separate, and Messrs Elkan and Frohnecht, both American citizens residing in New York were substituted to conduct this sole agency up to the time when it was discontinued.

Thereafter the corporation Beer, Sondheimer & Co. Inc. was temporarily placed in the British blacklist, but subsequently removed therefrom upon representations which satisfied the British Government of their neutrality. It may be added that Beer, Sondheimer & Co. Inc. have never been on a blacklist of the United States Government, and have had and continue to have friendly relations with the United States Government at all times since the United States entered the war.

The agency contract between Beer, Sondheimer & Co. American Branch and Minerals Separation American Syndicate (1913) Ltd. was made in 1913, when England and Germany were at peace. It was a ten year contract and it continued in force until the outbreak of the war, when, by the authority of the British Government it was modified as above indicated before the present corporation Minerals Separation North American Corporation was formed, when it was cancelled by mutual consent, and again with the special permission of the British Government. Since December 7, 1916. Minerals Separation North American Corporation has directly managed and controlled all of its business in North America under a board of three directors, two of whom are British subjects, and one of whom is an American citizen and a Lieutenant of Ordnance in the American Army.

The stockholders of Minerals Separation North American Corporation are all either British subjects or American citizens.

As to the patriotism and loyalty of the officers and directors of Minerals Separation Ltd., there can be no breath of suspicion. One of their directors as aforesaid is an officer in the American army. The company was a liberal subscriber to the Liberty Loan. Its process has contributed very largely to the increased output of metals in America, and it stands ready to license the use of its process by any and every responsible mining concern. Its rates of royalty are admittedly reasonable. The exercise of its rights under its patents has never in any instance checked the output of metals, even where that output was in adjudged infringement and defiance of its patents. The British officers and directors, Mr. John Ballot and Dr. S. Gregory, are also directors, and Mr. John Ballot is Chairman, of the parent company, Minerals Separation Ltd. of London, England. This company has its chief engineer and practically all of its staff enlisted in the British army, devoting all of their engineering skill to the services of the British Government, while receiving half pay from the company. Our American company has also notified its staff that any member joining the American Army will have his position held open and will receive half pay during the war.

The charges which have appeared in the "Toronto World" are false and malicious in every respect. They appear to have their origin among miners who wish to use the patented process of our company without the payment of royalty.

Yours etc.

Henry D. Williams.

Counsel for Minerals Separation North American Corporation.

#### JUDGE BOURQUIN'S DECISION IN MINERALS SEPARATION CASE.

Commenting on the decision handed down by Judge Bourquin, "Mining and Scientific Press," San Francisco, says in part:

Judge Bourquin's decision turns, as was expected on the definition of the so-called 'critical proportion,' the phrase expressing a supposed limitation to the quantity of oil efficacious in froth-flotation. By accepting this supposed limitation the Supreme Court was, we believe, misled into an erroneous inference. Judge Bourquin places his own interpretation on the dictum of the highest court; he argues that "small deviations from the predetermined amount," namely, the critical proportion of oil, are injurious to the operation of the process, and in saying so he sets aside the evidence of work done successfully with proportions of oil that make the use of 'critical' ridiculous. Yet he acknowledges that "the process can be fairly successfully operated with 1% or more of oil," insisting, however, that "the excess of oil is useless, wasteful, and harmful," and merely a means of escape from infringement.

As regards the use of a particular kind of violent agitation, to which the Supreme Court confined patent 835,120, Judge Bourquin has a variant notion. He refuses to distinguish between "applied agitation," that is, "by beating air into the mass" with blade-impellers, and "self-agitation," such as is "set up by the air particles themselves in merely rising through the mass" of pulp. It is not necessary to comment on this phase of the process to anybody that has compared the working of a Minerals Separation machine with that of a Callow cell.

The decision is sweepingly in favor of Minerals Separation and in accord with the same judge's decision in the Hyde case—a decision reversed by the Appellate Court in San Francisco. Judge Bourquin asserts that "the great mass of new evidence herein is but cumulative of the Hyde suit." We have read the record in both suits and have found much that seemed different to an important degree.

This latest decision of the courts is calculated further to undermine public confidence in the judicial interpretation of the patent law. Not only has it become manifest that it is against the community interest to grant the monopoly of a process to patentees themselves ignorant of the underlying principles of their supposed invention, and therefore undeserving of a blanket right to collect royalties from those that introduce vital improvements, but it is clear that contests over the validity of patents and the infringement of them should be tried by judges having special qualifications, such as a scientific training, including a thorough familiarity with the fundamental principles of chemistry, physics, and mechanics. If all such cases could be settled on questions of law, the need for scientific acumen would not arise, but it is obvious that in these flotation suits the judges are asked to

swim in waters wherein heretofore some of them have not waded, in waters by which they have been scarcely wetted.

Commenting on the same decision the "Engineering and Mining Journal," New York, says in part:

The arguments of the learned counsel in the interminable flotation litigation, and Judge Bourquin's recent decision, remind us of the ancient theological controversies. We have no patience with it.

The flotation litigation was carried up to the Supreme Court of the United States, which in itself was an unusual event. The Supreme Court rendered a decision upholding the Minerals Separation patents upon the use of less than 1% of oil plus a certain kind of agitation. Whether anybody dislikes that decision does not matter in the least. It stands as the decision of the highest court and is to be obeyed and respected accordingly.

The Supreme Court was perfectly clear regarding the matter of less than 1% of oil. It was the patent claims so reading that were upheld. The claims that specified simply "a small quantity of oil" were declared invalid.

The Supreme Court was not equally specific about the matter of agitation. The Minerals Separation consequently pushed its suit against the Miami Copper Co. which involved that question and won its case on appeal to the Philadelphia court. Unfortunately the Miami Copper Co. did not present a clear-cut case with respect to the Callow process, the status of which has not yet been legally defined. The Philadelphia court intimated, however, that in its judgment the Callow process involves a kind of agitation that is different from what the Supreme Court contemplated.

Meanwhile, Butte & Superior changed to the use of more than 1% of oil and Minerals Separation brought suit against it, claiming that to be an infringement of its patents. Last week we remarked that Judge Bourquin's decision seemed to us to be contrary to the letter of the ruling by the Supreme Court. Mr. Williams, the distinguished counsel for Minerals Separation, has objected to that characterization, alleging that the Supreme Court's decision protects Minerals Separation against the use of any quantity of oil when the results obtained are the same as with less than 1%. We are unable so to read the decision of the Supreme Court, and look upon such a claim as a species of the quibbling that we find so irritating.

Judge Bourquin, however, falls right into this. What shall we say of the mind, which, after quoting the Supreme Court as saying that the patent must be confined to the results obtained by the use of oil within the proportion amounting to a fraction of 1% on the ore, and holding invalid the claims that simply refer to "a small quantity of oil," says, "It seems clear neither patent nor decision undertakes to say the process depends upon less than 1% of oil or is inoperative with 1% or more of oil?" Judge Bourquin's reasoning and his decision follow this line.

With all due respect to the learned judge, we do not think that he viewed the case in the light of common sense.

The several decisions of the American courts in the flotation case have exhibited much clever analysis and clear reasoning. Judge Bourquin's recent decision is the poorest contribution to this juridical literature. We do not think that the loser will be content to let the matter stand as it does now.

Sulman, Picard and Ballot, who obtained the basic patents now owned by Minerals Separation, are en-

titled to the highest possible credit for carrying forward the early work of others in the field of flotation to a brilliant outcome in the laboratory. The management of Minerals Separation exhibited great skill and perception in collecting a far-reaching group of patents pertaining to the new art. With bulldog persistency they have fought their case through the courts of Australia, Great Britain and the United States. No fair-minded person ought to want to deny them the rights that the highest courts have given them. But when, in the same breath, Minerals Separation asserts that the use of more than 1 per cent. oil gives woefully inferior results as compared with the use of less than 1 per cent., and yet claims the right to collect royalty on the use of any quantity of oil, in certain ways, there is created a feeling that hoggishness is being exhibited. While the mining public ought generously to admit the service that Minerals Separation has rendered to it, that company ought on its own part to recognize the service that mining and mill men, especially those of Broken Hill, rendered to it in making a commercial success of its process. In this, as in many other new steps in metallurgy, there was a big gap between the idea and the successful development of it in practice. The enormous success of the flotation process of ore concentration, which is admittedly one of the major improvements of all times in metallurgy, is the result of the work of many men.

#### PRESIDENT BALLOT DENIES CHARGES.

President John Ballot has made the following statement concerning the statements circulated by the "Northern Miner" and "Toronto World":

Rumors have been circulated to the effect that Minerals Separation North American Corporation is dominated or controlled by German influences. These rumors are absolutely and unqualifiedly false. There is no alien-enemy ownership, control or influence in the affairs of this corporation, which are entirely managed and controlled by a board of three directors, viz.: John Ballot and Dr. S. Gregory, British subjects residing in New York, and Frank Altschul, an American citizen, and Lieutenant of Ordnance in the American Army, who is a partner in the well known banking firm of Lazard Freres. The certificate holders of the corporation are all British subjects or American citizens.

The basis of these rumors appears to be a connection no longer existing, arising out of a contract made during 1913 with Beer, Sondheimer & Co., of Frankfort, Germany, when Great Britain and Germany were at peace, whereby the American Branch of that firm became the sole American agents for our predecessor, Minerals Separation American Syndicate (1913), Ltd., a British corporation. This agreement was made for a period of ten years, but on the outbreak of the war the connection with the Frankfort firm was immediately discontinued, while that with the American Branch was continued by special license and consent of the British Government, and remained effective till December, 1916, when, upon the formation of Minerals Separation North American Corporation, it was terminated.

From early 1914 onwards the company was directly represented in the United States of America by its directors, and since the formation of the American Corporation it has at all times managed and controlled its own affairs without any intermediary or agent.

Minerals Separation North American Corporation,  
JOHN BALLOT, President.

**IRON AND STEEL.**

The Iron Age says: Since announcement of prices agreed on by government and leading producers the trade has been in utter confusion. Surprise that prices were agreed on rather than imposed was followed by excited efforts to get details which thus far are lacking, and meanwhile business practically stopped.

While only six products are included in announcement, including the three forms of finished steel the government will buy most largely, prices on other products will be worked out and put into effect later. On billets, a pivotal intermediate product, strangely omitted, a \$15 advance over pig iron may fairly be expected. In two products not yet fixed—wire and wrought pipe—market prices lately maintained by leading producer would be nearly in line with new schedule.

Because of large tonnages on books, much of it at higher prices, there is the view that the new schedule will have little effect for some time on private transactions. Yet there are contracts on which monthly settlements are based on current market quotations. These will automatically be adjusted to agreed prices, and effect on other contracts is not to be overlooked. But the situation is unlike that of past declines, since buyers who might fail to specify on contracts cannot now find hungry mills waiting to supply them.

For manufacturing consumers of steel whose products have not advanced in proportion to steel, the new prices meet a situation that was increasingly difficult. But now there loom up the priority regulations from Washington and prospect that with increased buying from the allies at the low prices, there will be less material for distribution to non-war industries. Government control of steel works output is tightening steadily and it is intimated even licenses to buy may in time be required.

Much of the upheaval over the new agreement was due to vagueness of the Washington statement. The iron ore price of \$5.05, it develops, applies to non-bessemer Mesaba ore and is the same as contract price for 1917 shipments. The \$33 pig iron price, it is explained, is for basic or No. 2 foundry iron at northern furnace. On other grades differentials will be worked out by pig iron committee. On southern iron the furnace price will be made low enough to allow for freight to the North.

That prices named are to be made effective promptly on new transactions appears from quoting of basic pig iron at \$33 at valley furnace by two producers in central West and sale of 5000 tons of bessemer at \$36.30 at furnace, the tentative differential on bessemer being put at 10% over basic. Several producers of foundry iron announce willingness to book orders at \$33 for No. 2, against \$50 one week ago.

Before the new prices were named eastern Pennsylvania furnaces old 5000 tons of basic to one steel company and 4500 to another at \$45, delivered. In one case the steel company has a government contract on a cost-plus basis.

Coke producers have started promptly to establish the \$6 basis. On two contracts which call for fixing of price according to the market from day to day, shipments have already been made at \$6. However, the coke trade is well booked ahead and there will be no large amount of \$6 coke available for some time. Only recently long-time contracts were entered into at \$8.50 and are expected to be carried out.

Raising of government price on coal is pointed to by \$6 price for coke and by fairness of agreements on cop-

per and steel, and \$2.50 and \$2.75 are suggested prices, a new argument for advance being furnished by extravagant demands of bituminous miners.

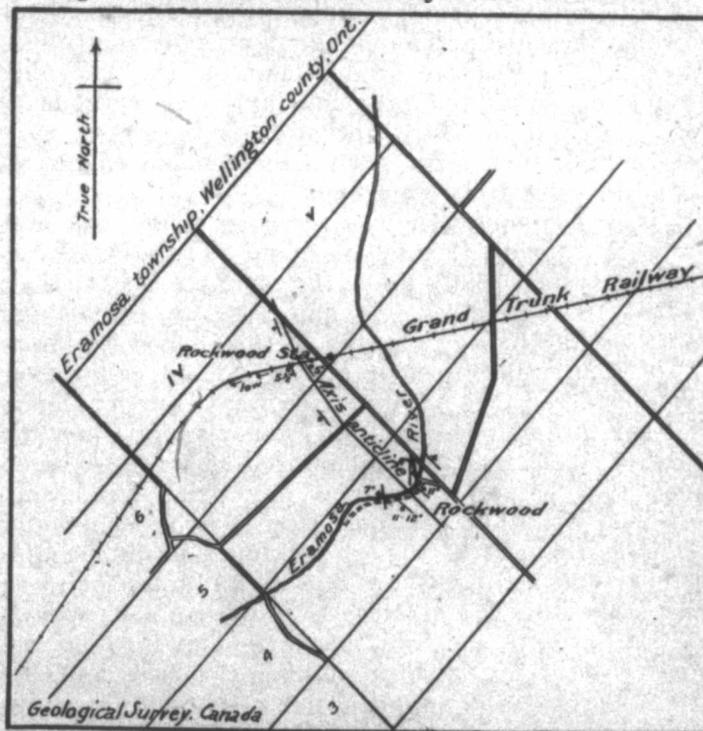
Steel and other committees of American Iron & Steel Institute will resume activities within a week, now that the industry has been put on a co-operative basis, and prices of all iron and steel mill products will be worked out. Apparently the government expects the large producers, under their agreement, to stimulate production, to find a way to supply raw materials to smaller producers in certain lines, particularly plates, so that they can take their share of government and allied contracts.

It is estimated 7,000,000 tons of steel products for government and allies will be scheduled in next 60 days to be provided for by steel companies in coming year.

Offering in United States of Canadian billets has been cited as indication of supply there overtaking demand. Yet it is known the British government is inquiring for 400,000 tons of shell steel from the United States and has yet to take 600,000 tons on existing contracts.

**WILL DRILL FOR OIL AT ROCKWOOD ONTARIO.**

In the "Canadian Mining Journal" of July 15, 1917, Mr. M. Y. Williams described the Rockwood anticline and stated in conclusion: "The anticline at Rockwood is the best defined of any known to the writer in southwestern Ontario, and affords a favorable location for prospecting for oil or gas." It is said that options on over 20,000 acres have now been secured on this locality by the Imperial Oil Company and others and that drilling will be commenced shortly.



Sketch map of Rockwood and vicinity, to show anticline at top of Niagara. Approximate scale of miles.

M. Y. Williams, 1917.

**FRASER ASBESTOS MINE REOPENED.**

The Asbestos Corporation of Canada has reopened the old Fraser mine in Broughton township and is installing a mill.

**BENNET-MARTIN CHROME AN ASBESTOS MINE.**

A company with the above name, capitalized at \$1,500,000 has been organized to work chromite and asbestos deposits in Quebec.

# The Cost of Coal

By F. W. Gray.

The following clipping from a recent issue of the New York "Herald" contains more truth than is usual in newspaper items concerning the coal trade. The newspaperman's point of view is rather ingenuously inserted in the concluding sentence of the quotation, which is as follows:

"Lack of modern business methods on the part of many of the coal operators of the United States, it was learned to-day, may necessitate a revision in many sections of the country of the prices fixed recently by President Wilson.

"Between forty and fifty coal operators from Tennessee and Kentucky admitted to-day to the Federal Rate Commission that it is impossible for them to ascertain from their books how much it costs them to mine their coal.

"These men appeared before the commission to protest against the figures fixed by President Wilson and asserted that such prices are so low that they will be forced to close down their mines. The commission called their attention to the fact that the operators had furnished the cost sheets on which the estimates of the commission had been based. It then developed that few, if any, of the operators keep systematic accounts of their receipts and expenditures. They were unable to give satisfactory explanations of the methods by which they had arrived at the figures originally submitted to the Federal Trade Commission. The only explanation suggested for such laxity of methods as those admitted by these operators is that they have been making such large profits as to make entries of expenditures entirely superfluous."

It is a moot question whether even those coal companies that pride themselves upon an up-to-date accounting system really know the ultimate cost of their product to themselves. It has been an astonishing feature of the fixing of prices in the United States to realize that well-informed public officers could ever have considered that \$2.00 per ton was a fair maximum price for bituminous coal. In Pennsylvania when the figure of \$2.00 was first announced it was also mentioned that before the war a fair price for bituminous coal was \$1.00 per ton. How sensible men could ever have thought they were making a profit on mining coal and selling it for one dollar a ton—and in some cases less—is a mystery to Canadian coal operators. It is quite possible that after paying for the actual cost of the labor in mining the coal, and the cost of the material supplies, it was possible in many of the favored coal mines of Pennsylvania to show a profit per ton with a selling price of one dollar, but, here lies the fallacy, the ultimate cost of coal to the producer is not complete when the items of labor and material are enumerated. The ultimate cost of coal should include provision for the full return of the capital invested, and reserves against the day when the coal areas approach exhaustion, when new areas must be acquired, or operations cease entirely. The truth is that coal is being sold, and has been sold without any allowance for the future, and merely from the standpoint of the operator who happens to be mining for the market at a given period. No fair appraisal of the cost of coal is possible unless the calculation extends over the whole life of the mine in

question. One might in some cases go even further, and state that such a calculation should take into account the whole coalfield in which the mine under consideration is situated.

In every coalfield that has been worked for any length of time there will be found abandoned collieries, forgotten areas, drowned sections, deep coals, thin coals, coals of meagre quality; the leavings and debris of profitable operations of long ago. When mining conditions become unprofitable and difficult, the operators move to more favored and newer territory, and the same vicious cycle commences. There is no particular nemesis until all the areas become partially exhausted, and then suddenly the operators and the public awake to a coal shortage and a great advance in prices. This condition of affairs has not yet arisen in the United States; indeed, so generous has nature been in her provision of coal there, that many years will pass before the country realizes fully what has happened, and realizes moreover that for many years coal was being sold and used at prices much below the actual cost of production. It may be quite frankly stated that coal has not and could not be mined at a legitimate profit and sold for a dollar per ton within the past ten years. Coal has been sold at less than a dollar per ton, and the operators have made money, but nevertheless that particular coal was sold below cost, and some day it will have to be paid for with interest.

A coal company, properly run and properly conceived, should when it finishes its life, have in its treasury every cent that has been expended in machinery, development and equipment, plus enough money to acquire a new coal area as large as that exhausted, and should during its career have paid out a reasonable interest return to its shareholders in the form of dividends. Did anyone ever hear of such a coal company? There are coal companies paying out large dividends, and many coal companies are envied because of their supposed prosperity. Yet if the accounts of these companies were properly kept, if the books made ample and proper provision for the future, either the dividends would have been less, or the price of coal to the public would have been greater.

If the Fuel Controller in the United States can keep down the price of bituminous coal to two dollars per ton, then the United States is to be congratulated, because nowhere in the civilized world is such a price possible for this essential raw material. If coal is properly burned, it should be possible to get more than two dollars per ton out of the by-products alone. When coal is bought and consumed to-day for two dollars a ton, it may be regarded as cheap fuel; so cheap that part of the bill will have to be paid by posterity.

The world will have to revise its opinions on the value of coal. In Europe it is many years since anyone, even coal operators, thought of coal in figures approaching a dollar or two dollars per ton. Over there coal is becoming appreciably scarcer, and, apart altogether from war conditions, has been steadily appreciating in cost year by year. Thanks to the fact that coal mines in Europe have in many instances been under the control of one family or one company for

periods approaching a century there has been established sufficient data to give some idea of the true cost of coal over long periods, and the necessity for proper reserves for depreciation of machinery, depletion of areas, amortization of capital, and future development, has been learned from experience. In the United States, and in Canada also, the process of industrial consolidation and mergers has obscured the data. Coal companies have added area to area and property to property. When a mine has become unprofitable it has been closed down and another one opened. Frequent changes of management and control have militated against long views and the perspective that experience gives. Properties have not been conceived as a whole. Their future has not been thought out, and the vaguest ideas have prevailed as to the true cost of coal to the producer. In many cases the acquirement of coal properties by railways and steel companies, and the merger of coal interests into steel interests and transportation problems has further obscured opinion. To-day, however, some sort of equilibrium has been reached, and the progress of industrial consolidations is not so rapid as it was some years ago.

The time seems to have arrived for a new viewpoint on the cost of coal; a viewpoint that will be based as much on the intrinsic value of the article, as on its apparent cost of production. If the edicts of the Fuel Controller in the United States do nothing more than cause coal operators to make serious enquiry into the ultimate cost of the coal they produce, it will be a good thing. If such an enquiry leads to an increase in coal prices to the consumer, that is not to be deplored as much as leaving the consumer under a false impression of the value of the coal he consumes. Economy in the use of coal in North America will not come until its value is appreciated. Easy come, easy go. Coal has been too cheap. It has been used too wastefully. The coal operator, and not the consumer, is chiefly to blame for this, and when the "Herald" reporter heads his article: "Operators admit figures submitted were guesswork," he is repeating a simple fact, only, unfortunately, many operators have not found out that their elaborate mining costs are incomplete. It has always been accounted a crime to extort unreasonable prices for necessary commodities. Is it any the less wrong to sell commodities below cost, and put all the loss upon posterity?

#### TO REVISE U. S. COAL PRICES.

Central coal operators in the United States competitive field have agreed to meet in part miners' demands on condition that government increase prices for coal at mines. Fuel Administrator Garfield is expected to revise coal prices upward so that wage increases may be paid. Chief point of difference now between operators and miners is how much of increase, if granted, shall be added to wages. Operators say that unless price increase more than meets wage advances, they cannot operate at profit.

#### OPENING NEW COAL MINES IN ALBERTA.

During the year 27 new coal mines have been opened in Alberta. Sinking is in progress at the new mine of the Edmonton Collieries in the Clover Bar district. The North American Collieries has taken over and is operating the Red Deer Valley Coal Co's. mine at Drunkeller.

#### ST. LOUIS MEETING A. I. M. E.

St. Louis, Mo. Oct. 8th.—Means of conserving the country's war minerals and engineering conferences on war service subjects will feature the 115th meeting of the American Institute of Mining Engineers which convened here to-day. Several hundred of the six thousand members of the Institute are in attendance and throughout this week the convention will inspect the coal fields of Illinois, the zinc and other mining operations of Missouri and the oil fields of Oklahoma.

Wastage of natural resources, the human element and capital in the coal industry, was pointed out in the course of to-day's meeting by Francis S. Peabody, President of the Peabody Coal Company and chairman of the Committee on Coal Production of the Council of National Defense. Suggestions of other members of the Institute for economy in mining and handling the country's resources were along similar lines in addition to the discussion of plans for opening up mining operations in sections which might not be commercially profitable except in emergency times.

Ways of improving the economic situation in the coal mining industry were presented by Professor C. M. Young, of the University of Illinois. Professor Young said, "It is highly desirable in featuring the ultimate welfare of the coal industry that there should be some control of the markets and transportation. It would be far better for the fuel industry if there were some such control in this country as exists in some European countries, through which there should be a proper regulation of output and of markets, so that each district may have its share of the business. I have no doubt that the operators of Illinois as well as most other states would welcome such control if they could only feel sure that it would be a constructive one."

This afternoon the Mining Engineers held a patriotic meeting and this evening a banquet. To-morrow they will take a boat trip to Herculaneum in addition to a visit to coke plants and fire clay plants. Technical sessions will be held throughout the day.

St. Louis, Mo. Oct. 9th.—Increasing the country's production of sulphuric acid by two million tons, which can be made possible chiefly through the greater production of pyrites in this country, will be one of the principal war services of the American Institute of Mining Engineers, according to plans discussed at the second day's sessions of the Institute which is in convention here. Sulphuric acid, besides being a prime requisite in the making of ammunitions, is important as a fertilizer ingredient and to the chemical industry.

Government authorities at Washington have informed the Institute that 6,250,000 tons of sulphuric acid were produced in this country last year, and in order to prosecute the war without handicap in this country, it is necessary to increase this production to 8,000,000 tons during 1917. The principal pyrites mines are now located in Virginia, California and New York, but on account of transportation difficulties, the California deposit is almost unavailable. Last year 40% of the sulphuric acid production came from pyrites shipped from Spain, 6% from Canada, 13% from domestic pyrites, 22% from smelter acid, and 19% from native sulphur.

The country's pyrites supply is said by the Mining Engineers to be only second in importance to increasing the supply of manganese ores for the American steel industry. The conservation of this mineral and methods to increase production are also considered by the Institute.

### PERSONAL AND GENERAL

H. E. T. Haultain, professor of mining in the University of Toronto, has been appointed vocational training officer for Ontario.

Mr. W. E. Segsworth, Toronto, has been appointed superintendent of vocational training of returned soldiers.

Capt. J. C. Riley is home on leave.

Major R. W. Coulthard expects to be home on leave shortly.

Lieut. W. M. Goodwin has been awarded the Military Cross for "conspicuous gallantry and devotion to duty."

Mr. Chas. F. Caldwell, of Kaslo, West Kootenay, B.C., who is largely interested in mines in Ainsworth mining division, left Kaslo on September 24 on a business trip to Chicago.

Messrs J. Charbonnier and Raoul Green, of the West Canadian Collieries, Ltd., Blairmore, Alberta, on September 25 visited the Joker mining property, situated at the head of the south fork of Kaslo creek, British Columbia. Years ago that property was operated by its French owners, who were also interested in coal mining Blairmore district.

Mr. R. W. M. Hunter, mining engineer, has returned to Victoria, B.C., after having been absent in other parts of Canada for about two years. He was in Nova Scotia for a while, and afterward visited mining districts in Northern Ontario and Manitoba.

Mr. C. H. Seymour Baker, who for some years has been investigating quartz occurrences in Cariboo district of British Columbia, recently returned to Barkerville, Cariboo, after having spent the winter in England.

Mr. R. G. Miln, formerly with the Tyee Copper Company and in recent months with the Ladysmith Smelting Corporation, is now superintending the development of the Blue Grouse mining property, situated near Cowichan lake, Vancouver island, which mine is making occasional small shipments of ore to the Ladysmith Copper Corporation's smelting works on Vancouver island.

Mr. E. W. Westervelt, formerly of Rochester, New York, is now superintendent for the Hobson Silver-Lead Mining Co., at Ymir, in Nelson mining division of British Columbia.

Mining and Scientific Press states that Mr. J. C. Houston had to resign as superintendent for the Dome Mines owing to ill health and is now examining mines in British Columbia.

The secretary of the Western Branch of the Canadian Mining Institute is arranging to hold a meeting of the branch at Merritt Nicola Valley, B.C., with a supplementary meeting to follow at Princeton, Similkameen. These meetings will probably be held on November 7th and 10th, respectively.

Mr. Thos. H. Rea, for some time engaged in mining in Ontario, is now superintendent of the Debenture group mining property situated in the Hazelton region of the Omineca mining division of British Columbia.

Mr. R. D. Fetherstonhaugh, of Calgary, who has been directing the development of the Copper Chief group of mineral claims in Trout Lake mining division, Lardau district, British Columbia, returned to Alberta recently with the object, it is stated, of organizing a company to acquire and operate the Copper Chief property.

Mr. W. J. Elmendorf, for several years developing a mining property in Portland Canal region, British Columbia, but now of Seattle, Washington, has gone

to Copper River, Alaska, on mining investigation business.

The Granby News, the monthly publication of which the Granby Consolidated Co. commenced recently chiefly for the edification and information of its numerous employees, says: "Miles Barrett, foreman of the furnace department of the Granby Consolidated Co's. Grand Forks plant since the inception of smelting there on August 21, 1900, when the first furnace was blown in, and at present general foreman of the furnace and converter departments, has the honor of having been the first foreman of a copper smeltery in British Columbia, as he came from the Great Falls smeltery of Montana in 1895 and blew in the Hall Mines smeltery at Nelson, B.C., on January 19 of that year. He brought with him from Montana ten men, one of whom, George Millar, is now furnaceman for Grand Forks. Alex. Clunis and Hugh Crosby, shift bosses, and Albert Benson, furnace man, whom he brought over from Nelson with him are still on the job. At that time Paul Johnson was smeltery superintendent, H. E. Croasdaile, financial manager, and M. S. Davys, mine superintendent at the Silver King mine, near Nelson."

From the Weekly Star, Whitehorse, Southern Yukon, it is learned that one day last month there arrived in Whitehorse by special train, Messrs W. H. Aldridge and Henry Krump, mining engineers of New York City, and Mr. John M. Turnbull, of Vancouver, B.C. The party had been to Taku arm, Atlin mining division, to examine the Engineer gold-quartz mine, the property of Capt. John Alexander, for the purchase of which Eastern capitalists, whom the engineers above-mentioned represented, are now negotiating. The party was accompanied here by Mr. H. McNeill, a prominent lawyer.

A meeting of the Council of the Canadian Mining Institute was held in Montreal on Oct. 5.

Dr. W. G. Miller has returned to Toronto after examining new goldfields in Northern Ontario. He is now in St. Louis attending a meeting of the A. I. M. E.

Mr. J. B. Tyrrell is in Newfoundland. He is expected to return to Toronto about Oct. 20.

Major Neil "Foghorn" Macdonald was the guest of honor at a meeting of the Montreal branch of the Canadian Mining Institute on Oct. 5.

### YUKON NEWS.

Mr. R. O. Ebbert, of Dawson, Yukon Territory, when in Seattle, Washington, last month, said that prosperity elsewhere and the high price of materials are causing a slight abatement of industrial enterprises in Yukon and Alaska.

"I have tried to get away four times myself," said Mr. Ebbert, "but always have returned. This time I hope never to return to the North. The country around Dawson, where-I was located, seems to have seen its best days."

Mr. Ebbert is an electrical engineer and was in the employ of the Canadian Klondike Mining Company, which operates four gold dredges near Dawson. Three of these dredges are the largest in the world, Mr. Ebbert said, and last winter was the first that one was ever kept operating anywhere at such low temperature. This winter, Mr. Ebbert said, none of the dredges will be operated.

### GOOD DEMAND FOR GRAPHITE.

The Plumbago Syndicate which took over the properties of the Dominion Graphite Co. at Buckingham, Quebec, is making regular shipments. Flake graphite for crucibles is in great demand.

## SPECIAL CORRESPONDENCE

## BRITISH COLUMBIA.

Quarterly dividends have been declared by several companies operating metalliferous mines in British Columbia. The Consolidated Mining and Smelting Company of Canada, Ltd., has declared a 2½ per cent. dividend, payable October 1st, total amount, \$210,695; the Granby Consolidated M. S. & P. Co. will pay a dividend of \$2.50 a share on November 1st, total amount, \$374,963. The Hedley Gold Mining Co.'s quarterly dividend and bonus, together at the rate of 20 per cent. per annum, total \$60,000, and the Standard Silver-Lead Mining Co.'s dividend, totalling \$100,000 were payable on October 1st.

Ore receipts at Trail, West Kootenay, show an appreciably large increase. The figures for the last part of September are not yet available, but for three weeks ended September 21st, the total was 28,739 tons, as compared with 24,052 tons for the corresponding period of August and 11,665 tons for that of July.

## West Kootenay.

West Kootenay mines shipped 14,112 tons of ore and concentrates to the smeltery at Trail during three weeks ended September 21st. The proportions from the several divisions were: Ainsworth, 1,168 tons; Slocan, 1,849 tons; Nelson, 375 tons; Rossland, 10,720 tons. This increased output of ore indicates a return toward normal conditions now that more coke is being received at the smelting works. The greater part of the gain was made by Rossland mines, from which little ore was shipped during the period of suspension of operation of the copper furnaces at Trail. Apart from production and shipment of ore there is development activity in different parts of this district which gives promise of increasing the output of ore ere long. In Ainsworth and Slocan divisions especially is this the case, and in comparatively small degree in other parts.

**Slocan.**—During 52 days ended September 21st, Slocan mines shipped to the Consolidated-Mining and Smelting Co.'s smeltery at Trail, 4,590 tons of ore and concentrate, chiefly silver-lead. Those situated in the neighborhood of Slocan lake that were among the shippers, namely the Galena Farm, Hewitt, Lucky Thought, Standard and Van Roi, sent out a total of a little more than 1,900 tons, about one-half of which was from the Standard mine. Each of these Slocan Like mines, with the exception of the Lucky Thought, has its own concentrating plant, so it is probable the greater part of the product shipped from those mines was concentrate. The other Slocan shippers were the Queen Bess, above Alamo; the Noonday, Slocan Star and Surprise, in the Sandon region; and the Lucky Jim and Rambler-Cariboo, in the eastern part of the Slocan division.

The net earnings of the Slocan Star Mines, Ltd., in August, were about \$4,500, according to a published preliminary estimate stated be based on reports received from the Slocan Star mine, which amount is about the same as that reported for July, in which latter month the company's operations were replaced on an earning basis. Up to September 14th, shipments in that month had been 110 tons of zinc concentrate and 40 tons of lead. The zinc is valued at \$25 to \$31 to the ton. The lead product was of higher grade than the last lot on which settlement was made, which lot contained 46 per cent. lead and 56 oz. of silver to the ton. The carload shipped in the early part of Septem-

ber assayed about 100 oz. of silver to the ton and 60 per cent. lead. On September 18th, Northwest Mining Truth, Spokane, stated that a telegram received from the mine superintendent read as follows: "No. 8 level looks favorable to-day. Are now sorting clean ore from this level. No. 10 level still looking favorable. Are opening good large body of zinc ore above No. 3 level. General outlook very favorable."

**Rossland.**—Mr. Ernest Levy, who for some years has been in charge of the Josie group of mines, owned by the Le Roi No. 2, Ltd., of London, England, was reported recently to have given a representative of a Spokane, Washington, newspaper, the following information: "The Le Roi No. 2, Ltd., at Rossland, B.C., has resumed shipment of ore from its Josie group of mines to the smeltery at Trail after an interruption of several months. The smeltery at Ladysmith, Vancouver Island, received much of the product of those mines up to the time of the change several weeks ago. We have been shipping 1,200 to 1,500 tons a month, and that quantity may be exceeded in September. Last year the average value of the ore shipped was \$22 a ton. We expect that before long we shall again be employing the full number of men at the company's four properties."

The newspaper quoted from stated further that: "The average metal contents of ore from the Le Roi No. 2 company's mines in thirteen years was 0.8142 oz. of gold, 1.0627 oz. of silver, and 39.08 lb. of copper to the ton, so it is gathered from the company's reports. The ore milled, after sorting out the better ore for shipping crude, averaged 0.11 oz. of gold, a little silver, and 0.5 per cent. copper. The recent increase in the price of silver has added about 40 cents a ton to the value of the ore." It may be stated, further, that during its fiscal year ended September 30th, 1916, the Le Roi No. 2, Ltd., produced 7,297 oz. of gold, 17,745 oz. of silver, and 732,631 lb. of copper. The production figures for the fiscal year just ended will not be made public until after the company's annual general meeting shall be held in London several months hence.

## Coast.

After having been in operation about five weeks, the copper smeltery at Ladysmith, Vancouver island, is again inactive, the reason being that there is not at the present time sufficient ore obtainable to allow of the furnaces, or even a single furnace, being kept in blast. This is greatly to be regretted, for it had been expected that with the re-establishment of a custom ore smelting works on the British Columbia coast there would be a number of small mines worked, and that these would maintain an output large enough to keep the smelting works in operation. It is now plainly evident that there is nothing like enough ore obtainable for this to be done. Not that there is not a considerable quantity of ore being produced, but that all the larger producers had made contracts for the smelting of their ores elsewhere before the Ladysmith smeltery was reopened, and, indeed, before negotiations were commenced that eventually led to a resumption of smelting at Ladysmith.

In this connection, it may be mentioned that two mining properties from which a fair amount of ore had been expected are not continuing production owing to returns from ore shipped having proved disappointing. It may be that under experienced supervision a less discouraging result might be obtained, but for the present the position is that ore was shipped and it proved to be of a lower average grade than had been expected

and consequently the problem of making the mines pay their way has to be faced and solved if production is to be resumed and kept up.

On the other hand, there are two properties, one near Cowichan lake and the other in the Sooke district, southwest of Victoria, that have been proved to have ore of a good enough grade to pay for operation if transportation costs can be kept down. This seems to be practicable in the case of the Sooke property, but the Cowichan Lake property is not so fortunately situated, so that until its transportation difficulties shall have been overcome it is hardly likely to be a regular shipper of any considerable quantity of ore to Ladysmith.

Newspapers have printed reports to the effect that the new mill erected and equipped by the Belmont-Canadian Mines Company at Surf Inlet, Princess Royal Island, is now being operated, but no authenticated particulars have been received. Another report is that a 50-ton concentrating plant is to be put in at the Bowena copper mine, on Bowen island, Howe sound, Vancouver mining division, but since the same publication prints the pure fiction that "the Ladysmith smeltery will be enlarged at once at a cost of \$2,000,000... and the extensions will increase the capacity to 1,200 tons a day," and this at a time when even 100 tons of ore a day is not regularly obtainable, all the British Columbia mining news from that source may well be regarded with suspicion. However, there seems to be a lull for the time in the newspaper establishment of iron and steel manufacturing works near Vancouver, which is something to be thankful for, though there may be another outbreak of this malady at any time. Meanwhile there is not any considerable quantity of iron ore being mined in British Columbia.

#### General Notes.

The attention of the authorities has been called in print to an advertisement, appearing in a Vancouver newspaper, of The Business Development Co., Limited, Agents for the River Gold Recovery Co., Limited (non-personal liability). The advertisement is headed "Who Is This Man?" and then allegations are made relative to a man stated to have come from Australia and to a gold recovery process he is announced to be introducing. One allegation in the advertisement is that "by acting immediately you can secure \$5 for every dollar invested." Another allegation is contained in the following sentence: "Remember the Minister of Mines, in an official statement, estimates the value of the gold-bearing river areas of this Province at a billion dollars." Incidentally, the correspondent of The Canadian Mining Journal, while he does not deny that such a statement was ever made or published officially, does state that he never before read or heard of it.

#### ASBESTOS.

The production of asbestos in Canada during 1916 and the first half of 1917, according to returns received by the Mines Branch, Department of Mines, Ottawa, is shown in the following table:

	Tons.	Value.	Per Ton.
Crude.....	2,086	\$1,069,761	\$512.77
Milled fibre.....	62,675	1,999,994	31.91
Total.....	64,761	\$3,069,755	\$47.40
Asbestic.....	8,442	21,820	2.58

#### THE QUESNEL FORKS COMPANY WINS IMPORTANT CASE.

Victoria, Sept.13.—The Quesnel Forks Gold Mining Company, controlled by Mr. John Hopp and others, was given judgment in the supreme court yesterday by Mr. Justice Macdonald against Robert T. Ward and the Cariboo Mining Company, the action being brought to establish the plaintiff's right of ownership to certain mining property in the Cariboo district. The trial lasted seven days, two of which were taken up in legal argument, His Lordship's judgment taking one hour to dictate.

#### History of the Case.

According to the evidence, the history of the case has been given as follows: In the year 1894 the Canadian Hydraulic Mining Company was owner of certain placer mining leases and Chinese placer claims, which now form the property known as the Bullion Mines. At that time there was no provision in the Mining Act by which these holdings could be consolidated, that is, under which authority could be given to do on any portion of this property all the work required to be done on each particular lease or claim.

As the company wanted to consolidate and operate the properties as one, it went to the Legislature to ask that its holdings be consolidated. This was done and a lease was issued to the company covering the whole of the ground which is owned and also authorizing the issue of a lease for some other ground adjoining these holdings.

The Cariboo Hydraulic Mining Company obtained from the Gold Commissioner the lease authorized by the act of 1894, and in the following year went back to the Legislature and had the lease confirmed, or made a statutory lease. This lease, amongst other things, provided that "if the Cariboo Hydraulic Mining Company or its assigns, should cease, for the space of two years, to carry on mining operations upon such premises or fail to do any work which would conduce to the facilitating of the carrying on of such work as aforesaid, or should completely abandon such premises for the space of one year, then the lease should become absolutely forfeited, and the terms thereby created and all rights, privileges and authorities thereby granted and conferred or intended so to be, should, ipso facto, at the expiration of the times aforesaid, cease and be void as if the said lease had never been made.

At the time the Cariboo Hydraulic Mining Company obtained this lease, in order to hold its mining property, it had to have a free miner's certificate. In or about 1896 the Cariboo Hydraulic Mining Company appeared to have assigned its rights under this lease to the Cariboo Gold Mining Company. The property was then worked until 1907, by which time the Cariboo Gold Mining Company became convinced that the property could not be worked at a profit and at the end of 1907 it sold out practically all its mining equipment and closed down the mine.

Mr. Hobson, who had been the manager of the Cariboo Gold Mining Company, thought that the mine could be worked at a profit, however, and so he appears to have staked it on the supposition that the Cariboo Gold Mining Company had abandoned the property. The latter company, however, got out an injunction and prevented him from carrying in operations after the close of the season of 1908.

After 1908 absolutely nothing was done on the property in the way of mining until 1914. One of the terms of the lease was that the company should do at

least \$5,000 worth of work each year. Before 1907 this provision had been duly complied with. In 1908 an arrangement was made by which it would seem that the Minister of Mines agreed that the company should be given credit for the work it had done before 1907, in excess of the statutory requirements and that this excess should be applied in satisfaction of work required for the years 1908 to 1912.

**Hopp Locates Claims.**

In November, 1913, the property was located by John Hopp and others as being vacant Crown land. Mr. Ward, one of the defendants, claimed that he had agreed to purchase the property from the company in October, before the staking by Hopp. It appeared, however, that as soon as he became aware of the possibility of the Cariboo Gold Mining Company having no title to the land, he entered into a new arrangement with that company under which the price he was willing to give before was cut in two and he assumed the risk of the Cariboo Gold Mining Company having no title to the property.

On May 31, 1912, the Cariboo Gold Mining Company failed to pay its rentals and also failed to take out a free miner's certificate. The fact of failing to take out a free miner's certificate was claimed to cause and absolute and immediate forfeiture of the mining property to the Crown.

In answer to Ward's contention that he owned the property as an assignee of the Cariboo Gold Mining Co., Hopp contended that the Cariboo Gold Mining Co. had nothing whatever to give Ward, as all its rights in the property had become forfeited to the Crown in 1910 on account of the failure of the company for those two years, and the succeeding years, to carry on mining operations. Hopp also contended that the Cariboo Gold Mining Co. in 1912 forfeited all its mining property on account of its failure to take out a free miner's certificate.

**U. S. SOLDIERS AND SAILORS RELIEVED FROM NECESSITY OF PERFORMING ASSESSMENT WORK ON MINING CLAIMS.**

Officers and men who have entered the military service of the United States may hold mining claims without complying with the section of the law which provides that \$100 worth of work shall be performed, annually, upon each unpatented claim. This step was taken by Congress and approved by the President, as a war measure, the text of the resolution reading as follows:

"Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, that the provisions of section twenty-three hundred and twenty-four of the Revised Statutes of the United States, which require that on each mining claim located after the tenth day of May, eighteen hundred and seventy-two, and until patent has been issued therefor, not less than \$100 worth of labor shall be performed or improvements made during each year, shall not apply to claims or parts of claims owned by officers or enlisted men who have been or may, during the present war with Germany, be mustered into the military or naval service of the United States to serve during their enlistment in the war with Germany so that no mining claim or any part thereof owned by such person which has been regularly located and recorded shall be subject to forfeiture for non-performance of the annual assessments during the period of his service or until six months after such owner is mustered out of the service or until six months after

his death in the service: Provided, That the claimant of any mining location, in order to obtain the benefits of this resolution, shall file, or cause to be filed, a notice in the office where the location notice or certificate is recorded, before the expiration of the assessment year during which he is so mustered, giving notice of his muster into the service of the United States and of his desire to hold said mining claim under this resolution."

**MINING AT WHITEHORSE, YUKON.**

On September 21st the Weekly Star printed the following news of mining in Whitehorse, Copper camp, in Southern Yukon:

Last week the crew of the government diamond drill, now working at the Valerie mine, went down 105 feet at a point a few feet west of the pumping station and struck a considerable body of ore. The drill was then removed about 50 feet southeastward and a new hole was then started. At a depth of 50 feet a body of high grade ore nine feet thick was passed through. There are night and day shifts on the drill.

John Warne is at the Valerie getting out timbers for anew pumping station that is to be put in there shortly.

A carload of the finest looking copper ore ever mined in this district is being hauled to town from the Rabbit's Foot mine and put on the car for shipment to an outside smelter.

:-: **Markets** :-:

**SILVER PRICES.**

		New York. cents.	London. pence.
September	24.....	108½	55
"	26.....	106½	54
"	25.....	108½	55
"	27.....	101½	51½
"	28.....	97½	49½
"	29.....	96½	49
October	1.....	95½	48½
"	2.....	93½	47½
"	3.....	93½	47½
"	4.....	92½	46¾
"	5.....	91½	46¼
"	6.....	90½	46
"	8.....	90½	45¾

**TORONTO MARKETS.**

- Cobalt oxide, black, \$1.50 per lb.
- Cobalt oxide, grey, \$1.65 per lb.
- Cobalt metal, \$2.25 per lb.
- Nickel metal, 45 to 50 cents per lb.
- White arsenic, 15 cents per lb.
- Oct. 11, 1917—(Quotations from Canada Metal Co., Toronto)
- Spelter, 10½ cents per lb.
- Lead, 10½ cents per lb.
- Tin, 63 cents per lb.
- Antimony, 18 cents per lb.
- Copper, casting, 32 cents per lb.
- Electrolytic, 33 cents per lb.
- Ingot brass, yellow, 20 cents; red, 25½ cents per lb.
- Oct. 11, 1917—(Quotations from Elias Rogers Co., Toronto)
- Coal, anthracite, \$9.50 per ton.
- Coal, bituminous, nominal, \$9.00 per ton.

STANDARD STOCK AND MINING EXCHANGE.

(Courtesy of J. P. Bickell & Co.)

Closing prices, October 9th, 1917.

Gold.		
	Bid	Ask
Apex. . . . .	.07 <sup>3</sup> / <sub>8</sub>	.08
Dome Extension . . . . .	.11 <sup>1</sup> / <sub>2</sub>	.11 <sup>3</sup> / <sub>4</sub>
Dome Lake . . . . .	.15 <sup>1</sup> / <sub>2</sub>	.16 <sup>1</sup> / <sub>2</sub>
Dome Mines . . . . .	8.00	8.20
Foley O'Brien . . . . .	.....	.55
Imperial. . . . .	.01 <sup>7</sup> / <sub>8</sub>	.02
McIntyre. . . . .	1.40	1.41
New Holly . . . . .	5.20	5.25
New Ray . . . . .	.55	.58
Porcupine Crown . . . . .	.....	.42
Porcupine Vipond . . . . .	.25	.....
Preston East Dome . . . . .	.03 <sup>1</sup> / <sub>2</sub>	.04
Teck-Hughes. . . . .	.43	.45
West Dome . . . . .	.16 <sup>1</sup> / <sub>2</sub>	.16 <sup>3</sup> / <sub>4</sub>

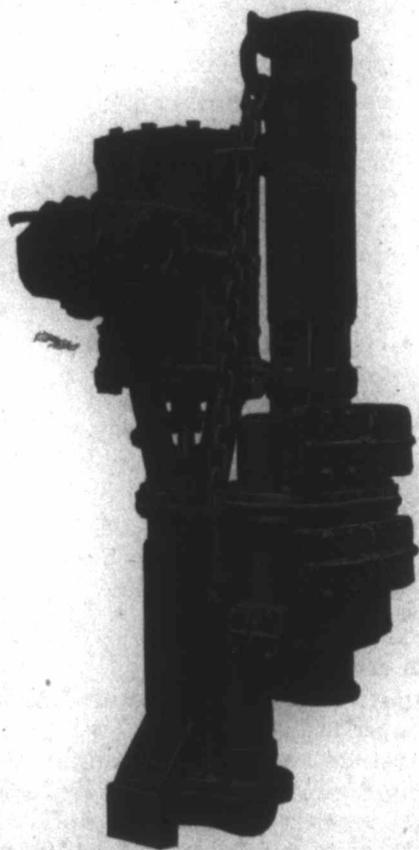
Silver.		
	Bid	Ask
Adanac. . . . .	.15 <sup>1</sup> / <sub>2</sub>	.15 <sup>3</sup> / <sub>4</sub>
Bailey . . . . .	.04	.05
Beaver . . . . .	.37	.38
Chambers Ferland . . . . .	.12	.13
Coniagas . . . . .	.....	4.00
Crown Reserve . . . . .	.24	.25
Gifford . . . . .	.04 <sup>1</sup> / <sub>2</sub>	.04 <sup>7</sup> / <sub>8</sub>
Great Northern . . . . .	.05 <sup>1</sup> / <sub>2</sub>	.06
Hargraves . . . . .	.10	.10 <sup>1</sup> / <sub>4</sub>

Hudson Bay . . . . .	.....	40.00
Kerr Lake . . . . .	5.30	5.55
La Rose . . . . .	.43	.45
McKinley . . . . .	.60	.61 <sup>1</sup> / <sub>2</sub>
Nipissing . . . . .	8.00	8.05
Peterson Lake . . . . .	.09 <sup>3</sup> / <sub>4</sub>	.10
Right of Way . . . . .	.05	.05 <sup>1</sup> / <sub>2</sub>
Seneca Superior . . . . .	.02	.02 <sup>1</sup> / <sub>2</sub>
Silver Leaf . . . . .	.01	.02
Temiskaming . . . . .	.30	.30 <sup>1</sup> / <sub>2</sub>
Trethewey . . . . .	.14	.14 <sup>1</sup> / <sub>2</sub>
Wettlaufer. . . . .	.05	.07
Provincial . . . . .	.37 <sup>3</sup> / <sub>4</sub>	.38
Mining Corporation . . . . .	4.00	4.20

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