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Editor: REGINALD E. HORE, B.A. (Toronto)

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WANT ANALYTICAL LABORATORY IN CENTRAL B.C.

Mining men of British Columbia want the Dominion Government to establish an analytical laboratory at some central mining point in the Province, and an agitation to this end has been in progress for some time. In the hope that his action may induce the Federal authorities to take this step, Mr. M. S. Davys, of Kaslo, B.C., has offered through the Kaslo (B.C.) Board of Trade to furnish a building for such a mill and it is understood that the municipal authorities would be agreeable to furnishing the necessary electrical power. It is admitted that a laboratory of the kind would be of material service to the operators of the southern interior of the Province.

Mr. Wm. Thomlinson, ore sampler for the Canadian Munitions Board, recently visited Franklin camp and forwarded ore samples to the Dominion Assay Office, Vancouver. While the returns did not demonstrate the presence of platinum in commercial quantities they were sufficiently satisfactory to warrant a closer survey of the entire district.

The Dominion Government has established a platinum camp on Slate Creek, a tributary of the Tulameen near Princeton, B.C. It is in charge of Mr. George E. MacKenzie, of the munitions commission.

The refusal of the miners of the Crow's Nest District to go to work pending an inquiry is sure to react to the disadvantage of coal miners at Fernie and elsewhere. Those who are responsible for increasing the shortage of coal at this time, have little cause to wonder that they fail to secure the sympathy of the public. Miners and operators of coal mines have alike a duty to perform at this time and no differences between them are so great that they should be allowed to retard the carrying on of war work.

It is reasonable to expect that wages should be increased as cost of living and danger in mines increases. It is reasonable also to expect that every effort will be made by both miners and operators to settle their differences without retarding production. It must be admitted that it is not always easy to settle labor disputes, and that one or the other side is often disposed to be unreasonable. It must be admitted by the miners that a serious endeavor is being made to investigate their grievances, and their refusal to work on Mr. Armstrong's terms will convince the public that they are shirking their duty, regardless of consequences. We hope that in the interests of miners generally the miners of Fernie District will take action that will prove that they have been misrepresented. We would like to believe that they have, for otherwise their conduct is a disgrace to the industry.

The great successes of the Allies during the past three months have brought victory much nearer. Few of us had reason to expect that success would come so soon. It was confidently expected that victorious advances would come in the spring of 1919; but already the change has come over Europe.

Great activity in the mining and metallurgical industries must follow the war. While a great endeavor has been made to keep up production of minerals and metals during the war, there has been greater consumption than production. The period of reconstruction will make great demands on our basic materials. During the war the shortage of men, machinery and supplies and their high cost has imposed serious handicaps on the mines, they have done well under these handicaps and it is certain that they will do better under normal conditions.

Very successful results are being obtained at Quyon in treating molybdenite by the flotation process. At Cobalt the flotation process is a great boon to operators, and is making possible the recovery of silver from low grade material at a time when the price is good. The mining industry in Canada, as elsewhere, owes more to those who invented and developed the flotation process than is generally acknowledged.

The Reports of the Resident Engineers of B. C.

By E. Jacobs.

The Annual Report of the Minister of Mines of British Columbia for the calendar year 1917, issued recently, includes the following official comment:

"During the session of 1917 the Hon. the Minister of Mines brought in the 'Mineral Survey and Development Act,' which was passed on May 19, 1917, and under the provisions of which the Province was divided into six Mineral Districts, to each of which there was appointed a Resident Engineer with headquarters at a centrally located point in such district.

"In the district to which he was appointed the Resident Engineer is expected to devote his whole time to the performance of the duties of his office, and to carry on continuously a mineral survey of his district, keeping records of the same, and of the mining and mineral developments taking place, and at the same time to assist prospectors and others with such advice as may be necessary and may come within the scope of a mining engineer's work.

"Aside from special reports which may be called for by the Minister, the Resident Engineers are expected annually to make a comprehensive report covering all matters relating to mining, mine development, and prospecting that have occurred within the year in their respective districts.

"These annual reports of the Resident Engineers are given later in this general report, and form the basis of the information given in respect to the mineral industry and its development within the Province.

"As the Resident Engineers did not take office until the season of 1917 was well advanced, and as the work was new to many of them, their reports are not as complete or comprehensive as they probably will be next year."

The value of mineral production in 1917, and the total value for three years 1915-1917 as shown in the last Annual Report, were as under:

VALUE OF PRODUCTION, 1917

District	Metallic	Non-metallic	Total
No. 1—Northwestern.....	\$8,405,696	79,742	\$8,485,438
No. 2—Northeastern.....	525,641	4,256	529,897
No. 3—Central.....	333,822	540,791	874,613
No. 4—Southern.....	4,191,960	62,005	4,253,965
No. 5—Eastern.....	8,970,491	2,058,836	11,029,327
No. 6—Western.....	4,856,864	6,980,288	11,837,152
Totals.....	\$27,284,474	\$9,725,918	\$37,010,392

TOTAL VALUE OF PRODUCTION FOR THREE YEARS, 1915-1917.

District	Metallic	Non-metallic	Total
No. 1—Northwestern.....	\$19,968,211	\$149,164	\$20,117,375
No. 2—Northeastern.....	2,178,300	15,256	2,193,556
No. 3—Central.....	737,084	1,326,252	2,063,336
No. 4—Southern.....	15,681,912	188,679	15,870,591
No. 5—Eastern.....	30,195,649	8,709,138	38,904,787
No. 6—Western.....	11,348,981	18,249,736	29,598,717
Totals.....	\$80,110,137	\$28,638,225	\$108,748,362

The various mining divisions included in the several Mineral Survey Districts are:

In No. 1—Northwestern District—Atlin, Stikine, Liard, Skeena, Portland Canal, Bella Coola, and Queen Charlotte.

In No. 2—Northeastern District—Omineca, Peace River, Cariboo, and Quesnel.

In No. 3—Central District—Clinton, Lillooet, Kamloops, Ashcroft, Nicola, Vernon, and Yale.

In No. 4—Southern District—Similkameen, Osoyoos, Greenwood, and Grand Forks.

In No. 5—Eastern District—Golden, Windermere, Fort Steele, Ainsworth, Slocan, Slocan City, Trout Lake, Nelson, Arrow Lake, Revelstoke, Lardeau, and Trail Creek (Rossland).

In No. 6—Western District—Nanaimo, Alberni, Clayoquot, Quatsino, Victoria, Vancouver, and New Westminster.

The Northwestern District.

The report of the Resident Engineer for the Northwestern District may be fairly adjudged the best-balanced and generally the most commendable of the lot. It is an excellent report, giving prominence to the most important things, wasting little or no space on unimportant ones, and treating briefly, but sufficiently, with regions and properties of promise. Where there was no opportunity to visit an important part of the district, as in the case of the Atlin gold field, a summary of results was obtained from the district Gold Commissioner, and included in the report. Bibliography and lengthy disquisitions on geology are left out, and instead useful general information is given, so that prospectors and miners are not confused by much technical detail. Most space is given to the important copper mining and smelting enterprise established in the district by the Granby Consolidated Co., the incorporation in the report of a comprehensive description—fully authentic since written by one of the company's prominent officials—being timely and of particular value to those desirous of knowing what progress has been and is being made by that company in that part of the province. Further, the mention of the company's exploration work and prospecting activities on Klekane inlet, Gibson island, Ecstall river, Portland canal, Bear river, and elsewhere, in its search for new mines, indicates the extending enterprise of this company.

The account given of the gold-mining property of the Belmont-Surf Inlet Mines, on Princess Royal island, is also of much interest. The mine, concentrator, hydro-electric power system, and plant and equipment generally are described, and the importance of this recent addition to the gold producing mines of the Provinces made clear.

The considerably improved outlook for the Portland Canal mining division is shown in the valuable information given relating to the Georgia River and the Salmon-Bear River mines; attention is directed to promising magnetite properties on Seymour inlet; information accounting for the delay in shipment of ore from Alice arm of Observatory inlet, from which a considerable production has been expected, is supplied; and summaries of the situation in various other parts of the district are also included in the report.

The illustrations in the general report that have relation to this district all have a practical bearing on matters dealt with in the text. The sketch map of the Salmon River district in Portland Canal division, is informative and useful, while the plans and views of the Granby Consolidated Co.'s properties—some of which should have appeared in the 1916 report, since many photographs were available early in that year—serve to impress those who have not visited Anyox or the Hidden Creek mine with the extent of the company's operations and the substantial character of its mining and smelting undertakings.

It is a pity that errors in figures occur. On one page, it is stated, in the Engineer's report that "the district in 1917 produced 822,819 tons, of which 784,000 tons was mined and smelted by the Granby Company, of Anyox,

which tonnage includes the low-grade quartz mined for use as flux." On another page the statement is made that the tonnage of ore mined and smelted was about 784,000 tons, averaging 2.12 per cent. copper, the gold and silver amounting to approximately \$240,000. The tonnage of low-grade quartz ore mined was about 37,000 tons, or a total of 812,000 tons." Again, it is stated on one page that the Belmont-Surf Inlet Mines Company shipped to the Tacoma smeltery 722 tons of table and flotation products, and on another page after stating that production is 25 to 30 tons of concentrates in 24 hours it is added that "the company will have shipped in 1917 about 1,700 tons, and expects to have a steady output of between 800 and 900 tons a month." In the general report it is printed that the district output was 821,819 tons and that the Granby Company treated "approximately 784,000 tons of ore, and in addition 38,000 tons of quartz flux and 53,000 tons of limestone flux."

Aside from these minor blemishes, though, the report is a most creditable one, and appears to measure more up to the stated requirements of the "Mineral Survey and Development Act" than any of the others also included in the general report.

Northeastern District.

The production of ore, in the Northeastern District, as shown in the official records, during the last three years was as follows: In 1915, 17,545 tons; in 1916, 17,752 tons; in 1917, 4,159 tons. The recorded value of the mineral production was: For 1915, \$885,502; for 1916, \$778,157; for 1917, \$529,897; total for three years, \$2,193,556. Of this total, \$2,178,300 was for metalliferous minerals. The decrease in value for 1917 was 32 per cent. as compared with 1916 and 40 per cent. with 1915.

In the report of the Resident Engineer it is stated that: "The mineral production of the Northeastern District for 1917 was a little less than in the year 1916. The principal reason for the decrease in value of output was, first, a smaller production of placer gold in all parts of the district, and, secondly, to the fact that the two principal lode mines—the Rocher Deboule and Silver Standard—were only shipping during one-half of the year. Both these mines are in shape, however, to make a good production in 1918. There were, however, a greater number of small shippers in 1917 than in any previous year, which is an encouraging sign for the future." The individual shippers of more than 100 tons of ore were as follows: Rocher Deboule, 2,889 tons of copper ore; Silver Standard, 671 tons of silver-lead-zinc ore; Santa Maria, 239 tons of copper-silver ore, and the M. & K., 123 tons of silver-lead-copper ore. Eight other properties together shipped 237 tons of ore containing silver, copper, and lead. The quantities and value of the minerals were: From Omineca division: Placer gold, 600 oz., \$12,000; lode gold, 931 oz., \$19,244; silver, 82,311 oz., \$63,668; lead, 271,885 lbs., \$21,506; copper, 852,373 lbs., \$231,675; zinc, 364,097 lbs., \$27,548, and miscellaneous materials, \$1,500; total, \$377,141. From Cariboo division: Placer gold, 6,750 oz., \$135,000, and miscellaneous materials, \$2,756; total, \$137,756. From Quesnel division: Placer gold, 750 oz., \$15,000. Total value for the whole of the Northeastern District, \$529,897. A little more than 75 per cent. of the lode-mineral production of the district came from the neighborhood of Hazelton, and the remainder from the Skeena River and Telkwa sub-districts.

In fairness to the Resident Engineer it should be pointed out that in having to report on a district containing nearly 100,000 square miles of territory in which last year there were only four mines that shipped more than 100 tons of ore each, and only one with an output of more than 1,000 tons, and in which there has been a steadily diminishing production of placer gold in the last two years, his field for comment of value is not of the best. Under

the circumstances, perhaps it would have been better for him to have placed more emphasis on the few points of general interest and condensed his report accordingly.

The list of the more important published official reports on the geology and mineralogy of the district is of value. Brief particulars of several miscellaneous minerals—scheelite in Cariboo division, and molybdenite and peridots in Quesnel division—are noteworthy. Information concerning many more or less developed mining properties, few of which, though, have yet reached the productive stage, will be handy for reference and so will be welcomed by many interested in the district. On the whole, however, the mining industry of the newer parts of the district has not yet made sufficient progress for this report to possess nearly so much value to the general public as one on a rapidly progressive mining district would do.

The Central District.

As regards mineral production, this is the least important district in the province, for the total value of its output in 1917 was only \$874,613, or less than two and one-half per cent. of the total for the province for the year, and less than two per cent. of that of the three-year period, 1915-1917. This would not seem, though, to be a sufficient reason for the quite inadequate report of the Resident Engineer, the text of which fills not quite eleven pages, and makes little or no reference to the more important mining operations carried on the district, nor to minerals that might well have had attention. This is to be regretted, for the mineral potentialities of the district are consequently not even fairly presented, when under the handicap of such limited production it might have been expected that the most would have been made of the opportunity to prepare a reasonably fair and full account of them.

Having in view the official statement that "Resident Engineers are expected annually to make a comprehensive report covering all matters relating to mining, mine development, and prospecting that have occurred within the year in their respective districts," it is evident that this requirement was in some comparatively important respects lost sight of by the local official.

The Southern District.

The Resident Engineer of the Southern District may be said to have erred just as much in the matter of brevity as did his co-officials of the Northeastern and Western Districts in the opposite direction. The disproportion already pointed out is markedly noticeable when it is taken into account that only ten pages of text are devoted to the Southern District with a metalliferous production of a total value of \$15,681,912 for three years, 1915-1917, which was nearly twenty per cent. of the grand total for the province for that period, while the Northeastern District has five times as much space notwithstanding that its three-years' output was less than three per cent.

One of the reasons that the report of this District does not measure up to what might have been expected is that there seems to be lacking a recognition of relative value of available information. The particulars given of the Similkameen District, for example, seem to indicate this. A small silver property, which shipped in 1917 about 320 tons of ore is given twenty-nine lines, while the Hedley Gold Mining Co.'s operations, which included the mining and milling of 71,207 tons of ore, are disposed of in five lines, and those of the Canada Copper Corporation, which is stated in the report to have expended on its big property on Copper mountain about \$1,250,000, are dealt with in twenty-two lines.

Notwithstanding its shortcomings, the report on this District is a useful though short summary, and will be read with interest.

The Eastern District.

The Eastern District is the most important metalli-

ferous mining district in the Province, embracing as it does the whole of the Kootenay, both East and West. An official list of all metalliferous mines in British Columbia shipping in 1917 shows that out of a total of 199 the proportion of East Kootenay is 15, and of West Kootenay 87, together, 102. In addition its coal mining industry is important, though in quite recent years less productive than several years ago; last year its gross output of coal was only 23 per cent. of that of the whole Province, as compared with 35 per cent. in 1916 and 44 per cent. in 1914. Its area is so large and its mining activities so varied and extensive that it is hardly reasonable to expect a single Resident Engineer to do it justice. Yet an endeavor was made to give more or less attention in the published report of that official to every one of the twelve mining divisions the District embraces. It seems a pity, though, that with such a favorable opportunity for giving a fair outline of the more striking features of mining and metallurgy in the District, much much prominence is given to comparatively unimportant properties than to large producers, the latter generally including those that have done, even during the year covered by the report, underground development in connection with which comment of great practical usefulness might easily have been made, and have conducted metallurgical operations that might well have been described even if only briefly. But in this report, as in nearly all the others, much more attention seems to have been given to properties, some of them in outlying regions, in connection with which applications had been made to the Government to spend money in wagon-road or trail making, than to those that are largely the mainstay of the mining industry in their respective districts. A number of instances might be cited where the sense of proportion or of appreciation of relative value seems to have been quite lost sight of. This is most noticeable in the case of the Sullivan lead-zinc mine, in Fort Streele division of East Kootenay, which is shown to have shipped 112,000 tons of ore and the development work done included extending "the new double-track tunnel" 3,000 feet, which tunnel "when completed will give an additional depth to the present workings of 700 feet, and will greatly reduce the present cost of handling the ore;" yet this big zinc-lead mine—the only one in the Province operating a "mucking" machine—was given eight lines of space, while a quite unimportant outlying group of minerals claims in Golden division, respecting one of which the report states "no ore bodies which could be considered of commercial importance have yet been opened up," and of another "it is a prospect upon which further work may possibly disclose ore in larger quantities than have as yet been found, but it is not considered that present conditions justify any heavy expenditure," has devoted to it nine or ten times as much space.

The Western District.

The report of the Western District may be designated the report of "the writer," for that expression is used in it seventy-seven times, which is about fifty times more than in the case of another Resident Engineer who also has a weakness in a similar direction. Its considerable length is easily accounted for when it is seen that "the writer" spread himself by filling eight pages with his "Outline of the Report," "Bibliography," and "Introduction."

Notwithstanding, though, that the Resident Engineer for this District gave a facile pen full play, and that needed editing was not done, there is much of interest in his report. The bibliography of the geology and mineralogy of the District, which should long since have been compiled and published by the Provincial Bureau of Mines, will doubtless prove of value to those seeking information on those matters. The information relative to copper ore deposits being developed in Victoria mining division will interest many, in the southern part of the District especially. The account of the extensive under-

ground workings of the Britannia copper mines, and the summary of the equipment and the plans of a 1,000-ton unit of its big concentrating mill are timely and of value for reference. Generally, the particulars of numerous mining properties in various parts of the District, though they might with advantage have been considerably condensed, will be welcomed by those giving attention to mining in the Southern Coast District.

In conclusion, the opinion may be expressed that as a whole the first annual reports of the Resident Engineers are not of a character to induce other Provinces of the Dominion to follow British Columbia's example in this direction. As has already been stated, the report of the Resident Engineer for the Northwestern District (No. 1) is a most creditable one; it keeps within the limits officially outlined and may well be regarded as a model that other Resident Engineers can learn from, whether their weakness be that of undesirable brevity, or the other extreme of considerable prolixity. It is certain that Ontario Mines Department officials have little to learn from these reports, in either relative proportion in dealing with various mining properties, or in the general character of the original comment made upon them. Nor are Dominion Mines Department officials likely to discover in these reports leads that they may follow with advantage. Whether or not the future will see the marked improvement that may reasonably be looked for will probably depend largely upon the adoption by the Provincial Department of Mines of method and system for future reports, or a continuance of the inaugural "go-as-you-please" style which has not proved a signal success.

WILL OPERATE WOOLSEY CLAIMS.

The Woolsey Group of mineral claims, situated on Silver Creek, a short distance from Revelstoke, B.C., have been bonded by Calgary, Alberta, financial men, for a substantial sum. Extensive development work will be undertaken immediately. The ore is silver-lead and is said to be very high grade, a test shipment being reported to return 137½ ounces silver and 73 per cent. lead to the ton, with a trace of zinc. A road is to be constructed to replace the present trail to the mines and a bridge to connect with the latter is promised over the Illecillewaet River.

CHANGES IN FRANKLIN CAMP.

Considerable stir is reported from Franklin Camp, near Grand Forks, B.C., The Maple Leaf Group, a well-known property on which considerable development work has been done and a sample shipment from which gave substantial returns in copper, gold and silver, has been bonded, according to announcement from that district, by Mr. H. W. Holly, of Winnebago, Minn., representing Chicago, Ill., financial interests. The Union Mine also is expected to be transferred under bond to American interests, negotiations being in progress, while mining engineers have been inspecting the Pathfinder, of the same section, with the same object in view.

It is reported that the Woolsey group of claims on Silver Creek east of Revelstoke have been bonded and that a large force of men will be put to work at once. The ore is high-grade silver-lead.

Mr. Charles Camsell, head of the British Columbia branch of the Geological Survey of Canada, is in the Bridge River country gathering information on mining development in order to bring up to date the report on that district, which is in course of preparation.

Ontario Mining Officials Visit British Columbia

Mr. T. Ernest Godson, Mining Commissioner for the Province of Ontario, and Mr. T. F. Sutherland, Chief Inspector of Mines for the same Province, are paying a visit to British Columbia for the purpose of making a general but close investigation of Western mining conditions.

Mr. Godson is chiefly concerned in the judicial aspect of the mining regulations. While in British Columbia disputes over mining properties are decided in the courts, in Ontario he, as Mining Commissioner, adjudicates between the parties at odds, an appeal from his decision to the Court of Appeal being open to the dissatisfied party. Some differences between the British Columbia and the Ontario regulations are referred to by Mr. Godson. There, before a claim can be recorded, it must consist of a discovery of "valuable" mineral in place, as contrasted with the requirement here of "mineral in place." The Ontario definition, he explains, is supposed to prevent what is known as blanketing a considerable section, but just how far it does so is a moot question. In Ontario, too, the Crown Grant carries everything, including surface rights, and the system of British Columbia of either work or payment on the part of the locator to cover annual assessment duty does not exist. The actual work must be done by the locator, the alternative of payment being not permitted. While unable as yet to make a full study of the mining regulations of British Columbia, Mr. Godson is of the opinion that those of Ontario are the best in existence in the Dominion of Canada, are more elastic than those of other Provinces, and meet the situation as far as possible. While in Winnipeg, Mr. Godson made a study of the new regulations which are being drafted consequent upon the expected early handing over to that Province by the Dominion of the mineral lands now held by the latter. There, as elsewhere, throughout the country, he states, there appears to be a growing sentiment in favor of the elimination of the existing system of issuing Crown Grants of mineral claims to parties who comply with the requirements as to development, etc., and the inauguration, in its stead, of a system whereunder the Government would retain perpetual ownership of their mineral lands, only granting leaseholds on liberal terms, with a penalty of forfeiture if the terms are not complied with.

Chief Inspector Sutherland is making a personal inspection of the larger mines of the Province and already has visited the underground workings of the mines at Anyox, B.C., of the Granby Consolidated Mining & Smelting Co., as well as those of the Britannia Mining Co. Both are on their present tour at the suggestion of the Hon. Mr. Ferguson, Minister of Mines of Ontario, with a view to obtaining all information available as to mining conditions in other sections of Canada for their guidance in effecting improvement in their home Province. Respecting mining conditions in Ontario at present, Mr. Godson says that mining is very active, especially in silver, copper, nickel and other metals, but that the gold producing mines are affected similarly to those of British Columbia and other parts of America. Like other Provinces, Ontario since the outbreak of the war has taken steps to protect the interests of the men overseas on active service and those holding mining licenses and interests have been given every protection pending their return.

The Hon. Frank Cochrane has been appointed acting Secretary of State and Minister of Mines during the absence of Hon. Martin Burrell, who is taking an extended vacation.

FLUORITE NEAR GRAND FORKS.

Diamond drill exploration on the "Rock Candy" property of the Consolidated Mining & Smelting Co. near Grand Forks, B.C., are understood to have disclosed a body of fluorite exceeding expectations. Meanwhile work is proceeding in preparation for substantial shipments, and an extension of the Kettle Valley Railway above Lynch Creek to connect with a tramway from the property is projected, thus facilitating the economical movement of ore.

Considerable ore has been proved up in the Drum Lummon Mine, Douglas Channel, B.C., since the installation of a new compressor plant. A concentrating mill of the Gibson type now is being constructed.

DEVELOPING EPSOMITE DEPOSITS NEAR CLINTON, B.C.

Two Vancouver companies are developing deposits of epsomite near Clinton, B.C., which have been reported upon by a competent mining engineer. The only production of epsomite in British Columbia hitherto has been from the Spotted Lakes in the Osoyoos Mining Division, where twenty men were employed last summer collecting it from the shores of these lakes, where it crystallizes, and shipping it to the United States. The output was about 900 tons from that locality.

TESTING PLATINUM ORE FROM OLIVINE MT.

The Olivine Mountain Syndicate of Vancouver has shipped two tons of ore containing platinum from Olivine Mountain, Tulameen, to the Faust concentrating plant, Seattle, Wash., for testing purpose, with a view to ascertaining whether the metal can be extracted in sufficient quantity and at a low enough cost to make the operation of the property profitable. If so the syndicate plans the installation of a plant at Tulameen to undertake the production of platinum from the dunite which carries the mineral along with gold, copper and microscopic diamonds.

ERECTING PLANT FOR CANADA COPPER.

Mr. H. R. vanWagener, of Denver, Col., comes to the general managership of the Canada Copper Corporation at an interesting period. The newly developed properties at Copper Mountain near Princeton are the scene of considerable activity. A concentrating plant to cost one half million dollars is in course of erection, and steel will be laid on the Kettle Valley Railroad branch line to this point in a few weeks. It is expected that the entire line to Copper Mountain, eighteen miles south of Princeton, will be finished by mid-summer next. Electric power is to be obtained by an extension of the West Kootenay Light and Power Company's line from Greenwood, and work has been started at clearing the right of way and building roads for the 150 mile extension.

The Harewood mine at Nanaimo recently re-opened by the new owners, the Canadian Western Fuel Company, is producing from the new workings what is claimed by officials of the company to be the best class of steaming coal on Vancouver Island.

Crow's Nest Pass Miners Stay Out

Victoria, Oct. 1.—The Coal miners of Fernie and Michel, B.C., Crow's Nest Pass Collieries, are still on strike. It was thought that when it was ordered by Mr. W. H. Armstrong, who is appointed by the Dominion Government as Director of Coal Operations in the United Mine Workers of America District No. 18, that the company should open its mines on the single shift system, and that the Minister of Mines for British Columbia should be requested to appoint a Royal Commission to investigate and report as to whether the adoption of the one shift in twenty-four hours will make the mines safer than the double shift rule, the men would go back to work without further delay. That, however, did not happen. When the men had the proposition put before them on Monday, September 30th, they voted it down solidly.

What will be the next move? This is the question interesting those who have been watching developments. Mr. Armstrong admittedly is confronted with a serious situation. Several of British Columbia's most important coal mines are idle and the continued lack of output would have the effect of depriving a number of large and, at the present time, essential Western industries of the coke necessary to keep their plants in operation. The company which first comes to mind as being placed in this position is the Trail (B.C.) Smeltery, Consolidated Mining & Smelting Co. of Canada. Last year it suffered when the Fernie strike, following the explosion of April, 1917, occurred and the authorities are determined that such a difficulty will not arise again. Moreover, Mr. Armstrong has taken a step which is pretty definite, having invoked the very extensive authority placed in his hands by the War Measures Act of Canada under the terms of which his appointment was authorized. It is interesting, in this connection, to reproduce the text of Mr. Armstrong's order, which follows:

"A request has been received from the miners employed at the mines of the Crow's Nest Pass Coal Company, Ltd., at Coal Creek and Michel, for the adoption of a single shift in all the mines instead of a double shift as at present. This request is based upon what is alleged by the men as 'the dangerous condition of the mines' due to working double shift.

"The question of the safety of the above mentioned mines is one that comes under the regulations of the Coal Mines Regulation Act of British Columbia, and therefore, comes within the jurisdiction of the Department of Mines of that Province, and not under the jurisdiction of the Director of Coal Operations.

"The issue as to whether or not the operation of those mines would be more dangerous on a double shift than on a single shift is one upon which the representatives of the men and the company disagree.

"However, in view of the difference of opinion which has developed I hereby instruct the Crow's Nest Pass Coal Company, Ltd., to install a single shift system at their mines and will request the Minister of Mines of British Columbia to appoint a Royal Commission as proposed by him to determine the question at issue. The Commission to report without delay when the matter under dispute will again be reviewed.

"It is further understood that the single shift system does not apply to development places nor to necessary repairs in the mines.

"By virtue of the authority vested in me by order of the Committee of the Privy Council, passed under the provisions of the War Measures Act of Canada, 1914, I hereby direct the foregoing conditions shall be in force and effect at the mines of the Crow's Nest Pass Coal Company, Ltd., until further notice."

W. F. ARMSTRONG, Director of Coal Operations.
Calgary, Alberta, Sept. 27th, 1918.

Some difficulty is being experienced in understanding the attitude of the men in refusing to endorse such a proposal as it grants them that for which they struck, namely, the single shift, without insisting that any condition or conditions be accepted. The only explanation ventured is that they object to the proposal that the Provincial Government appoint a Royal Commission as indicated.

In the face of this deadlock there seems to be only two courses open: first, the granting of the men's demands as set out by themselves without reservation or qualification of any kind. Second, the continuance of the fight. The adoption of the latter course according to officials of the U.M.W. of A. would mean the calling out of all the coal miners of District 18, affecting probably some 9,000 men. What action Mr. Armstrong would feel called upon to take in such a case is hard to say, but it is significant that the military can be empowered to enforce orders given under the War Measures Act if necessary:

Hon. Wm. Sloan, Minister of Mines for British Columbia, returned recently from Calgary where he engaged for a week in conference with officials of the U.M.W. of A. and representatives of the company in an endeavor to come to some amicable and satisfactory adjustment of the issue. All proposals made by him, however, were without avail and finally he requested Mr. Armstrong to take the matter in hand. The result was the order quoted.

In discussing the matter subsequently, Mr. Sloan explained that District 18, so-called, includes the Eastern section of British Columbia and the whole of the Province of Alberta. It was a division of the Canadian coal mining fields for which the U.M.W. of A. was responsible. Within its limits, he pointed out, there were fifty-one shipping mines and forty-two Local Unions, three of the latter being in this Province and thirty-nine in that adjacent.

Referring to Mr. Armstrong's services in this District, Mr. Sloan paid him a very high compliment. Since taking office, Mr. Armstrong had contended with many problems, both serious and trivial, and had handled all with consummate tact and judgment, bringing about satisfactory understandings in each instance. Through his efforts and influence the coal output of the District for the first six months of this year had exceeded that of the same period of 1917 by 1,060,000 tons.

An adequate supply of steam fuel, Mr. Sloan thought, was assured for the winter, and he did not believe that there was occasion for undue alarm with regard to the domestic fuel reserve for the prairies during the next few months. It was the effect the strike would have on the coke supply that was most to be feared and it was this that made a settlement of the trouble imperative.

Incidentally the Minister of Mines asserted that, in his judgment, the Eastern British Columbia and Alberta fields were the "coal cradle" of the American Continent, and would be the scene of the greatest mining activity of any American section in the course of the next few years.

A two-room addition to the Creighton Mine school is under construction by the Laberge Lumber Co., Limited, to be ready for occupation by the end of October. The addition is a continuation of the design and construction of the present school building, is of brick veneer with stone basement, and will be modern throughout, and when completed will give Creighton a six-room school. There are now 462 children of school age in Creighton Mine.

A high grade copper ore is being shipped to the Tacoma Wash. Smelter by the Monitor Mine, Vancouver Island, B.C., and it is proposed erecting a concentrating mill.

LUCKY JIM RE-ORGANIZED

The new directorate of the Lucky Jim Mines, Limited., has issued the first financial statement issued to stockholders since 1914. For many years the affairs of the company have been tangled due to the over-issue of stock by Mr. G. Weaver Loper, former managing-director and transfer agent, who now is in jail in Spokane, Wn., following charges made by the prosecuting attorney. This statement shows that from April, 1914 to April, 1918, the income was \$249,874 of which \$228,161 was from ore shipments made by Mr. A. G. Larson as trustee. Of income \$20,680 was from loans. Expenditures totalled \$246,721, leaving a balance of \$2,653, with \$14,966 paid to trustees, \$6,142 to creditors, \$32,822 first mortgage retired, and \$20,149 paid as interest upon mortgages. Office expenses for the period were \$15,703 and operating expenses \$155,975. Listed as over-issued shares an item of \$2,999,899 was shown on the balance sheet and \$2,121 was shown as due from smelters. Liabilities included debentures to the amount of \$6,200, \$38,087 due on second mortgage, \$27,004 accounts payable, and \$18,533 for loans. The total assets were \$5,533 with indebtedness of \$71,291, or a net deficit of \$65,758.

The company has issued the following statement with reference to past difficulties and future plans:

"The quantity of ore produced could have been very materially increased if this company had owned a concentrating plant. At the time the receiver was appointed the only mill available was one situated at Sandon, B.C. Some ore was sent to this mill for treatment, but unfortunately before this ore was treated the mill was destroyed by fire and it became necessary to look elsewhere for milling facilities. Fortunately the receiver was able to make a contract with the lessee of the Roseberry mill to treat our ores and the first concentrates were produced by this mill the latter end of October of the same year. This mill was operated by the lessee until October last year when it was taken over by the Surprise Mining Company. During the period it was in operation by the lessee about 16,000 of crude ore was treated. September, 1916, the customs concentrator at Kaslo commenced operations and a quantity of middlings was transferred from the Roseberry Mill to the Kaslo Mill for magnetic treatment. Two months later this mill commenced concentrating and treated about 6,000 tons of crude ore for this company during the period it was in operation, but, owing to circumstances it closed down January last, thus leaving the mine without any concentrating facilities. Neither the Roseberry nor the Kaslo mill was satisfactory as owing to lack of necessary equipment, the efficiency was considerably below what it should have been, resulting in low extraction; while, on the other hand, the milling costs were much higher than if the ore had been treated in the company's own mill. Had the price of zinc been maintained it might have been possible to continue but at the present price it was impossible to pay the high treatment charges and make any profit on the ore.

"Efforts are being made to raise sufficient money to erect and equip an up-to-date mill on the property of the company.

"You are aware that on the 12th of January last, an extraordinary general meeting of the members was held in Victoria and the capital stock of the company increased from \$2,500,000 to \$6,000,000, said action being confirmed by a subsequent extraordinary general meeting held on the 2nd February last.

"The reasons your directors called these meetings for aforementioned purposes were as follows:

On taking office in December, 1916, they found it was not possible to prepare a financial statement or have an audit made of the books of the company on account of the

refusal of Mr. G. Weaver-Loper, late vice-president and managing director of the company, to turn over the books and documents of the company to the present secretary. An application was, therefore, made to a judge in Spokane for a writ of mandamus to compel Mr. Loper to deliver said books and documents, also three thousand debentures or bonds amounting to \$150,000 of the company held by him. Said writ was issued but Mr. Loper appealed against the same.

"Last year F. P. Green, certified accountant of Spokane, was instructed by the board to make an audit of the transfer books. This audit and a subsequent audit disclosed an over issue of approximately 3,000,000 shares. Upon completion of aforementioned audit your directors called an informal meeting of members in Spokane, representing a majority of the shares issued, and after consulting the best legal authorities in British Columbia and Spokane, they were advised that to avoid litigation the only thing to do was to increase the capital stock to \$6,000,000 to cover said over-issue.

"At the time the conditions above mentioned were exposed, Mrs. Fannie G. Loper, wife of G. Weaver Loper, late vice-president and managing director of the company, had a suit pending against the company in the sum of \$220,644, covering a claim of G. Weaver Loper for \$73,340 contained in the last financial statement issued to members; certain salary and expenses of administration amounting to about \$30,000 and sundry other claims of which your directors have no knowledge. On the 27th of November, 1917, an assignment was obtained from Fannie G. Loper and G. Weaver Loper of all their claims against this company, surrendering all or any property of said company in his possession and in addition to the above an affidavit was also made by Fannie G. Loper and G. Weaver Loper of which the following is an excerpt:

"That no person or corporation has any claim of any kind, nature or description against the company on account of any matter or thing whatsoever, and especially on account of any stock, share or shares of stock, certificate or certificates for share or shares of stock other than is shown by the audit of the transfer books and subsequent audit made by F. P. Green, of Spokane, Wn."

"On the 15th of March last, a meeting of directors was held at which it was resolved to issue to A. M. Wolverton, of Vancouver, debentures aggregating \$6,200 in respect of his garnishee proceedings in re Wolverton vs. G. Weaver Loper, said Wolverton giving the company a release of all claims under said judgment.

"A resolution was also passed authorizing the officers of the company to take up and cancel all the shares shown to be out-standing by the audit before mentioned and to issue in lieu thereof new stock, share for share and to re-number all such certificates and shares beginning with one (1) and so on until all the stock has been re-issued."

Ottawa, Oct. 8.—Word has been received at the Department of Labor that the coal miners who have been on strike in the Crow's Nest Pass region voted to return to work on the lines laid down in an order issued by W. H. Armstrong, Director of Coal Operations in the West. Work, it is stated in the communication received by the Department, was resumed this morning. The men have been out for nearly a month.

J. Murray Clarke, K.C., in National Progress, claims that the decrease in gold production on the Continent is due to German propaganda. The German government, he says, voted \$250,000,000 for the purpose of interference with Allied production, and the United States government has traced the expenditure of \$90,000,000 in that country, partly in the purchase of newspaper support. The German government worked through the I. W. W.

Milwaukee Meeting of Mining Engineers

Milwaukee, Wis., Oct. 9th.—A clarion call to conserve tin, which may be heard around the world, was sounded here to-day at a meeting of the American Institute of Mining Engineers when representatives of the Government and many of the country's largest firms conferred.

Collect tin for our use, substitute other metals for tin whenever possible, and discontinue the manufacture of tin-consuming products non-essential to the winning of the war. These were the advices made public after the conference.

Those in attendance represented the War Industries Board, National Lead Company, Pennsylvania Railroad, U. S. Bureau of Standards, American Sheet and Tin Plate Company, Westinghouse Electric and Manufacturing Company and several scores of others.

Conserving tin was the principal subject of the conference, together with a study of means for increasing the by-products of coke and the fuel supply in the United States. The statement was made that from certain coals it is now possible to secure nearly 20 gallons of gasoline or motor fuel of the same value per ton of coal mined. Among other things, a new type of coke, known as semi-coke, has been produced, which it is said has proved a satisfactory fuel for all general purposes. The advantages of using coal in pulverized form or of using briquet, or a new fuel, known as carbocoal, were discussed at some length and in several instances statements were made showing that enormous sums have been spent in order to make these substitutes for coal available to the domestic and industrial consumer during the coming winter.

To-day motion pictures were shown before the engineers in regard to concrete ships, pointing out the important part which ships are playing in the life of the world; the paramount importance of cripples in the manufacturing industries, indicating the wide uses that can be made of them in the mine world; and the Triplex Steel Process.

At the Institute of Metals Division of the Mining Engineers Institute the following subjects were presented in the course of the day: "Conservation of Tin"; "The Volatility of the Constituents of Brass," by John Johnston; "The Effect of Impurities on the Hardness of Cast Zinc or Spelter," by G. C. Stone; "Dental Alloys"; "Electrolytic Zinc," by C. A. Hansen; with discussion by J. L. McK. Yardley; "The Condensation of Zinc from its Vapor," by C. H. Fulton; "The Action of Reducing Gases on Copper," by Norman B. Pilling.

At the Iron and Steel Section meeting the following subjects were presented: "The By-product Coke Oven and its Products," by W. H. Blauvelt, with discussion by A. K. McCosh; "The Use of Coal in Pulverized Form," by H. R. Collins; "Carbocoal," by C. T. Malcolmson, with discussion by W. Rowland Cox, J. M. Fitzgerald, Newell W. Roberts, F. R. Wadleigh, Charles Catlett and Charles M. Barnett; "Low-temperature Distillation of Illinois and Indiana Coals," by G. W. Traer; "Price Fixing of Bituminous Coal by the U. S. Fuel Administration," by Cyrus Garnsey, R. V. Norris and J. H. Allport.

A substitute for radium, the world supply of which is only about three ounces of radium element, has been found, according to a statement presented by Dr. Richard B. Moore, of the U. S. Bureau of Mines. Mesothorium is the radium substitute which, according to Dr. Moore, is excellent in many ways. This can be used, it is said, just as efficiently for radium as luminous paint and it is this use to which radium is being especially put in the work on airplane dials, compasses and gun-sights. In these uses it has greatly increased the efficiency of night firing both with machine guns and artillery. The substitute can also be used for cancer treatment, although

the fact that it has a shorter life makes it much less desirable for this purpose.

Its usefulness in luminous paint will continue for four or five years, which is as long as it is required for cheap watches, push buttons, etc., and which will prevent the use of radium for such purposes, as in some instances it is now being used in wasteful fashion.

The result of Dr. Moore's experiments met with great interest on the part of the mining engineers and excited considerable discussion.

The future peace of Europe depends upon the disposal of the iron ore resources of Alsace-Lorraine. This is an opinion which was reflected in a study of the iron ore resources of the world, made by the Iron and Steel Section.

Although, it is pointed out, enormous resources of iron ore will be available to the world when shipping facilities are adjusted, probably no working basis can be reached to meet the iron ore needs of Southern Europe unless the mines of Alsace-Lorraine are left in the hands of the Allies. In the same session it was stated that the iron ores of Brazil are certain after the war to play an important part in the economic reconstruction of Europe and perhaps in the development of America. It was stated to the engineers that by efficient management these ores could be landed in Europe or the United States at a profit despite a contrary opinion which has been widely circulated.

The meeting is being held in conjunction with the American Foundrymen's Association and the American Malleable Castings Association and engineers are present from practically every metal producing centre in the country. In Machinery Hall a notable exhibit of metallurgical and mechanical processes and products was displayed at which over 165 firms are represented.

Among subjects taken up by the Institute of Metals Division of the American Institute of Mining Engineers were: "The Metallography of Tungsten," by Zay Jeffries, with discussion by Sir Robert Hadfield; "The Constitution of Tin Bronzes," by S. L. Hoyt; "Oxygen and Sulphur in the Melting of Copper Cathodes," by S. Skowronski; "The Relation of Sulphur to the Overpoling of Copper," by S. Skowronski, with discussion by Phillip L. Gill.

The subjects presented by the Iron and Steel Section of the Institute were as follows: "The Work of the National Research Council," by H. M. Howe; "The Limonite Deposits of Mayaguez Mesa, Porto Rico," by C. R. Fettke and Bela Hubbard; "The Manufacture of Ferro-alloys in the Electric Furnace," by R. M. Keeney; "The Manufacture of Silica Brick," by H. LeChatelier and B. Bogitch; "Notes on Certain Iron-ore Resources of the World"; "Recent Geologic Development on the Mesabi Iron Range, Minn." Discussion by Anson A. Betts and J. F. Wolff.

Henry E. Cooper, Vice-President of the Equitable Trust Co., in an interesting treatise entitled, "The Gold Situation," declares that of the many financial and economic problems which the international developments of the last four years have brought to the fore, one of the gravest is the maintenance of the gold reserve.

It is understood arrangements have been made for the resumption of mining operations on the Huronia mine at Beaverhouse Lake, in the Larder Lake District. A number of men have already been engaged.

During the week ended October 4th, eight Cobalt companies shipped an aggregate of 13 cars containing approximately 912,802 pounds of ore. The McKinley-Darragh with three cars containing 211,609 pounds was the leader. A feature of the weekly statement is the appearance of the Peterson Lake once more on the shipping list.

NEWS FROM BRITISH COLUMBIA

NEW REGULATIONS FOR COAL DISTRIBUTION

Fuel Controllers and coal mine operators have received notice from Ottawa, that regulations providing for the more uniform distribution of coal needed for industrial uses in Canada have just been approved by the Governor-in-Council at the instance of the Canadian Fuel Controller.

They provide that all mine operators in Canada and importers of industrial coal in this country shall rotate delivery of coal among their customers in proportion to their requirement so that no one shall at any time have advance supplies on hand while others are under-supplied.

A preference list of coal consumers is also outlined in the regulations. Those preferred consumers include railways, military and government buildings, public utilities, retail dealers and manufacturing plants chiefly engaged on war contracts. These must be given preference in supply over all other users in the order named.

Drastic provision also is made against the unnecessary hoarding of coal on the part of industrial users and heavy penalties are provided. Those whose operations required large advance stocks at the end of the present coal year must obtain special permission from the fuel administrator. Provision is made whereby mine operators and importers may require certified statements from their customers, as to the tonnage of coal on hand and required for each month, so that an equal distribution may be made of all coal mined and received in Canada.

PROSPECTING FOR PLATINUM ON TULAMEEN RIVER

Mining and prospecting for platinum on the Tulameen River, British Columbia, is going forward briskly, having been materially stimulated by the interest representatives of the Geological Survey Branch of the Dominion Government are taking in this work. The Church company, of Tacoma, Wn., is extensively developing property on the Tulameen above Bear Creek, having put in a big dam and a flume 200 yards long. A force of twenty men with three large centrifugal pumps is working the bed of the river over a distance of over 700 feet and is reported to be recovering considerable platinum and gold. Several smaller outfits are at work and the Government, having established camps at Slate Creek, is sinking test holes on the bars and benches to determine the value of the ground to bedrock.

HON. MR. BURRELL IN BRITISH COLUMBIA

Hon. Martin Burrell, Minister of Mines in the Dominion Government, is visiting British Columbia. He is going to Nelson first, where he will investigate the question of the production of zinc and lead. Mr. Burrell has announced that while in the West it is his intention to investigate the prospects of increasing the output of platinum, "as British Columbia promises to be the best source of supply."

GASOLINE FROM ALBERTA NATURAL GAS

It is possible that gasoline will be produced in commercial quantities from gas wells in the Province of Alberta, as a result of investigations carried out by Dr. D. B. Dowling, of the Dominion Geological Survey. At one large gas well south of the city of Calgary a plant already is in course of erection for the extraction of gasoline from the gas. While the flow of gas at the wells in question is sufficient to meet any ordinary commercial demand, the city of Calgary is supplied from other wells and, as there is little chance of another franchise being granted, the owners of the former are turning their attention to the production of gasoline. Because of the scarcity of this fuel the Dominion Government is conducting a thorough survey of the natural gas district with a view to increasing Canada's available supply of gasoline.

RE-OPENING DONOHUE MINE

The Donohue Mines Corporation has re-opened its mining property at Stump Lake, Merritt (B.C.) District, mining engineers having given assurance, according to report, that it can be developed into one of the best mines of the interior of the Province. Descriptions given are to the effect that it is traversed by a series of true fissure veins, all of which carry good values in copper, gold, silver and lead, with some zinc. New machinery and equipment is to be installed, including air compressors and drills, additions to the hoisting plant, etc. It is likely that a new concentrator will have to be provided. Mr. John D. Leedy, of Seattle, Wn., will be the new manager.

To encourage residents of the village in growing vegetables and beautifying their home surroundings the Mond Nickel Company has for a number of years offered cash prizes for the best results obtained in this direction. The results have been most gratifying and this year over ninety-nine per cent. of the village lots are producing vegetables.

At the 100-foot level of the Bourkes Mines at Bourke's Siding, drifting has been carried a distance of about forty feet and the present face is said to be in good ore. Some exceptionally rich ore has been taken out of this working and from a small shipment recently made the company got a return in the neighborhood of four hundred and eighty dollars.

Arrangements have been made for the resumption of operations at the property of the Huronia Mining Company, in Gauthier Township, in the Larder Lake District and a number of men have already been engaged. This property has had a somewhat checkered career, since the first gold discoveries were made there several years ago. The property was sold to a company organized for its extensive operation. Later it passed to the Timmins interests of the Hollinger Consolidated Mines who secured a working option during the tenure of which a considerable amount of diamond drilling was done, with only fairly satisfactory results, which led to the option being allowed to expire. Other interests have since made efforts to operate the property, but up until the present time these efforts have never met with a great deal of success. Just what the plans of the present operators are has not yet been announced.

Claims situated in the Townships of Ogden and Mount Joy in the Porcupine District owned by Philadelphia interests known as the American Porcupine Gold Mines are undergoing exploration, a small force of men being engaged in the work.

Gold mining will doubtless be very active next year. The war has naturally seriously hampered gold production. The end of the war will doubtless soon be followed by the greatest activity the gold mining districts have yet seen. Developments in Northern Ontario during the war have been remarkably good and a return to normal conditions, or nearly normal conditions, will result in great increase in production of gold.

The editor of the Mining Institute Bulletin is apparently of the opinion that the Government has not handled coal production and distribution in a very satisfactory way. Many will agree with him. Comparisons with the United States are hardly fair however. We have been at war for four years and the United States has had every opportunity to profit by our mistakes.

A TRIBUTE TO JAMES DOUGLAS

At the Colorado Meeting of the American Institute of Mining Engineers on September the 3rd, a service was held in commemoration of the late Dr. James Douglas. The Canadian Mining Institute was represented officially by Mr. E. P. Mathewson, who delivered the following address:

"In my early youth I knew of no name in science to compare with that of Dr. Douglas. He was associated many years with the late Dr. T. Sterry Hunt, and Dr. Hunt was the immediate cause of my coming to the United States from Canada and entering on my professional career in this country.

"Dr. Douglas was a man of most benevolent disposition, far-seeing in many ways, who, though possessed of much wealth, thought nothing of money; he had not the love of money at all. The only use he had for money was to do good to those who needed it.

"Dr. Douglas was particularly thoughtful of his Canadian fellow countrymen and particularly of those who were engaged in scientific pursuits. The educational institutions of Canada were frequently benefited by his benevolence. McGill University was highly favored by Dr. Douglas, after he learned of the financial difficulties of that institution. McGill, not being granted any aid from the state, and relying upon private benevolence, had outstripped its income in giving what it could of educational advantages to Canadians, and it became necessary at one time to have a campaign for more funds. In this campaign Dr. Douglas responded nobly and was the means of getting the necessary funds to go on with the good work of that University. The University from which he graduated, Queen's University, was also frequently aided by his benefactions. Altogether, the sums given by him during his lifetime to Canadian institutions would be probably up in the millions, but he was so unobtrusive and so retiring in his disposition that he seldom allowed his name to be used in connection with these matters unless it was possible, by using his name, to influence others to similar benevolence. Anywhere in Canada, if you mention the name 'Douglas,' you will find people who will say at once, 'That was a great Canadian, a man we all revered.'

"Dr. Douglas had the broadmindedness to introduce the open door into metallurgy. Prior to his advent into the metallurgical field, the non-ferrous metallurgists in this country, in Canada, and practically all over the world, were absolutely oyster-like toward visitors. No one was admitted who did not have a letter of recommendation from one of the Board of Directors, at least. But Dr. Douglas, early in his career in this country, allowed every one to come to the plant and visit the mines with which he was connected. He welcomed them, and argued that he was getting as much benefit from the visitors as the visitors were getting from him.

"The example of Dr. Douglas was followed by many metallurgists in this country, and to-day we may say that there is hardly a non-ferrous metallurgical establishment in the United States and Canada to which a person, who is honestly seeking information, cannot obtain access. Of course, during war times a few precautions are taken for fear that information might get to the enemy. This, of itself, is enough to make Dr. Douglas called a great man, and to let his name go down to posterity as really the father of open-door metallurgy."—(C. M. I. Bulletin.)

If it is all that is represented a new copper property has been located in the Arrowhead Lake District, near Revelstoke, B.C., which is likely to be heard from. Some samples are said to have been produced assaying \$50 to the ton. The claims are near the water so that the question of transportation is not difficult of solution.

PERSONAL

Mr. H. H. Lavery was in Toronto last week.

Mr. A. Sancton was at the McIntyre mine last week, and has returned to Montreal.

Mr. E. Craig is foreman at the Otisse mine of the Colorado Ontario Development Co., Matachewan area.

Dr. H. C. Cooke visited the Otisse mine last week.

Mr. "Mike" Kennedy is at the O'Brien mine, Cobalt.

Mr. R. E. Hore has returned to Toronto from Northern Ontario.

Mr. H. R. VanWagenen, the new general manager of the Canada Copper Corporation, has arrived in Princeton, B.C., from Denver, Colo., and is taking up his residence at the scene of the company's operations, Copper Mountain. Mr. Oscar Lachmund, the retiring general manager, will spend the winter in Spokane, Wash. The company's headquarters staff presented the latter with a testimonial on the occasion of his departure in the shape of a handsome suitcase.

Mr. A. R. Whitman has given up consulting practice until after the war, being now an instructor in War Topography at Columbia University.

Mr. Arthur L. Day announces a change of address from Geophysical Laboratory, Washington, D.C., to Corning Glass Works, Corning, N.Y.

Mr. Robt. Bryce was in the Gowganda District last week.

Mr. N. H. Newman is in the Matachewan District.

Mr. W. D. Matthews, President of the Consolidated Mining & Smelting Co. of Canada, accompanied by Mr. C. B. Hosmer, a director of the Bank of Montreal and Mr. Walter O. Miller, District Superintendent of the Canadian Pacific Ry., recently visited the Trail, B.C., Smelter. They thoroughly inspected the smeltery from the ore bins to the acid plant, including the blast furnaces for copper and lead, the refineries for both, the roasters and the zinc plant.

Dr. F. W. Farrier, representing the Munition Resources Commission of Canada, and Mr. R. Graham, assistant professor of Mineralogy at McGill University, are making a trip into the heart of the Cascade Range, British Columbia, to inspect mica deposits. Wm. Schmock, who is with the party, is the discoverer of the mica in question and, having succeeded in interesting the Dominion Department of Mines in his find, is escorting and guiding the authorized investigators to his claims in order that they may make a report. As is well known mica is much needed for the manufacture of war necessities.

The Eureka Mine.

The Minister of Mines Report for 1917, refers to the Eureka Mine of the Nelson Mining Division (B.C.), as the chief copper shipper of that section and states that certain improvements of equipment were underway which would permit the shipment of 50 tons a day sometime this year. More recent news of this property is to the effect that this work has been completed and that the plant is in shape for the increasing of output to the point predicted. A lease has been taken on the power plant of the Kootenay Gold Mines and an air line 6,000 feet in length constructed. Air drills have been installed, thus doing away with hand drilling and materially facilitating development. Other work done of a preliminary nature includes the repairing of the tramway and wagon road and the timbering of the mine. The Eureka has shipped 5,000 tons of ore, has about 9,000 tons blocked out, and it is considered that the prospects of developing a great tonnage are excellent. The ore averages about \$15 a ton in silver and copper. The Inland Mining Company, with headquarters at Walla Walla, Wash., has taken over this mine from the original Eureka Company.

THE GOLD CONFERENCE AT SPOKANE

The Gold Conference, which was held at Spokane, Wash., on September 5 and 6, was attended by Wm. Fleet Robertson, Provincial Mineralogist, as the representative of the Province of British Columbia. Mr. Robertson states that those present, among whom were deputations from the States of Washington, Oregon, Idaho, and Montana, were agreed that the monetary value of an ounce of gold was so well established at \$20.67, and accepted by all civilized nations as the basis of national and international financial transactions and credits that no change could even be considered, at least at such a time as the present with the world at war. It was, therefore, impossible to raise the selling price of gold, it being the standard of monetary measurement. It was undisputed, Mr. Robertson declares, that the actual cost of producing an ounce of gold from lode mining as compared with pre-war costs had increased from 50 to 75 per cent. It was shown that a large percentage of the gold mines under present conditions could not produce gold at a profit with gold at \$20.67 an ounce and had shut down, while with many others the profits had been reduced to so nearly the vanishing point that the owners had or were about to shut down until operating costs became lower which naturally meant until after the termination of the war. Mr. Robertson pointed out that certain copper properties in the aggregate produced a large quantity of gold, yet in these properties the gold was merely a by-product, only from 5 to 10 per cent. of the total values being gold while the remaining 90 to 95 per cent. was in copper, the value of which latter metal had increased so greatly, that this class of mine at present was making excessive profits and did not need any assistance. He attempted to get a definition of what a "gold mine" was, as none of the British Columbia mines produce gold exclusively. The sense of the meeting, however, was that assistance should be sought for any mine producing gold, in whatever proportion such gold might be to the total values contained in the ores. In summing up the results Mr. Robertson stated that the suggestions of Mr. F. A. Ross, vice-president of the Northwest Mining Association, had been endorsed, emphasis being given that recommending a bounty on gold produced. The suggestions offered by Mr. Ross may be summarized as follows:

(1) The recognition of gold mining as a war industry with special privileges as to taxation, priority in obtaining

supplies, transportation and labor, etc. (2) The immediate induction of labor, as has been done in the case of the lumber industry. (3) The building of trunk line motor truck roads necessary to the building up of commercially inaccessible gold fields, precisely as the spruce forests have been made accessible by Government-built railroads. (4) The extension of financial aid to such properties as may be judged by qualified Government specialists to be capable of producing metals essential to the conduct of the war. (5) The granting of a bounty on all new gold produced by the mines of the United States; and the same to be paid by the Canadian Government on new Canadian gold.

The chief resolutions adopted at the Conference follow: Memorial to governments of the United States and Canada requesting in aid of the gold mining industry, priority rights; assignment of labor to mines; motor truck roads to commercially inaccessible gold fields; government financial aid to approved properties and bounty upon new gold as determined from time to time by the proper authorities.

Requesting Northwest Mining Association to appoint a committee to continue work of Conference and cooperate with American gold conference.

Endorsing action of Oregon Bankers' Association, which went on record in favor of "appointing by the Secretary of the Interior of a committee to study the increased cost and the decreased output of gold, in order that the gold production of the United States may be maintained at its pre-war volume."

Urging the President of the United States to appoint "a man whose success and experience in mining thoroughly qualifies him for the position" upon the Industrial Commission to be sent to Siberia.

Urging upon Congress that relief from annual assessment work upon mining claims, now covering the years 1917 and 1918, be extended to include the calendar year after the termination of the war.

Urging that, to relieve the labor shortage, men in military training be permitted to work in mines under proper rules for pay and protection and that men slightly disabled be given opportunity to perform such work.

Urging that property owners in adjacent mining districts make reports upon local conditions to committee appointed by Northwest Mining Association for use in furtherance of the objects of the Conference.

Mr. Robertson submitted the following analysis of the lode gold output of British Columbia:

LODE GOLD OUTPUT OF BRITISH COLUMBIA.

Source from which obtained	1914		1917		1918 Estimate	
	ounces	\$	ounces	\$	ounces	\$
Stamp Milling	60,477		40,480	836,722	35,000	
Smelting—						
Gold-Copper Ore	138,867		36,314	750,610	50,000	
Copper-Gold Ores	44,502		33,890	700,506	32,000	
Silver-Lead Ores	3,324		3,765	77,823	3,500	
Miscellaneous			74	1,529		
	247,170	5,109,004	114,523	2,367,190	120,500	2,490,735
Placer Gold	28,250	565,000	24,800	496,000	17,500	350,000
Total Gold		5,674,004		2,863,190		2,840,735

1917 PERCENTAGES OF VALUES IN ORES AS CLASSIFIED.

	Gold	Silver	Copper	Lead	Tonnages
Stamp Milling	97.30%	2.70%			72,071
Smelting—					
Gold-Copper Ores	58.45%	4.04%	37.50%		107,712
Copper-Gold Ores	4.31%	2.34%	93.35%		2,025,124
Silver-Lead (dry ores)	46.62%	53.38%			4,078

SPECIAL CORRESPONDENCE

BRITISH COLUMBIA.

Ore shipments to the Trail (B.C.) Smelter had reached the total of 239,197 tons early in the month of September.

Roaster Building Destroyed by Fire.

Fire threatened to destroy the entire plant of the Canadian Consolidated Mining & Smelting Co., Trail, B.C., recently but, fortunately, was got under control before advancing too far, with a total monetary loss of only \$40,000. The Dwight and Loyd roaster building and contents were completely destroyed. This structure was one of the oldest of the plant, having been erected with hewn timbers about twenty years ago. It was oil soaked and an easy prey to the flames. The only explanation of the outbreak given is that the oil ceased to flow to the furnaces for a time and then recommenced. Without being noticed with the result that it became ignited by the hot furnaces. The work of rehabilitation is being hastened and will not take long, the destruction of six electric motors, one of 100 h.p., two of 50 h.p., and the others in smaller sizes being the most serious in point of replacement. It is not thought, however, that the work of the lead plant will be held up as there are old roasters which can be used if required. A new wooden building is likely to be constructed for temporary use, a steel structure taking its place as soon as it can be erected.

Asks Removal of Royalty on Gold.

There is a demand among the companies and the placer miners of the Yukon Territory for the removal of the present royalty exacted on the gold output of that section of Canada. Consequently Dr. Alfred Thompson, member of the Dominion Parliament for the Yukon, has announced that at the next Session of the Parliament, he will ask that, as a war measure, the said royalty be removed. He thinks that this can be done easily by introducing an amendment to the Yukon Placer Mining Act. Dr. Thompson asserts that his constituents are not requesting too much in view of the increased cost of mining and the desirability of encouraging the output of gold to assist the Allied Countries in meeting the extraordinary financial obligations caused by the war.

The Increased Charges for Smelting at Trail.

An increase in the charge for smelting to \$8.30 a ton as against \$7.50 is announced by the Canadian Consolidated Mining & Smelting Co. It is contained in a circular issued by General Manager S. G. Blaylock, which is dated August 31, and reads as follows:

"In our circular of July 31, we advised you of an increase in the price of coke amounting to 40 cents a ton and stated we understood that further increases were being made. We now have definite advice of these increases. They are, first, a further increase, effective August 1, ordered by the director of coal operations, in the first cost of coke, amounting to 36 cents a ton, and, second, an increase by the railway commission in freight rates of 65 cents a ton. The total increase therefore since Schedule B was published in the price of coke is \$1.41 a ton. Under the terms of Schedule B we are accordingly increasing the base rate of 25 per cent. of this or 35 cents per ton of ore.

"Our circular of July 31, has already advised you of the increase of 45 cents a ton on account of wage adjustments.

"The total increase of the base rate effective August 1, 1918, is, therefore, 80 cents a ton, making the base rate now \$8.30 a ton instead of \$7.75.

"The freight adjustment in the lead sale price advised in our circular of July 31, is more than covered by the recent advance in freight rates on the competing lead from American points, so that this adjustment is compensated for by the increase in the lead prices in Canada."

Activity in Kootenay District.

That men in the gold mining industry find themselves in an unenviable position by reason of high costs of production, and the stationary price of gold is a statement made by Mr. Fred. A. Starkey, President of the Associated Boards of Trade of Eastern British Columbia, after a recent tour of the Province. He expressed the opinion that the government eventually would have to relieve the condition by bounty or premium of some sort if gold production is to continue. Mr. Starkey states that, with the exception of gold mining, never in his experience has he found the mining industry of the Kootenay District of British Columbia more prosperous.

"Since the outbreak of the war," he said, "the silver-lead properties of the Slocan District have been reopened and without exception are doing splendidly. Properties which had been closed down and which it was not expected would operate for a long time if ever are producing more metal than ever before. Mr. Clarence Cunningham, who has been operating in the Slocan for a comparatively short time, is now building a concentrator at Three Forks, B.C., to serve the properties on the Sandon, B.C., side of the range. He first obtained the Queen Bess which with little work was made a consistent producer and he also now controls the Sovereign, Wonderful, Van Roi, Alamo-Idaho, and Wakefield, all of which are producing silver and lead. The Van Roi and Hewitt have their own mills, and the new one will serve the other properties. The plant is to cost about \$150,000.

"The Rosebury-Surprise Company at Sandon, has just taken over the Ivanhoe and the Canadian, which are old mines. The Slocan Star is another fine property and work is being continued on a nine-foot vein in the old workings under the management of Mr. R. H. Stewart. Some first-class ore is being taken out.

"Mr. C. F. Coldwell is working on the old Utica which is shipping again. I understand that the Cork-Province is working full blast and development in this section is greater than ever before.

"Coming into East Kootenay the Sullivan Mine, owned by the Canadian Consolidated Mining & Smelting Co., is the biggest shipper. Another big producer is the Paradise at Wilmer, B.C. The old North Star and other properties were acquired recently by the Federal Mining Company of the United States.

"A most encouraging feature of this year's operations is the fact that many leases have been taken throughout the District, and this means much valuable development. Some 1,500 miners are employed in the District."

Inquire into Smelter Charges

There is every indication that the inquiry into the schedule of charges and the general policy of the Consolidated Mining & Smelting Co. of Canada, towards the operators of British Columbia will commence at an early date. Messrs. Fowler, DeLashmut and Anderson, three prominent mining men of British Columbia, who were nominated by the Associated Boards of Trade as being the proper persons to conduct such an investigation, have decided to accept their appointment at the hands of the Dominion Government, the latter, apparently, having met their wishes in regard to empowering them to take evidence on oath and also as to providing the finances necessary to enable them to make their work thorough and complete.

Are All Coal Miners Doing Their Duty?

Coal mine operators of British Columbia have complained for some time of the tendency which they allege exists among their men of laying off at frequent intervals to enjoy a holiday notwithstanding the former's efforts to meet the urgent need for fuel by increasing the output of their mines. They assert that many of the men, all of whom now are receiving much higher wages than are available under normal conditions, take advantage of

their improved financial position to work little more than is necessary to obtain a good living remuneration.

In this connection Mr. T. A. Spruston, Superintendent of the Canadian Collieries (Dunsmuir) Ltd., has received the following communication from Mr. N. Thompson, Fuel Controller for British Columbia:

Dear Mr. Spruston:

I have to thank you for your favor of September 9, enclosing statement showing the percentage of shifts lost from the 3rd to the 7th.

I regret to see that the percentage has gone up for the time mentioned without considering the holiday of September 2, and I think it is a pity our men here cannot see the importance of working as near as possible full time and keeping the production of coal up to as near as possible the top notch.

Just recently I received a file of letters from the Fuel Administration of Washington, setting forth the extra effort that is being made by the miners in the United States since they entered into the war. I enclose herewith copies of some of the memos which I received, and it is my intention to send similar copies to the secretaries of the men's committees of the various mines in British Columbia, and I trust it may have the effect of impressing upon them the importance of their responsibility in the present crisis of our country's history.

Yours faithfully,

(Sgd.) N. THOMPSON,

Fuel Administrator for British Columbia.

The memoranda in question shows that the United States Fuel Administration has found that since coal production records began to be broken in various of the leading districts, the spirit of emulation seems to be catching throughout the entire production field. In nearly every field the mine workers are a unit in consenting to make a sacrifice of many of their usual holidays and diversions. Wherever there seems to be a danger of taking men away from the vital task of mining more coal the mine workers are doing their part by making the necessary sacrifice.

One special incident given is at Barnesboro, Pa., the centre of an important mining district, where one of the annual events enjoyed by the mine workers has been the picnic of the Northern Cambria Scottish Club. It is pointed out that word has been received by Mr. Jas. B. Neale, Director of Production, U.S. Fuel Administration, that the Northern Cambria Club has decided to discontinue its annual picnic during the period of the war so as not to interfere in any way with coal production.

It is further explained for the benefit of the Western Canadian miners that the U. S. Fuel Administration has taken the position that in producing fields wherever public gatherings, county fairs, firemen's picnics and such like, are likely to interfere with production it is desirable that they be abandoned while the present National need of fuel continues.

Coal Production.

British Columbia's production of coal for the month of August totalled 240,055 tons, which is an increase of 13,467 over July, and the highest tonnage produced in any month so far this year. Vancouver Island takes the lead in comparison with the output of other Provincial Collieries having 145,266 tons to its credit. The Crows' Nest Pass mines are next with 78,971 tons while the Nicola Princeton District shipped 15,818 tons.

Of the Island companies the Canadian Collieries Ltd., have the best showing with 71,791 tons, the Canadian Western Fuel Company following close with 61,200 tons. The balance is accounted for by the smaller collieries as follows: Pacific Coast Coal Mines, South Wellington, 6,858 tons; Nanoose Collieries, 2,631 tons; Granby Consolidated Mining & Smelting Co. (Cassidy's), 2,383 tons; B.C. Coal Co. (Jingle Pot), 400 tons.

In the Crow's Nest Pass District the Crow's Nest Pass Coal Co., produced 66,457 tons from the two collieries operated, as follows: Coal Creek Colliery, 44,366 tons; Michel Colliery, 22,091 tons; Corbin Coal & Coke Co., 12,514 tons.

The Middlesboro Collieries were the biggest producers in the Nicola Princeton District with a tonnage of 8,529, the remainder coming from the smaller collieries.

The new mines being opened on the Island are beginning to count in the monthly production. These recently opened up at South Wellington and Cassidy's having an output of 5,530 tons for the month, while it also is to be noted that the Jingle Pot, for months sealed by order of the Chief Inspector of Mines, because of fire, is again on the shipping list. But the most remarkable gain is that of the Harewood Mine of the Canadian Western Fuel Company which was recently re-opened and last month produced 21,695 tons.

At the other new mine, which is being opened by the Canadian Western Fuel Company on the farm near Nanaimo, rapid advances are being made. Two shafts are being sunk to tap the Wellington Seam, and one of these struck the coal a few days ago, exposing a seam about 9 feet in thickness. The other is expected to reach the same seam sometime during the present month.

The total production of the coal mines of British Columbia so far this year is 1,822,031 tons. For the same period last year it was 1,535,998 tons. Therefore there has been a gain of 286,033 tons.

WILL OPERATE SILVER BELL MINE.

Considerable activity is reported at the Silver Bell mine, a high grade silver-lead property situated on the South Fork of Kaslo Creek, B.C., and owned by Mr. R. F. Green, M.P., and Mr. S. Green. Quantities of equipment and supplies are being shipped in and it is understood that operations are to be carried on well into the winter. This property has been idle for fifteen years.

EXODUS OF GOLD MINERS FROM YUKON AND ALASKA

The stationary price of gold and the much increased cost of mining material, food and supplies has caused a sudden exodus of miners and their families from the Yukon and Alaska. Every boat coming down the coast from Ruby, Fairbanks, Iditarod and Dawson comes with all accommodation taken by people who are leaving the country for the coast, where there is hope of getting work in shipyards and other war industries at high wages until after the war. This "stampede," for it is said no other term fittingly described the condition, has caused a decided slump in the gold output, as evidenced by figures tabulated by the banks, express companies and others. The decline in the Alaskan camps is said to be fully 50 per cent., according to figures given out by various institutions having to do with the handling of bullion. The Yukon and Alaskan Press is unanimous in declaring that unless a bonus is provided or other adequate measures taken the gold camps of the North will be paralyzed until normal conditions are restored. Arrivals at Dawson express doubt as to whether all those who want to get out of the country this winter will be able to do so. There is an agitation to request the Government to send extra boats to help those having difficulty in getting out of the district. The overland stages are crowded.

Mr. Hugh Boyle, of the Dominion Diamond Drill Co., has gone to Weyburn, Sask., to superintend some extensive diamond drilling work in the coal fields there.

Granby, Oct. 8.—At first glance the report of the Granby Consolidated Mining Company for the year ended June 30th last, presents a rather lean showing. Granby, however, like most mining companies, increased its chargeoffs last year, pulling net down to but a few cents above the annual dividends of \$10 a share.

On a production of 44,675,000 pounds of copper and 550,000 ounces of silver the company earned a gross operating profit of \$4,124,819. After bond interest of \$582,195, net profits were \$3,542,624, or the equivalent before depreciation of \$23.60 a share on the 150,000 shares.

But Granby reserved for depreciation \$2,015,491, 60 per cent. more than the \$1,256,267 set aside in the preceding twelve month, a sum that would seem to be ultra-conservative. After this reservation there remained a balance of \$1,527,133. The year's dividend called for \$1,500,000, leaving a surplus of but \$27,133.

With \$2,015,000 charged against earnings for depreciation stockholders need have nothing to worry about, for Granby can easily earn and pay \$10 a share with copper at or near 26 cents a pound.

"Mine exhaustion" has caused a writing down of value of mining property to \$9,100,000 from \$15,000,000 at which it had stood for a number of years.

Ore reserves on June 30th were placed at 23,531,208 tons, estimated contents being 688,064,015 pounds of copper, 265,157 ounces of gold, and 2,238,193 ounces of silver. This tonnage includes 10,000,000 of low-grade material which the company hopes to handle by flotation.

NORTHERN ONTARIO

Hollinger-Consolidated Mining Company.

Operating their milling plant at a little more than half capacity, the Hollinger-Consolidated Mining Company at Porcupine is yielding well over \$500,000 in gold per month. Recently the directors of the company visited the property, and on their return to Montreal expressed themselves as "more than ever impressed with the greatness of the mine." It was also stated to be the intention of the directors to keep the mine in continuous operation as long as the supply of labor will permit. At the present time the supply of workmen is far from satisfactory and efficiency is sadly lacking, but in spite of this fact the production of the company remains high. With a sufficient number of men available the present equipment of the Hollinger-Consolidated could be speeded up to from 3,000 to 3,500 tons daily, compared with less than half that amount being treated at the present time. owing to the fact that the winter months usually see an increase in the number of men at the various properties, seeking employment removed from contact with nature's elements encountered in outside work, the next six months' operation of the property may reasonably be attended with great prosperity. Added strength is given to this contention when it is remembered that the Canadian Government may follow the example of aiding the gold mining industry by placing miners in preferred classes in respect to the need of men for military drafts, and it is highly probable that special concessions will be given to these concerns in the matter of taxation. It is understood that the Hollinger, due to having increased its average mill heads, is making net profits considerably in excess of dividend requirements of 1 per cent. every eight weeks, or 6½ per cent. per annum, the policy of the directors being to further add to the already big surplus. The dividends at 6½ per cent. are on a parity with the returns of first-class bonds; with the added inducement that with the conclusion of the war and adequate working forces, the company will be able to pay 13 per cent. or even more. The company own a large area of ground which up until the present time has been proven to contain upwards of two score veins, none of which have been explored, while in the portions of the property already developed to a

depth of 1,200-feet upwards of \$40,000,000 in ore reserves was shown in the last annual report of the company. To use the words of one of the directors who recently visited the property: "The Hollinger has only started to mine."

A limited amount of development work is being done at the Dome Mines, Porcupine, and about sixty men are employed at the property. It is understood a contract for driving a raise from the 800-foot to the 700-foot level was recently let. Heretofore the main workings of the Dome have been between the 700-foot level and the surface, where, according to the last annual report of the company, close to \$10,000,000 in gold ore was blocked out. The present plan would appear to be to add the 800-foot level to the main workings of the property. With exploration work having been carried to a depth of 1,250-feet, where considerable lateral work was done, it appears reasonable to expect that the various levels down to that depth will be developed in their turn as fast as labor conditions will permit. With a return to normal conditions the Dome Mines should be one of the first and foremost properties in the Porcupine camp to reflect the improved conditions.

Very satisfactory results are obtaining in a winze driven from the 1,000-foot level of the McIntyre-Porcupine Mines. It will be remembered that upwards of a year ago diamond drilling disclosed the presence of an ore body at a depth of 1,400-feet, which proved to be the downward continuation of the main ore body of the mine. The policy of development being followed by the McIntyre is to establish main haulage levels at depths of 300-feet with intermediate level at depths of 150-feet. Thus the 1,300-foot level will become a main haulage way with an intermediate working at the 150-foot level. This will permit of the automatic handling of ore from the stopes of the mine to chutes where it will be possible to load the cars with the minimum amount of labor. The production at this, the second largest producer in the Dominion of Canada, is at the rate of upwards of \$150,000 per month. The mine is now developed to a position where added milling facilities are required and with a cessation of hostilities in Europe and a sufficient supply of men, it is understood the company would immediately undertake the construction of an addition to the mill which would raise the present capacity of 600-tons per day to 1,000-tons. The average gold content in the ore of the mine, as so far determined appears to be close to \$11 per ton. In the past it has been the policy of the management to treat the ore from development work without bringing it up to the average of the mine. This policy has resulted in placing the ore reserves in excellent condition. The annual meeting of the company has been called for the 26th of the present month and besides the general business of the organization, the shareholders will vote on the proposed purchase of the Plenaureum property. The forthcoming annual report will cover the period of operations for the fiscal year of the company ending on June 30th last, and is expected to show the affairs of the company to be in an exceptionally satisfactory condition.

The new shaft being sunk at the Davidson property is down nearly 400-feet, this shaft is being sunk some distance north of the original shaft. The object in view in sinking this shaft is to open up an ore body which has been cut by diamond drilling at depths of 650 and 550-feet. The core of the first drill hole showed a vein 30 feet in width of ore containing good average milling values, while the second hole disclosed the ore body a similar width with slightly increased value a hundred feet lower down. The shaft is being sunk at the rate of about five feet per day and should encounter the new ore body within the next week. In the old workings of the mine an ex-

tensive ore body has been opened up down to the 300-foot level, ore from these workings having been treated in the mill since the commencement of milling operations.

Mr. P. A. Robbins, managing director of the Hollinger-Consolidated Gold Mines, has joined the forces of the American Engineers for overseas service, and left recently for California, where his family will reside until his return from overseas. Mr. Robbins was general manager of the Hollinger all through its early development, and indeed, up until seven months ago, at which time he became managing director, to be succeeded by Mr. Brigham as general manager. To the former general manager is due in a large measure the present satisfactory condition of the Hollinger-Consolidated. Besides his extensive mining activities, Mr. Robbins found much time to devote to municipal affairs in the town of Timmins and will be greatly missed in this respect as well as by Northern Ontario mining men generally.

A carload of concentrates resulting from the operation of the new Peterson Lake Mill was among the list of shipments from the Cobalt camp for the past week, the material going to the Globe smelter at Denver, Colorado. Mr. C. A. Filteau, manager of the National Mines, was appointed manager of the Peterson Lake Silver Mining Company at a meeting of the directors held on the 14th of September. Mr. Filteau will also continue to manage the National property. Both these properties are equipped with small oil flotation plants, and are treating tailings from previous operations.

The annual meeting of the shareholders of the McIntyre Porcupine Mines, Limited, will be held in the Board Room of the Bank of Hamilton, 65 Yonge Street, Toronto, on Saturday, the 26th of October, 1918, at eleven o'clock in the forenoon for the purpose of receiving the report of the operations for the year ended June 30th, 1918; for the election of directors for the ensuing year, and the transaction of such other business as may properly come before an annual general meeting of shareholders and for the following special business: To consider and, if approved, to ratify and confirm a by-law of the company authorizing it to purchase the whole or any portion of the capital stock of the Plenaureum Gold Mines, Limited, for cash or fully paid stock, and to use the funds of the company therefor.

The installation of machinery at the Haileybury Mining School is nearing completion. The building itself was completed some time ago. The structure is of solid brick. The ground floor is almost wholly taken up with a complete mill of the most modern design. In addition to serving educational purposes, the mill is expected to be useful in determining the process best suited to the treatment of the various ores met with throughout this mining district. The equipment consists of a small jaw crusher, three light stamps, amalgamation plate, classifiers, 3 x 4 tube mill, concentrating tables, the usual agitators and thickeners. Flotation equipment has also been installed. Therefore it will be possible to test ores for determining either their free-milling qualities, their adaptability to cyanidation, or treatment by flotation.

The record from the Coniagas Mine at Cobalt for the current year promises to be on a par with that of last year, production being at the rate of upwards of one million ounces of silver annually. According to the last annual report the company had approximately five million ounces of silver in their ore reserves. Last year the price of silver averaged 81.47 cents per ounce, while for the first half of the current year the price of the white metal has averaged 92.8 cents per ounce. Owing to arrangements between the governments of Great Britain and the

United States in which the price was fixed at \$1.01½ cents per ounce, the average price for the full calendar year will be 96.805 cents per ounce. This is more than 15 cents per ounce over the average price for the preceding year. The increased net earnings for the various large silver producers is readily realized.

This week in the crosscut being driven west at the 310-foot level of the Adanac Silver Mine, which adjoins the Temiskaming, ore was encountered. The new vein is upwards of six inches in width and is composed of calcite, cobalt and niccolite, as well as considerable native silver. This vein was encountered approximately twenty-one feet west of the first stringer cut in this cross-cut, which marked the eastern side of a series of veins, which bid fair to develop into a big asset for the Adanac Company. For the full twenty-four feet the cross-cut has opened up a series of veins, ranging in width from mere stringers to as much as nine inches, the last few veins encountered being the strongest and most uniform of the series. When the entire shear zone has been cross-cut the management will commence drifting on the most encouraging vein, and the results are looked forward to with the keenest interest. With such a series of veins occurring in the Keewatin formation in the zone immediately above the diabase and in close proximity to one of the most pronounced shearings in the mine, the outlook never appeared so bright for the Adanac. The geological conditions being met with are proving true to those predicted by Mr. A. R. Whitman, well-known geologist, and the conditions are almost identical with those prevailing on the Temiskaming mine in its most productive areas. The Adanac will be the centre of interest in the Cobalt camp until the importance of the new discoveries is determined.

Active underground operation of the Foster mine at Cobalt has commenced, the property being under lease to Messrs. C. L. Campbell, of Montreal, and Mr. W. Fairburn, the latter being in charge of the work at the mine. A small railway siding has been constructed from the Nipissing Central Railway to the property and the dumps from previous operations are being transported to the Northern Customs mill at 104 for treatment. Already upwards of ten cars have been shipped, the ore for the greater part being of low grade, running approximately ten ounces to the ton. With the cost of mining eliminated this allows of a good margin of profit with silver selling above the dollar mark. A considerable amount of high grade ore is also being encountered in the work of loading the ore. This is being sorted out and bagged and a considerable amount running close to 2,000 ounces to the ton has already been found. It is estimated that the entire dumps contain about 13,000 tons. The mining operations underground, for the time being, will be confined to the upper levels owing to the fact that the lower levels of the property are flooded with water and considerable delay will follow before the de-watering can be accomplished. The agreement on which the lease has been given to the present operators calls for ten per cent. of the profits to go to the Foster Mining Company. Facilities for handling the ore from the mine and dump are being improved and it is expected that in the near future about one car of ore per day containing upwards of fifty tons will be sent to the mill for treatment.

Developments at the Beaver Consolidated property at Cobalt in the zone immediately above the diabase are understood to be very favorable. At the same time the new mill on the company's Kirkland Lake property, the Kirkland Lake Gold, is nearing completion, with the resultant possibility of adding largely to their revenue from the treatment of the large amount of good grade ore

already mined and on the dumps at this property ready for treatment in the new mill, as well as the workings of the property having reached the most advanced depth in the Kirkland Lake camp (700-feet) at which point the vein was proven to contain consistent width and value over some 20-feet. A new main shaft is being sunk as a central working for the property and is being connected with the old underground workings as each succeeding level is reached. It might be said that the Beaver Consolidated is in a very strong physical position.

Development work at the Keeley mine is being carried on in a small way, a few men being employed by the company and considering the size of the working force a considerable amount of ore is being recovered. Owing to the fact that the personnel of the company is made up of Old Countrymen, it is not thought likely the property will be very aggressively operated until the conclusion of hostilities in Europe.

The legal action involving the interlocking directorates of the R. A. P. Syndicate property and that of the Boston Creek Gold Mines is reported to have been settled out of court. It is further learned from a reliable source that negotiations aiming at the amalgamation of the two properties are now in a more or less advanced stage. The rumors to the effect that operations would be resumed in the near future appear to be well founded. The R. A. P. property is equipped with a modern mining plant while the Boston Creek Gold mines have buildings sufficiently large to accommodate an adequate working force. Prior to the development of differences between the principals of the companies, the R. A. P. Syndicate shaft had been driven to a depth of 200-feet, at which point lateral work was carried on to the property of the Boston Creek Mines, on which a winze was driven to a depth of 300-feet. With a merger of the two properties effected their development could be carried forward without much delay. News to this effect will cause general satisfaction in the Boston Creek camp and at the same time extend the field of active operations.

Coniagas	2.50	
Crown Reserve .....	.22	.19
Foster .....	.02 1/4	..
Gifford .....	.02 3/4	.02 1/2
Great Northern .....	.04 1/4	.03 1/4
Hargraves .....	.03	.02 7/8
Hudson Bay	18.00	..
La Rose .....	.52	.50 1/2
Lorrain Con. M., Ltd. ....	.02	.01
McKin-Dar-Sav. ....	.42	.41
Mining Corp. of Can.	2.75	2.38
Nipissing	8.80	8.55
Ophir .....	.05 3/4	.05 5/8
Peterson Lake .....	.10 1/2	.10
Right of Way .....	.04	.03 3/4
Silver Leaf .....	.00 3/4	.00 1/2
Temiskaming .....	.40 1/2	.30
Trethewey .....	.25	.23
Wettlaufer .....	..	.04 1/2
York, Ont. ....	.01	.00 3/4

Gold.		Bid.	Asked.
Apex .....	.03	.02 3/4	
Boston Creek Mines .....	.29	.25	
Davidson Gold Mines .....	.35	.30	
Dome Extension .....	.18 1/2	.17 1/2	
Dome Lake .....	..	.10	
Dome Mines	10.50	10.10	
Eldorado .....	.02	.00 3/4	
Elliott-Kirkland .....	.36	..	
Hattie Gold Mines .....	.69	..	
Hollinger Cons.	5.15	5.10	
Keora .....	.10	.05 1/2	
Kirkland Lake .....	.40	.38	
Lake Shore M., Ltd. ....	.74	..	
McIntyre	1.51	1.50	
Moneta .....	.07 1/2	.07	
Newray Mines, Ltd. ....	.17	.12	
Porc. Crown .....	.16	.15 1/2	
Proc. Imperial .....	.01 1/4	.01	
Porc. Tisdale .....	.01 1/4	..	
Vipond .....	.18	.16	
Preston East Dome .....	.03 1/4	.02 3/4	
Schumacher .....	.20	.19	
Teck-Hughes .....	.25	.23 1/2	
Por. V. N. T. Gold M. ....	.18	.15 1/2	
Thompson-Krist .....	.05 1/4	.04 3/4	
West Dome .....	.11 1/2	.11	
Wasapika Gold M., L. ....	..	.25	
Miscellaneous.		Bid.	Asked.
Vacuum Gas .....	.08	.06 1/2	
Rockwood Oil & Gas .....	.25	.24	

MARKETS

STANDARD MINING EXCHANGE.

Closing prices October 7th, 1918.

	Silver.	Bid.	Asked.
Adanac Silver M., Ltd.11 1/4	.11
Bailey04 1/4	.04 1/2
Beaver31	.30
Chambers-Ferland10 1/2	.09 1/2

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