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NOTES AND COMMENTS.

The Index to Vol. XIV., of the *MINING RECORD*—that for the year 1907—will be mailed on request for same.

The total value of the mineral production of British Columbia for all years to end of 1907 is nearly \$300,000,000.

The total value of coal and coke produced in British Columbia during all years to the end of 1907 is about \$87,000,000.

Vol. VII, the new edition, of “The Copper Handbook,” by Horace J. Stevens, of Houghton, Michigan, U.S.A., has been published.

It is estimated that in Ontario about \$100,000 has been collected as proceeds of the mining tax imposed last year.

According to the *Kaslo Kootenaiian*, about five cars of zinc ore are coming down daily from the White-water mine for shipment to Bartlesville, Okla., U. S. A.

The Arlington mine at Eric, Nelson mining division, will again ship ore as soon as the wagon road shall be in good enough condition to admit of loads being hauled over it to the railway.

The courtesy of the officials of the British Columbia Bureau of Mines in lending the *MINING RECORD* a number of blocks used in this issue for purposes of illustration, is acknowledged with thanks.

The average price of electrolytic copper for the month of May (*Engineering and Mining Journal* quotations), was 12.598 cents per lb. This was the lowest average since September, 1904, for which month it was 12.495 cents.

The American Mining Company intends commencing gravel-washing at its placer gold property on French Creek, Big Bend, with two full gangs of men, as soon as practicable after the arrival of

its manager, J. C. Vance, who has already left Revelstoke for the scene of the season's operations.

Richard Merton, of Frankfort-on-Main, Germany, who is connected with a large metal-purchasing company, has been credited with having stated that "during his travels he had seen nothing that compared with the Granby mine workings at Phoenix, Boundary District of British Columbia, as far as low costs and general economical operation are concerned.

The Ottawa correspondent of the *London Mining Journal*, writing under date May 11 stated that "Dr. Goodwin, dean of the Kingston, Ontario, School of Mines, has already received three gifts of \$10,000 each towards the substantial endowment of the Provincial Government institution there. The governors want \$200,000, and they hope for good aid from the Government."

T. D. Pickard, of the mines at Goose Bay, Observatory Inlet, has been at Prince Rupert looking for experienced miners, states the *Prince Rupert Empire*. The property is owned by the M. K. Rodgers Syndicate, which has ample means to work it. Including those he hired at Prince Rupert he will have over 30 men at the mine.

The decision of the Dominion Government to continue granting a bounty on lead mined in Canada is giving great satisfaction in East and West Kootenay, in which are situated the chief lead-producing districts of the Dominion. The conditions under which the payment of the bounty will hereafter be made are even more favourable to the producer than during the five-year period now about closed.

In April the miners' union at Goldfield, Nevada, declared the strike at an end, allowing the men to work with non-union miners. By a vote of 90 to 25 it was decided to return to work and adopt the Tonopah scale of wages. The operators, however, refused any advance above their schedule, which was 50c. per day less than Tonopah, but the miners returned to work, glad to bring the labour difficulties to an end.

Information has been received at Nelson to the effect that owing to the serious illness of Chief Justice Fitzpatrick, all the British Columbia cases before the Supreme Court of Canada have been postponed until the October sittings. This will mean that the celebrated extra-lateral rights case of *Star v. White*, which was to have come up on appeal, will now not be heard until the autumn.

Early in May George H. Aylard, manager of the Standard silver-lead mine, situated above Four-Mile Creek, in the Silverton section of Slovan District, when on a visit to Nelson informed the *Daily News* that normal progress was being made at the mine, but it was not practicable just then to ship ore to

the smelter because of the state of the roads. Some six to eight cars of good ore were stored in the bins at the mine and would be sent to Trail just as soon as transportation should again be possible.

Favourable progress is being made with the raise in the Tariff mine, in Ainsworth camp, to connect the long cross-cut tunnel with the bottom of the shaft. After raising 70 ft. through limestone the footwall of the vein was encountered and the ground was much easier to work. It is expected the bottom of the shaft will be reached in about 60 ft. more. When this shall have been done the old workings will be thoroughly drained, and the Tariff will thereafter be in a position to resume the shipment of ore, states the *Kootenian*.

The *Rossland Miner* says that James Cronin, formerly manager of the mines of the Consolidated Mining and Smelting Company of Canada, has "expressed himself as well pleased with the manner in which the Rossland mines are turning out in the lower levels, and said they were doing well for mines that three years ago were thought by some to be practically worked out. There is any quantity of ore in Red Mountain yet, but those who are hunting for it must not be afraid to drive for it, although the distance is sometimes considerable before it is found. Rossland, he declared, is 'all right' and will continue to yield a large tonnage of ore for many years to come."

A press despatch from Seattle, Washington, states that the failure of the recent strike of the Western Federation of Miners at the Treadwell mine has resulted in an almost complete dispersion of the Slavonic element formerly at Douglas, and these men have scattered in every direction. Many have come to Seattle, others have gone into the interior of Alaska, and some have departed to the west coast of Alaska. The places of these Slavonians have been taken by English-speaking American citizens, and this change is good for southeastern Alaska. The Treadwell people have nearly completed their working force and the strike is broken. This is admitted by everyone in Douglas.

Relative to the Queen Charlotte Islands, the *Vancouver News-Advertiser*, the editor of which is a member of the Provincial Government, lately made the following comment: "The Queen Charlotte Islands are attracting widespread attention. Inquiries, personal and by communication, are being received by the Bureau of Information as to their climate, resources and means of communication with other parts of British Columbia. It is not at all improbable that the Provincial Government will despatch a survey party to the islands in order that the Crown lands may be surveyed and all information practicable secured as to the possibilities of the country from farming, mining and other standpoints.

It is believed that the Queen Charlotte Islands contain much more agricultural land than is known, and that with more complete official knowledge available, many settlers could be induced to take up homesteads there. Upwards of 400 prospectors are reported to have left this season for the islands. They have gone in an unostentatious way but intend, from what can be gathered, prosecuting a vigorous search for metal and suitable farming land during the warm weather. On this account more is expected to be heard of that country in the ensuing fall than has yet been made public."

The *Boston Commercial* recently published the following comments of G. L. Walker on the Dominion Copper Company, with mines and a smelter in the Boundary District: "Dominion Copper interests state that the company expended its treasury surplus of about \$400,000 on mine development, equipment and smelter improvements last year, and that it was a heavy loser when the price of copper declined from 25 to 12½ cents, as it had a large amount of metal in transit and in production which had not yet been sold. The company's increase of production had only fairly begun when the decline in metal prices occurred. The company is said to have about \$60,000 worth of supplies, and \$15,000 cash on hand. It owes about \$27,000, and has \$800,000 of bonds outstanding. Some of the inside interests express a determination to raise the necessary money and pay the bond interest, and also to provide for a resumption of operations at the mines after copper prices advance a little further. They have every confidence in the value of the company's properties." Later reports are to the effect that the bond interest has been paid and preparations are being made to shortly resume operations at the company's several mines and smelting works—probably about the middle of June.

The Geological Survey branch of the Dominion Department of Mines is having the maps that will accompany Mr. R. W. Brock's report on Rossland camp prepared as speedily as is practicable. The field work was completed last October. The topographical sheet of the Rossland special map has already been received from the engraver and many copies distributed. The geology has been laid down on it and the engraver will proceed with the preparation of the colour stones without unnecessary delay. The general topographical sheet of the camp has been completed and sent to the engraver, and after this has been engraved the topography will be laid down on it. As soon as the field parties shall all be out and the Dominion Parliament prorogued, Mr. Brock, who is acting director of the Geological Survey, will be relieved from the heavy pressure of his present duties and in some measure be free to complete his report, so that it may be ready by the time the maps that are to accompany it shall be printed. The foregoing information has been com-

municated to the secretary of the Western branch of the Canadian Mining Institute which, at its recent meeting, held at Rossland, passed a resolution requesting that the report be completed and published as soon as shall be practicable.

The retirement of F. J. Deane from the active management of the *Nelson Daily News*, which newspaper he recently disposed of by sale, is a matter for sincere regret to many interested in the mining and smelting industries of the Kootenay and Boundary Districts. In the obtainment and publication of reliable information relative to these industries in particular, while never neglectful of others or of the maintenance of a good news service, he was, we believe, the most energetic and enterprising newspaper proprietor in British Columbia. No daily newspaper published in the province spent so much money or effort to obtain and publish an annual review of mining, and certainly none during the years the *Daily News* was in Mr. Deane's hands printed anything like the quantity of carefully collected and reliable information regarding mining and smelting in British Columbia. There was no place for "hot air" or similar rubbish purporting to be mining news in the columns of the *Daily News*; on the contrary Mr. Deane and his staff did their utmost to obtain facts only. While we have no reason to suppose the *Daily News* will in the future change its policy in this regard, we feel called upon to acknowledge the great value of Mr. Deane's efforts in the direction above indicated, and to express deep regret that they are, we would fain hope only temporarily, lost to the leading industry of the important districts to which he has been of signal service.

On May 18 the miners employed at the Crow's Nest Pass Coal Company's Michel colliery discontinued work. A despatch published by the *Nelson Daily News* stated that as far as could be ascertained the cause of the trouble was a case of alleged discrimination, the company refusing to give employment to a miner who claimed he had signed on and received his tools, but when he applied for work was refused a place. The officials at the mine denied that he was signed on and claimed they had good and sufficient reasons for declining to engage the man and were perfectly justified in refusing his application. In this contention the management was supported, so it was stated, by the district officials of the United Mine Workers of America, and District President Sherman visited Michel and urged the miners to return to work and keep their agreement with the company. The company on May 20 took action against William Douglas, president of the local union; Charles Garner, secretary, and William Whitehouse, another member of the union, for breaches of Sec. 60 of the "Industrial Disputes Investigation Act," but the local magistrate decided he had no jurisdiction under the act and dismissed the accused. A temporary understanding was arrived at

between the company and the men and the latter returned to work on May 23, but as 12 of their number, including those against whom the company had taken action, were not given employment, work was again stopped until the 30th, when the majority of the men returned to work, following a decision of the local union that they had better do so. A later despatch reported the dispute settled and the miners, including those refused work earlier, back in the mines.

Wide publicity has been given to an erroneous statement concerning the Tyee mine at Mt. Sicker, Vancouver Island, which should not be permitted to go uncontradicted. The statement referred to is as follows: "The Tyee mine, which for some years has been the largest shipper of copper ores on the Coast, has now been permanently closed down, as hope of finding other orebodies has been abandoned." As we understand the position it is not correctly stated in the foregoing assertion. It is true that what was known as the main orebody of the Tyee mine has been worked out within the boundaries of the Tyee Copper Company's property, but there is another occurrence of ore which has not yet been exhausted. This is known as the North Lode and during the last months of operation of the mine it supplied the greater part of the ore extracted. Further, while the company has for the time stopped prospecting for other orebodies, it by no means follows that it has abandoned hope of finding them. The big and valuable orebody, from which during half a dozen years about 180,000 tons of ore have been taken, was discovered quite accidentally in the rough country where it outcropped. A forest fire burned off the surface debris and exposed the ore outcrop. There is no sufficient reason to conclude that similar fortuitous circumstances will not in the future lead to the location and development of other orebodies of considerable extent and value. Indeed, quite recently a promising discovery of ore has been made on a claim in proximity to one of the boundaries of the company's group, so that there would appear to be grounds for the expectation that sooner or later more ore will be found and mining be resumed at Mt. Sicker by the Tyee Copper Company, which holds a large area of ground, much of it not yet thoroughly prospected.

The "Annual Report of the Minister of Mines" for 1907 contains, beside many statistics of mineral production and general notes relating to the mining industry of British Columbia, a summary of which is printed on pp. 173-6 of this number of the *MINING RECORD*, much interesting information from the reports of gold commissioners, mining recorders, and other officials. There are in it, also, reports by the provincial mineralogist on several districts and mining camps he visited last year. The progress of mining during the year is reviewed by the provincial mineralogist, and a brief statement given of the work of the provincial assay office. Examinations

for assayers and for coal mine officials, respectively, are reported, and lists are printed of the names of all holding certificates of efficiency or competency as one or the other. Coal mining is more fully dealt with in this report than in those of previous years, the recent considerable expansion of this industry being thus recognized. A list of the metalliferous mines shipping ore during the year under review, one of Crown grants issued, and another of gold commissioners and mining recorders, all add to the practical usefulness of the Report. Half-tone reproductions of photographs, lithographs of sketch maps, and tables presenting facts and figures in graphical form, serve to effectively illustrate the Report, which is, as has for years been the case, distinctly creditable to the Provincial Bureau of Mines for its comprehensiveness and the care taken in its preparation, and to the Government printing office for the excellence of workmanship in its printing particularly in regard to the finish of the half-tone reproductions of views, to which W. H. Clark, foreman of the press room, evidently gave much care and attention with very pleasing results.

A suggestion, contained in a letter from R. W. Brock, acting director of the Geological Survey, Dominion Department of Mines, to the secretary of the western branch of the Canadian Mining Institute, was, unfortunately, received too late to be acted upon at the meeting of the members of the institute held recently at Rossland. Mr. Brock wrote: "I think a good subject for discussion at the Rossland meeting would be values in depth, and the lower limits of ground water. In the Survey Summary Report for 1906 I mention the water struck by diamond drill on the 11th level of the Centre Star mine. Its temperature is lower than that of the rock at this level, so it must have descended a short distance at least. It would be very valuable to get facts regarding water levels and the depths at which water is encountered; its temperature, composition, etc., to compare with ore values on corresponding levels."

The British Columbia Copper Company, Limited, has resumed operations at its smelter at Greenwood and several mines in the Boundary District. The mines are the Mother Lode, Oro Venoro and B.C., in British Columbia, and the Napoleon and Lone Star and Washington, south of the International Boundary line. J. E. McAllister, general manager, has appointed E. G. Warren, well and favourably known throughout the district, as general foreman at the smelting works, in which capacity he will have charge of labour matters which, prior to the suspension of work late last year, were in a condition locally most unfavourable to amicable relations with the management and the effective operation of the works. Frederic Keffer, the company's geologist and engineer, remains in charge of the mines. It is expected that a large tonnage of ore will be mined and smelted and that during the remainder of 1907 the company will establish a still better production record than in the past.

ANNUAL REPORT OF THE MINISTER OF MINES FOR BRITISH COLUMBIA FOR 1907.

(By E. Jacobs, Victoria, B.C.)

THE ANNUAL REPORT of the Minister of Mines for British Columbia for the calendar year 1907, being an account of mining operations in the Province, has been issued. Its statistical tables show the total mineral output to December 31, 1907, and also exhibit in considerable detail the actual mineral production of the year last past, as based on smelter or mill returns. Further, the report contains a summary of the production of each of the last four years, 1904-7, thus illustrating by comparison the progress made in productive mining during this period.

Taking several of the tables, the following information is obtained:

TOTAL PRODUCTION FOR ALL YEARS UP TO AND INCLUDING 1907.	
Gold, placer	\$ 69,549,103
Gold, lode.....	45,070,717
Total gold	\$114,619,820
Silver	27,289,833
Lead	19,917,197
Copper	43,713,122
Other metals	320,699
Total metalliferous	\$205,860,671
Coal and coke	\$86,972,511
Building stone, bricks, etc.	6,693,100
Total non-metalliferous.....	93,665,611
Total production	\$299,526,282

The next table shows that there has been a gradual enlargement of production, from a total of \$2,608,803 in 1890 (the first year for which a separate total is given), to one of \$25,882,560 in 1907.

The quantity and value of mineral products for 1904, 1905, 1906 and 1907, respectively, are shown in the following comparative table:

COMPARATIVE TABLE SHOWING QUANTITY AND VALUE OF MINERAL PRODUCTS FOR FOUR YEARS,—1904-1907.

	1904.		1905.		1906.		1907.		
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
Gold, placer	Oz.	\$ 1,115,300	\$ 969,300	\$ 948,400	\$ 828,000	
Gold, lode	Oz.	222,042	4,589,608	238,660	4,933,102	224,027	4,630,639	196,179	4,055,020
Total gold		\$ 5,704,908		\$ 5,902,402		\$ 5,579,039		2,745,448	\$ 4,883,020
Silver	Oz.	3,222,481	\$ 1,719,516	3,439,417	\$ 1,971,818	2,990,262	\$ 1,897,320	2,745,448	\$ 1,703,825
Lead	Lb.	36,646,244	1,421,874	56,580,703	2,399,022	52,408,217	2,667,578	47,738,703	2,291,458
Copper	Lb.	35,710,128	4,578,037	37,692,251	5,876,222	42,990,488	8,288,565	40,832,720	8,166,544
Total metalliferous		\$13,424,335		\$16,149,464		\$18,432,502		\$17,044,847	
Coal	Tons, (2,240 lb.)	1,253,628	\$ 3,760,884	1,384,312	\$ 4,152,936	1,517,303	\$ 4,551,909	1,800,067	\$ 6,300,235
Coke	" "	238,428	1,192,140	271,785	1,358,925	199,227	996,135	222,913	1,337,478
Other minerals (building materials, etc.)			600,000		800,000		1,000,000		1,200,000
Total production		\$18,977,359		\$22,461,325		\$24,980,546		\$25,882,560	

While those of the foregoing figures which show total value would make it appear at a casual glance that there was an increase in 1907 as compared with 1906 of \$902,014, it should be borne in mind that average prices of some of the minerals vary from year to year, so totals of value do not correctly represent the actual position, which may be better ascertained by a comparison of quantities of minerals produced. Thus placer gold, assuming that it has during the whole period under notice been calculated at \$20 per oz., shows a production in 1907 of only 41,400 oz., which was the smallest since 1898, in which year it was 32,167 oz. In 1899 the maximum annual yield in 30 years was reached with a total of 67,245 oz. Lode gold, with a production in 1907 of 196,179 oz., was lower than in any previous year since 1900, when it was 167,153 oz. The maximum production of this metal was reached in 1905, with a total of 238,660 oz. Silver, with a total of 2,745,448 oz., was less than in any other year since 1895, when the total was 1,496,522 oz. The maximum production of this metal was in 1897, when a total of 5,472,971 oz. was produced. Lead, with a total in 1907 of 47,738,703 lb., had its smallest year since 1904, when the production was 36,646,244 lb. Its maximum production was in 1900 with 63,358,621 lb. The production of copper—40,832,720 lb. compared favourably with that of all other years excepting 1906, when a maximum of 42,990,488 lb. was reached. It will therefore be seen that as regards quantity there was a falling off in production of all the metalliferous minerals, but fortunately not a serious one. On the other hand, non-metalliferous minerals showed increases as compared with 1906, coal with a total in 1907 of 1,800,067 tons (2,240 lb.) having reached its highest for any year since production was commenced in the province in 1836; coke, with a total of 222,913 tons, made an increase over 1906 of 23,686 tons, but was 48,872 tons below the maximum, which was reached in 1905; and building materials, etc., valued last year at \$1,200,-

900, was higher by \$200,000 than in 1906 and still higher than in earlier years.

PRODUCTION OF MINERAL BY DISTRICTS AND DIVISIONS.

Coming now to production of mineral by districts and mining divisions, the following results are shown:

Name.	Divisions.			Districts.		
	1905	1906	1907	1905	1906	1907
Cariboo District				\$ 406,000	\$ 405,400	\$ 360,500
Cariboo Mining Division.....	\$ 300,000	\$ 355,800	\$ 306,500			
Quesnel "	96,000	39,600	44,000			
Omineca "	10,000	10,000	10,000			
Cassiar District				504,372	555,599	572,809
East Kootenay District				5,339,154	5,171,024	5,548,880
West Kootenay District				5,421,859	4,660,352	4,792,976
Ainsworth Division.....	100,273	268,111	364,868			
Nelson "	532,564	515,709	614,395			
Slocan "	970,544	532,228	619,842			
Trail Creek "	3,672,828	3,223,587	3,049,702			
Other parts	145,650	120,717	144,169			
Lillooet District				32,584	20,314	15,721
Yale District				6,483,504	8,779,711	8,444,326
Osoyoos, Grand Forks and Greenwood Divisions.....	6,356,410	8,698,470	8,354,995			
Similkameen Division.....	1,533	2,624	56,564			
Yale "	125,561	78,617	32,767			
Coasts Districts (Nanaimo, Alberni, Clayoquot, Quatsino, Victoria)				4,273,852	5,388,146	6,147,348
				\$22,461,325	\$24,980,546	\$25,882,560

These figures indicate a gradual decrease in Cariboo district, where production is restricted to placer gold; a net increase in Cassiar, in the Skeena division of which there was a substantial increase in the production of copper, but offset to a considerable extent by a decrease in placer gold; a net increase in East Kootenay, altogether in coal and coke and in excess of the falling off in the production of both silver and lead; a net increase of about \$132,600 in West Kootenay, in which district Ainsworth, Nelson, Slocan and Lardeau divisions each produced more silver and lead than in 1906, and Nelson and Rossland more copper, while the last-mentioned camp experienced a decrease in the total gold value of its ores to the extent of about \$223,000, and this notwithstanding that there were some 6,400 tons more ore produced: a loss of about \$5,000 in Lillooet district, in which the yield of placer gold has been steadily declining for several years; a decrease in Yale district, in the Greenwood and Grand Forks divisions of which there was less gold and silver recovered from the low-grade ores mined in them, although the copper contents of about 1,170,000 tons of ore mined and smelted averaged but little less than in 1906, and with an addition of about \$50,000 for coal mined in the Nicola Valley, where production of this mineral was commenced late in the year; and a net increase of about \$759,000 in the coast districts where (on Vancouver Island) a larger production of coal considerably more than compensated for a decrease of 134,000 tons, in tonnage of gold-

copper ore produced, with the consequent combined loss of nearly \$500,000 in lode gold, silver and copper.

IN COMPARISON WITH OTHER PROVINCES OF CANADA.

Another table shows the mineral production of British Columbia in 1907 in comparison with other provinces of the Dominion, leaving out miscellaneous

minerals. Arranged in a slightly different way, the relative productions are as under:

	Yukon Territory.	British Columbia.	All other parts of Canada.	Total.
Gold	\$3,150,000	\$ 4,883,020	\$ 231,745	\$ 8,264,765
Silver		1,703,825	6,625,396	8,329,221
Copper		8,166,544	3,312,100	11,478,644
Lead		2,291,458		2,291,458
Iron		4,500	2,023,714	2,028,214
Nickel			9,535,407	9,535,407
Coal		6,300,235	14,799,792	21,100,027
Coke		1,337,478	2,148,478	3,485,956
Totals..	\$ 3,150,000	\$24,687,060	\$38,676,632	\$66,513,692

It will be seen that in gold, copper and lead, British Columbia's production is larger than that of all the remainder of the Dominion combined. Formerly it was in silver as well, but the great increase in Ontario, following the discovery of the Cobalt silver mines, has placed that province far in the lead as regards this metal. No nickel is produced in British Columbia, and practically no iron. The province's proportion of the total of coal and coke is steadily becoming larger: for instance, in 1902 it produced only \$4,832,257 out of that year's total of \$17,077,540. In 1907 it was \$7,637,713 out of a total of \$24,585,983. Last year's proportion was 31 per cent. as against 28 per cent. in 1902.

PROGRESS OF MINING.

From the Provincial Mineralogist's review of the

progress of mining the following information is summarized:

The total value of the mineral production of the province for the year 1907 is greater than that of any preceding year; it shows an increase equivalent to 3.6 per cent. greater than that of 1906, to 15.2 per cent. greater than that of 1905, and 36.3 per cent. greater than that of 1904.

The tonnage of ore mined, exclusive of coal, was 1,804,114 tons, which was produced by the various districts in the following proportions: Boundary (Greenwood and Grand Forks divisions), 65.1 per cent. of total; Rossland, 15.8 per cent.; Fort Steele division of East Kootenay, 8.6 per cent.; Coast, 4.7 per cent.; all other districts, 5.8 per cent. The number of mines from which ore was shipped was 147, but of these only 72 shipped more than 100 tons each. There were 36 mines that shipped in excess of 1,000 tons each; of these 11 were situated in the Boundary district, 8 in Nelson, 6 on the Coast, 4 at Rossland, 3 in Fort Steele division, 3 in the Slocan, and 1 in the Lardeau. The number of non-shipping mines is 61. There were employed in the shipping (metalliferous) mines, 3,697 men; in the non-shipping mines, 246; in the coal mines (including Japanese 174, Chinese 743, Indians 23 and boys 205) 6,059; total, 10,002.

Taking the province as a whole, there were 488 tons of ore mined for each man employed about the metalliferous mines; in respect to districts, however, the tonnage per man was as follows: Slocan, 59 tons; Nelson, 179 tons; Trail Creek (Rossland) 387 tons; Boundary, 946 tons.

In connection with the several minerals constituting the production of the province the following notes have been extracted from the much fuller comment appearing in the Report:

Gold.—The production of placer gold was \$828,000, a decrease of \$120,400, or 12.7 per cent., as compared with 1906. Nearly half of this amount was from Atlin camp, where the companies contributed about 70 per cent. and individual miners 30 per cent. of the production of the camp. Dredging for gold has been abandoned at Atlin, but a large steam shovel was successfully used in filling cars with gravel for conveyance to a washing apparatus. Cariboo district contributed \$360,500, as follows: Cariboo division, \$306,500; Quesnel division, \$41,000; Omineca division, \$10,000. The remainder of the total production came from the following localities: Cassiar (other divisions than Atlin), \$25,000; East Kootenay (Fort Steele division), \$10,000; Lillooet (Fraser River), \$12,000; Revelstoke, \$5,000; sundry smaller yields, together, \$6,000. The lower Fraser and Thompson Rivers have almost ceased to produce gold.

The total of lode gold was \$4,055,020, a decrease of \$575,619, or about 12.5 per cent., in comparison with 1906. The chief individual decreases were: In the Boundary district, nearly \$267,000; in Trail Creek division (Rossland), about \$223,000; in Lar-

deau division, \$18,000, and on the Coast, \$103,000. The only increase worth noting was in Nelson, of rather more than \$35,000. About 95 per cent. of the lode gold produced was recovered in smelting copper-bearing ores. The only stamp mills operating to an important extent in 1907 were that of the Daly Reduction Company, at Hedley, Similkameen, where about 32,000 tons of ore were milled, from which was recovered approximately \$475,000; and the Queen mill, in the Nelson division, where some 8,800 tons were crushed, producing about \$100,000.

Silver.—The total quantity of silver produced in 1907 was 2,745,448 oz., valued at \$1,703,825, a decrease of 244,814 oz. in quantity and \$193,495 in total value. About 72 per cent. of the silver produced was found associated with lead, in argentiferous galena, and the remainder in conjunction with copper-bearing ores, chiefly from the Boundary district. Slocan district, including Ainsworth division, contributed 32 per cent. of the total output, and Fort Steele division of East Kootenay some 30 per cent., all from argentiferous galena. The output of the latter district was less than in 1906 by 246,000 oz., and of the Boundary by nearly 203,000 oz. On the other hand, the Slocan made a gain of nearly 155,000 oz., the Lardeau about 43,000 oz., and Nelson 25,000 oz.

Lead.—The production of lead totalled 47,738,703 lb., having a market value of \$2,291,458, a decrease as compared with 1906 of 4,669,514 lb., and in value of \$376,120. Nearly 79 per cent. of the production was in Fort Steele division, and between 16 and 17 per cent. in the Slocan. By far the larger part of the output of Fort Steele division was from the St. Eugene mine, while the Sullivan was the only other important producer in that part of the province. In the Slocan, the Whitewater was the largest shipper, with a production of between 2,000,000 and 3,000,000 lb. The Rambler-Cariboo, Ruth, Standard, Vancouver group, and Hewitt were the other chief producers in Slocan district. The La Plata in the Nelson division, and the Silver Cup in the Lardeau, also shipped a considerable tonnage of silver-lead ore.

Copper.—This metal had a total production of 40,832,720 lb., valued at \$8,166,544. The decrease in quantity as against the production of 1906 was 2,157,768 lb., and in total value, \$122,021. The larger decreases were—Coast, 2,054,920 lb.; Boundary, 705,232 lb.; and Ashcroft-Kamloops, 319,257 lb. The increases were: Skeena division of Cassiar, 381,618 lb.; Rossland, 330,165 lb.; and Nelson, 218,188 lb. The larger copper-producing mines—those of the Boundary—were not operated the full year, but only about nine months, owing first to a shortage of coke having interfered with the regular running of the smelters, and next to the considerable fall in the price of copper towards the close of the year.

The average assays of the copper ores of the various camps, based upon the copper recovered, were

as follows: Boundary, 1.34 per cent.; Coast, 1.99 per cent.; Rossland, 0.885 per cent.

Iron and Zinc.—There was practically no iron ore mined in 1907—only some 1,500 tons of bog iron ore at Quatsino Sound, Vancouver Island. The iron deposits of this island were examined last summer by an expert sent out by the Dominion Department of Mines, but his report has not yet been published.

But little zinc ore was mined in 1907, but some 1,120 tons of Lucky Jim (Slocan) ore, mined in 1906, was shipped to the United States. A certain quantity of zinc concentrates is obtained every year from galena ores, in which zinc blende occurs in association with lead. At the Blue Bell mine, on Kootenay Lake, large quantities of zinc ore have been opened up and the erection of a concentrating mill to treat it well advanced. Zinc occurs in the Whitewater and Whitewater Deep mines, Slocan, in conjunction with lead and a zinc product is being made when milling the lead ore. The zinc smelter erected by the Canadian Metal Company in southwest Alberta, for the treatment of British Columbia ores has not yet been operated on a commercial scale. The Canada Zinc Company is installing a plant at Nelson to treat complex galena-zinc ores by a process of electric smelting under the Snyder patents, whereby it is hoped to recover the lead and zinc in a metallic state, and also save the silver contents of the ores with the lead.

Coal and Coke.—The gross output of coal for the year was 2,219,608 tons (2,240 lb.), an increase of 320,532 tons over the production of 1906. The quantity made into coke was 419,541 tons, leaving a net production of 1,800,067 tons of coal. The output of coke was 222,913 tons, against 199,227 tons in 1906. While the net production of coal was the highest, by 320,532 tons, of any year of the 72 years since coal mining was commenced in the province, that of coke was 23,686 tons less than in 1905, when a record was made with an output of 271,785 long tons. Though coal-mining in the province has been extended over the comparatively long period above-mentioned, operations were but small until comparatively recent years, the production during all years up to 1887, inclusive, having totalled only 3,769,007 tons, while in the next 10 years a total output of 8,312,680 tons was made, and in the last 10 years (1898-1907) 13,863,013 tons. The average yearly production during the last-mentioned period was therefore between 51 and 52 per cent. greater than that of the 10 years, 1888-1897.

Of the net production of 1907, 916,262 tons were sold for consumption in Canada, 651,076 tons for export to the United States and 22,038 tons to other countries. The remaining 210,691 tons were used under colliery boilers, etc. Of the coke, 155,579 tons were sold in Canada, 60,110 tons exported to the United States, and the balance of 7,224 tons added to stock.

The official estimate of the value of the net production of coal—1,800,067 tons—was \$6,300,235,

and of the 222,913 tons of coke, \$1,337,478. Coal was calculated at \$3.50 per long ton, as against \$3 in earlier years, and coke at \$6, as compared with \$5. The official figures show the following increases over 1906: Coal, in quantity, 18.6 per cent.; in value, 38.6 per cent. Coke: in quantity 10.6 per cent.; in value, 34.2 per cent. The increase in the value of coal and coke together is 37.7 per cent.

The chief producing collieries of the province in 1907 were: (1) On Vancouver Island, the Western Fuel Company's No. 1 Shaft, Esplanade, Nanaimo, and Protection Island mine, worked as one mine, and its No. 4 Northfield mine; and the Wellington Colliery Company's Extension and Union collieries. (2) In the Crow's Nest Pass, southeast Kootenay, the Crow's Nest Pass Coal Company's Coal Creek and Michel collieries. Several new mines were opened, the most important of which is that of the Pacific Coal Company (a Canadian Pacific Railway Company organization) at Hosmer, in the Crow's Nest Pass district; others (two) are at Nicola, in Yale district, and three or four on Vancouver Island. The net production of the several collieries was as under:

	Coal. Tons.	Coke. Tons.
Vancouver Island:		
Western Fuel Company's mines.....	504,292
Wellington Colliery Company's mines.	727,467	16,372
Several small mines.....	3,579
Total for Vancouver Island.....	1,235,338	16,372
Mainland:		
Crow's Nest Pass Coal Co.'s mines...	553,861	206,541
Nicola Valley Coal and Coke Co.....	10,868
Total for Mainland	564,729	206,541

The smaller mines at Nicola and on Vancouver Island are now producing coal, but the Pacific Coal Company's big mine will not make any output for sale until the beginning of 1909.

Miscellaneous Minerals.—In several directions a little attention was paid to platinum, but the production was small. Oil and oil shales, were practically neglected, owing to lack of transportation facilities in districts in which oil occurs. More building stone—sandstone, granite and andesite—was quarried. The brickmaking industry was enlarged, red brick, fire brick, and lime-silica brick, each having been made in considerably increased quantities. The Vancouver Portland Cement Company sold 143,226 bbl. (350 lb.) of cement made at its works near Victoria, Vancouver Island, where it has facilities for manufacturing between 300,000 and 400,000 bbl. per year. A larger quantity of lime was made on the Coast, and there was an increased demand for marble from quarries on and near Kootenay Lake, chiefly for building purposes.

British Columbia has produced to date gold to the value of about \$115,000,000.

NICOLA MINING DIVISION.

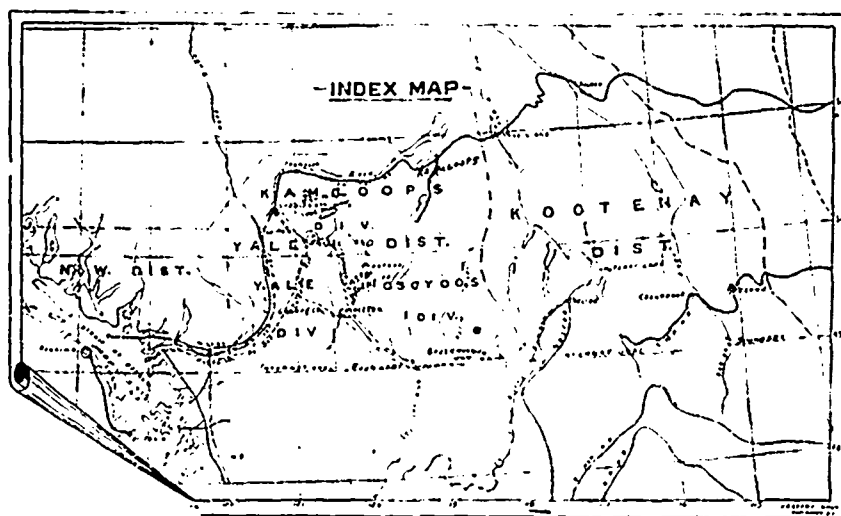
Official Reports on Mining Operations in 1907.

NICOLA MINING DIVISION made substantial progress during 1907 in the opening up of some of its coal resources, though the development of the metalliferous ore deposits of the district was not similarly advanced. The following official reports have been taken from the "Annual Report of the Minister of Mines" for 1907:

FROM REPORT OF THE PROVINCIAL MINERALOGIST.

MINERAL CLAIMS.

The Peacock group, consisting of three Crown-granted claims, the Boulder Cap, Peacock and Banner, owned by Thomas Hunter, of Nicola, is situated on Clapperton Creek, about six miles up from Nicola.



The showings upon which the properties were staked occur in the creek bed, having been exposed by the washing of the waters of the creek. The country rock, a volcanic rock, granitic in character, has been faulted, and a crushed zone follows this fault-plane, along which the creek has worked its way. There is a rather indistinct quartz vein following the course of the creek—connecting several large outcrops of quartz which occur in the granite and have been laid bare by the creek. The vein along its edges carries more or less copper sulphides and carbonates, but the mineralization does not appear to enter the larger quartz bodies; one of these quartz bodies exposed is 100 ft. long by 36 ft. wide. The hills rise abruptly on both sides of the creek, and such development as has been done is confined to the narrow gorge of the creek. On the Peacock a shaft has been sunk about 50 ft. and a drift set-off for 20 ft. to the north, with the intention of cutting, at a depth, a large body of quartz exposed in the bed of the creek. These workings appear to have cut several small stringers of quartz, but not to have reached the main body, although it is reported that the face of the drift is showing an increasing amount of mineralization.

On the opposite side of the creek from this main shaft, and 100 ft. farther up stream, there is a smaller shaft sunk about 10 ft. on a fissure in the country rock, in which were seen a number of narrow quartz veins, mineralized with copper pyrites.

Still a little farther up the creek bed is the pump shaft, 4x6 ft., sunk some 20 ft. on a showing of quartz carrying copper sulphides. A sample taken of selected ore gave, upon assay, 4.1 per cent. copper, with small quantities of gold and silver.

NICOLA COAL FIELD.

During the year 1907 a new producing coal field was opened up in the Nicola Valley, where the Nicola Valley Coal and Coke Company began shipments of coal from its Middlesboro Colliery, situated a few miles south of the town of Coutlee and on the bank of the Coldwater River, while another company, the Diamond Vale Coal and Iron Mines, had, by the end of the year, so far progressed towards the

producing stage as to be deserving of notice. The whole field has been the subject of a report by Dr. R. W. Ells, of the Geological Survey of Canada, from which report extended extracts were copied into the Report of this Bureau for 1905. The collieries above mentioned are both in the area designated by Dr. Ells as the Coal Gully area.

Nicola Valley Coal and Coke Company.—The Coal Gully coal seam, now included in the area held by the Nicola Valley Coal and Coke Company, had for many years been mined in a small way to provide for local wants. The opening from which this coal was taken had been run-in on an outcrop of coal so far up the gully as to be inaccessible by a railway, consequently, the company drove a new tunnel at a convenient height above the general level of the valley, and succeeded in striking the coal at that level, after driving 20 ft. through surface wash. This adit level is now known as the No. 1 mine, and had been, in July, only driven into the coal about 50 ft., but since that time it has been extended to intersect the old slope from Coal Gully at a depth of about 800 ft. on the slope, and various rooms have been set off. The tunnel was driven 8x8 ft. in the clear,

inside of timbers, which were 10x12 in. in caps and sills and 10x10 in. in the posts. This coal varies somewhat in thickness and character, but, where measured, was as follows:—Conglomerate roof, coal, 8 ft. 6 in. thick; 2 ft. 6 in. rock and shale parting; coal, 5 ft. thick, with a shale pavement.

The No. 2 mine is also opened out by an adit tunnel started a sufficient height above the valley to give working height for tipples and bins. This tunnel was started on the knoll forming the bank of the

When the properties were visited in July they were only being developed, and neither of the tipples nor the railway had been constructed; since then, however, the Nos. 1 and 2 mines have been fully equipped. Actual underground development had only been attempted on the two seams mentioned, but, from prospecting the outcrops, the company believes it has at least four workable seams on its properties, viz.:—The Jewel seam, which is the lowest stratigraphically, reported to be 18 ft. 6 in. thick; next to this, in ascending order, is 136 ft. of rock;



Nicola Valley Coal and Coke Co's Property—First Opening on Coal Gully.

Coldwater River, about half a mile to the south from the No. 1 mine, and is supposed to be driven on the second to lowest of the known seams, which seam is here about 5 ft. 6 in. thick with a 4-in. stone parting. About 200 ft. higher up the hill a slope has been started-away from the outcrop, and was to follow the dip until it intersected the adit level at a point about 500 ft. from its mouth. It was the intention to use this slope as the return airway when the mine was opened up. The roof and pavement of the seam are good and sound, consisting of a fine-grained conglomerate or sandstone, the wash of a disintegrated granite.

then the Ells seam, 8 ft. 9 in. thick, followed by 136 ft. of rock; then the Major seam, 17 ft. 6 in. thick, above which is 89 ft. of rock, and then the Gem seam, 3 ft. thick.

The company shipped during the short portion of 1907 in which it was in operation, some 10,868 tons of coal. A spur leaving the Canadian Pacific Railway branch line from Spences Bridge to Nicola, at Merritt, between Coutlee and Nicola, has been built to connect with both tipples.

As indicating the quality of the coal, the following analyses are given, taken from Dr. R. W. Ells' report:—



Nicola Valley—Overlooking Diamond Vale Coal and Iron Mines' Property.

	Per Cent.
(a) From tunnel on lower seam of Coal Gully:	
Water	3.04
Volatile combustible matter.....	37.18
Fixed carbon	52.05
Ash (reddish-white)	7.73
	100.00
Coke per cent., 59.78. Yields a compact, firm, coherent coke.	
(b) From Lot 1,267. One creek running into Quilchena Creek:	
Water	6.95
Volatile combustible matter	37.21
Fixed carbon	47.95
Ash (pale reddish-brown)	7.89
	100.00
Coke per cent., 55.84. Yields a firm, coherent coke.	
(c) From southerly outcrop of seam on Coldwater River:	
Water	3.17
Volatile combustible matter	35.73
Fixed carbon	55.25
Ash (light reddish-brown)	5.85
	100.00
Coke per cent., 61.10. Yields a firm, coherent coke.	
(d) From the Coldwater River, near its junction with the Nicola near Coutlee Lower tunnel:	
Water	1.37
Volatile combustible matter	38.24
Fixed carbon	54.25
Ash (light reddish-brown)	6.14
	100.00
Coke per cent., 60.39. Yields a compact, firm, coherent coke. Analyses by fast coking understood.	

Diamond Vale.—The Diamond Vale Coal and Iron Mines, Limited, holds the areas immediately adjoining, and across the river from, the Middlesboro Colliery.

The Diamond Vale Company's areas cover a large portion of the level valley between the Coldwater and the Nicola Rivers, under which there is reason to believe that at least some of the coal seams being developed by the Middlesboro Colliery extend. This point has been proved to the satisfaction of the holding company by a series of bore-holes, sunk from the flat land which borders the river. The solid, or coal-bearing, formation underlying the valley is overlain by a heavy covering of gravel wash, carrying a large amount of water, through which the company has experienced some difficulty in sinking a shaft, owing to trouble from water.

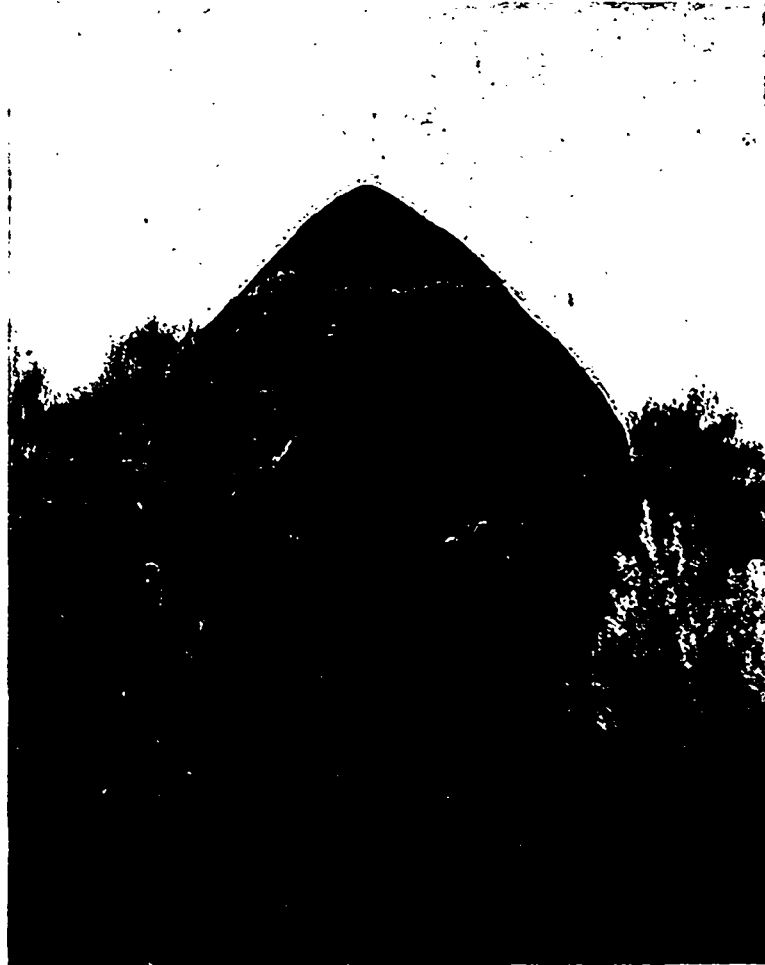
No. 1 shaft was started about 475 ft. from the bank of the Coldwater, and at this point the solid

formation was expected to be struck, at a depth of 96 ft. This shaft was started 8 ft. 4 in. x 12 ft. 10 in. in the clear, and well timbered, and was sunk about 45 ft. when it had to be temporarily abandoned, owing to the influx of water, which the machinery at command could not handle. The shaft had been equipped with a suitable hoisting plant and head gear, pumps, etc., and a sawmill erected and equipped.

After the stoppage of work at the No. 1 shaft, there was an attempt being made in July to sink

50 ft. deep in the solid formation, while 150 ft. below this it is expected that the Rat Hole seam developed by the Middlesboro Colliery will be struck. These seams dip at an angle of about 25 deg. towards the No. 1 shaft and would, consequently, at that shaft be correspondingly deeper.

While considerable delay has been experienced in reaching the coal seams, owing to the overlying water-bearing strata, it is not felt that the conditions offer any insurmountable difficulties, and that, with proper mining equipment, the task can be accomplished.



Hollow Concretion on Nicola Valley Coal and Coke Co.'s Property.

No. 2 shaft, at a point about 10 ft. from the edge of the Clearwater River, which point was "to the rise of the coal" from the No. 1 shaft. Here the solid formation, which outcrops boldly immediately across the river, was expected to be covered by only 19 ft. of gravel wash.

In July this shaft had been sunk for 16 ft. and, although the inflow of water was considerable, it was expected that no difficulty would be experienced in reaching the solid formation and eventually making the shaft water-tight.

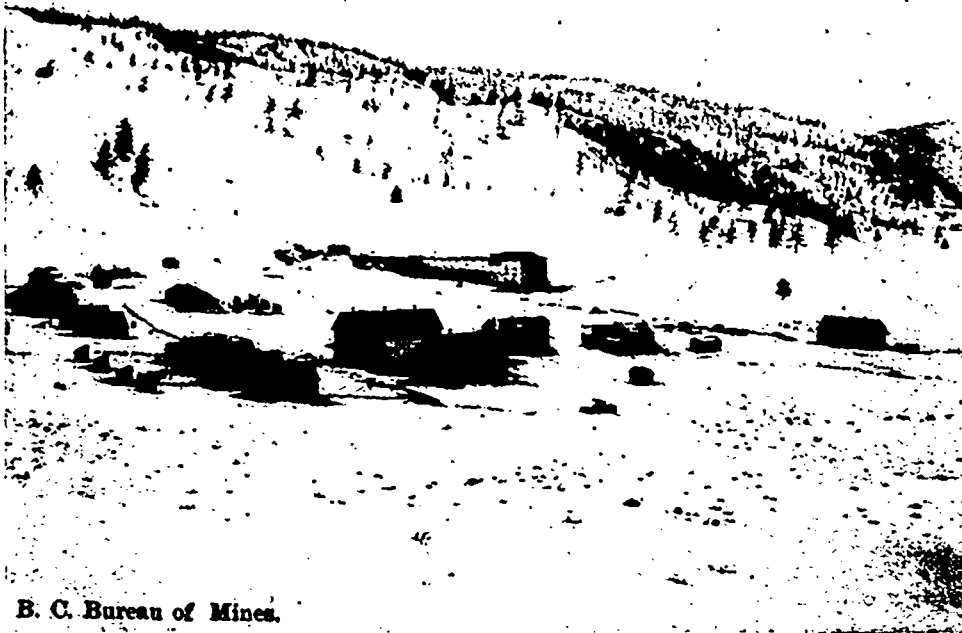
From exploratory work it was indicated that, at the No. 2 shaft, a 40-in. seam of coal would be found at a depth of 70 ft. from the surface; this is about

The developments in the vicinity would give every indication that important coal seams underlie the property and will soon be made productive.

B. C. Amalgamated Coal Company.—The only other company doing any development in the valley was the British Columbia Amalgamated Coal Company. This company was organized in Portland, Oregon, with head office at 506, McKay Building, Portland, Oregon, A. B. Crossman, secretary-treasurer, and registered in British Columbia as an "Extra-Provincial Company," under date March 7, 1907. The company is limited, and its capital stock is \$10,000,000, divided into \$1 shares. It is reported to hold a large acreage of land situated up the Cold-

water River and some options on Ten-Mile Creek, but, so far as could be learned, no successful prospecting had taken place on these areas, and no work

On August 1 the company was employing one shift of five men in sinking a diamond drill hole, using a Sullivan H drill, giving a 1½-in. core; the

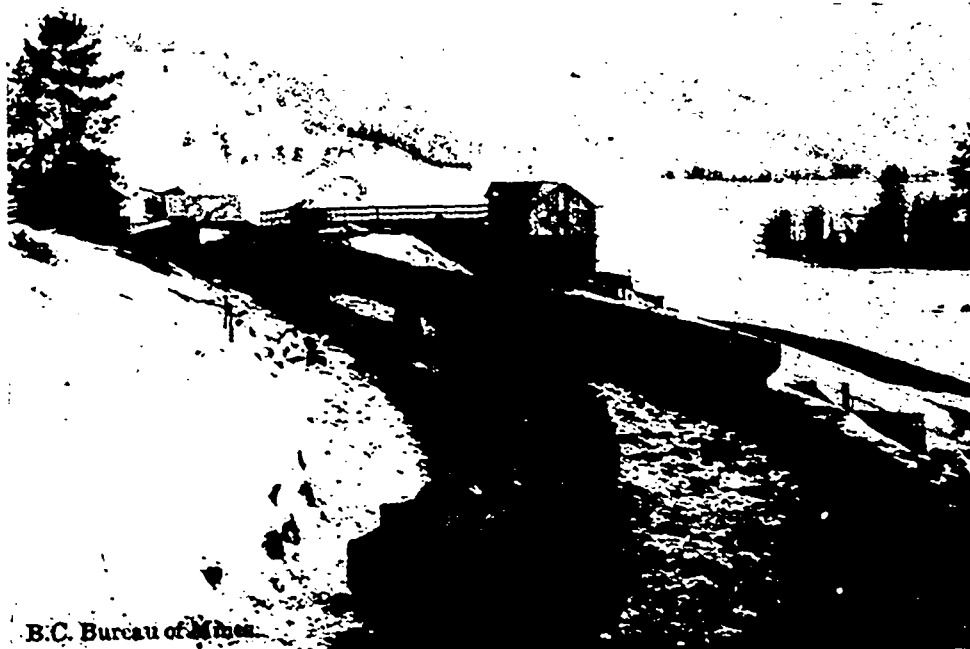


B. C. Bureau of Mines.

Camp and No. 1 Tipple at Nicola Valley Coal and Coke Co.'s Middlesboro Colliery.

was going on there on August 1, 1907, when the district was visited. The company had, however, secured options on some land adjoining the Indian

casing pipe at the surface being 3 in. in diameter. The bore-hole was being sunk on the edge of the Indian reserve, and on August 1 was down some



B. C. Bureau of Mines.

No. 2 Tipple at Nicola Valley Coal and Coke Co.'s Middlesboro Colliery.

reservations at Lower Nicola. This land, it is understood, consisted of 300 acres owned by Mrs. Woodward and 200 acres owned by Mr. Smith, while application had been made for "licence to prospect" on 640 acres lying adjoining, to the north.

145 ft. and was then still in gravel wash, the solid formation not having been reached. The log of the drill-hole shows it to have passed through clay and boulders, clay, sand, coarse gravel, clay, clay and boulders, clay, clay and boulders, and at 143 ft.

down to have struck what the driller classed as hardpan. This is the first hole the company has sunk, and as yet coal has not been developed on the property.

REPORT OF GEORGE MURRAY, MINING RECORDER.

Progress during the year 1907 has not equalled expectations, yet there has been some advance. Prospects were growing brighter until the severe and rapid decline in price of copper took place. Mining engineers who had been exploiting the field were favourably impressed and intended to begin development on working bonds; but the drop in copper values has resulted in at least a temporary check.

MINERAL CLAIMS.

Ore values in this district are chiefly in copper. Notwithstanding disappointment, the confidence of claim owners is still unshaken. With most of them it has been a continual expenditure for eight years or more, without one dollar's return; yet assessment work has been carefully performed and Crown-grants have been obtained for a number of claims.

The group of claims owned by Max Ekars and his associates gives promise of a large body of high-grade ore. Those parties had done much development work, and were preparing to ship several car-loads of ore for smelter treatment when the price of copper fell. Tests already made would have justified the venture with a higher price ruling for the metal.

Prospecting work on a gold-copper group of claims, situated on Clapperton or Mill Creek, owned by T. Hunter, has been prosecuted steadily, with favourable results. A cross-cut, run from a shaft 60 ft. deep, exposed 20 ft. of mineralized matter carrying copper, with commercial values in gold and silver, and the stronger portion of the lead has not been reached.

COAL MINING.

In coal mining operations development has been steady, rapid and satisfactory. Extensive coal seams of excellent quality have been opened up and a valuable industry inaugurated.

The Nicola Valley Coal and Coke Company has been singularly successful. Commencing on a well-known coal exposure, most of its underground work has been in coal and has demonstrated the presence of several large and valuable seams. The work already done demonstrates a large body of coal to be now available, and this at a depth which can be regarded as little more than surface. The mine is being thoroughly equipped with every modern appliance for effective work. The daily output at the present stage can easily be 300 tons, a capacity which can be speedily enlarged when the demand shall warrant.

In the same vicinity the Diamond Vale Coal and Iron Company is operating and has persisted in prosecuting work, amid unexpected difficulties and expenditure. After considerable drill prospecting, a

site for a shaft was chosen and extensive preparation made to push the work and have a shaft in first class order. Unfortunately, after a heavy outlay in sinking, the work had to be abandoned, owing to seepage from the Coldwater River, close by. Another shaft site was selected and success crowned the effort, conditions being favourable. Bed-rock was reached at a depth of 50 ft., and at 65 ft. a 5-ft. seam of coal of excellent quality was disclosed, from which there is now an output. Work is being rapidly pushed, so that the production may be increased. Beneath the seam now reached the drill has proved two other veins within a depth of 300 ft. The three seams give a combined thickness of 15 ft., with greater possibilities, as the large Coal Gully seam may be discovered. The percentage of carbon in the coal mined is 51.25, and the coking value is 59 per cent.

The surface work, buildings erected and plant installed, are planned on a scale which has in view extensive mining operations.

The B. C. Amalgamated Coal Company has been operating with the drill on Ten-Mile Creek, Lower Nicola, since the middle of May. The site chosen proved difficult, owing to great depth of wash and numerous boulders. This company has recently secured coal limits adjoining the Diamond Vale, on the west and north of the Nicola Valley Coal and Coke Company, and on the line of the Canadian Pacific Railway. The drill will operate on the newly acquired land and can hardly fail to find coal.

About 2½ miles east of the Diamond Vale shaft the Nicola Coal Company, Limited, composed chiefly of Vancouver men, has a large coal exposure of good quality, on which work on an extended scale will be undertaken.

Slow progress in metalliferous mining is more than compensated by activity in the production and search after coal. There is now in evidence sufficient to justify the belief that the coal resources of Nicola will draw and sustain a large and prosperous community. For years the presence of coal was known, but it was difficult to induce capital to take hold.

REPORT OF ARCH. DICK, INSPECTOR OF MINES

From the official report of Archibald Dick, one of the Provincial inspectors of mines, the following has been taken:

MIDDLESBORO COLLIERY.

The Middlesboro Colliery of the Nicola Valley Coal and Coke Company, at Coutlee, (Alexander Faulds, mine manager) is a new colliery, not mentioned in any previous reports, and although only recently in operation is now a producing property. This colliery is at the lower end of the Nicola Valley and near the Coldwater River.

No. 1 Mine.—This mine is opened by an adit tunnel about 800 ft. into the hillside, and at 550 ft. it is intersected by a slope from Coal Gully, where the coal was first discovered and where the company

started the slope, which, after being put down 853 ft., was stopped, as it was found the coal was good and regular, having a dip about 22 deg. and being

working inside as miners, as the outside equipment was not ready to handle the coal. A large gang of men was put to work so as to have the tippie in



Entrance to No. 1 Mine, Nicola Coal and Coke Co.'s Middlesboro Colliery.

18 ft. thick. At this distance down the slope was down to the level at which the tippie would be built.

At this level an adit tunnel was started, to find the coal outcrops, and it was successful. This adit

operation as early as possible. The last time I was there the tippie was almost far enough advanced to be used. The natural ventilation up the Long Slope above referred to is good, but the manager told me



Entrance to No. 2 Mine, Nicola Coal and Coke Co.'s Middlesboro Colliery.

tunnel makes a roadway 7 ft. wide and 7 ft. high, inside of all timber, and intersects the slope at 550 ft. from the entrance. There were only a few men

that it was planned to soon have a ventilating fan. I could not find a trace of explosive gas.

No. 2 Mine.—This mine is also on the hill, simi-

larly situated to No. 1, but about one mile away and on a higher seam.

This tunnel is now in 1,000 ft., and at a distance from the outside of about 500 ft. it was intersected by a slope from a higher level. This slope is 460 ft. down, with a pitch of 22 deg. The seam is about 6 ft. thick, but of this 12 in. is rock, which has to be put into the gob. Overlying the coal is about 40 ft. of sandstone rock. The coal is of a very good

liery for the portion of 1907 that it was at work:—Coal sold for consumption in Canada, 9,712 tons; used under colliery boilers, etc., 158 tons; held in stock at close of year, 998 tons; total output of colliery for 1907, 10,868 tons (2,240 lb.). Number of men employed underground 26, above ground 10, total 36.

Name of Seams or Pits—Jewel and Ells seams, Nos. 1 and 2 mines respectively.



Ten-Mile Creek Camp, Nicola District.

quality, clean to handle, and having a bright black lustre. The seam is worked on the long-wall system, and when I was there it had not taken the first "break of the roof," neither did it show much weight on the timbers, but it is only a matter of time when it will break, when some idea can be formed as to how suitable to the seam this class of work will be.

Ventilation was good, motive power natural, 10,500 cu. ft. of air passing per minute for 24 men

Description of seams, tunnels, levels, shafts, etc., and number of same—Jewel seam of No. 1 mine with stope 6 ft. x 6 ft. x 800 ft., in coal to intersection of tunnel, and tunnel 9 ft. wide by 7 ft. 6 in. high by 845 ft., 200 ft. of which is in rock and the remainder in coal, being gangway or level. Slope dips from surface 13 to 24 deg. at intersection of tunnel. Grade of tunnel to intersection of slope 1 in 150, and therefrom to face in coal 1 in 200;



On Aberdeen Mineral Claim, Ten-Mile Creek, Nicola District.

and two horses. I could not find a trace of explosive gas.

General.—To these mines there is a siding of about one mile long, from the Nicola Valley branch of the Canadian Pacific Railway.

At No. 1 mine the tippie was almost ready for operation, with the railway cars passing under to receive the coal.

There are other seams of coal in sight, but the two mentioned are the only places where they are producing coal.

The following are the official returns of this Col-

provided with a ditch and manway. All well timbered where necessary. Size of seam, 18 ft. 6 in.

Ells seam of No. 2 mine with slope 6 ft. wide by 5 ft. high by 465 ft. to intersection of main gangway or level, and tunnel level or gangway to intersection of slope 460 ft. by 12 ft. wide by 6 ft. high, in coal, provided with ditch and manway; 100 ft. of tunnel being timbered; roof good. Seam dipping 24 deg. Grade of main gangway or level 1 in 200. Size of seam, 6 ft.

Description and length of tramway, plant, etc.—Haulage by horse-power; tramway 430 ft. from

portal to Mitchell tippie at No. 1 mine, with trestle 210 ft. long. Haulage by horse-power; tramway 530 ft. from portal to Mitchell tippie at No. 2 mine, with trestle 140 ft. long. Tunnels and tramways laid with 30 lb. per lin. yd. steel rails. Face of No. 1 mine tunnel main gangway or level from portal in 845 ft. and No. 2 mine tunnel face in 1,170 ft. from portal.

DIAMOND VALE COAL COMPANY.

This is a new company. Its south boundary is the north boundary of the Middlesboro Colliery property, the coal dipping into the Diamond Vale from the Middlesboro. The last time I was there two shafts were on the way down. No. 1 mine was down 90 ft., but was stopped for the present. No. 2 shaft was some distance "to the rise" in the rock formation, and was down 60 ft., and from boring it was expected to strike coal at 70 ft. from the surface, and I have reason to believe that good coal was found at the latter distance down.

I have not anything special to say in connection with this mine except that from appearances the coal seam is the same as that in the Middlesboro property.

The Ottawa correspondent of the *London Mining Journal* has informed that publication that shipments of ore from Cobalt, Ontario, in 1907 totalled 28,081,010 lb. or 14,040 tons, valued at between \$10,000,000 and \$12,000,000.

The Bunker Hill & Sullivan Mining and Concentrating Company, operating at Wardner, Idaho, with its payment of dividend No. 127, of \$75,000 on April 4, has disbursed \$225,000 since January 1 of the current year, and \$10,071,000 since the opening of the mine. The mine is the greatest silver-lead producer in the world. Its dividends cover a period of 20 years, but it has been only in the last four years that the large monthly disbursements of profits have been made.

Writing on "Mining Law" in the *Mining and Scientific Press*, H. W. Turner, a mining engineer who was some time since professionally connected with the Omar Mining Company, which operated on Prince of Wales Island, Ketchikan mining district, southeast Alaska, observes: "The Apex law was adopted in British Columbia, but as soon as the authorities realized the crop of lawsuits certain to ensue, they repealed this law and substituted the Square Location law. Although there have been some lawsuits over claims located under the Apex law in British Columbia, have there been any serious conflicts resulting from the application of both laws? It is probably true that the number of claims located in British Columbia under the Apex law is not great, but surely it is not too late to introduce the Square Location law into the Territory of Alaska, where the majority of claims located to date are placers."

CASSIAR DISTRICT.

Official Reports for the Year 1907.

CASSIAR DISTRICT includes Atlin, Stikine, Liard, Skeena and Omineca mining divisions.

These are somewhat lengthily reported on in the "Annual Report of the Minister of Mines" for 1907, including the description, by the provincial mineralogist, of Moresby Island of the Queen Charlotte group, and extracts from W. W. Leach's report to the Geological Survey of Canada on the Bulkley Valley, both of which were reprinted in the *MINING RECORD* for February, last. The several other official reports for the year 1907 follow:

ATLIN MINING DIVISION.

RAINY HOLLOW CAMP.

The provincial mineralogist says of this camp:

Rainy Hollow is the name locally given to the basin surrounding the headwaters of the Klehini River, a tributary of the Chilkat River, which it enters from the west. The Chilkat and Klehini Rivers both have their sources in the territory formerly comprising the Chilkat mining division of British Columbia, but which is now included in the Atlin mining division, of which it forms the western part. Both these rivers, about midway in their course, pass out of British Columbia into Alaskan territory.

Between Bennett Lake in British Columbia, on the line of the White Pass-Yukon Railway, and the Chilkat River, there is a range of high mountains, which it is impracticable to cross, even with a pack-train, so that the only way to reach the Rainy Hollow camp is through Alaskan territory. The route usually taken to the camp is from Skagway, Alaska, by a small gasoline launch which runs daily, to Haines Mission, an important United States military post; thence by wagon road a distance of a couple of miles across the peninsula to Chilkat Inlet, into which the Chilkat River flows. Here Indians and canoes can be obtained and the Chilkat River followed up to the Indian village of Klukwan, at the junction of the Klehini.

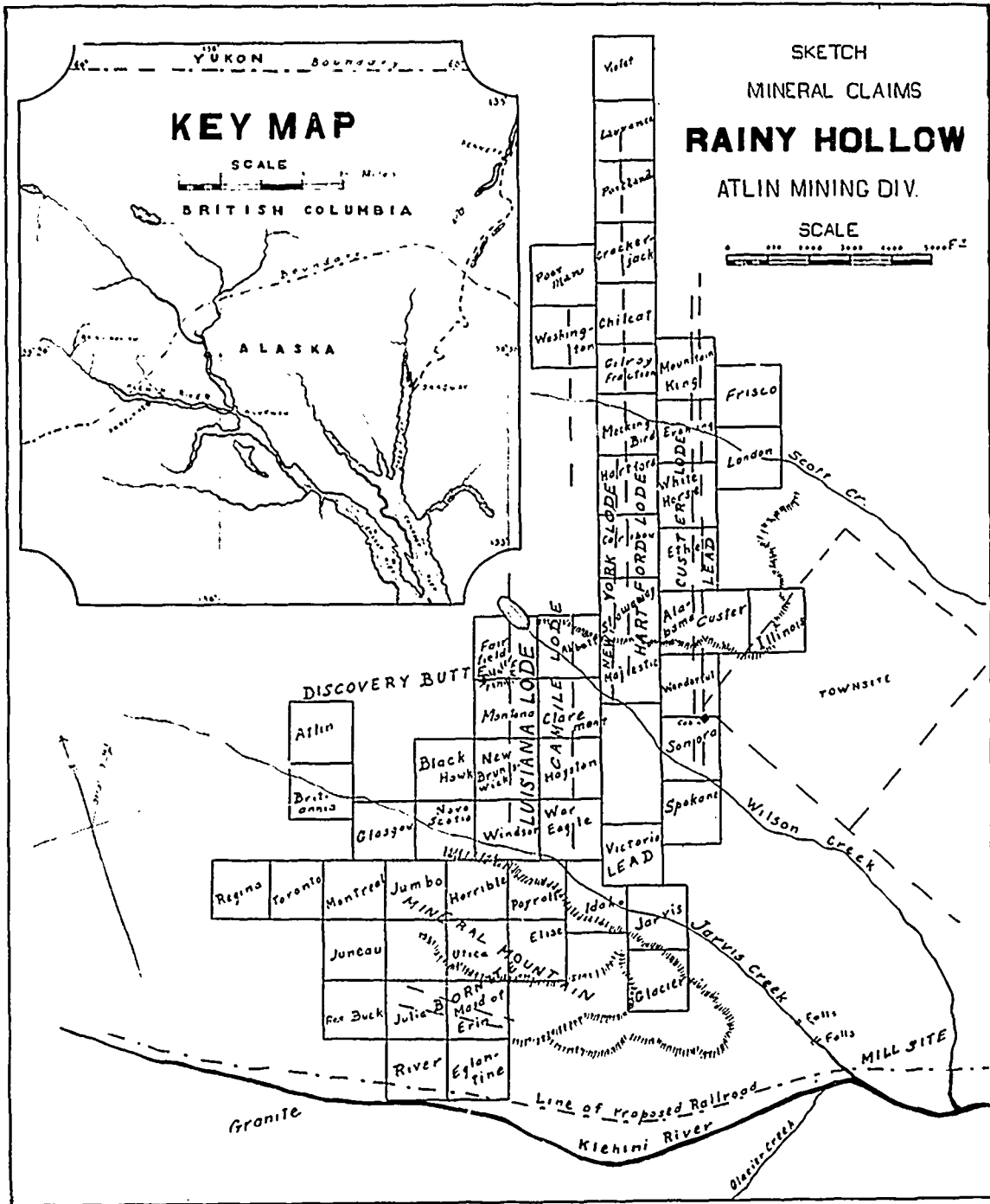
The United States Government has already surveyed a line for a wagon road from Haines to Klukwan along the eastern side of the Chilkat, and it is expected that this road will be built within the next two years. The distance from Haines to Klukwan is about 20 miles, and at present the only method of travel, or for the transportation of supplies, is by canoe.

From Klukwan the Klehini River is followed up to Porcupine City, a distance of 18 miles by a wagon road built by the United States Government along the southern bank. Porcupine City formerly supported two hotels and two stores, but in 1906 the only occupants of the townsite were the employees of a company engaged in placer mining on Porcupine

Creek, for whose accommodation the company maintained a store, but the hotels have disappeared.

From Porcupine the wagon road follows up the river bed for some four or five miles, being only available, in summer, during low water, crossing over to the northern bank, connecting there with a

the Provincial Government was last fall engaged in building a trail, or sleigh road, which was, however, not cut through in 1906, so the old trail had to be followed. This follows up the north bank of the Klehini for some three miles to Dalton's cache. The cache is about 500 ft. higher elevation than Porcu-



crude wagon road, formerly built by Royal North West Mounted Police, which is followed for a further distance of two miles to old Pleasant Camp, on the Alaska-British Columbia boundary line, and at one time occupied by the police.

The Province of British Columbia is entered at Pleasant Camp, from which point to Rainy Hollow

pine City and is about 1,000 ft. above sea level.

From the cache the trail turns north, away from the river, rising, by a series of zig-zags, in two miles an additional height of 1,000 ft. to the level of the plateau, which slopes slightly to the north and is devoid of trees or vegetation. The trail follows across this plateau for some six miles, when it gradually



Rainy Hollow—Headquarters of Klchini River—Atlin Mining Division.

The Klchini River flows into the Chilkat at the Indian village of Klukwan, in Alaskan territory. This was formerly in the Chilkat mining division of British Columbia, but when the location of the boundary line was finally determined, Klukwan was found to be in Alaska. The above half-tone is a reproduction of a photograph taken by the provincial mineralogist when visiting the district in 1900.



Looking down valley of Rainy Hollow, in Atlin mining division.

descends into Rainy Hollow. The plateau is said to be very dangerous to cross in autumn, owing to the prevalence of dense fogs, which arise without warning, and in winter on account of blinding snowstorms.

To avoid this portion of the trail with its incidental and unnecessary climb—impracticable for even a sleigh-road—the Provincial Government has chosen a line for the new trail following the river valley, and running through wooded country most of the way, which will afford shelter at all seasons, and it also has the advantage of being some two or three miles shorter.

Although there are wagon roads and trails there are no horses to be obtained; the Indians track the canoes with the necessary baggage and supplies up the Klehini to within three miles of Pleasant Camp, but do not carry passengers up stream, so the whole distance has to be walked over very rough roads. After leaving the canoe, the baggage and supplies have to be packed on one's back in and out of the Hollow.

The time taken by the writer in reaching Rainy Hollow from Skagway was as follows:—One day, Skagway to Haines; one day, Haines to Klukwan; one day, Klukwan to Porcupine; one day, Porcupine to Pleasant Camp; one day, Pleasant Camp to Rainy Hollow.

The possibility of improved transportation facilities by the rivers is very slight, as they are only navigable for canoes, while the swift current and the ever-shifting character of the river-bed render any permanent improvement of the channel impracticable. Should sufficient ore be found to justify it, there are no serious engineering difficulties in the way of building a railway from Haines to Rainy Hollow, while Haines offers first class terminal facilities and a good harbour.

The provincial mineralogist, in the fall of 1900, made an examination of, and a report on, the mineral claims of Rainy Hollow, which is included in the "Annual Report" for that year. Since that time little real development work has been done; some prospecting has taken place and many of the claims then in existence, having lapsed, have been re-staked under other names and ownership. Some new ground has been located, but, as the old posts have disappeared, it was found to be impracticable to determine how much of ground examined was of recent discovery.

Prospectors take their supplies to the camp in early spring, over the ice on dog-sledges and toboggans, a proceeding so expensive and arduous that it is not to be wondered at that little or no serious development has been attempted in the district.

Wonderful and Sonora.—The Wonderful and Sonora mineral claims, owned by Richard Kennedy and J. W. Burnham, were located prior to 1900 and are situated on the right bank of Wilson Creek, which flows from the east into the Klehini River at Rainy Hollow. The claims are situated on what is locally

known as the Custer lead, a contact of one of the three or more large parallel dykes which cut across the country to the south, and along the course of

The first cropping visited on the Wonderful showed much iron oxide and dark red garnets along a line contact, but no mineral of value was visible. No



Valley of the Klehini, in Chilkat district of Atlin mining division.

which most of the known mineralization occurs. The rocks forming the contact are limestone and schist, cut by a dark, fine-grained dyke rock, having a north

work had been done at this spot, the cropping merely indicating the extension of lower workings. A second iron-cap, some 20 ft. away, showed a certain



Village of Klukwan, on Chilkat River, Atlin mining division.

and south (mag.) strike. The contact is traceable for a long distance, being marked by a prominent iron cap.

amount of copper pyrites throughout the mass, but was also undeveloped. Farther down, on the same contact, a tunnel had been run in for 140 ft., which

showed a considerable though somewhat irregular deposit of pyrrhotite carrying copper and a small percentage of zinc blende. A sample of the pyrrhotite taken for assay gave: Copper, 2.6 per cent.; silver, 2.2 oz. to ton, and a trace of gold.

The Sonora is an extension of the Wonderful and on the same contact, nearer Wilson Creek. On this claim a tunnel has been driven 30 ft. and a number of open surface cuts made, with practically the same results.

Victoria.—The Victoria mineral claim, formerly known as the Jarvis claim, is owned by J. W. Burnham. A pit about 6 ft. has been sunk in a white crystalline limestone near the contact of a dyke. The sides of the pit show the limestone to be cut by a number of small stringers of mineral—galena, copper pyrites and zinc blende. Some 200 ft. distant from this first pit and around a small knoll an old open-cut has been recently cleared out. This cut is about 15 ft. long by from 3 to 5 ft. deep, and the sides show stringers of mineral somewhat similar to the first pit.

Some 30 ft. from the first open-cut is a second one, also 15 ft. long by 5 ft. deep, in which is exposed a seam from 2 to 4 in. wide, of mixed sulphides—galena, zinc blende and copper pyrites, which appear to have been deposited as replacements of the limestone.

A sample of the ore taken from the face of the two open-cuts gave, upon assay: Lead, 31.5 per cent.; copper, 2.3 per cent.; silver, 8.8 oz. to ton, and a trace of gold.

Maid of Erin.—The Maid of Erin mineral claim, owned by J. W. Burnham and Richard Kennedy, is situated on the west slope of Mineral Mountain, some 700 ft. above the valley of Klehini River, and is, as near as could be determined, a re-staking of the ground formerly occupied, in 1900, by the Carmichael and Pretoria claims. A bed of limestone, lying nearly horizontal, outcrops along the face of a small hill, in contact with which is a highly silicious pink-coloured layer, lying conformably with the lime, and apparently an indurated sandstone. Along this outcrop the limestone appears to have been replaced, for a thickness of 3 to 16 in. by copper sulphides, chiefly bornite. This outcrop has been exposed at intervals by stripping and open-cuts over a distance of several hundred feet, but in no instance has a depth of more than 2 or 3 ft. from the surface been attained. The ore exposed is of exceedingly high grade as copper ore, and would be of value if reasonable transportation facilities were available, but, of course, cannot be extracted under the present conditions, which accounts, to a large extent, for the very slight amount of work done on the property.

Two separate samples were taken of the ore exposed at different points, which gave, upon assay: Copper, 29.2 per cent.; silver, 50.2 oz. to ton, with trace of gold, and (2) copper, 37.9 per cent.; silver, 60.8 oz. to the ton, with trace of gold.

Adams.—The Adams mineral claim, owned by M. J. O'Connor, is another property located on the con-

tact known as the Custer lead, which contact has been exposed for some distance by surface stripping. The mineralization is chiefly pyrrhotite, with a small amount of galena and molybdenite. In an open cut on the hill top the mineralization is some 4 ft. wide. A sample of this exposure assayed 0.04 oz. gold and 0.5 oz. silver to the ton. On the contact on the other side of the diorite dyke there is an outcrop of iron sulphides, with some galena and zinc blende. At the time no work had been done to determine the extent of this mineralization, but a cross-cut had been started for the purpose and was within a few feet of the ledge visible in outcrop. This deposit was not sampled.

Storraway.—The Storraway mineral claim, owned by M. J. O'Connor, is also on Custer hill, along the line of what is known as the Hartford lead, which is indicated by iron croppings extending for miles to the northward. This is on ground occupied in 1900 by the New York mineral claim, and is about a quarter of a mile from Wilson Creek. The first open-cut showed a trap dyke carrying iron sulphides. A short distance to the south, in an open-cut, is a pit some 8 ft. deep sunk prior to 1900, in which there is exposed a large body of pyrrhotite, shown to be at least 4 ft. thick, and it is probably considerably greater. This exposed mineral was thoroughly sampled and assayed for copper, gold and silver, but did not show values of any importance.

Fairfield.—The Fairfield mineral claim, owned by Michael Cassin, is situated near the head of Wilson Creek, on the east side of Copper Butte, and was formerly the Columbia mineral claim. Near a small lake there was an open-cut 20 ft. long, from which a tunnel has been driven some 10 ft. on the contact of a mass of limestone with diorite. Along this contact there is a deposit of pyrrhotite, which was sampled and assayed, giving copper, 0.6 per cent., with traces of gold and silver.

Montana.—The Montana mineral claim, owned by W. S. Brown, is situated on the west side of Copper, or Limestone Butte, as it is sometimes called. This was the only claim in the camp upon which men were found at work, and they were engaged in erecting a cabin, the timbers for which had to be hauled some three miles, and from a lower elevation, as the hills around Rainy Hollow are bare.

The claim was surveyed in 1907 by E. S. Wilkinson, P.L.S. Some little stripping has been done for about 100 ft. up the hillside, from which there had been extracted one or two tons of very nice copper ore—bornite. As far as could be determined from the rather erratic workings, the bornite occurred along the contacts of limestone with several quartz-porphry dykes, occurring associated with garnets, etc. No defined vein or lead could be seen, although there were various outcrops carrying ore, and it is probable some of them were slides from a main ledge in place. Preparations were being made to drive a tunnel, cross-cutting the country, so that whatever ledges exist may be developed at some depth. The occur-



Amalgamated McKee Creek Mining Company's placer gold hydraulic workings on McKee Creek, Atlin mining division.

According to official reports somewhere about \$80,000 worth of gold has been taken out of McKee Creek by the above-mentioned company during three gravel-washing seasons—1905-6-7. The prospects are stated to be favourable for a larger proportionate recovery of gold in the 1908 season.

rence of mineral is very similar to that seen on the Maid of Erin mineral claim.

A sample of the selected ore taken for assay gave: Copper, 26.5 per cent.; silver, 33.2 to the ton, and a trace of gold.

The Atlin mineral claim, owned by Richard Kennedy, is on a hill lying to the north of Copper or Limestone Butte. A small tunnel had been driven about 6 ft. on an outcropping of iron and copper sulphides with some zinc blende, but this ore body was cut off by a quartz-porphry dyke and could not be traced further. The showing was unimportant.

The Mocking Bird mineral claim, owned by Mike Cassin and Jos. Chisholm, is on the Hartford lead, and is an extension of the Storroway or New York claim, and also shows a deposit of pyrrhotite of the same character as found on that claim.

Horrible.—The Horrible mineral claim, owned by Mike Cassin, is situated on the steep east face of Mineral Mountain. A very narrow tunnel had been driven about 20 ft. through a hard, white, silicious rock, classed upon microscopic examination as an altered porphyrite. The face of the tunnel was in what was apparently a gray, silicious lime, very hard, showing small specks of iron pyrites. Some 100 yd. to the north of the tunnel, along the face of the precipice, an open cut had been run into the hill 10 ft., in which was exposed a number of small patches of iron pyrites which gave, upon assay: Copper, 0.86 per cent.; silver, 0.8 oz. to the ton, with trace of gold. A few patches of copper pyrites were also visible, and, although the quantity of mineral was very small, gave unexpectedly high assay values as compared with other exposures in the vicinity, as a picked sample of the mineral assayed: Copper, 15 per cent.; silver, 8.6 oz., and gold 1.04 oz. to the ton.

The Nova Scotia mineral claim, owned by David Fraser, is located below the Horrible, on Jarvis creek. A tunnel had been driven some 20 ft., showing bands containing iron sulphides, which upon assay, however, gave no values.

ATLIN MINING DIVISION.

The report of J. A. Fraser, gold commissioner, on mining operations in the Atlin mining division of Cassiar district for the year follows:

Notwithstanding the fact that the number of men engaged in mining during last season was less, by about 100, than in any previous year, the output reported and revenue therefrom was considerably in excess of that of 1906 and compares very favourably with that of the year 1905; in fact, except in the matter of lease rentals, in which there was a large decrease as compared with last year, there was an all-round increase in revenue from mining sources, which, coupled with the general satisfaction expressed by the operators, might be deemed sufficient justification for regarding the year's operations as quite satisfactory. The keen disappointment experienced from the scarcity of water and labour, and the failure of

certain promoters and bondees to carry out contemplated development and installation work, tended to mar the general satisfaction that otherwise obtained throughout the camp.

The drifting operations of last winter were, as usual, profitable, the only regret being that so few men were thus employed. Drifting operations are being carried on this winter also, and the reported success of the operators is better than in any previous winter, but again I must note decreased numbers, there being only 75 to 80 men so employed this winter as compared with 100 last winter, 190 the winter before, and so on.

Drifting operations are being carried on this winter on Spruce, Pine, Gold Run, Boulder and Ruby Creeks, and possibly on Wilson Creek.

McKEE CREEK.

Only four individual operators were engaged on this creek this last season, and they for but a comparatively short time. Their ground being pretty well worked out and water being scarce, the results were not as satisfactory as in former seasons. The whole creek being practically under one management, although held by two companies, the McKee Consolidated Hydraulic, Limited, owning the leases on the upper portion of the creek, was granted exemption from the operating conditions of said leases on account of the scarcity of water, and so as not to embarrass the operations of the Amalgamated McKee Creek Mining Company, Limited, on the lower portion of the creek. The latter company, under the superintendence of S. H. Plumbe, with Geo. Adams as foreman, and latterly under the direct supervision of Fletcher T. Hamshaw, president and general manager, commenced operations about the middle of May and continued as water would permit until October 8. About midsummer the company was compelled by the scarcity of water to reduce the width of the sluices to make the available quantity more effective. Notwithstanding these and other difficulties, this company, according to the president's report, moved about 500,000 cu. yd. of overburden, washed nearly 60,000 cu. yd. of pay-gravel, thereby uncovering 7,000 sq. yd. of bedrock and recovering therefrom nearly \$24,000. The last pit worked was the best, and according to said report averaged \$8.45 per sq. yd. of bedrock. It also removed a great quantity of overburden (nearly 400,000 cu. yd.), which leaves a large amount of pay gravel exposed for next season's operation. About \$8,000 was expended on new plant, pipe-lines, etc., which, with the amount of dead-work done, leads to the expectation of a good start and excellent results for next season. A force of about 20 men was employed during the season.

PINE CREEK.

Not more than 12 individual miners operated on Pine and Gold Creeks this season, but those who did were very well rewarded for their labour.

On the upper portion of Gold Run L. B. Harris, with two assistants and a steam (Keystone) drill.

spent the entire open season prospecting for the pay-streak which is confidently believed to exist there, as well as farther down stream. The valley being wide and the area large, he did not succeed in satisfactorily locating it, but he intends continuing next season and either locating it or demonstrating to his own satisfaction its non-existence.

Of the companies operating on Pine Creek, from the standpoint of number of men employed and output, the Atlin Consolidated Mining Company, Limited, under the superintendence of Thos. D. Harris, led the van this year. This company, locally known as the Guggenheims, commenced operating with the steam shovel on June 8 and closed down on October 18. The operating plant consists of one 70-ton traction steam shovel, three 5-ton electric locomotives and about 40 dump cars, an elevated screening and washing plant, with under current and tailing sluices, one 75-h.p. motor-generator, transformer, station, etc., driven partly by steam and partly by electric power. During that time they employed from 45 to 55 men (average of about 50) and moved an immense quantity of gravel, with, I believe, very satisfactory results. This company found it expedient and economical to run in powder drifts ahead of the shovel and shake up the gravel with dynamite. The superintendent also introduced a new feature in methods of operation here by installing a 10-in. rotary pump driven by a 50-h.p. electric motor, by which water was taken from Pine Creek, just adjacent, practically on the level, and was supplied with such force and volume as to provide a stream with which quite an area of bedrock was successfully worked (sluiced) hydraulically. But for the lack of certain necessary portions of the plant, which were delayed in transportation, the shovel might have commenced operating a month earlier.

The Pine Creek Power Company, Limited, and North Columbia Gold Mining Company, under the superintendence of J. M. Ruffner, president and general manager of both companies, with a force of from 30 to 50 men, operated their hydraulic properties both above and below Discovery and had a very successful season. They commenced operations early in May and continued until about November 12, thus putting in just about six months actual hydraulic work, and working up to the last quite as effectively as in mid-summer; in fact, the best returns secured were during the last month of operation. They installed a small steam shovel on a scow (which floats in the ditch) and commenced the enlargement of their main ditch early in the season, but only completed about two miles of it, and it will take them the greater part of next season to complete the whole work. The ditch thus far constructed is about 25 ft. wide on top and 5 ft. deep, and is calculated to carry 15,000 miner's inches of water, and when completed will certainly place these companies in an excellent and very enviable position for carrying on their hydraulic operations and washing out the famous yellow gravel which is so uniformly auriferous

and of which their properties appear to cover a very large quantity.

The British-American Dredging Company, Limited, the name of which has been changed to the British Columbia Electric Mining Company, Limited, has done nothing this year except that its power plant at Pine Creek falls has supplied the Atlin Consolidated Mining Company's steam shovel with the electrical power used.

From 90 to 115 men were employed on Pine Creek and Gold Run during the summer.

SPRUCE CREEK.

Only from 100 to 120 men were employed on this creek during the summer, but the results of individual operation were as remunerative as in any previous year, and some of the best results were obtained from re-slucicing tailings that had been washed once or twice already. The reduced numbers operating on the creek left the diminished water supply more generally available, and there was consequently less wrangling than in former years, although troubles of that nature have not entirely disappeared. The drifting operations of last winter were generally very satisfactory, and reports from there this winter are more than satisfactory. About 45 men are drifting there, and there are about 65 people of all classes on the creek.

The Spruce Creek Power Company, Limited, under the management of W. C. Hall, with a force of 12 men, spent the early part of the season hydraulicking in the same place as in former seasons, but with what result I cannot say, as I was not favoured with a report by the manager. During the latter part of the season the force was engaged opening up and installing a plant at Spruce Creek falls, some distance down stream, where I understood things are in shape for a good start next spring.

The Northern Mines, Limited, allowed its steam shovel to remain unused during this season, but its ground was being worked by a crew of about 16 men, on a lay, who had returned to the original pick and shovel methods and, I believe, realized good returns.

Considerable desultory work of a prospecting nature was carried on at various points along the creek, but none worthy of special mention. Practically no fresh ground has been broken, the work done having been confined to the portions that have been under development for several seasons.

BIRCH CREEK.

About a dozen men operated on this creek with better than usual results, the scarcity of water being the only drawback. A small crew of individual miners did very well on the upper portions.

Pearse & Co., operating the ground and plant of the Dominion Trust Company, commenced piping on May 4 and continued until November 1, but were limited to about two hours a day in use of the monitor, the water supply not affording any more.

BOULDER CREEK.

Between 45 and 50 men operated on this creek during the season, including the French Company's

employees. The results were, as usual, good in general and very good in some cases. Those who drifted on the creek last winter realized splendid results. About 15 people are employed drifting there this winter.

The Societe Miniere de la Colombie Britannique, under the management of Mons. Tade Obalski, M.E., employed 13 men during the summer, and realized the best returns, with least cost, of any season since it has undertaken to operate on the creek, cleaning up nearly \$40,000. Even with these satisfactory results, some ground was worked over that had been drifted during the winter, demonstrating that the pay on this creek is more generally distributed throughout the gravel and is not all found within the range of drifting operations.

RUBY CREEK.

The Ruby Creek Syndicate, under the foremanship of Robert Mackay, opened up its property and, with a small force, continued prospecting underground from the middle of May until September 20. The average value of the gravel handled was satisfactory. The owners, unfortunately, have not yet secured the necessary capital to properly equip the property with a suitable plant.

WRIGHT CREEK.

About 11 miners operated on this creek throughout the summer season, and, I believe, with perhaps one exception, were well satisfied with results. Gierke & Co., in particular, did very well and are being repaid for their several seasons of unremunerative labour on the creek.

OTTER CREEK.

On this creek Carmichael, Moran & Co. (the Otter Creek Development Company), who own the Otter Creek Consolidated group of hydraulic leases, situated on upper Otter Creek, worked with a force of five men throughout the season, and were again rewarded by very fair returns. They commenced operations on April 25 and continued until October 21, while active piling was carried on from May 25 to October 15. During this period they moved about 20,000 cu. yd. of gravel, uncovering over 2,000 sq. yd. of bedrock, from which they recovered gold averaging upwards of \$2.50 per sq. yd. of bedrock. They also constructed dams for the conservation of water and performed other dead-work which is calculated to enable them to make a much improved showing next season.

On lower Otter Creek the Otter Creek Hydraulic Gold Mining Company, which controls a group of 11 leases, under the superintendence of M. R. Jamieson, had a crew of from four to eight men employed from June 1 to October 15, preparing for the installation of hydraulic plant, in the course of which was constructed about 2,100 ft. of ditch and flume 4 ft. x 3 ft. 6 in., with necessary head-dams, etc., and a larger dam on the divide between Otter and Spruce Creeks, thus establishing a reservoir capable of conserving a large quantity of water. Everything is in readiness for the installation next spring of a hydraulic plant,

with which to at once commence operations and be able to make a fair showing before the end of the season.

WILSON CREEK.

Although a large number of claims were located on this creek last year, no work worth mentioning was done on any but Discovery claim. On this claim the discoverer, Andrew Grier, and his partner, Mr. May, did very well indeed. This year Mr. Grier, who acquired sole ownership, operated throughout the summer with a crew of about seven men, commencing to sluice on June 24 and ceasing on October 15. Although they, at times, got off the pay-streak, at no time did they average less than wages and, I believe, they averaged upwards of \$10 a day to the man for the whole season.

At intervals, during the past season, some fresh report from the creek would cause a stampede, with the result that from seven to eight miles of the creek has been located in individual claims, but with two or three exceptions no continued or systematic prospecting has been done, except on Discovery claim, as above mentioned. About 1½ miles below Discovery one man made upwards of \$20 a day panning for a short time, but that was not continuous. There are four men on the creek this winter.

O'DONNELL RIVER.

On this river several leases have been located, but, with the exception of Robert McKee's operations, no work whatever has been done by any of the locators. Mr. McKee brought in supplies last winter and commenced operations last spring with three men, but ceased early in the season at the instance of a party to whom he had bonded his property and who was preparing to institute extensive development operations when the financial stringency overtook him and upset his calculations for the time being.

On Graham, Consolation and Lincoln Creeks some prospecting was being done, but without definite results.

On Gold Bottom Creek an American company acquired bonds on a group of leases thereon located and, in the fall of 1906, built cabins, etc., and commenced prospecting by sinking a shaft, however, encountered water at the usual depth in this district, viz., somewhere between 20 and 30 ft., and work was suspended until they could procure suitable pumping apparatus.

MINERAL CLAIMS.

The impetus given to prospecting for mineral claims in 1906, by the active development undertaken by Col. Conrad and his associates around Windy Arm, was not sustained in 1907, the enthusiasm subsiding in sympathy with the restricted development maintained by those same parties, and a glance at the statement of locations and certificates of work recorded conveys the impression that not many new properties have been located and that a number previously located had been abandoned. It is encouraging, however, to note that all the principal properties are being protected, if nothing more, and that the assessment work, where properly done, in

most cases reveals increasing values, as the properties are opened up. I am pleased to be able to state that the Beavis mine, situated about three-quarters of a mile north of Atlin, under the management of C. E. Wynn-Johnson, and the Table Mountain property, situated on Taku Arm and about 12 miles from Atlin, under the superintendence of J. A. Oliver, are being systematically developed this winter.

RAINY HOLLOW.

The anticipated development of the properties in this district, unfortunately, was not vigorously entered upon this year by the bondees, so that they are practically no further ahead than they were a year ago, except in one case, where the representative of American capital is building cabins, etc., preparatory to active development. The recent visit of the provincial mineralogist to that district will have provided fuller and more reliable information with reference to the district than anything that I can offer, so that I will conclude by stating that trails have already been built along the Klehini River and across the divide from Pleasant Camp to the head of Boulder Creek, which will materially assist the prospectors and pave the way for the wagon road that will probably follow.

GENERAL.

The falling off in the amount of revenue collected, as compared with 1906, is represented almost entirely by the great discrepancy in the amount collected from lease rentals, as already noted, which alone amounts to more than the difference, the amount collected for free miners' certificates (more than usual of which were taken out elsewhere) and the lesser amount collected (and collectible) for taxes, both real and personal. There was a considerable advance in the amount collected under most of the other heads representing sources of revenue.

(Note—The statistical tables included in this report give details of the revenue of Atlin mining division for the year, amounting in all to \$36,177.96. Among the larger items of receipts are: Free miners' certificates, \$3,624.75; mining lease rentals, \$8,420; water records and rentals, \$1,447.50; mineral tax—being royalty collected on 21,718 oz. gold, valued at \$339,989.62, \$5,192.99, and sundry mining receipts, \$9,173.70. Of the gold on which royalty was collected 6,186 oz. were mined by individual miners and 15,532 oz. by companies.)

(To be continued next month.)

The *Engineering and Mining Journal* states that at the first meeting of the newly-elected directors of the New York Metal Exchange, held on April 9, the copper quotation committee was enlarged from three to four. The committee for the next year is composed of Berthold Hochschild, Paul Koning, L. Vogelstein, and Harmon W. Hendricks. The committee on tin is composed of Messrs. Koning, Baerwaid, Hall and Groves; that on lead of Messrs. Hochschild, Steiner and Langloth; that on spelter of Messrs. Vogelstein, Hochschild and Elkan.

CANADIAN MINING INSTITUTE.

Second General Meeting of the Western Branch.

THE WESTERN BRANCH of the Canadian Mining Institute held its second general meeting at Rossland on Thursday, May 14. This branch, it will be remembered, was organized at Nelson on January 15 of the current year, at which time it was decided that thereafter general meetings should be held three times a year, at intervals of four months, in accordance with which decision the meeting at Rossland was held.

A. B. W. Hodges, of Grand Forks, general superintendent of the Granby Mining, Smelting and Power Company, Limited, was in the chair, and E. Jacobs of Victoria, editor of the *BRITISH COLUMBIA MINING RECORD*, carried out his duties as secretary.

The following members were present: From Nelson: S. S. Fowler and C. H. Rowlands. Grand Forks: W. B. Bishop, A. B. W. Hodges, Frank E. Lathe, W. St. John Miller and C. T. Mitchell. Phoenix: C. M. Campbell. Trail: F. W. Guernsey and J. M. Turnbull. Vancouver: J. West Collis. Victoria: E. Jacobs. Northport, Wash., Thos. Kiddie. Rossland: D. J. Browne, T. W. Cavers, H. H. Claudet, P. S. Coudrey, Graham Cruickshank, Geo. W. Dunn, A. G. Larson, A. J. McMillan, M. E. Purell, J. M. Sands, R. H. Stewart and C. Varcoe. Dr. J. Bonsall Porter, professor of mining at McGill University, and Dr. John A. Dresser, instructor in geology, both members of the institute, who were in the Kootenay with the McGill summer mining school, also attended. The visitors at the meeting included J. A. Macdonald, M.P.P. for Rossland; A. B. Mackenzie, secretary of the Associated Boards of Trade; J. S. C. Fraser, manager of the Bank of Montreal, Rossland; W. S. Rugh, office manager of the Le Roi Mining Company, Limited; H. P. Dickinson, district representative of the Giant Powder Company; K. C. Allen, J. C. Fuller and F. S. Peters.

In opening the meeting, which was held in the court house, courteously placed at the disposal of the branch for the purpose, the chairman expressed his pleasure at the gratifying attendance, though considering the great importance of the mining and smelting interests they represented, it might have been expected that many more would be present. However, a society like their institute should not be judged by the attendance at its meetings; its influence must be measured by the wide publicity given to the matters discussed and the papers submitted for information and discussion. In order to extend the influence of their branch of the institute their periodical meetings are held at different places from time to time, thus giving members resident at those places opportunity to attend and take part in the proceedings. In this way an increased hold is obtained on the many interested in the mining and smelting industries.

The secretary read an account of the proceedings at the Nelson meeting last January, and this was taken as the minutes of that meeting, and on resolution was so adopted.

The chairman then asked J. A. Macdonald, member for the Rossland district in the Provincial Legislature, who was present by invitation, to address the meeting.

Mr. Macdonald said that the citizens of Rossland had been honoured by having the second meeting of the Western Branch of the Canadian Mining Institute convened in their city. Of course they had always flattered themselves that Rossland was the banner gold-copper camp of British Columbia. Some of those present might not agree with that description. Perhaps, for instance, the president of that meeting might say there were some copper mines in the Boundary District, and he, the speaker, was quite prepared to admit that there were. But he still maintained that Rossland was the banner camp. Rossland was glad to have mining engineers and others connected with mining visit the camp, for the residents had nothing to be ashamed of in the mines of Rossland, which had been established mines for years, and he had faith that their mineral resources would prove to be permanent and valuable. As he had been informed there would be speeches made at a smoker to be held that night, he would not further take up the time of the meeting. He thanked them for the honour done him in inviting him to be present and to address the meeting. He knew the work the branch was doing was entirely one of unselfishness—to give others the benefit of the experience each had obtained in his own sphere. In mining there was no selfish competition, each mine owner being glad to see his neighbour prosper and none succeed at the expense of others. This spirit had been carried into the work of the Canadian Mining Institute, and was being used for the purpose of disseminating the knowledge individual members had gained, thus exemplifying the unselfishness of their motives.

A. J. McMillan, managing director of the Le Roi Mining Company, was next called upon. He expressed pleasure at seeing members of the Canadian Mining Institute meeting in Rossland, and hoped the proceedings would be found profitable to those taking part in them. The visitors would be given opportunity to go through the large mines of the camp. Those in charge of the mines had not lost faith in them—they believed there still remained large bodies of good ore, and although there were still difficulties to be met, these would doubtless be overcome as others had been in the past.

The chairman then announced that an intimation had been received from the secretary of the institute, Montreal, that several British and foreign institutes connected with engineering, mining and metallurgy had been invited to join the Canadian Mining Institute in an excursion through the mining sections of the Dominion next September, and that it was proposed to visit the chief mining camps of British

Columbia. The members of the Western Branch would be expected to unite in entertaining the visitors, and he asked that as many as possible would join in the excursion when the party should come west and proceed to Victoria, where a formal meeting of the institute would be held. He understood the Provincial Government had already been informed that it would be asked to make an appropriation towards the cost of entertaining the visitors. He hoped Mr. Macdonald would endeavour to help them to secure some such assistance from the Government.

Mr. Macdonald enquired whether the Canadian Mining Institute received a grant from the Provincial Government. He thought that if application for it were made the Legislature would support a grant to assist in carrying the useful work of the institute.

The secretary said that so far as he knew no financial assistance had yet been given the institute by the Government of British Columbia. The statement of the treasurer of the institute, presented at the annual meeting in Ottawa in March, shows that the Dominion Government gives an annual grant of \$3,000 and the Ontario Government one of \$1,500, and he understood that the Dominion Government had been asked to increase its yearly grant to \$5,000. As a matter of fact there had been no official recognition by the Government of British Columbia of the existence of the institute. The Dominion Government and the Provinces of Quebec and Ontario had all been officially represented at the annual meetings of the institute, and had supplied information relative to their mineral production, but British Columbia had had only the benefit of the attendance at the annual meetings of two or three members from the Province, and such information concerning mineral production as he, the speaker, had supplied for submission to the meetings of 1907 and 1908 respectively.

Mr. McMillan suggested that the institute should apply to the Provincial Government for a grant, which should not be less than the amount received from Ontario.

Mr. Macdonald did not anticipate that the institute would have any difficulty in obtaining a grant from the Provincial Government if the proper information concerning the work and position of the institute were supplied. The Province had been fairly liberal in giving aid to the agricultural and fruit-growing industries, so he thought the mining industry would be similarly assisted if the necessary representations were made.

The secretary mentioned that the total value of the mineral production of the Province in 1907 was not far from \$26,000,000, which was as large as or larger than that of the combined value of two or three other of the chief industries of British Columbia. It was true the Province had the benefit of the work of the provincial mineralogist and the provincial assayer, but in his opinion, the mining industry did not receive from the Provincial Government adequate aid or recognition. It was gratifying

to find the Dominion department of mines doing so much work in the West, and he had received assurances from the minister of mines and the directors of the geological survey and mines branches, respectively, that their work in the West would be continued on at least as large a scale as during the past few years.

The secretary here mentioned, as good news, to those interested in the zinc mining industry, that the appeal to the United States courts against the decision of the General Board of Appraisers in favour of admitting zinc ores into the United States duty free, had not been successful, the court ruling that no duty is legally chargeable upon them, except as to their lead contents.

The chairman expressed his pleasure that the question of applying to the Provincial Government for aid to the institute had been brought up, and that Mr. Macdonald had been present and heard the views expressed in this connection. Bearing in mind the relative importance of the several industries and the value of their products, he thought the mining industry should receive from the Government twice the amount of the assistance given to any one of the others.

An adjournment to the afternoon was here made.

AFTERNOON SESSION.

The business was resumed at 2.30 o'clock p.m., and the following resolutions were unanimously adopted after a brief debate:

Proposed by P. S. Couldrey, seconded by Thomas Kiddie, "that in order to make the council of this branch more fully representative, the number of elected members thereof be increased from nine to twelve, in addition to the president and secretary."

Proposed by R. H. Stewart, seconded by F. W. Guernsey, "that Messrs. R. W. Coulthard, Fernie, John L. Retallack, Kaslo, and Robert Hamilton, Vancouver, be and hereby are elected members of the council."

The secretary reported that "the council recommends that a committee be appointed to request the Provincial Government to make an appropriation towards the expense of suitably entertaining the British and foreign and other visitors who will next September visit British Columbia as guests of the Canadian Mining Institute, such committee to consist of A. B. W. Hodges, W. H. Aldridge and S. S. Fowler, with power to add to their number."

Dr. J. Bonsall Porter, who is senior vice-president of the Canadian Mining Institute, at the request of the chairman, gave some information as to who were these invited guests, who include a number of eminent members of British and foreign societies, and the scheme of the proposed excursion.

On motion of A. J. McMillan, seconded by M. E. Purcell, the recommendation of the council was adopted.

Proposed by S. S. Fowler, seconded by J. West Collis, "that a committee of five be appointed by the president to make suggestions to the council of the

institute in connection with the itinerary in western Canada of the British and foreign visitors next September." Carried unanimously.

The reading and discussion of papers was then proceeded with.

E. Jacobs read some brief notes on a "Matte Separating Forchearth," in use at the Tyee Copper Company's smelter at Ladysmith, Vancouver Island. He said that W. J. Watson, manager of the smelter, had informed him that so far as he knew, he, Mr. Watson, was the first to use this particular adaptation of the old Orford settler to a water-jacketted receiver, and that during the two years it has been in use the matte compartment has only frozen up three or four times, and then on account of the high zinc contents of the matte. The settler has more than paid for itself by reason of the slag made being cleaner. Among other advantages which this arrangement of the settler affords are the following: The wear and tear of the matte pots is reduced by the stream of matte not striking the side of the pot as it does in the ordinary tapping methods; tapping clay is saved; the danger of men being burned when tapping slag is obviated; the services of a tapper are dispensed with and a consequent economy is affected in not having to pay this extra man's wages.

H. H. Claudet contributed a "Few Notes on the Elmore Vacuum Process of Ore Concentration." The discussion that followed was participated in by Dr. Porter, S. S. Fowler, F. W. Guernsey, A. B. W. Hodges, Thos. Kiddie and J. M. Turnbull. Samples of several concentration products were passed around for inspection.

"GRANBY MINING METHODS."

C. M. Campbell's paper on "Granby Mining Methods" was a clear and comprehensive description of the methods followed by the Granby company at its big copper mines in Phoenix camp, Boundary district. It showed that the company is operating here in what appear to be two distinct orebodies. The older workings are in ore outcropping on the Knob Hill and Old Ironsides mineral claims, and the newer on the Gold Drop claim. The Knob Hill-Ironsides mine has been opened by several levels, in depth about 100 ft. apart. It is divided into three distinct units, known, respectively, as No. 2 Tunnel, No. 3 Tunnel, and Victoria Shaft. The tracks of the Canadian Pacific Railway connect with the outlet from No. 2, and those of the Great Northern Railway with that from No. 3, and of both railways with the orebins at Victoria Shaft. Each unit has its own complete equipment of rolling stock, ore crushers, and bins, and is manned by a separate working force under its own shift bosses. The Gold Drop, which is similarly equipped and manned, constitutes a fourth unit, and connection with the Canadian Pacific system gives it railway transportation facilities. The present maximum output capacity of each unit is about 150 tons per hour, so that if ore production at one, or even two, of them should be interrupted it

would still be practicable to ship 3,000 tons daily, which is about the quantity now ordinarily treated at the company's smelting works with all furnaces running. Similarly, shipment of sufficient ore for the smelter's needs could in an emergency be made over one railway should the regular operation of the other be at any time interfered with.

The paper showed, further, the progressive character of methods of underground mining and improvements in equipment; the nature of the ore-bodies; the course usually followed in opening up a level—drilling, blasting, and removal of broken rock; stopping, raising, mining by "glory-hole" method, timbering where necessary, ore-loading, etc.; and labour-saving devices in use. A classification of the working forces employed underground at two different periods—in 1902 and 1908—indicated the expansion and development along new lines of the company's operations.

Other subjects dealt with were diamond drilling—more than 30,000 ft. of holes having been drilled, method of estimating "ore in sight," surveying and mapping, stope maps, brown prints (for reproduction of mine maps), etc.

The text of the paper was illustrated by a number of drawings and large photographs. There was no time available for discussion, but Mr. Campbell was generally commended for having contributed so excellent a paper.

The chairman here announced that he had been requested by Frederic Keffer, engineer in charge of the mines of the British Columbia Copper Company in the Boundary, and who was last year's president of the institute, to present to Frank E. Lathe the president's gold medal for the best paper submitted by a student member last year. Mr. Lathe, who is now with the Granby Company, was then at McGill University. The following is an extract from the report of the judges: "The undersigned, appointed by you to be the judges of the student papers submitted to the latest annual meeting of the institute, would respectfully report as follows: The first place should be accorded to the paper on 'Basic Open-Hearth Steel Manufacture as Carried Out by the Dominion Iron and Steel Company at Sydney, C. B.,' by Frank E. Lathe. This is an excellent monograph, carefully written, with full attention to details, and especially to the costs and expenses of manufacture; a point in which many technical papers are deficient. It shows also a fair sense of proportion; that is, of the relative importance of the various parts. This paper unquestionably takes the first place. It is to be regretted that it cannot be published in full, as some of the details of cost, etc., were given to the writer on condition that they should not be made generally public."

Mr. Lathe was heartily applauded as he went forward to receive the medal, in addition to which he had already received from the institute a cash prize of \$25.

The secretary then read some notes he had ob-

tained on "Ore Hoisting Appliances at the Tyee Copper Company's Wharf at Ladysmith, Vancouver Island," when visiting those works a fortnight previously. Owing to the considerable expansion of its custom ore smelting business, and the fact that nearly all the custom ore received comes to the smelter by water, the company has found it necessary to provide facilities for the expeditious and economical unloading of ore from the vessels bringing it. Consequently a wharf has been erected in Oyster Harbour, close to the smelter. On this wharf two ore-bunkers, one fixed and the other movable, have been constructed and equipped with hoisting appliances adapted to local needs. A marked feature of these unloading facilities is a trolley, designed by W. J. Watson, the company's smelter manager, for use in operating a bucket or scoop in hoisting ore from the hold of a vessel and conveying it to the bunker of the wharf. This trolley runs on a movable arm, which may be of any length requisite to bring its outer end over the hatch of the vessel to be unloaded. The construction of the trolley was described in detail, and drawings and photographs were shown, these illustrating the trolley, ore-bunkers with arm in position above wharf, the long trestle from the wharf up to the ore storage bins and sample mill, and, as well, giving a general view of the works.

On the request of the chairman Dr. Porter briefly outlined the work in progress in McGill laboratories to test the coals in Canada. These tests are being made under the auspices of the Dominion Government.

On motion of S. S. Fowler seconded by M. E. Purcell, the president and secretary were appointed to urge upon the Dominion Department of Mines the desirability of completing as soon as possible R. W. Brock's full report on his structural survey of Rossland camp, with maps, the necessity of having these made available being pressing.

Votes of thanks to the local committee for its services in providing for the entertainment of the visitors; to the district press for the publicity given the meeting, and to local officials for the use of the court room, were passed, and the meeting then adjourned.

SMOKER AT THE ROSSLAND CLUB.

A most enjoyable smoker was tendered the visitors at the Rossland Club in the evening. The chairman of the club, J. S. C. Fraser, presided over the proceedings and he and J. A. Macdonald, M.P.P., cordially welcomed the visitors, on whose behalf A. B. W. Hodges responded. Speeches were also made by A. J. McMillan, Dr. J. B. Porter, A. S. Goodeve, P. S. Couldrey, S. S. Fowler, M. E. Purcell, Thos. Kiddie, F. W. Guernsey and others.

In the course of the evening an excellent programme of vocal and instrumental music was rendered. Schorlemmer's orchestra contributed some very good numbers, adding greatly to the enjoyment of those who heard them, and when tendered remuneration for their services, which the local committee fully expected were to be paid for in the

ordinary way, generously declined to accept payment, desiring to do their share in entertaining the visitors without pecuniary reward.

The next day was spent in inspecting the Le Roi, Le Roi No. 2, and Centre Star mines, under the escort of the various mine officials. Most of the visitors left for home by the evening train.

The committee on entertainment consisted of A. G. Larson, J. S. C. Fraser, R. H. Stewart, W. S. Rugh, P. S. Couldrey, Graham Cruickshank and H. P. Dickinson. They are worthy of unstinted praise for their untiring efforts to promote the comfort and pleasure of the visitors, and were eminently successful in doing so.

NOTES ON WHITEHORSE COPPER MINES.

On Completion of Railway Much Ore Will be Shipped.

MR. BYRON N. WHITE, of Spokane, Washington, U.S.A., when in Victoria last month, gave to a representative of a Victoria newspaper some particulars of mining properties in Whitehorse copper camp, in southern Yukon. This information, with some necessary corrections made for the *MINING RECORD* by Mr. White, is as follows:

COPPER MINING PROPERTIES IN WHITEHORSE CAMP.

"I expect shortly to go up north to provide for getting out ore shipments on the Pueblo and Carlisle, which are situated in Yukon Territory, about five miles southwest of Whitehorse. The claims belong to the Yukon Pueblo Mines company of which I am president, the capital interested being partly drawn from Spokane, and partly from Milwaukee and Chicago. The White Pass & Yukon Railway is building a branch line into the camp, and when that shall be completed mining will be active. The railway company has cut its right of way for about two and a half miles of the distance. There are about eight miles of road to finish, which will be completed in July.

"The Pueblo group contains 420 acres of ground, the mineral consisting of an enormous body of hematite in a limestone and diorite contact. The surface showing very much resembles that of the copper mines at Bisbee, Arizona. My attention was drawn to the resemblance by an engineer who went over our properties and I had the curiosity to go down to Arizona to look for myself. The likeness is very striking and adds to the probability of our having permanent mines at Whitehorse.

"The orebody on the Pueblo group crops out some 20 or 25 ft. above the surface and at present is practically a quarrying proposition, and we estimate that we have 400,000 tons of ore in sight. We have sunk a shaft to a depth of 100 ft. and this shaft is all in ore. We have also stripped the surface showing and exposed an orebody some 300 ft. long and 200 ft. wide. The hematite averages about 50 per cent.

iron and 5½ per cent. copper, making an excellent fluxing ore.

"The Carlisle group, consisting of 300 acres, is distant about two miles from the Pueblo, and has a different character of ore. The vein is smaller, running from 15 to 20 ft. in width, but the ore is high grade, the paystreak frequently showing 4 ft. of solid bornite. The ore is a bornite and chalcopyrite. We made a shipment last year to the Tyee smelter, sending 100 tons from a 50-ft. shaft and the smelter returns showed 22½ per cent. copper. The main shaft on this group is down 137 ft. We expect to ship regularly from both properties as soon as the railway shall be completed.

"About seven miles southeast from Whitehorse and four miles from our property is situated that of the Arctic Chief Mines Company, backed by Spokane and Victoria capital. W. J. Elnendorf, mining engineer of Spokane, is manager for this company, which has three claims in the Arctic Chief group and also owns the Best Chance. On the Arctic Chief there is a body of magnetite carrying 5 per cent. copper and \$4 in gold. The orebody has been opened up on the surface for about 400 ft. The company has driven a tunnel which taps the ore at a depth of 60 ft. and shows a continuous orebody 400 ft. long by 50 ft. wide. From the tunnel a winze 60 ft. deep has been sunk, and from the bottom of this a drift has been run both ways showing a similar orebody at that level. It is estimated there are here fully 200,000 tons of ore in sight.

"On the Best Chance there is an orebody which is 75 ft. wide by 500 ft. long which averages 6 per cent. copper with small values in gold and silver. It is developed by a shaft 60 or 70 ft. deep, and from the bottom cross-cuts have been driven. The ore on the Best Chance crops out 20 or 25 ft. above the surface. Both these properties will also ship as soon as the railway shall be finished.

"There are other meritorious properties in the district, but those mentioned are sufficient to show that within a short time the copper camp of Whitehorse should be an important producer."

RAILWAY AND BUNKER SHIPPING FACILITIES.

Regarding transportation and shipping facilities the *Dawson News* says:

The White Pass Company has sufficient faith in the future of Yukon Territory as a copper producer to go to the expense of building extensive wharves, conveyors and other equipment at Skagway for the handling of ore, and to at once undertake the extension of the railway a distance of 12 miles or more into the Whitehorse District. This is the news brought by William Taylor, general agent of the White Pass Railway, who has just reached Dawson from the coast.

"The company," says Mr. Taylor, "has investigated carefully the outlook as to shipments from the Whitehorse District, and feels that the mines there are developed sufficiently to warrant the laying of miles of new track and the building of big ore bunkers. If the application for a charter be not

held up, the company will begin building the railway from Whitehorse next month.

"It is planned to run the road almost straight northward, the spur leaving the main track a few miles south of Whitehorse. This road will follow along the line of developed copper properties. There are some good-looking copper claims on the general lead, which runs, it seems, at least as far as Takini, and in order to have a charter to go that far in case those claims become productive the company is asking for the privilege of going a little beyond the present developed properties.

"The bunkers at Skagway will be built just south of Moore's wharf. They will have a stone background, and be largely on the shelf of the bluff, where there will not be so much piling to maintain as though built exactly in front of the old town or the broad beach. The bunkers will be divided into compartments, designed for keeping each shipper's ore by itself. Modern conveyors will carry the ore from the bunkers to the hold of the ship."

DOMINION DEPARTMENT OF MINES.

Outline of Ensuing Season's Work in the West.

FIELD WORK OPERATIONS to be conducted by the Dominion Department of Mines this summer have been approved by the minister, Hon. Wm. Templeman, and within a short time geologists and mining engineers representing the Mines and Geological branches, respectively, of the department will be operating in various sections of Canada.

The work this year will be more extensive than that of any previous season, and it is expected it will be followed by most satisfactory results. It is the intention to have Canada's mineral resources fully and systematically investigated, and the knowledge acquired imparted to the public.

British Columbia occupies an important place in the programme. The field parties to operate in this Province will be larger than usual, and their scope of operations specially wide. The following is an outline of the work proposed for British Columbia:

Vancouver Island will have considerable attention. The geology and topography of the interior of this island is practically unknown, so it is intended to begin a geological examination this year. In order that a start may be made under the most favourable circumstances, it is proposed to commence in Victoria District, which is better opened up and developed than other parts of the island. This work will be commenced with C. H. Clapp, of the Massachusetts Institute of Technology, in charge. Though a young man, Mr. Clapp has had considerable experience under the guidance of one of the best economic geologists in America.

Other work proposed for Vancouver Island is the collection of plants and trees, birds, insects and mammals, and also of marine life on the coast, by Professor Macoun and W. Spreadborough. The collec-

tions they shall make will be placed in the new museum which is being erected in Ottawa, and which when completed will be one of the finest in America.

The copper and iron deposits of Texada Island are receiving a great deal of attention. Their favourable situation as regards mining and smelting operations makes it desirable to assist in every way in their development. R. G. McConnell has studied similar deposits in the Whitehorse district, Yukon Territory, and the information there gained will be valuable in the conduct of his examination of Texada Island.

R. P. D. Graham will continue the work of examining the Pacific Coast and inlets which was begun in 1906, and carried on in 1907. Mr. Graham is demonstrator in mineralogy at McGill University.

In the northern interior W. W. Leach will continue the reconnaissance of the Bulkley Valley, through which it is expected the Grand Trunk Pacific railway will pass. Coal and ores occur in this valley, and the exploration proposed is of great importance to prospectors and development companies. Mr. Leach has been engaged in this section for the past two seasons, and the department is accumulating much valuable information concerning it. It is proposed to extend this work by reconnaissance survey along the line of the railway between Bulkley Valley and Yellow Head Pass. No work has been done here by the Survey since the reconnaissance survey by Dr. Dawson near Fort George in 1876, which disclosed evidences of the existence of coal and copper in this region. As this country will soon be opened up, numerous inquiries are received from prospectors regarding its mineral resources.

In the south, at Camp Hedley, Chas. Cansell will complete the work begun last year, and then undertake a survey of the Tulameen District. This latter investigation is important because of the platinum gravels found there, and the discovery of copper and other ores. The improvement in transportation facilities makes it probable that this district will now receive liberal attention from mining men, and it is hoped that a geological study of it will assist in its rapid development.

O. E. LeRoy and W. H. Boyd will examine Phoenix camp, Boundary District, which is one of the most important mining centres in British Columbia. Mr. LeRoy will also study in detail the geology of the Sloean District. The attempts to revive the silver-lead industry of this section justify the department making a detailed survey of the geological structure, to assist in the search for ore. This work has been urged by the Associated Boards of Trade of Southeastern British Columbia. Mr. Boyd will prepare a topographical map for this district, as well as for Phoenix camp. These maps are invaluable to mining companies for the location of trails, tramways, flumes, etc.

John M. Macoun will study the fungi which cause the rotting of timbers in dry places in the mines, and will attempt to discover a method of preventing

their growth. He will also secure photographs illustrative of the forests of British Columbia, and will collect samples of the woods for the museum.

In Yukon Territory parties under D. D. Cairnes and Joseph Keele will conduct investigations. The former last year was working at Tantalus and Whitehorse, where good coal measures had been discovered. It is proposed that this year he shall define accurately the coal area, and trace the measures toward Whitehorse, for the purpose of finding coal as close to transportation as possible.

Mr. Keele will explore the territory near the great divide, at the head of the Pelly River. He began this exploration last year, and has spent the winter there.

The department expects in the near future to be able to place before the public the results of some very important investigations undertaken last year. Among these will be the report on the mineral industry of Canada, which, when completed, will be the largest and most important work of its kind ever attempted in Canada.

Another report which will be of particular interest to the people of British Columbia generally, and to those of Vancouver Island specially, will be that of Mr. Lindeman on the iron ore deposits of Vancouver Island.

With regard to the question of peat it may be mentioned that an appropriation has been made for experiments with Canadian peat, to ascertain its fuel value.

The Department of Mines, in conjunction with the American Museum and Natural History Association, has arranged for an interesting exploration to be undertaken by V. Stefanson at Coronation Gulf, east of Mackenzie River. This investigation will have three phases—ethnological, geographical and mineral. Mr. Stefanson and a companion will spend a couple of years studying the Esquimaux of this region, and especially their habits, particularly of those of them who have never come into contact with the white people, and obtaining geographical information and data as to the occurrence of minerals. This exploration will be watched with considerable interest in scientific circles in Canada and the United States. Mr. Stefanson is a well-known explorer and ethnologist, and accompanied Capt. Mikkelson on his exploratory trip to the Arctic in the steamer *Duchess of Bedford* two years ago.

In addition to work above outlined the Department of Mines will have its engineers and geologists in other portions of Canada following a carefully thought-out programme of exploration and investigation.

A few men have been kept at work at the La Plata mine, in Nelson mining division, but the resumption of operations on a scale similar to that of last year will be dependent probably upon a better price being obtained for silver than that now offering.

CONDITIONS IN WEST KOOTENAY.

Observations of Editor of *MINING RECORD*.

I NTERESTING INFORMATION relative to the condition of several of the industries of West Kootenay was given to the *Victoria Colonist* by the editor of the *MINING RECORD* upon his return from a fortnight's trip. The interview, as published in the *Colonist* was as follows:

During his absence from Victoria Mr. Jacobs visited Rossland, Nelson and Kaslo, and, as well, spent four days at Northport, Washington, at which last-mentioned place is situated the smelter owned by the Le Roi Mining Company, of Rossland.

Speaking generally, Mr. Jacobs said he found things quiet at all the places he visited. While there was a certain amount of activity in mining and smelting, and also in agriculture, on the whole, the parts of Southern Kootenay he was in were by no means as busy as he had seen them in bygone years. To some extent an exception should be made in favour of Nelson, which has—and appears to merit—the reputation of being the most flourishing town in the Kootenay. Business certainly seemed slack at Rossland and Kaslo, while at Northport there was even less doing in a general way than in the British Columbia towns mentioned.

AT ROSSLAND.

Notwithstanding that there was not any stir noticeable on the business streets of Rossland, there must be a deal of trade done regularly by some of the stores, for the mines of the Consolidated, Le Roi and Le Roi No. 2 companies together give employment to a comparatively large number of men, many of whom are married and have their homes in the camp. Conditions at the several mines mentioned seem to be more satisfactory now than for years past, there being much ore available for extraction, and the average grade of a considerable proportion of it higher than that encountered in the earlier operations of recent years. While the improvement in this respect does not warrant extravagant statements in regard to either the quantity or value of this ore, it is a fact that shoots of ore of a grade that will leave a margin of profit above cost of making its metal contents marketable, have been encountered in the lowest levels of the mines of both the Le Roi and Consolidated companies, and that this ore is of a character more suitable for economic smelting than the bulk of the ore produced by these mines during recent years. Further, the increase in value is chiefly in gold, which is a decided advantage now that the price of copper is low.

The mine of the Le Roi No. 2, Limited, is also in a better position now than at any previous time as regards quantity of ore development work has proved it to contain. Those who read the report of the company's consulting engineers and mine manager, submitted at the annual meeting held in London, England, last March will perhaps remember

that it was then stated the company could with safety look forward to three years of continuous shipments at the rate of 2,000 to 2,500 tons of ore monthly, and that at no previous time had the outlook for the mine been so good as this year.

Of the other mining properties in Rossland camp, there is little that is encouraging to be said, except in the cases of the Giant-California, on which development work is being steadily proceeded with, and the Bluebird, in the south belt of the camp, which latter property is reported to give much promise of proving productive.

The Consolidated Mining and Smelting Company of Canada smelts the ore of its mines at its smelting works at Trail. Le Roi No. 2 also goes to Trail, but that from the Le Roi mine is smelted at Northport. The Trail smelter was not visited on this trip, but Mr. Jacobs was informed that in both its copper and lead departments important improvements and additions to the plant have recently been made, and others are being carried out, these adding to the treatment capacity and the facilities for reducing the varied ores received at these works.

PROSPECTS AT NORTHPORT.

At Northport, owing to the supply of suitable ore lately obtainable having been insufficient to allow of a second copper furnace being continuously operated, only one has been in blast during the last five months. Thomas Kiddie, who about six months ago was appointed manager of this smelter is, however, making an excellent record, notwithstanding the disadvantages he is at in being for the time restricted to a single furnace. He has increased the tonnage of ore smelted here daily and this improvement, together with several economies he has been able to make in other directions, has had the effect of appreciably reducing smelting costs. After development work now in progress on the lower levels of the Le Roi mine shall have been advanced to a stage which will admit of the extraction of a larger quantity of ore, it will be practicable to run two furnaces at Northport and to further reduce smelting costs. Mr. Kiddie has expressed confidence that with two furnaces in blast he will be able to smelt Le Roi ore at a cost which will compare favourably with past costs, whether at Northport or Trail, and his numerous friends on the coast, who know him to be a man of deeds rather than words will accept his assurance and look for its realization whenever the conditions above mentioned shall be brought about.

IN NELSON DIVISION.

While at Nelson Mr. Jacobs, in company with Neil F. Mackay, M.P.P. of Kaslo, was shown through the works of the Canada Zinc Company by Robert Irving, resident director. This is the company to which the Provincial Government has rendered aid by making it a loan of \$10,000 to complete its plant for the treatment of lead-zinc ores by the Snyder method of electric smelting. The works are nearly completed, all buildings having been erected, substantial foundations for machinery, dust flue and

smokestack, all of cement concrete, built; large specially designed roaster and patent electric furnace constructed; transformers and other electrical equipment installed, and the electric power transmission line—between two and three miles in length, and having 60-ft. poles placed 100 ft. apart—well advanced towards completion. It is hoped that it will be practicable to shortly commence smelting lead-zinc ores on a commercial scale.

Mining in some of the districts tributary to Nelson had not lately been in a flourishing condition, but there was a prospect of an early change for the better in several directions. To the southwest, in the Salmo-Eric section, several gold-quartz mines did well throughout last winter, these having been exceptions. At the Ymir mine there appears to have lately been a decided improvement, though no particulars were obtained at Nelson by Mr. Jacobs. Recent additions to working force and office staff, though, would appear to indicate that operations are being enlarged and that there is warrant for an increased expenditure.

The Hall Mining and Smelting Company's smelter at Nelson is closed and is likely to remain so for a time. It is expected, though, that work will be resumed shortly at the company's Silver King mine, which is stated to have been leased to M. S. Davys and associates. The Queen Victoria has not sent out any ore since the fall, last year, in the price of copper. The La Plata Mines company has been in financial difficulties, so is not likely to resume work while prices of silver and lead remain low.

AINSWORTH AND SLOCAN.

The Canadian Metal Company's 200-ton concentrating mill at its Blue Bell mine, on Kootenay Lake has been completed, and late in May was started on its first regular run. There is a large quantity of ore blocked out in the Blue Bell which was the first lode mine discovered in British Columbia. In Ainsworth camp across the lake from the Blue Bell, but little mining was done through the winter, but preparations are being made to resume work on several properties after the snow shall have disappeared and the difficulty of dealing with surface water lessened.

At Kaslo Mr. Jacobs was informed that a new company had been organized in France to operate the Cork silver-lead mine and mill, situated on the south fork of Kaslo Creek, and that work for the season had already commenced. Development work is being continued at the Rambler-Cariboo on the deep levels of which ore shoots are being proved to occur. In Whitewater camp the lessees of the Whitewater and Whitewater Deep are regularly maintaining production and are shipping zinc concentrate to the United States as well as silver-lead ore and concentrate to Trail. Alex Smith is about to continue the work of extending the deep level tunnel into the Surprise, near Sandon, and it is expected the Last Chance will also be further developed after Louis Pratt, its manager, shall have returned from Ottawa, whither he and John L. Retallack went last January

to endeavor to induce the Dominion Government to extend the period during which the bounty on lead shall be payable.

Marble of excellent quality is being shipped to Nelson for building and other purposes from one quarry on Kootenay Lake, and another situated a few miles north of the lake, along the Lardo to Trout Lake railway. Some fine slabs of clear marble about 4x5 ft. from the latter quarry have lately been used in making improvements in the lavatories of the Hume hotel at Nelson.

FURTHER NORTHWARD.

Concerning mining farther northward Mr. Jacobs was informed that the Lucky Jack property at Poplar Creek, on which a phenomenal strike of free gold was made in 1905, is to be taken over and worked by an English company; also that the Silver Cup mine, in Ferguson camp, which for some time past has been regularly producing monthly about 150 tons of silver-lead ore of good grade is to be opened to a depth of some 300 ft. below its present lowest workings.

GENERAL.

There is much of interest to tell of developments in the districts visited in connection with fruit-growing, also with farming on a small scale, but these matters may not be dealt with here. Suffice it to say that Mr. Jacobs was greatly interested in the evident progress being made in the settlement and cultivation of land in the valleys along the streams and lakes of the southern part of West Kootenay, and believes that this development will be continued and extended to the material benefit and advancement of that part of British Columbia.

QUESTION OF DUTY ON ZINC ORE.

Decision of United States Circuit Court Judge.

ZINC ORE imported into the United States is not dutiable, according to a decision recently rendered by Judge Burns, of the United States Circuit Court, Southern District of Texas, Laredo Division. The question had been pending a long time and it came before Judge Burns in the shape of an appeal from the Board of General Appraisers, who decided that zinc ores, which were being imported into the United States from Canada and Mexico, were not properly chargeable with duty. The decision follows:

DECISION OF JUDGE BURNS.

"This is an appeal in the nature of a petition to review the action of the Board of General Appraisers in holding the several importations in question subject to duty under paragraph 181 of the tariff act of July, 1897. Said paragraph is as follows: 'Lead-bearing ore of all kinds, 1.5c per lb. on the lead contained therein.'

"The counsel for the importer concedes that this

assessment is correct; and while the action of the collector of customs in so assessing duty was embraced in the original protests, it was abandoned upon the hearing, and, therefore, is not at issue here. The appellant in its petition complains of the action of the board in not sustaining the action of the collector in assessing an additional duty of 20 per cent. ad valorem under paragraph 183 on the value of zinc contents. The importations involved in the several protests consist of zinc ore; and the importer in his protest claims the same to be free from duty under paragraphs 514, 614, 629, or in the alternative, that in the event the same is subject to duty, only the lead contents thereof are dutiable at the rate of 1.5c per pound.

"In so far as the specific duty is concerned the question presents no difficulty; the language clearly and specifically provides that the lead contents shall be subject to duty at the rate assessed by the collector. Besides, as suggested, this feature has been eliminated by the counsel for the respondent, and, therefore, not a subject for further enquiry.

"The single question here presented is, are the ores free of duty under paragraphs 514 and 614, or subject to duty at rate of 20 per cent. ad valorem under paragraph 183? If the latter provision does not apply, it follows that the General Board is in error in holding the importations not subject to the ad valorem tax.

"Paragraph 183 is as follows: 'Metallic mineral substances in a crude state, and metals unwrought, not especially provided for in this act, 20 per cent. ad valorem.'

"From the evidence in this case it appears that the zinc as metal is not found in the ores involved herein, nor are they metallic mineral substances, and, therefore, not subject to duty under paragraph 183. This conclusion is reached from the entire record as an original proposition, and is supported by the opinion in the case of *Hempstead v. Thomas* (122 Fed. Rep., 538).

"The court is of the opinion that the importations in question are free of duty under sections 514 and 614, and the contention of appellant cannot be sustained that the latter section is without application by reason of the importations having been advanced in value by what is claimed as 'a process of manufacture'; said process consisting of eliminating the rock and dirt by hand and hammer, in order to reduce the bulk and save the paying of freight charges upon useless and foreign matter; this contention would require a broad stretch of the imagination to designate the labour performed as 'a process of manufacture.'

"The case cited, *Hempstead v. Thomas* (*supra*), is conclusive of the contentions made by the appellant. It follows as a conclusion of law:

"First, that the provision for lead-bearing ores in paragraph 181 under the facts in this case, is exclusive, and that the importations are not subject to additional duty.

"Second, that paragraph 183 is without application to the merchandise in question.

"Third, that the ores are free under paragraphs 514 and 614 of the tariff act of 1897.

"The petition of review disclosing, no error, the finding of the Board of General Appraisers should be in all things affirmed; and the decree will so provide, with directions to the collector of customs to liquidate the entries in accordance with this holding."

A PROMINENT EDITOR'S VIEW OF THE MATTER.

The *Engineering and Mining Journal*, of New York, has published the following editorial comment on this question:

"Judge Burns' decision is a sweeping victory for the smelters of the United States as against the miners who have sought to exclude Mexican and Canadian ores. In upholding the previous decision of the Board of General Appraisers, the smelters are able to import free of duty not only silicate ore, but also sulphide. A strenuous effort is being made to induce the Government to refrain from appealing to a higher court and let the matter rest as it is now. If so, the smelters will be assured of the supply of raw material that they need. Nor should the miners of the Joplin district make any further objection.

'It is to their interest that the smelters should live and make a fair return on their investments, and to do so they must have freedom in securing their raw material. At no time since the Mexican ore has been imported have the interests of our miners been jeopardized. When the price for spelter was high they obtained a big price for their ore. Since the price of spelter has been low they have received a comparatively low price for ore, so low, indeed, that many mines have had to cease producing, but nevertheless, so high that the profit to the rank and file of smelters has been zero. The fact that they can obtain some profitable ore enables them to live and pay relatively high prices for the Joplin ore. The latter is of such superior quality that competition for it will always keep up its price. After all, the fear of Mexican ore has been a good deal of a bugaboo."

As bearing upon the foregoing, it may be mentioned that on April 18 the *Engineering and Mining Journal* published (on pp. 822-3) the substance of a letter, dated March 31, 1908, addressed by Messrs. L. Vogelstein & Co., of New York, to the Secretary of the United States Treasury on the zinc ore question. The following extracts will probably be of particular interest to owners of mines in British Columbia in which zinc ore occurs in appreciably large quantity: "The zinc industry of this country (United States) at the present time is in great distress; production has fallen off 45 per cent., but the consumption has surely fallen off over 60 per cent. Enormous stocks of spelter have accumulated in the hands of producers, which cannot be sold except at a heavy sacrifice. From 50 to 75 per cent.

of the zinc smelters in this country are doing business at a loss, preferring to run their smelters on a reduced tonnage rather than disband a valuable organization. The industry certainly deserves a chance to settle on a peaceful basis, and to know from where it may draw its supply of ore, and whether ore coming from foreign countries is dutiable or not." * * * "The collectors of the ports are insisting that the manifests be made valuing a metric ton containing 40 per cent. zinc at \$16, with a variation of \$1 per unit up or down. On this basis they collect 20 per cent. ad valorem duty. This arbitrary valuation is unjust, and works a great hardship upon the shipper. We are buying ores in Mexico now at a price which makes them worth at the border \$10 per ton, with zinc contents of 40 per cent. The value of these ores varies according to the market price of spelter, and it is unfair that we should now pay duty at the same rate as during prosperous times upon a material which has decreased in price. If foreign ores are kept out of this country by a high duty, they will go to European smelters in spite of the geographic advantage which we have."

A BRITISH COLUMBIA MINE MANAGER'S COMMENT.

The *Nelson Daily News* on May 26 made reference to this question, as follows:

"Speaking of the shipments of zinc ore from the Whitewater mine to United States points, S. S. Fowler, general manager of the Canadian Metal Company, yesterday said to a representative of the *Daily News* in connection with the recent decision as to the admission to the United States of the sulphides of zinc, that is to say, the zinc ores now being mined in this country, that he regretted the recent decision about the tariff had been appealed and he did not know when there would be an ultimate decision arrived at. He said further: 'The United States Government has decided to appeal from the decision recently handed down by Judge Burns in the matter of duty on zinc ore entering the United States, to the United States Circuit Court of Appeals. This will not sit until October next. After that, no matter what the result, there will be a further appeal, if desired, to the Supreme Court of the United States. In the meantime, however, and in the absence of other facilities for the disposal of local zinc products, and particularly concentrates, the Whitewater mine will continue to export to the United States, the duty being paid under protest.'"

On May 31 the *Nelson Daily News* published the following: 'To-morrow the Blue Bell mine will open with one regular shift. Within the week following another shift will be placed at work. The mine is now in good shape and merely requires a systematic development. There are already two or three cars of lead concentrates ready for shipment to Trail, ore taken out in the improvements which have been effected in the recent development of this well known property.'

Company Meetings and Reports.

INTERNATIONAL COAL AND COKE CO., LTD.

"The directors beg to present their fourth Annual Report, for the year ending December 31, 1907, together with Statement of Assets and Liabilities.

"The net profits for the year, after paying all operating expenses at head office and mine, amount to \$251,049.21 (being 8.9 per cent. on the outstanding capital), which sum has been derived from the various departments of the company's business, together with the sale of coal and coke, receipts on account of lots sold from the company's townsite and returns from water and electric light supplied by the company to the people of Coleman.

"On February 1, 1907, a dividend of one per cent. on the capital stock of the company was paid; a similar one on May 1, which was increased to 1½ per cent. on August 1, and 2 per cent. on November 1, making in all 5½ per cent., aggregating \$154,000, and as you will see by reference to the Balance Sheet the sum of \$97,049.21 was carried to surplus account for the year.

"Coal produced during the year was 372,480 tons, of which 61,998 tons were sent to the company's ovens and produced 39,121 tons of coke, all of which found a ready sale, and the balance was marketed as coal.

"The total amount of the pay roll for 1907 was \$437,723.19, average number of men employed 465; days worked 236; average tonnage per day 1,575 tons. During the year there were some additions made to the plant (expenditure under this head having been \$45,943.57), including coke ovens, additions to haulage plant, a Bradford breaker, snow sheds, and a thoroughly well-equipped wash-house for the men, all of which were deemed necessary in the company's best interests and were approved by the board."

BALANCE SHEET AS AT DECEMBER 31, 1907.

Liabilities.	
Capital	\$3,000,000.00
Less shares in treasury.....	200,000.00
Issued and outstanding	\$2,800,000.00
Bonds—	
Authorized issue	300,000.00
Outstanding	200,000.00
Surplus—	
As shown December 31, 1906.....	393,469.84
Net profits earned during 1907	\$251,049.21
Less dividends paid dur- ing 1907	154,000.00
Balance carried to Sur- plus Account	97,049.21
	490,519.05
	\$3,490,519.05
Assets.	
Coal lands	\$2,859,276.02
Plant	452,985.98
Real estate	18,576.17
Warehouse stock	45,281.28
Stocks of coal and coke	3,624.19
Unearned insurance and interest paid in advance.	9,073.34
Accounts receivable	47,427.11
Cash on hand and in bank	54,274.96
	\$3,490,519.05

Special general meetings of the Mugwump Gold Mining Company, Limited, and the Monita Mining Company of British Columbia, Limited, respectively, are to be held at Rossland on June 23, for the purpose of passing special resolutions to authorize voluntary winding up, appointment of liquidators, etc.

COMPANY CABLES AND NOTES.

CABLES.

British Columbia—

Le Roi—March Shipped from the mine to Northport during the month 6,116 tons of ore, containing 3,250 oz. gold, 5,000 oz. silver and 192,000 lb. copper. Expenditure on development work during the month, \$9,000.

Le Roi No. 2—March. Josie mine report for month:— Shipped 2,410 tons. The net receipts are \$51,835, being payment for 2,398 tons ore shipped, and \$1,387 for 46 tons concentrates shipped; in all \$53,222. A diamond drill hole at a depth of 337 ft. below the 900-ft. level (1,237 ft.) has struck a body of ore 7 ft. wide, assaying 19 dwt. gold and 4.25 per cent. copper.

Tyce—March: Smelter ran 7 days, treating 1,474 tons of custom ore, producing a total of 250½ tons of matte.

U. S. A.—

Alaskan Mexican—March. 120-stamp mill ran 28½ days, crushed 20,409 tons of ore, estimated realizable value of bullion, \$30,255. Saved 265 tons sulphurets; estimated realizable value, \$19,929. Working expenses, \$29,311.

Alaska United—March: Ready Bullion claim 120-stamp mill ran 28½ days, 700-ft. claim 100-stamp mill ran 28½ days, crushed 35,727 tons of ore, estimated realizable value of bullion, \$42,205. Saved 605 tons sulphurets, estimated realizable value, \$27,033. Working expenses, \$50,194.

Alaska Treadwell, Alaska Mexican, Alaska United—San Francisco, April 10: Strike at Alaska—Strike has stopped only 700-ft. Mill superintendent telegraphs as follows: "Hope to start 700 ft soon, steadily regaining crew, everything peaceful, situation under complete control.

DIVIDENDS.

A dividend (No. 50) of 50 cents per share, declared by the Alaska Mexican Gold Mining Company, was paid in April; amount \$90,000. This makes the total of dividends paid by this company to date, \$1,896,381.

A dividend (No. 80) of 75 cents per share, declared by the Alaska Treadwell Gold Mining Company, was paid in April; amount \$150,000. This makes the total of dividends paid by this company to date, \$9,935,000.

A dividend (No. 9) of two per cent. on the par value (\$100 per share) of its stock has been declared by the Granby Consolidated Mining, Smelting and Power Company, Limited, payable June 13; amount, \$270,000. This will make the total of dividends paid by this company, \$3,238,630. No. 8 dividend was paid in September of last year.

NOTES.

A meeting of the directors of the Rambler-Cariboo Mines, Limited, has been convened, to be held in Kaslo in June.

The Canada Zinc Company hopes to have its electric smelting plant at Nelson in readiness for operation before the end of June.

The Canada Metal Company has resumed mining operations at its Blue Bell mine, on Kootenay Lake, its concentrating mill having been completed and the plant adjusted for continuous running.

James A. Harvey, of Cranbrook, barrister-at-law, has been appointed the new attorney in British Columbia of the Sullivan Group Mining Company, in the place of John H. Fink, whose appointment has been revoked.

Alois Klauer, of Fernie, chief accountant, has been appointed the new attorney of the Crow's Nest Pass Coal Mining Company, Limited, in the place of James McEvoy, who has resigned from the company's service.

A general meeting of shareholders of the Imperial Coal and Coke Company, Limited, was called for April 30, at the company's office, Montreal, Quebec, to elect directors, and adopt means with a view to making arrangements for the financing of the company. No report of the proceedings at the meeting, though, has come to the notice of the MINING RECORD.

ORE PRODUCTION NEWS.

A press despatch from Nelson gives the tonnage of ore produced in the Kootenay and Boundary districts during the five expired months of 1908 as under.

	Tons.
Rossland—	
Centre Star group	71,336
Le Roi	33,038
Le Roi No. 2	12,320
Other mines	520
Total	117,214
East of Columbia River—	
St. Eugene, East Kootenay	8,942
Whitewater, Slocan (milled)	6,020
Richmond "	729
Hewitt "	199
Poorman, Nelson div. (milled)	4,600
Queen, " "	2,245
Second Relief, " "	3,875
Fern, " "	200
Silver Cup, Lardeau	239
True Fissure, "	125
Other mines	15,777
Total	42,951
Boundary—	
Granby Company's Mines	444,470
*B. C. Copper Company's mines	7,440
Other mines	522
Total	452,432
*No ore shipped until latter part of May.	
Summary—	
Rossland	117,214
East of Columbia River	42,951
Boundary	452,432
Grand total	612,597

ORE RECEIPTS AT SMELTERS.

The ore receipts at the several smelters, including a small tonnage from United States mines, were as follows:

	Tons.
Granby Co.'s, Grand Forks	444,470
B. C. Copper Co.'s, Greenwood	7,440
Consolidated Co.'s, Trail	113,488
Sullivan Co.'s, Marysville	5,730
Le Roi Co.'s, Northport, Wash.	35,343
Total	606,471

SLOCAN SHIPMENTS THROUGH KASLO.

The Kootenayan on May 28 showed shipments through Kaslo of ore and concentrates from Slocan mines for this year to have been as under:

Silver-lead.		Tons.
South Fork of Kaslo Creek—		
Bismarck		20
Revenne		20
Whitewater Camp—		
Whitewater		407
Whitewater Deep		205
Bear Lake—		
Silver Glance		22
Wellington		20
McGuigan Basin—		
Rambler-Cariboo		493
Sandon—		
Reco		103
Ruth		279
Slocan Sovereign		43
Sunset		101
Total		1,713

The Ferguson Mines, Limited, also sent through Kaslo 299 tons from its Silver Cup mine, in Ferguson Camp, Lardeau. Zinc Concentrates.

	Tons.
Ruth, Sandon, to Kootenay Ore Co., Kaslo.....	830
Whitewater, Whitewater Camp—	
To Kootenay Ore Co., Kaslo	21
" Antwerp, Europe	173
" Bartlesville, Oklahoma, U.S.A.	460
Total	1,484

ROCK-DRILLING CONTEST AT KASLO, SLOCAN.

Unusually good work was done by the winners of the double-handed rock-drilling contest held at Kaslo on May 25. The *Slocan Mining Review* says:

The rock-drilling contest at Kaslo on Victoria Day was the means of proving beyond cavil the superiority of McGillivray and Erickson, of Silvertown, over all competitors. For this competition three teams were entered, but the champions drove their steel 4½ in. further into the granite than their nearest opponents, and made a grand total in 15 minutes of 49¾ in. The winners of the second money were Dunne and Johns, Sumpter, Oregon, Mackenzie and Johnson of Silvertown coming third with 41¾ in. The winners received quite an ovation.

In the single-handed rock-drilling contest the same day at Kaslo, Erickson obtained the verdict over his old drilling partner, Johnson, their performances being 14¾ and 14 3-16 in., respectively. Pat Dunphy drilled 11 3-16 in. and Angus McGillivray 11¼ in.

RECENT ADDITIONS TO WESTERN MEMBERSHIP OF MINING INSTITUTES.

Among those who between January 1 and May 3 of the current year were elected members of the Canadian Mining Institute are the following western men: Jas. Anderson, Kaslo; S. E. Belt, Greenwood; Spencer Bonerman, Midway, Thos. Brown, Nelson; J. W. Bryant, Victoria; Jas. A. H. Church, Frank, Alberta; H. H. Claudet, Rossland; F. J. Deane, Nelson; J. C. Dufresne, Nelson; Geo. L. Fraser, Coleman, Alberta; C. D. Griffith, Rossland; F. W. Guernsey, Trail; A. Heathcote, Lethbridge, Alberta; A. G. Larson, Rossland; A. J. McMillan, Rossland; E. F. Miltenberger, Nelson; Louis Pratt, Sandon; C. L. Rameau, Blairmore; J. L. Retallack, Kaslo; J. F. Robertson, Greenwood; C. H. Rowlands, Nelson; Bert N. Sharp, Orient, Washington; Jas. Taylor, Taber, Alberta; J. A. Whittier, Kaslo; W. C. Wilson, Greenwood. Among those recently proposed for membership are: L. K. Armstrong, Spokane, Washington; G. A. Corbet, Phoenix; Fred. S. Peters, Rossland; R. P. Williams, Rossland. All the foregoing are resident in British Columbia, with the exceptions appearing above.

Among those who during four month, January-April, accepted election as members of the American Institute of Mining Engineers were: Elmer A. Holbrook, of Hedley, B. C.; H. Richardson, Jun., of Republic, Washington; Walter E. Segsworth (formerly of Greenwood, Boundary district), of Toronto, Ontario; Wm. G. Norrie, of Coleman, Alberta; and Robert Smart, of Whitehorse, Yukon Territory. During the same months several western men were proposed for membership, viz., E. A. Austin, Dawson, Yukon; Wm. Harris and George W. Otterson, of Seattle, Washington, and W. P. White (formerly of Moyie, East Kootenay), of Spokane, Washington.

In the Dominion House of Commons, in reply to a question it was stated during last year 70,557 tons of coal were mined in Alberta, on which royalties to the amount of \$70,650 were paid.

COAL MINING NEWS.

VANCOUVER ISLAND NOTES.

Bernard, Purvis & Co. have secured a contract for supplying 2,000 tons of coal to the City of Vancouver, for its public schools, hospital, etc. For screened lump the tender price was \$6.03, and for slack \$2.45. The accepted tender calls for the delivery of coal at all points in the city and when required. The city agrees to pay the cost of weighing the coal, which will be 10 cents a ton.

At South Wellington about 40 men are steadily at work in the mines of the South Wellington Coal Mines, Limited, driving ahead and opening up. About 1,000 tons of coal per month are being shipped. The coal is stated to be from 6 to 12 ft. in thickness. Manager Wilkinson has gone to Malcolm Island to look over the work being done there on properties also owned by this company.

On May 12 the *Nanaimo Herald* published the following. While the Vancouver-Nanaimo Coal Mines Company is not shipping coal at present, the management states the mine is not closed down by any means. Development work is being proceeded with, and as soon as the new wharf the company is building on the Townsite shall be completed, shipping will be commenced again. The company is getting its property in shape to take out a large amount of coal, and anticipates a prosperous future.

DIAMOND VALE COAL AND IRON MINES, LIMITED.

The Vancouver *Province* states that W. E. Duncan, a mining and mechanical engineer of Cardiff, Wales, has completed an exhaustive examination of the coal mine and coal areas of the Diamond Vale Coal and Iron Mines, Limited, at Merritt, Nicola Valley.

Mr. Duncan is reported to have said: "I have no hesitation in stating that the Diamond Vale company owns coal areas that with further development will be large coal products. An excellent quality of 'fatty' bituminous coal is now being extracted from a 5-ft. seam. Its occurrence under such favourable conditions agreeably surprises me. Two other workable seams have already been located, and between them there is a mile and a half of unexplored ground in the heart of the coal basin and which, according to an analogy, should contain other seams, I see no reason why the company should not maintain a large output which will find a profitable market on the coast and east to a point beyond Revelstoke.

"Beside its 2,067 acres in the Nicola Valley the company owns 12,000 acres of coal lands in Quilchena basin with nine seams of coal, aggregating a total thickness of 50 ft., but the development of which has not yet been undertaken."

NICOLA VALLEY COAL AND COKE COMPANY, LIMITED.

On Saturday afternoon, May 16, a special train, arranged for by the Nicola Valley Coal and Coke Company, left Vancouver for Nicola Valley, taking about 100 representative business men on a visit to the company's Middlesboro colliery at Coutlee. The next day the visitors were shown through and about the two coal mines already opened, Bruce R. Warden, the company's engineer, taking charge of one party, and Alexander Faulds, superintendent of the mines, of another.

In its account of the excursion, which was much enjoyed and served to give the visitors a good idea of the importance of this comparatively new enterprise, the *Vancouver News-Advertiser* gave the following, among other interesting information:

"The company owns altogether 2,661 acres of land and it is fortunate in being within easy reach of several saw-mills where timber can be obtained for the mines. It also owns four square miles of standing timber a short distance away. The mines are now well opened and enough coal is being sold to keep them going till the markets shall be well assured and things in full swing, when they will be able to ship out about 600 tons a day. The company fully expects to be sending coal steadily to Vancouver by next fall. According to analysis, the coal contains 54.90 per cent. of fixed carbon, and will yield 60 per cent. of coke. When it is considered

that it was only in December, 1906, that the first work of the company was commenced, it is certainly to be congratulated on the great amount of development since accomplished. All the initial difficulties have been overcome, and they only await an assured and continuous market, before the Nicola mines take their place in the front rank of the industries of British Columbia.

CROW'S NEST PASS.

The West Canadian Collieries, Limited, last month resumed mining operations at its Bellevue colliery, near Frank, southwest Alberta.

The total of the payroll of the Crow's Nest Pass Coal Company for the month of April was \$140,557.75 as compared with \$166,251.05 for March.

The output of the Crow's Nest Pass Coal Company's collieries during four weeks ended May 1 was 63,819 tons, and for a similar period to May 29, 57,600 tons. Owing to a strike of the miners, there was no production at the Michel colliery during the latter half of May.

A despatch from Fernie, dated May 24, gave the following information. Great activity prevails at Hosmer, where the Pacific Coal Company is busily engaged in the construction of its plant and development of its mines, and where the erection of numerous houses and stores is being rapidly carried on.

On May 15 the *Cranbrook Prospector* was informed that No. 9 mine at Coal Creek, the property of the Crow's Nest Pass Coal Company, which has been closed down for several months, would resume operations in a few days. The miners have accepted the terms offered by the company. More than 300 men will be employed.

The Fernie correspondent of the *Nelson Daily News* informed that journal on May 24 that: "Industrial conditions in the Crow's Nest Pass, though not in as flourishing a condition as might be desired, nevertheless are showing a slight and hopeful tendency towards improvement. At the Coal Creek mines there are still a considerable number of men out of employment but at the Michel colliery it is probable the company will this week have places for many of the miners who unfortunately have lately been idle, and the payroll at that place will, consequently, be materially increased."

THE GERMAN DEVELOPMENT CO., LTD.

Big enterprises in the West are about to be inaugurated by the German Development Company, Limited, a corporation with a capital of \$1,000,000, fully paid up. It has acquired 12 sq. miles in the Brazeau, Big Horn and Saskatchewan coal basins in the foothills of the Rockies, about 85 miles southwest of the main line of the Grand Trunk Pacific, and another area of 6 sq. miles in the Canadian National Park, 12 miles south of Kananaskis, a station on the Canadian Pacific Railway.

The latter field is now being developed on an extensive scale, according to a statement recently made to the *Province*, Vancouver, by Martin Cohn, the managing director. The coal is the semi-anthracite, similar in character to the product of the Canadian Pacific Railway mine at Bankhead. The Brazeau and adjacent coalfields are regarded as embracing the largest area of bituminous coal in the West, even exceeding that of the Crow's Nest District. Prospecting will be carried on this summer under the direction of James McEvoy, who lately resigned from his position as geologist with the Crow's Nest Pass Company. The coal is said to be excellent for coking and when the seams are opened up an enormous output can be maintained. The company intends to build a railway to these coal fields from Innisfall, a station on the Canadian Pacific Railway, its length being 100 miles. The cost is estimated at \$3,500,000. The necessary legislation has been secured.

The president of the company is Baron Buxenstein, councillor of commerce to the King of Prussia. Other directors are Dr. A. E. Barlow, late of the Geological Survey; Col. Talbot, M.P., Bellechasse, and Andrew Hayden, Ottawa.

Mr. Cohn stated that his company has ample resources for building the railway and opening up these two coal fields.

MINING MEN AND AFFAIRS.

S. Keast has returned to Cariboo from New York.

W. H. Adams, mining engineer, of New York, was in Victoria last month.

J. W. Bryant is examining mining properties in southern Yukon for the Tye Copper Company.

Wm. Fleet Robertson, of Victoria, provincial mineralogist, was a recent visitor to Seattle, Wash.

Byron N. White, of Spokane, Washington, was in Sandon late in May, looking into Slocan Star affairs.

Herbert Carmichael, of Victoria, provincial assayer, has been on a holiday visit to England and Ireland.

Jules Labarthe, manager of the Trail smelter, was in Spokane, Washington, during the early part of May.

B. Brown, superintendent of the Diamond Vale Company's coal mine in the Nicola Valley, was in Nanaimo lately.

J. L. Parker has returned to Victoria from examining claims on Moresby Island of the Queen Charlotte group.

A. C. Garde, of Nelson, lately went up to Prince Rupert, which is in Skeena mining division, to open an office there.

Alexander Sharp, superintendent of the First Thought mine at Orient, Wash., is proceeding to Scotland on a vacation.

Alex. Faulds, superintendent of the Middlesboro' colliery, Nicola Valley, was a recent visitor to Vancouver and Victoria.

J. C. Gwillim, professor of mining at the School of Mines, Kingston, Ontario, was in British Columbia during the month.

Albert I. Goodell, late manager of the Le Roi Mining Company's smelter at Northport, Washington, is in Portland, Oregon.

D. W. Moore, of Spokane, Wash., for several years ore-buyer for the Trail smelter, is spending a few weeks in Victoria.

R. J. McPhee has recovered from his long illness and is again managing the Ottawa mine, in Slocan City mining division.

A. G. Larson, superintendent of the Le Roi mine at Rosslund, has lately been visiting Seattle, Victoria, and other coast cities.

John L. Howard, of San Francisco, California, president of the Western Fuel Company, was in Nanaimo about the middle of May.

Henry White, now of Pasadena, California, one of the pioneers of mining in the Boundary District, is visiting the Skeena district.

J. A. L. Waddell, the well known bridge engineer, has taken charge of the construction of the new bridges over False Creek, Vancouver.

A. H. Kelly was in Victoria recently after having been up to Whitehorse copper camp, southern Yukon. Later he returned to Nelson.

Robt. Denzler, of Spokane, original owner of the Snowshoe, situated near Phoenix, Boundary District, went up to Prince Rupert lately.

Leslie Hill, manager of the Hastings (British Columbia) Exploration Syndicate, has returned to Nelson from a visit to London, England.

Alexander Smith, manager of the Surprise mine in the Slocan district, has returned to Sandon after having spent the winter in Ontario.

W. J. Elmendorf, of Spokane, Wash., is in Whitehorse copper camp, southern Yukon, where mining operations have been resumed with vigor.

Thomas Graham, superintendent of the coal mines of the Western Fuel Company at Nanaimo, Vancouver Island, was in San Francisco recently.

The painstaking English and Scotch architect looks for

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A. D. Wheeler, of Ainsworth, expected to resume work for the season on his Gallagher mineral claim, in Ainsworth camp, before the end of May.

H. Mortimer Lamb, of Montreal, Quebec, secretary of the Canadian Mining Institute, was in New York on business about the middle of last month.

Wm. P. White, for some time superintendent of the St. Eugene mine, at Moyie, East Kootenay, but now of Spokane, Wash., was in Cranbrook lately.

George Hughes, for years actively engaged in silver-lead and zinc mining in Slocan District, was seriously ill in Spokane, Washington, early in May.

M. R. Galusha, of Spokane, was in Rosslund recently on business connected with the projected resumption of work at the Jumbo mine, in Rosslund camp.

Chas. W. Goodale, of Butte, Mont., has been spending a vacation of about two months at Seattle and Tacoma, Wash.; Victoria, B. C., and neighbouring places.

Robert Irving has returned to Nelson from a trip to Chicago and is now giving close attention to the completion of the Canada Zinc Company's plant at Nelson.

Victor Howard, of Victoria, and W. Lindsay, of Trail, passed the examination for assayers for licence to practise in British Columbia, held recently in Victoria.

The *Slocan Mining Review* stated on April 30 that Bruce White, of Nelson, had been to New Denver "fixing up a deal on the Alpha group with N. F. McNaught."

Melbourne Bailey, manager of the Cariboo Consolidated (1904) Limited, has returned to Barkerville, Cariboo, from Tacoma, Wash., where he spent part of the winter.

Barclay Bonthron, of Vancouver, lately paid another visit to coal lands south of the Nicola district, owned by the Erl Syndicate, which he represents in British Columbia.

T. C. Dennis, of the Dominion Department of Mines, Ottawa, Ontario, is visiting the coal mines of the West, for the purpose of securing samples of coal for the department.

Frank B. Smith, of Edmonton, Alberta, inspector of mines for that Canadian province, has lately been examining coal properties in the Tulameen country, northern Similkameen.

Neville F. Townsend, formerly assistant to the superintendent of the Le Roi mine, Rossland, has been making surveys on Porcher Island, in the coast section of the Skeena district.

H. H. Shallenberger, of Spokane, Washington, well known at Greenwood, Boundary district, where he has for years been interested in mineral claims, was a recent visitor to Victoria.

Wm. Ogilvie, formerly commissioner of Yukon Territory, has again gone north. It is reported that he will superintend the construction of several gold dredges for use on Stewart River, Yukon.

Hon. Richard McBride, premier and minister of mines for British Columbia, lately visited several of the larger mining and smelting centres in the Boundary and Kootenay districts of the Province.

O. B. Perry, general manager of the Guggenheim companies operating in Yukon Territory, recently arrived at Vancouver, from New York. He intended leaving for Dawson a few days later.

W. H. Trewartha James, general manager of the Tyece Copper Company, has returned from Whitehorse copper camp, in southern Yukon, whence he went to examine several mining properties there.

W. C. Thomas, of Greenwood, Boundary District, manager of the Dominion Copper Company, was in Seattle, Washington, late in the month, to see the American fleet then on a visit to Puget Sound ports.

COPPER PROPERTIES WANTED

WANTED TO PURCHASE, good Copper properties. Must be handy to salt water for shipping ore. Give full particulars, stating position, analysis of ore, and terms of sale or bond. The undersigned are prepared to take up on reasonable terms. The Tyece Copper Co., Ltd., P. O. Box 665, Victoria, B.C.



THE attention of the Lands and Works Department having been directed to the fact that town lots in a townsite named Prince Rupert, being a subdivision of Lot 642, Range 5, Coast District, situated on the mainland between the mouth of the Skeena River and Kalien Island, are being offered for sale, it has been deemed necessary to warn the public that the said townsite is not situated at the terminus of the Grand Trunk Pacific Railway, and is not the townsite which is owned jointly by the Government of British Columbia and the Grand Trunk Pacific Railway Company.

F. J. FULTON.

Chief Commissioner of Lands and Works,
Lands and Works Department,
Victoria, B.C., May 1st, 1908.

J. K. Cram, surveyor in the mines at Rossland of the Consolidated Mining and Smelting Company of Canada, has gone on a two months' holiday tour of mining camps in California and Nevada, U.S.A.

During the month Sir Andrew Armstrong, Bart., of Galen's Priory, King's county, Ireland, visited the West. He is stated to be interested in a 5-mile square hydraulic placer gold concession, in Yukon Territory.

A. J. McMillan, managing director of the Le Roi Mining Company, has returned to Rossland from his trip to Chicago,



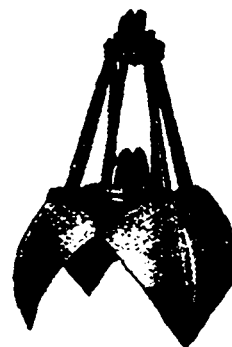
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VANCOUVER OFFICE: 353 WATER STREET

Illinois, to meet the chairman of the company, and is expected to shortly visit Victoria on business.

R. P. Williams, of Rossland, western representative of the Canadian Rand Company, recently made a trip to Field, where the Canadian Pacific Railway Company is having a long tunnel driven through a mountain.

M. K. Rodgers, of Seattle, Wash., formerly manager of the Yale Mining Company and Daly Reduction Company, operating at Hedley, Similkameen, has been visiting that camp after an absence of several years.

L. C. Wynne, formerly of Claudet & Wynne, assayers and mining engineers, Rossland and Princeton, has been appointed assayer for the Hewitt Mining Company, with a silver-lead mine and concentrating mill near Silverton, Slocan.

Paul S. Couldrey, manager of the Le Roi No. 2, Limited, has returned to Rossland from a visit to England and the Continent. Ernest Levy, who had charge of the Le Roi No. 2, during Mr. Couldrey's absence, has gone back to London.

James Cronin, formerly manager of the St. Eugene lead-silver mine in East Kootenay, on May 14 left Vancouver for Hazelton, on the Skeena River, whence he will proceed to the Babine country to open up a silver-lead property in that district in which he is interested.

J. C. Vance, of Anderson, Indiana, U.S.A., manager of the American Mining Company, which is operating a hydraulic placer gold property in the Big Bend district, north of Revelstoke, reached the city on May 21, on his way to the Big Bend to commence the season's hydraulicking.

A. J. McNab, metallurgist at the Consolidated Mining and Smelting Company's smelter at Trail, was married at Yarmouth, Nova Scotia, on April 22 to Miss Bingay, sister of T. W. Bingay, the company's office manager at Trail. Mr. and Mrs. McNab were expected at Trail about the end of May.

W. W. Leach, of Ottawa, Ontario, geologist of the staff of the Mines Branch of the Department of Mines of Canada, has gone to the Bulkley and Babine sections of the Skeena mining division, to continue the geological work in which he was engaged there during the field-work seasons of 1906 and 1907.

Wm. Fleet Robertson, provincial mineralogist, will leave Victoria early in June for the Findlay River country, in the northern part of the province, where reported discoveries of placer gold on creeks tributary to the Findlay are attracting attention. He expects to return to Victoria early in September next.

T. R. Drummond, formerly general manager of the Dominion Copper Company at Greenwood, Boundary district, and afterwards manager of the Nipissing Mining Company, Cobalt, Ontario, has been appointed superintendent for the Newhouse Mines and Smelters at Cactus, Utah, succeeding Alexander D. Moffatt.

Dr. J. Bonsall Porter, professor of mining at McGill University, Montreal, Quebec, has been in British Columbia visiting mining camps. J. W. Bell, assistant professor, has been with Dr. Porter directing the studies of some 30 students comprising the McGill Summer Mining School, which has just completed its tour in the West.

A. C. Flumerfelt, of Victoria, has resigned the office of president of the Royal Collieries and the Alberta Coal and Coke Company, two coal mining companies operating in southwest Alberta. He has been succeeded by H. N. Galer, of Spokane, Washington, formerly general manager of the International Coal and Coke Company, of Coleman, Alberta.

Jas. McEvoy, of Fernie, chief engineer and land commissioner of the Crow's Nest Pass Coal Company, has resigned to accept an important appointment with the German Development Syndicate which last year acquired extensive areas of coal lands in northern Alberta. Mr. McEvoy was for years a prominent member of the Geological Survey Department of Canada.

MACHINERY FOR SALE

Four INGERSOLL-SERGEANT Class "A" Straight Line AIR COMPRESSORS. Air Cylinders 26 $\frac{1}{4}$ x30 inch. In good working condition. Available about July, 1908.

One VULCAN, four-wheel, saddle-tank STEAM LOCOMOTIVE, 42-inch gauge; cylinders 10 $\frac{1}{2}$ x16-inch. Built 1903. Immediate delivery.

One CANADIAN, four-wheel, saddle-tank STEAM LOCOMOTIVE, 42-inch gauge; cylinders 10x14 inch. Built 1902. Immediate delivery.

One PORTER, four-wheel, saddle-tank, STEAM LOCOMOTIVE, standard gauge 4 ft. 8 $\frac{1}{2}$ inch.; cylinders 7x12 inch. Purchased 1901. Immediate delivery.

Four JEFFREY, ten-ton ELECTRIC LOCOMOTIVES, 36-inch gauge, 220-volt; direct current. In good working order. Available about July, 1908.

Three LIDGERWOOD ELECTRIC HOISTS, 75 h.p. Equipped with duplicate JEFFREY M. H. 30 h.p. MOTORS, 220-volt, direct current. Available about May, 1908.

One ALDRICH ELECTRIC PUMP. Portable. Mounted for 36-inch track. Capacity 100 gallons on 300 ft. lift. Equipped with 10-h.p. WESTINGHOUSE MOTOR, 220-volt, direct current. Purchased 1907. Immediate delivery.

The machinery listed above will all be available during present season, owing to its being replaced by larger equipment.

Write for detail specifications and prices.

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