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BRITISH COLUMBIA DEPARTMENT OF MINES

Preliminary Report  
on the  
**MINERAL INDUSTRY OF  
BRITISH COLUMBIA**

For the Year 1934

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PRELIMINARY REPORT ON THE MINERAL INDUSTRY  
OF BRITISH COLUMBIA  
For the Year, 1934.

The gross value of the mineral production of the Province for 1934 is estimated at \$42,049,013, an increase of \$9,446,341 as compared with the output in 1933, or 29 per cent. This highly satisfactory increase is due in part to increased prices for gold and silver and in part to increased volume output in these metals, and particularly so in lead and zinc.

The table on page 2 shows the estimated output of metals and minerals for 1934 and corresponding figures for 1933.

The value of the metallic mineral production (gold, silver, lead, zinc and copper) is estimated at \$34,418,463, an increase of \$8,848,439 as compared with 1933. Coal shows a slight increase in quantity and value and miscellaneous metals and minerals a large increase in value. Structural materials showed a further decline.

Mineral production in the first half of the year showed an estimated increase of 50.5 per cent over the corresponding period in 1933 but showed a slight decrease as compared with the last six months of 1933. The estimate issued for the last six months of 1934 is \$663,359 over the first six months of the year and slightly over the last six months of 1933. In other words, the value of the mining production of the Province has remained very steady during the past 18 months.

The tonnage of ore mined was approximately 4,732,000 tons as compared with 4,030,778 tons in 1933. The average price at \$6.66 per ton compares with \$5.87 per ton in 1933. This increase is equivalent to the premium on gold and the increase in the price of silver.

Gold production showed an increase of 64,543 ounces over 1933, establishing an all-time high record with a value of \$6,360,960 (gold at \$20.67 per fine ounce). To this figure an additional estimated "premium" of \$4,249,862 must be added to arrive at the total return in Canadian funds of \$10,610,822. The average price of gold in Canada for the year is estimated at \$34.48 as compared with \$28.60 in 1933.

The following table shows the standard statistics and approximate actual returns in Canadian funds for gold production in British Columbia in the last four years:-

<u>Years.</u>	<u>Standard Statistics.</u>	<u>Approx. value in Canadian funds.</u>
1931	\$ 3,310,886	\$ 3,351,000
1932	4,100,061	4,656,000
1933	4,857,780	6,702,890
1934 (estimated)	6,360,960	10,610,890

The benefits to the mining industry in British Columbia from the increased price of gold is clearly indicated.

Lode-gold production has increased chiefly because of larger tonnages from the Pioneer, Bralorne, the old Rossland camp, and a number of small operations.

Placer output is apparently the same as in 1933 but it is worthy of note that two larger-scale operations in the Cariboo are under way and an increase may reasonably be expected in 1935.

Revised Dec. 29, 1934.

## ESTIMATED MINERAL PRODUCTION FOR THE YEAR 1934 COMPARED WITH 1933

PRODUCT	QUANTITY		VALUE		1934		1934 Percentage Increase (+) or Decrease (-)
	1933	1934	1933	1934	Increase	Decrease	
Gold, placer, oz.	25,928	24,000	\$ 406,776	\$ 408,000	\$ 1,224		+ 00.3
Gold, lode, oz.	223,529	288,000	4,620,754	5,952,960	1,332,206		+ 28.8
Silver, oz.	7,006,406	8,907,000	2,650,720	4,197,869	1,547,149		+ 58.4
Copper, lb.	42,608,002	49,400,000	3,176,341	3,566,680	390,339		+ 12.3
Lead, lb.	271,606,071	340,700,000	6,495,731	8,313,080	1,817,349		+ 28.0
Zinc, lb.	195,963,751	252,780,000	6,291,416	7,730,012	1,438,596		+ 22.8
Coal (2240 lb.) tons.	1,264,746	1,337,000	5,375,171	5,682,250	307,079		+ 5.7
Structural materials.	-	-	1,024,045	906,800		\$117,245	- 11.5
Miscellaneous metals and minerals.	-	-	633,532	1,041,500	407,968		+ 64.3
Totals	-	-	30,674,486	37,799,151	7,124,665		+ 23.2
Exchange equalization on gold			1,928,186	4,249,862	2,321,676		+ 120.4
TOTAL VALUE IN CANADIAN FUNDS	-	-	32,602,672	42,049,013	9,446,341		+ 29.0

Silver production is estimated at 8,907,000 ounces, an increase of 1,900,594 ounces over 1933 and an increase in value of \$1,547,149.

Copper production for the year is estimated at 49,000,000 lbs., valued at \$3,566,680, an increase over 1933 of \$390,339, or 12.3 per cent.

Lead production established an all-time high volume record of 340,700,000 lbs. valued at \$8,313,080, an increase of \$1,817,349 over 1933, or 28.0 per cent.

Zinc production also established an all-time high value record of 252,780,000 lbs. valued at \$7,730,012, an increase of \$1,438,596, or 22.8 per cent over 1933.

Coal production increased from 1,264,746 tons to 1,337,000 tons valued at \$5,682,250, an increase of \$307,079, or 5.7 per cent.

Structural materials show a decline of 11.5 per cent from a value of \$1,024,045 in 1933 to \$906,800 in 1934.

Miscellaneous metals and minerals show an estimated increase of 64.3 per cent over 1933, having a value of \$1,041,500.

Average metal prices for the year estimated in Canadian funds are shown in comparison with prices for 1933 in the following table:-

		1933	1934 (estimated)
Gold (Canada)	per oz.	¢ 28.60	¢ 34.48
Silver (New York)	per oz.	37.8328	47.13
Copper (London)	per lb.	7.4548	7.22
Lead (London)	per lb.	2.3916	2.44
Zinc (London)	per lb.	3.2105	3.058

#### Metallurgical Developments

During the year the larger operations brought their production back close to capacity, and several operations increased their capacity and a number of new mills were constructed. The following table shows the increase in milling capacity and new mills erected and in course of construction:-

Company	District	Rated Capacity	Producing	Increased from:
Pioneer	Bridge River	400	400	300
Bralorne	do	450	400	225
Minto	do	50 - 75	60	new
Wayside	do	40	25	new
Grange	Lillooet	60	60 ?	25
Dunwell	Stewart	25	25	new
Columario	Ominoca	100	?	new
Island Mt.	Cariboo	50	50	new
Cariboo G.Q.	do	100	100	70
Home Gold	Coquihalla	30	30 ?	new
Windpass	N. Thompson	25	25	new
Twin Lakes	Oliver	35	Intermittent	new
Kelowna Expl.	Hedley	50 - 100	Old Hedley mill reconditioned.	
Jennie Long	Kamloops	30		
Kootenay Belle	Sheep Creek	65	35	new
Yankee Girl	Ymir	100		new
Dentonia	Greenwood	100	140	new
Superior Gold	do	50		
Sheep Cr. Gold	Sheep Creek	150	Under construction.	
Ymir Con. Gold	Ymir	50	50	new
C.M. & S. Co.	Tadanac	100	Old Redmill treating Rossland ores.	
Meridian	Camberne	100	Under construction.	



During the year 178 mining companies were formed of which 91 were public and 87 private organizations. Of these, 149 companies were formed for the purpose of developing gold properties, with three or four exceptions, within the Province. These figures compare with 153 companies in 1933 of which 145 were gold mining companies.

There was a distinct falling-off in company promotions during the latter part of the year. However, it is estimated that more worth-while work will be done during 1935 than in 1934.

Dividends for the year are estimated at \$6,753,614 as compared with \$3,075,577 in 1933.

During the year the B. C. Electric Company installed a small unit at their Bridge River power project and brought a transmission line into the Bridge River camp. The West Kootenay Power Company extended their transmission line from Ymir into the Sheep Creek camp, making available ample power for the properties located in that camp.

#### GENERAL SITUATION

With the close of 1934 it is evident that the mineral industry of the Province is approaching more stable conditions and that an increase in 1935 comparable to that of 1934 is not to be expected. The fact that mineral production for the past 18 months has been very steady is sufficient reason for such a statement. However, to forecast future production even for the present year is, under existing, rapidly changing world conditions, a matter of considerable speculation. Such a forecast is considered to be of sufficient importance to merit the attempt which may be best accomplished, by treating the major mineral industries of the Province separately.

The history of gold shows that every increase in the price of the metal has been maintained. Therefore, the present price will in all probability hold, and an even higher price may be anticipated. With the bringing into production of a number of old and new properties and increased production in some of the established mines, it is reasonable to anticipate increased volume and a possible increase in price of the metal.

In the case of silver it is interesting to note that the past records in volume and also value production have not been due to extremely high prices for the metal and that production was fairly steady from 1896 to 1921 in spite of wide fluctuations in price. The sudden rise in the volume of silver produced came in 1922 with the sudden rise in the production of lead and zinc, and the future of silver volume production will depend on the markets for the base metals. However, silver camps such as the Slocan respond to the rise and fall in the price for the metal. It is worthy of note that in the peak years of silver production in the Slocan the value of lead produced was not far below that of silver. Under existing conditions, little or nothing can be obtained for the lead content of these ores so that for the immediate future production will have to be estimated on the silver content only. Even under such conditions an appreciable increase in silver production may be anticipated. It also seems probable that a moderate increase in price may be realized.

Copper production in 1935 so far as it can be foreseen is likely to show a decline of about 60%, due to the announcement that the Granby Operation at Anyox is to be closed down late in the spring.

Lead production is likely to remain about the same but it is anticipated that a slight increase in the price for the metal may be realized. The present price is low beyond reason and while the prices of 1926 may never again be reached, a reasonable appreciation in value should be attained within the next few years.

While it is anticipated that the volume of zinc will be maintained due to a demand for electrolytic zinc, and the position which the British Columbia metal has won in world markets in spite of keen competition, it is not anticipated that any appreciable increase in the price of the metal will be realized.

Coal has shown in 1934 an increase of 5.7% over 1933 and if 1935 shows a slight increase, it seems to be a reasonable estimate.

Structural materials should by the end of the year show a marked increase in production.

Miscellaneous metals and materials are not expected to show the marked increase in 1935 over 1934 which has been achieved in 1934 as compared with 1933, and a slight increase is considered reasonable.

Therefore an estimate of \$44,500,000 in even figures is arrived at as the possible value for the mineral production of the Province for the year 1935.

It is hazardous to venture an estimate of the future value of the mineral production of the Province but sound business principles demand a long-sighted view of affairs. To arrive at a possible figure under what, at the moment, may be anticipated as reasonably normal conditions, an estimate is made based on anticipated volume production for 1935 in gold, silver, lead and zinc, and increased production in coal, copper and structural materials. Estimating the value of gold at \$40 an ounce, silver at 60 cents per ounce, copper at 11 cents per lb., lead and zinc at 3.5 cents per lb. in this attempt a figure of \$55,000,000 is obtained.

To increase this figure it seems that gold production will have to be increased and the importance of this metal to the future welfare of the Province is becoming more apparent.

The importance of the mining industry of the Province to the other major industries and in particular to general business conditions has not been fully appreciated by the people of British Columbia. It is gratifying to observe that interest in and realization of the importance of the industry is at last being shown by general business interests.

The Resident Engineers of the Various Mineral Survey Districts report on general conditions in their respective districts as follows:-

No. 1 Northwestern Mineral Survey District. J.T. Mandy.

There has been a decided increase in activity in all branches of the mining industry in this district during 1934. Employment has increased over 1933 and approximately 2,000 men have been employed in about 40 operations of varying size, exclusive of individual prospectors and smaller outfits scattered throughout the district.

Prospecting

Prospecting has been active in the Unuk River area where the aeroplane has been used in transporting men and materials. The Department of Mines has commenced construction of a trail from the head of navigation into this section and the Alaskan authorities have co-operated in the improvement of river navigation through Alaskan territory to the British Columbia boundary.

In the Coastal area prospecting has been carried on at the La Porte group near Port Essington, and the Mastodon group, Hastings Arm, in both of which values in gold are present.

Work has been done on gold showings on the Fairtide claim and Big Chief claim in the Queen Charlotte Islands.

In the Alice Arm area gold showings have been prospected on the Home-stake and Gold Reef groups. Though this area has been comparatively inactive the gold aspects of the west side of the Upper Kitsault Valley area are attracting the attention of examining engineers. The increased price of silver is also attracting attention once again to this area.

In the Portland Canal area, Stewart, new discoveries of interest have been made on the Star Gold group, Marmot river, and the Troy and Portland groups in the Upper Salmon River section. In the Bear River section new discoveries have also been made on the Palme and El Oro groups. On the L. and L. the discovery of two new veins carrying gold and silver values is reported.

In the Liard area a lode discovery on Quartz creek, tributary to McDames creek, was reported late in the season and resulted in a small stampede and the staking of 170 claims.

Although prospecting for both lode and placer has been very active, no outstanding new discoveries in new areas have been made. However, the features and results during the year of detailed prospecting on many old properties in already known areas can be classed as new discoveries with a favourable bearing on future productivity.

#### Exploration and Development

Exploration and development work has been carried out on many lode properties throughout the district of which only a limited number are mentioned.

In the Skeena division construction and renovation work has been carried out at the old Surf Inlet mine.

In the Portland Canal area a crew of about 60 men has been employed on the Big Missouri and work has been done on the Unicorn, Troy, Salmon Gold, and Portland groups. In the Salmon River section work has been continued at the United Empire and Glacier creek properties.

Development of the Atlin Pacific Mining Company's property (formerly Norgold) continued throughout the season and it is anticipated that the old Engineer mine will be opened up this year.

#### Production

Production from lode operations has mostly come from the Premier and Dunwell mines, Stewart, Granby Consolidated, Anyox, and Surf Point mine, Porcher Island.

Small shipments have also been made from the Spider, Joker, United Empire and Black Hill at Stewart, Jeannie on Porcher Island, and Princess Royal Gold Mines, Surf Inlet.

Numerous individuals, syndicates and companies have been actively engaged in placer mining. In this connection, it must be stressed that placer prospecting in this district is no easy task and requires not only experience but a grub-stake and funds to see the prospector through the season in the even of failure.

#### No. 2 Northeastern Mineral Survey District, Douglas Lay.

During 1934 mining activity was chiefly confined to the prospecting and development of gold properties, both lode and placer.

Prospecting and development of lode gold properties was carried out at Hudson Bay mountain, near Smithers, Dome mountain near Telkwa, near Babine lake, and in the northern part of the district.

Two new hopeful discoveries were made during the year: that of the Patmore group near Dorreen in the Skeena section, and that of the Timber Line group near McKee lake, in the Horsefly section.

In the Cariboo section, it may be said of lode-gold operations generally that although some have been discontinued, a comparison between the present position and that of two years ago shows clearly that real progress has been made.

The discovery of the markedly-auriferous pyrite replacement deposit in limestone at the property of Island Mountain Mines Company, Ltd., last year and development therein this year has aroused much interest at this property, and at that of the Cariboo Gold Quartz Mining Company, Ltd., at which mineralization of similar type, although less extensive, has been found. This type of deposit adds new interest not only to these two properties, but also to the zone or belt in which they occur.

Stimulated by the improved silver market, work in excess of assessment was carried out at a few silver-lead-zinc properties and a car of ore was shipped from the Golden Eagle group, Topley, by the owners.

For the first time for many years interest has been shown in tungsten properties at one of which, the Hardscrabble mine, near Barkerville, preliminary investigation was commenced.

In placer-mining a marked general increase in activity featured the year. Much additional plant was installed during the year by various operators, including several drag-lines, and two small dredges of new type. Operating control of two well-known mines was secured by different English interests; the property of Consolidated Gold Alluvials of B.C. Ltd. (Wingdam) on the one hand, and that of Bullion Placers Limited (Bullion) on the other.

In the Omineca Mining Division, activity continued in the Manson section where operations are carried on by several companies and individuals.

In McLeod River area operations were carried on by Northern Reef Gold Mines Limited on McDougall river.

In Two Brothers Lake area, in the extreme northwestern portion of this Mineral Survey District, Two Brothers Valley Gold Mines, Ltd., carried on preliminary testing operations at its property on McLair (M-Iaron) and Thudegade creeks (Thudegade creek is also known as Two Brothers river). This is the most northerly operation in the district and is served by aeroplanes based at Takla lake.

Calling for special mention are the results gained by the many individual bar-workers on the Fraser and other rivers. It is estimated that the sum total of the value of placer recovered by such during the year will not fall far short of \$50,000.

The output of "Bulkley Valley" coal from F.M. Dockerill's colliery near Telkwa will be greater than in 1933.

#### Nos. 3 and 4 Mineral Survey Districts, P.B. Freeland.

The greatest activity in mining took place in the Hedley, Cscyoos and Greenwood areas where known deposits of gold occur and where practically all the facilities for mining are at hand. Many old mines have been reconditioned, and extended exploration has produced more ore. Some of this, of course, has been brought into the picture by the higher price of gold and was known of before, but it all points to the fact that one of the best speculations for an exploration company lies in these semi-developed regions where power and transportation exist and where, consequently lower costs at first can be obtained.

The Hedley district for many years was represented by one operation, the Hedley Gold Mining Company. Today this one mine has been rejuvenated by the Kolowna Exploration Company and more ore discovered. In the lower part of the same ore-body, the Hedley Mascot Syndicate is exploring extensions of the known ore-bodies with favourable results.

The key to possible future ore-bodies in the Hedley area appears to lie in the structural association of the gabbro-diorite rocks and the sedimentary beds. In some instances the dykes themselves have been impregnated with arsenopyrite, the gold-bearing mineral of that area. Those prospecting the district will do well to familiarize themselves with the diorite and gabbro.

In the Oliver or Fairview belt, the gold ores occur chiefly in associ-



ation with pyrite, galena and sphalerite in quartz. Some of the veins are found in the schistose rocks; other in granite. There is no doubt about the genetic connection between the veins found in the granite and those in the schist. The fact has been stressed that many of the outcrops are almost entirely barren of values but along the strike where the vein is covered, ore-shoots may occur.

In the Greenwood section, there are many types of quartz veins containing some gold values which are worthy of exploration. With higher prices for silver, the silver-lead-zinc mines at Beaverdell showed increased activity and most of the old claims, upon which some work was done in the past, have been bonded and reconditioned for further development. A large area to the northeast of the operating mines is overlain with the Wallace formation which so far has not produced any commercial ore to speak of. Underlying this and in the direct path of the shear-zones the ore-bearing quartz diorite has been discovered at varying depth between 200 feet and 300 feet. Prospecting beneath the Wallace rocks may result in the extension of the high-grade silver-bearing shear zone being found.

In the Kamloops Mining Division recent discoveries on the Sweet Home claim belonging to the Windpass Mining Company above Kamloops, are most attractive and appear to warrant extensive exploration of the region near Chu Chua.

Taking the district as a whole, developments have been favourable and in the future several mines will come into production. It is not, of course, to be expected that all the explorations will develop mines, but that the only way to discover them is to do some digging.

#### No. 5, Eastern Mineral Survey District, B.T. O'Grady.

In No. 5 district there has been a very marked increase in the production of silver, lead and zinc, chiefly due to the larger output from the Kimberley mine of the Consolidated Mining and Smelting Company. More men were put to work both at this mine and at the Trail smelter, the number of employees at the Sullivan now being 934 with 3,132 at the smelter.

District No. 5 customs shipments to the Trail smelter, chiefly gold ores and concentrates, also show a substantial increase. Shipments were made from 35 properties in the Nelson Mining Division, 11 in the Trail Creek Division, (exclusive of the large output made by lessees on the Consolidated Mining and Smelting Company's mines), 22 in the Slocan Camp (Slocan, Ainsworth and Slocan City Divisions) and 3 in the Lardeau, Arrow Lake, and Fort Steele Divisions (one small shipper in each of these Divisions). The Slocan Camp shipments, with a few exceptions where the ores contained gold, consisted of silver-lead ore and concentrates mostly from leasing operations.

Gold mining has contributed in an important degree to the improvement in the District employment situation, over 1,200 men being at work in the mines (exclusive of the Consolidated Mining and Smelting Company's operations, and seasonal placer-mining undertakings scattered through the District). Production of gold for the current year is better than any year since large-scale production by the Consolidated Company ceased at Rossland. Customs shipments of gold ores and concentrates for the 10-month period contained 20,893 ounces of gold to which must be added the bullion produced by the Reno Gold Mines Ltd., the Relief-Arlington Mines, Ltd. (from which concentrates shipped to the Tacoma Smelter must also be taken into consideration), and the Wilcox Leasing Syndicate. Lessees on the well-known old mines of the Consolidated Mining and Smelting Company at Rossland contributed 20,208 ounces of gold for the first 10 months of the year and their estimated production for the whole year should be close to \$1,000,000 in value. A rough estimate of 1934 total gold production for District No. 5 is 60,000 oz.

The gold-mining industry, based on the enhanced price of this metal, is showing evidence of permanence with increased production when milling operations such as at the Yankee Girl (Ymir-Yankee Girl Gold Mines Ltd.), Kootenay Belle Gold Mines, Ltd., and Queen (Sheep Creek Gold Mines Ltd.), get under way. Shipments have been suspended from the first two mentioned properties and the Goodenough (Ymir Consolidated Gold Mines Ltd.) pending consummation of milling

plans. Expansion to say 60 or 70 tons a day may occur at the Second Relief mill (Relief-Arlington Mines Ltd.), though this is dependent upon the results of exploration under way by the Premier Mining Company organization. A substantially larger annual production from the Reno Gold Mines Ltd., no longer handicapped for power shortage, is assured. Increased output can also be expected from some of the properties entering the production stage such as the Gold Belt Mining Company, and Ymir-Dundee Gold Mining Company, while new developments and discoveries such as, for instance, at the Centre Star property of the Wesko Exploration and Development Company near Ymir, must be taken into serious consideration.

Lode-gold development and exploration is going on at numerous prospects in the Nelson Mining Division, at points in the Fort Steele Division including the Midway group of the B.C. Cariboo Gold Fields Ltd., near Moyie, and the Quartz Mountain, near Cranbrook, of the Kimberley Goldfields Syndicate, and in the Lardeau Mining Division as at the Teddy Glacier (gold-silver-lead) near Camborne. Long dormant properties in the area south of Nelson are being investigated and exploration resumed at former producers such as at the Porto Rico, which lessees are re-opening, and the Fern, where the Gold Fern Syndicate of Toronto is starting work. Preparations are being made to resume work and initiate production from the Bayonne mine reached from Tye Siding on the western side of Kootenay lake. In the Lardeau Division mill construction is announced by the Meridian Mining Company. Gold ore occurrences are widespread in District No. 5 and with good management and adequate financing, important factors which are beginning to materialize, a substantially increased and permanent gold production can be expected. A satisfactory feature is the provision of adequate and dependable power in the Nelson-Ymir-Salmo-Erie area through the newly constructed transmission lines of the West Kootenay Power and Light Company extending from existing hydro-electric plants on the Kootenay river.

No. 6, Western Mineral Survey District, A.M. Richmond.

Gold mining continues to hold first place in the mining activity of the No. 6 District and in 1934 for the first time the two leading gold producers in the Province, Pioneer, with an estimated production of 102,000 oz., and Bralorne, with an estimated production of 52,000 oz., are found in the Bridge River camp. Steady gold production has also come from the Vidette property located on the shore of Vidette lake, north of Kamloops lake. Here a 35-ton milling plant has been operating steadily on ore averaging about  $\frac{3}{4}$  of an ounce of gold per ton. Gold production has also come from the Grange property near Clinton where a 25-ton mill, more recently stepped up to 60 tons capacity, has been in operation for some months. Recent developments at this property are encouraging.

A small production has also come from the Taylor-Windfall mill in the Taseko Lake country. This plant, operating at about 3 tons per day capacity, produced about 250 ounces of gold. More recently, the Wayside property has been equipped with a 35-to 50-ton milling plant of the amalgamation type and it is now reported to be operating successfully at an average capacity of about 20 to 25 tons per day. Minto Gold Mines have recently completed the installation of their 50-ton milling plant and this it is expected will be in continuous operation during the present month.

At the two leading producers, Pioneer and Bralorne, the former has been milling at a rate of about 400 tons per day while the Bralorne is gradually stepping up production to the anticipated 450 tons per day, present milling being slightly more than 300 tons per day.

The Hone Gold property near Hope have recently installed machinery in their mill building and expect to get into production late this year. In all parts of the district prospecting and development work is very much featured in the year's activity.

On Vancouver Island in the Alberni district a mild boom occurred early in the season and many claims were staked in the area contiguous to the Port

Alberni Canal. Further up the West coast of Vancouver Island in the vicinity of Zeballos river and north, many claims were staked by prospectors investigating the possibilities outlined by Dr. H.C. Gunning of the Geological Survey. In the Shoal Bay-Phillips Arm section several hundred claims were staked early in 1934 after the Alexandria property was re-opened by the Premier Gold Mining Company. At the present time in that area much of the prospecting and development work has stopped, the only activity there at present being confined to the operation of the Hercules Consolidated Mining, Smelting and Power Corporation, and the Shoal Bay Syndicate, under the direction of Seymour Campbell.

In the area north of Harrison lake, particularly in the area surrounding Fire lake and Fire mountain, there has been considerable prospecting activity during 1934 and one or two promising finds are reported to have been made in the Lillooet Lake area. In the Hope-Yale area many claims were staked around the property of the B.C. Nickel Company, Ltd., and some exploration work has resulted further up the Fraser river. In the vicinity of Lytton and Ashcroft, activity has been commenced by several gold mining syndicates and companies and in the area surrounding the Vidette mine several groups claims have been staked and a considerable amount of development work, much of it of a negative nature, has been accomplished.

Further north in the area about Clinton many prospectors have been in the hills and they report encouraging results in their year's work, although so far the Resident Engineer has not been able to examine all these properties in detail and cannot give any definite information.

In the Tatlayooc Lake area considerable interest resulted in the possibilities of the country when the old Morris mine was acquired by Vancouver interests. Several exploration parties were in the field in this area and several encouraging finds are reported.

Along the P.G.E. railroad from Squamish to the Bridge River there has been a continuation of the prospecting activity started in 1933 and several new companies were formed during the year for the purpose of obtaining funds with which to develop showings in the Blackwater-Birkenhead and McGillivray Creek sections. In the Brandywine area prospecting activity continues as in past years.

In the main Bridge River camp several developments which were commenced in 1933 have been somewhat curtailed in 1934 due primarily to lack of funds and in many instances due to the failure to locate promising mineralization. The two main producers, Pioneer and Bralorne, have both increased their ore reserves substantially and when recently visited both mines gave the appearance of showing a very substantial ore reserve ahead. Particularly interesting have been the developments on the lowest level of the Pioneer mine and the present programme of shaft-sinking which is to go down to the 3100-foot level (No. 26 level), should result in very interesting development when the lateral work from the shaft is commenced. This, it is understood, will not be undertaken until the shaft has been completed to the 3100-foot level.

In the Bralorne mine interesting and very promising sections have been opened up on the 6th, 7th, 8th, 9th and 11th levels. The "C" vein, or "C" block, as it is called, lying along the No. 2 fault, has responded well to development. More recently the development on what is believed to be the shaft vein on the 8th level has been of a promising nature and a length of more than 300 feet of commercial ore has been opened up on the 8th level development of this vein. At the Bralorne mine the new milling plant has been operating for some time and tonnage is gradually being stepped up to a production rate of approximately 450 tons per day. This tonnage should be reached in the very near future as the new underground shaft serving the levels below No. 8 has been in operation for some weeks.

In the Bridge River camp, outside of the two producing mines and a few other properties, it may well be considered that most of the work being done is primarily of a prospecting nature. Much of this prospecting is being done under the well-directed supervision of the engineers in charge and is rapidly eliminating unfavourable ground, so that efforts may be better directed to any possible prospecting chances which might exist on the individual properties.

COAL MINING - James Dickson, Chief Inspector of Mines:-

The total production of coal in British Columbia during 1934 was 1,380,920 tons, an increase of 9.18% as compared with 1933 when the production was 1,264,746 tons.

The mines of the East Kootenay district were responsible for the increase as both Vancouver Island and the Nicola-Princeton districts showed decreases as compared with 1933. Increased business in railroad coal and intensive marketing, assisted in Manitoba by a Dominion subvention, is largely responsible for this increase in coal production in East Kootenay mines.

The mines of the East Kootenay district produced 651,829 tons in 1934 as compared with 477,677 tons in 1933, an increase of 36.4%.

The mines on Vancouver Island produced 581,695 tons in 1934 as compared with 613,203 tons in 1933 a decrease of 5.1%.

The mines in the Nicola Princeton district produced 144,602 tons in 1934 as compared with 170,643 tons in 1933, a decrease of 15.2%.

The coal mines in the Telkwa area, Northern district, produced 2,800 in 1934 as compared with 3,403 tons in 1933 a decrease of 17.8%.

The official returns for 1934 are not available to date and the above figures are subject to slight revision.