

Formation of Ore-shoots.

While it is, of course, possible that some of the bedded veins were direct trunk channels and derived their quartz and ore direct therefrom, it seems to me certain that a vast majority of the bedded veins are merely lateral branches which were filled by vein material diverted from the trunk channels into lateral openings, made in the thin strata of intercalated slate,

into which the solutions from the vertical fissures were forced and in which were deposited silica, pyrite, arsenopyrite, and other minerals. Examination of the intersection of fissures and the bedded veins branching from them seems in many cases to show that they are contemporaneous in origin, while in other instances the fissures are clearly of later origin.

(To be continued).

MINERAL PRODUCTION OF THE PROVINCE OF QUEBEC DURING 1910.

ASBESTOS.

The returns received from asbestos producers show a total production of 80,605 tons of the various grades of asbestos, valued at \$2,667,829 at the points of shipment. This is a substantial increase as compared with the shipments made in 1909, which totalled 63,965 tons, valued at \$2,296,584.

These figures represent the actual shipments made, and they are this year considerably less than the output, as a great deal of asbestos of all grades was reported as stock on hand on December 31st. As may be seen by the table given below, this stock on hand amounted to 41,159 tons, which, valued on the same basis as the shipments, amounted to \$1,921,923.

The activity of asbestos mining was very notable during the first seven months of the year. The mines were working night shifts as well as day shifts, and most of the mills were producing to their full capacity. Unfortunately the demand did not keep pace with the increased output, and as a result the market became congested, prices dropped and the stocks on hand increased. Towards the end of the year several of the mines discontinued mining operations and a period of stagnation ensued. That this state of affairs is only temporary is shown by the past records of the asbestos industry. Periods of over-production and consequent depression have been noted before, and these have always been followed by periods of healthy growth.

	Shipments		Stocks on hand Dec. 31.	
	Tons	Value	Tons	Value
Crude No. 1	1,817	\$ 471,649	1,703	\$ 447,227
Crude No. 2	1,612	196,382	3,181	440,884
Mill Stock No. 1	10,313	627,635	4,938	313,053
Mill Stock No. 3	44,793	1,141,374	24,417	621,065
Mill Stock No. 3	22,070	230,789	6,920	99,694
	80,605	\$2,667,829	41,159	\$1,921,923
Asbestic	24,711	17,612		

The value of the asbestos shipments made during the year 1910 is the highest recorded to date. The previous banner year was 1908, when it reached \$2,551,596.

The following table illustrates the growth of the asbestos industry during the past decade:

Year	Tons.	Value
1900	21,408	\$ 719,416
1901	33,466	1,274,315
1902	30,634	1,161,970

1903	29,261	916,970
1904	35,479	1,186,970
1905	48,960	1,476,450
1906	61,675	2,143,653
1907	61,985	2,455,919
1908	65,157	2,551,596
1909	63,965	2,296,584
1910	80,605	2,667,829

The returns which we received from the producers show that a quantity of 2,035,705 tons of asbestos bearing rock was quarried during 1910. Of this rock about 25 per cent. is waste, which goes to the dumps without treatment as being too lean in asbestos for milling. Shipments of asbestos during 1910 and stocks on hand at the end of the year totalled 121,755 tons, valued at \$4,589,756 at the prices prevailing during the year. To arrive at the output, we may subtract the stocks on hand at the end of the previous year 1909, which, according to the Federal Mines Branch, amounted to 20,921 tons. These figures leave a total extraction during 1910 of 100,837 tons of asbestos from 2,035,705 tons of rock mined or from about 1,500,000 tons of rock milled.

It must be understood that these figures are averages of totals. In the case of individual mines the figures of extraction, may diverge considerably from these averages.

In last year's report, attention was drawn to some of the advantages which were likely to ensue from the amalgamation of individual asbestos properties into large corporations. One of these advantages was that it would be easier to establish a standard classification of the various grades of asbestos. The importance of this point can hardly be exaggerated, for it is quite likely that one of the reasons which militates against a more rapid extension of the uses of asbestos and contributes to the dulness of the market, comes from the fact that at present there is a lack of uniformity in the grading and classification of the various products of the asbestos mills. Each individual producer has its own grades and marks which can only be sold to manufacturers and consumers by submitting samples. In the classification which we have adopted in the short table given above, we have followed the Federal Mines Branch, based on value per ton of the product. Crude No. 1 represents asbestos quoted \$200 a ton and over. Crude No. 2 under \$200. Mill stock No. 1, is the product of the mills of a value of \$45 per ton and over, No. 2 between \$44 and \$20 inclusively, and No. 3 under \$20, but individual items of these groups vary widely between the limits assigned and the classification is arbitrary in the extreme. For instance, under mill stock No. 1, we