wise very variable. In some cases the ore is curiously split up by the country rock, as shown in figure 7, which is a cross-section of the Payne vein, as seen in No. 3 tunnel 1,000 feet in from "day" and at a depth below the surface of about 360 feet. An interesting section showing how a pay-streak some-times becomes unusually large and the ore highly concentrated, is given in figure 8, which is a section of part of the Ruth vein, near Sandon. A rib of solid galena, four feet wide, occurred in the centre of the vein, and a smaller rib on each side of it, also mostly galena, the remainder being siderite and limonite. The total width of the vein, at that point, including the eighteen inches of "horse," was eight feet. The average width of the pay streak is, however, of more interest to the miner. In some of the more extensively opened mines this has been found to be as under:

MINE.	Average width. Feet.	Area Super F e et.
Le Roi (gold-copper) War Eagle '' Payne (Silver-lead) Alamo '' Cariboo (gold-quartz	17.0 39.7 1.2 375	35,000 60,000 180 000 60,000 87,000



Of none of these chutes has the total extent been determined. The widths are the average, in each case, in the areas opened at the time they were taken.

There is usually one well-defined wall to these veins, and sometimes two, accompanied generally, by a greater or less thickness of "fluccan" or "gouge," but, in some instances the ore is "frozen" to one or both walls.

The length of the pay-chutes is very variable. Some of the longest yet proved being:

	Length proved. Ft.
Payne (Silver-lead) Ruth '' Cariboo (Gold-quartz) War Eagle (Gold-copper)	1,080 840 570 315

The full length of the pay-chute has not been proved in any of these cases.

The depth to which some of the veins have been proved may be illustrated by a few examples:

	Depth Proved. Ft.
Le Roi (Gold-copper).	700
Payne (Silver-lead).	480
Whitewater (Silver-lead).	450
Cariboo (Gold-quartz).	200

Ore has been worked from the surface, in each case, and is still going down in the bottom of the mine, without any indication of giving out.

Too little work has been done on any of the veins to show whether or not the pay-chutes have any definite pitch in relation to any other feature of the vein or country rock.

No preference has been established, among the veins, for any particular kind of country rock, unless it be of the gold-bearing pyrrhotite and pyrite for basic volcanic rocks; but too little is yet known of the country for such statements to be made with any degree of confidence. Gold-copper ores-but without any pyrrhotite as at Rossland-occur on Texada Island, at the Van Anda mine, in limestone. There, however, the proportionate value of the precious and base metals is such that the ore is more properly called a copper-gold ore. In the Slocan there are more veins being worked among the argillites (clay slates) than in the granitic area, but that arises, so far as can be at present seen, from the greater ease of working the agillites and not because the veins are better or more numerous in those rocks. The Enterprise mine, on 10-Mile Creek, is in granite, yet it contains some of the richest ore found in the Slocan, and has a pay-chute (shifted at one part about 100 feet by a fault) over 1,100 feet in length and neither end of it reached.

Gold-bearing quartz occurs in argillite at the Cariboo mine. in quartzites and argillites at Fairview, in syntie at Nelson-Poorman and in basic volcanic rocks at the O. K. mine, Rossland.

The mode in which the gold-bearing-pyritous ores of Rossland, the silver-copper ores of Nelson and the dry silver ores occur in the veins, has already been briefly described. A few words may here be devoted to the gold-bearing quartz veins, and the silver-lead ores of the Slocan. In the former, the ore occupies the full width of the vein, unless interrupted by horses of country rock. The quartz has sometimes a banded structure, more or less parallel to the walls of the vein, and the sulphides are mostly distributed in courses that are also parallel to the walls, more or less, but with frequent interruptions and great irregularities in width.

The silver-lead ores also have more or less of a banded form parallel to the vein, the continuity and regularity being broken by country rock, quartz, siderite, limonite and other associated minerals. Sometimes the metallic minerals occur in threads, strings, spots and blotches in quartz or country rock, or in the volcanic rocks which sometimes penetrate the latter.