

near Ashcroft, tests of the deposit proving it to be equal to the best manufactured washing powders. The area of this deposit is very considerable.

Gypsum has also been discovered in several places in large bodies, and alum in the East Kootenay and on Bute Inlet on the Coast.

Although the ore shipments have fallen off considerably during the year, owing principally to the lockout in the Slocan, general development has progressed with enormous strides. New camps have opened on every side, and with railroads branching out in all directions, the coming year should be one of great prosperity. Amongst the most noteworthy events of the year have been the legislation on alien labour and working hours in mines; neither have had a beneficial effect on the country, and the eight hour law has raised dissent between labour and capital which did not exist formerly. Great hopes are entertained that an agreement will shortly be arrived at, and the working of the Slocan Camps be resumed. The immense developments in the Greenwood, and generally, in the Boundary Camps are worthy of special note. A year ago the district was practically unknown; to day, hundreds of properties are making considerable output and only awaiting the completion of a smelter being built in the locality to ship. A number of prominent mines have changed hands and management, and many improvements have been made on them. The use of electricity in connection with mining operations has made great strides and promises still greater ones during the coming year, as many charters are being granted for new companies to operate in different districts.

MINERAL BELTS OF BRITISH COLUMBIA.

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The Quartz mining regions of the interior of British Columbia, in which any great extent of development has been done, are the East and West Kootenays and the South Eastern portion of the Yale District. The minerals in these districts are contained in three distinct belts, that round Rossland, Trail and a portion of the Eastern Boundary of Yale District being contained in an eruptive series of dioritic rocks. From these points toward the westward, passing outwards, northward on the Rossland side and westward on the Yale side, the valuable mineral belts are contained in a series of crystalline metamorphic formation and are many miles in thickness, consisting of layers of schists (mostly talcose and graphitic), limes, carbonaceous slates and siliceous shales overlaid again with a belt of lime of great thickness interlaid with belts of quartzites and dioritic and porphyritic intrusive rock and some dykes of the same nature, that in a northerly direction passes through the Slocan and bending to the westward runs through the Lardeau district and on, always trending more to the westward, through the Revelstoke division, and on to Shushwap Lake in the Kamloops division of the Yale District, where it becomes almost lost being broken up by a series of intrusions of trap, which form a mineral belt apart. The same series of crystalline rocks are encountered again on the south side of the district and occur in the Okanagan district and connect with those mentioned as passing westward from the border of the Yale and Trail Creek districts. It will be seen from this that they form a circle, irregular in outline, which is broken through at two nearly opposite points by two very extensive intrusions; *i. e.*, that at Rossland and

Kamloops, the centre of this irregular circle is composed of intrusive granitoid and syenitic rocks, these again have in places, such as in the Slocan and at Revelstoke broken through the crystalline rocks but have not displaced them for any very extensive areas. The centre of this circle will be at a point not far west from the head of the Upper Arrow Lake. The dip of the crystalline rocks is, generally speaking, away from the centre of the circle, and the reason for this can be very simply demonstrated by closing ones fist and passing the knuckles through a sheet of news paper allowing the paper to hang down, the knuckle representing the intrusion of the granites and the paper the crystalline formation. The East Kootenay mineral belt lies in the same formations but, is mostly due to more recent disturbances, which show themselves in the manner of porphyritic and felsic dykes, of great extent. A series of these run at almost straight lines, slightly diverging in a south-easterly direction, and forming the ranges of mountains lying between the Columbia and Kootenay Rivers, and West Kootenay dividing line, the most northerly of them, cutting over into the Rockies for some distance beyond the Windermere Lakes, these dykes occur mostly through Fort Steele, Golden and Donald division. The formations being much folded and tilted by the intrusions and carried up by dykes with great alterations in their structure and consequent fissuring. It has been found also that in the Rocky Mountains, running nearly through the centre of the range, there is another series of similar dykes of about the same age and apparently creating another mineral belt, but there has not been sufficient exploration as yet to fully determine this. The other mineral belts throughout B. C. are consequent on distinct and separate volcanic waves which apparently occurred at the same period but only in places found their way through the earth's crust. This description will clearly demonstrate that the ores of the country have their origin from the mineral charged gases emanating from the interior below the earth's crust, filling the fissures, consequent on the cooling of the rocks heated by intrusion, and that, therefore, they are of necessity primarily and essentially of a composite nature.

HISTORY OF MINING IN B. C.

The discovery of the mineral resources of British Columbia has been known for many years—more than what is generally supposed—and dates back to the early occupation of Canada by the British. The older French occupants, being pushed out, immigrated west, crossing the Rockies, in search of new hunting and trapping fields; they reported the using of gold for ornamentation by the Indians, with whom they had come in contact, when bartering furs. Later, the missionaries of the Roman Church and their emissaries discovered gold beyond the great range of mountains, but their finds were too far afield in those days to cause any excitement. Somewhere about the same time, the Spaniards discovered gold along the coast line of B. C. and worked the same for some time, with what result is not known, though the evidence of their workings still exist amongst the islands of the Gulf of Georgia. Later again, the pioneer traders of the Hudson's Bay Co., in the forties, discovered placer mines in many of the rivers of the interior, and also reported the existence of extensive deposits of lead and copper and went, in some cases, as far as sinking prospect holes. In 1856, the miners of California and Montana, following the mineral belts of those countries, in search of new fields for alluvial