

**Copper.**—Surface evidences of deposits of sulphuretted copper ores exist at various points in Cape Breton. They are almost wholly in the Laurentian formation and this geological series embraces nearly one-half of the entire island. While the present commercial values of the coal and iron deposits are limited by the lack of accessible markets for those minerals, it is not so with copper, which has a natural market in Europe, without intervening duties or expensive transportation; therefore, granted that the copper deposits of Cape Breton are of workable extent, it seems certain that with such cheap fuel, supplies, limestone and transportation to market, it is only a question of time for Cape Breton to take its place among the important cheap producers of copper in the world. The ores have been shown to be practically free from arsenic and other impurities, and they have added value in the nearness of the copper deposits of Newfoundland, which furnish ores suitable for fluxing those of Cape Breton. By far the most important development of the Cape Breton copper deposits is that at the Coxheath mines of the Eastern Development Company, Ltd., a corporation owned chiefly in Boston.

The company's mining rights cover an area three miles in length by one mile in breadth, or say an area about equal to the entire copper district of Butte, Montana. Some \$250,000 have been expended in the purchase of the Coxheath properties and in its mining operations. Two vertical shafts, 175 feet and 300 feet respectively, have been sunk, and from them extensive cross-cuts, drifts, etc., have been run, proving a series of parallel veins dipping about 60 degrees north, with a strike of 56 degrees east. Two of these veins have been drifted upon for several hundred feet; one of them carries ore from 8 to 20 feet in width, much of which will assay from 10 to 12 per cent. copper. On the 200-foot level an ore body 600 feet in length has been opened. Recently an additional vein, located 1,500 feet to the south of these workings, has been opened up on the surface, at two points 600 feet apart, showing well mineralized rock from 8 to 10 feet in width.

Dr. E. D. Peters, Jr., M. E., from his personal study of the two districts, says the Coxheath compares favorably in general formation and prospects with the Butte district, although the surface ores of Coxheath are not so rich as those of Butte, owing, probably, to the denuding glacial action.

George Grant Francis, M. E., of London, England, who has wide experience in examining copper properties, has reported on the Coxheath veins, and says "they are well defined fissure veins. The ore being chalcopyrite with hardly any admixture of iron, and there being, I think, no question as to the large quantities of vein material, the only problem to solve is which is the best mode of concentration."

Mr. Francis has since then supervised the altogether successful concentration of a lot of these ores which was sent to Germany.

The Eastern Development Company claims to be able to-day to make a daily output, from its No. 2 shaft alone, of 300 tons of ore, and proposes this season to build 6½ miles of railroad to connect the mine with the Government Cape Breton Railroad, and with tide water on Sydney Harbor, also concentration and smelting works.

The following analyses of the Coxheath ores give a fair idea of their characteristics: No. 1, Copper, 12.97; iron, 14.47; sulphur, 17.26; silicious rock, 53.14; arsenic, none; antimony, none. No. 2: Copper, 7.95; iron, 14.93; sulphur, 8.98; silicious rock, 47.67; magnesia, 3.45; alumina, 7.94; arsenic, trace; antimony none.

The ores are reported to contain about one ounce of gold to the ton of matte. Concentration and smelting in large modern reverberatory furnaces have been adopted for the immediate treatment, but eventually, when other fluxing ores are obtained, as is expected from Newfoundland and Venezuela in exchange for coke, the treatment will no doubt be by smelting in water-jacketed furnaces.

In order to put ourselves more directly in touch with the managers of gold mines, a representative of THE CRITIC will leave shortly to visit our friends in Lunenburg and Queens Counties. The eyes of the world are now turned upon the mineral resources of Nova Scotia, and the publication of the facts in connection with some of our gold mines cannot fail to convince capitalists that these mines could not fail to make remunerative investments. We bespeak for THE CRITIC's representative a cordial reception.

**MONTAGUE DISTRICT.**—Manager McQuarrie was in town on Saturday with another fine lot of gold bearing quartz from the Annand Mine. One large piece was fairly bristling with coarse gold and must have been worth over \$600. The Rose and the Annand Mine are both showing up very rich, and a new tunnel in the latter has just reached a gold bearing streak that gives promise of large returns. The special correspondent of the Toronto Globe, who is in the province writing up gold and coal, visited the mine this week.

On the Tobin property the Rose lead has been opened upon by Messrs. Barry, Chetwynd et al., and a fine gold-bearing streak reached. We wish them every success.

**CONCENTRATES.**—Nevada may be said to have produced, in round numbers, \$300,000,000 worth of bullion, 60 per cent. silver, 30 per cent. gold, balance nearly all lead.

San Marcos mines in Honduras have produced over \$100,000 during fifteen months of work, in spite of many interruptions, due to the want of proper mining machinery.

The vein of ore in the Treadwell mine, Alaska, is 464 feet wide, and extends along the mountain three-quarters of a mile. The mine produces 100,000 in gold bullion monthly.

The future of Montana as a mining country is very bright, and the estimated output for the current year has been placed at \$45,000,000.

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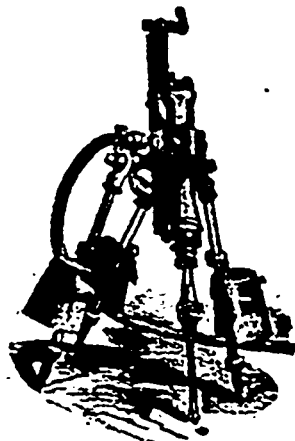
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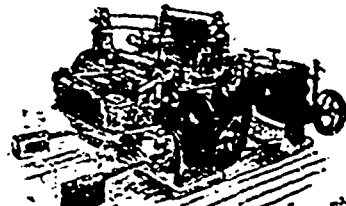
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