

promising veins have been found. Work has been abandoned for some years.

In the section between Burnt point and Boulaeet harbour, copper pyrite in small quantity is found in veins cutting a grey micaceous laminated quartzite of the crystalline series; and at the silver mine on this harbour a rich pocket of galena, with copper and iron pyrite holding some silver and gold, was found in a small vein of $\frac{1}{2}$ to 4 inches thick and mined to some extent by Mr. A. Cameron of Baddeck. Report Geol. Surv. 1876 77, p. 407.

Similar occurrences are recorded from the Washaback district, the copper and iron pyrite being in irregular quartz veins with blende and galena. In a conglomerate at Washaback near Crow point copper ores are found, probably induced through the agency of plant stems on the metal in solution, which have given by assay appreciable quantities of gold and silver. Gilpin, 1887, page 80.

In the felsite of Blue mountains small quantities of copper occur, as also in the White Granite hills near French River. The ore is in the form of porites with iron-omic importance.

At Three Island Cove, copper and iron pyrite are found as mere specks only, in quartz veins crossing black and grey slate and sandstone and the deposits are of no apparent value.

At Grantmire brook, iron and copper pyrite are found in layers in a compact gray and pink felsite, the ores yellow and purple, weathering into the green carbonate.

In a brook just west of Morrison road near West Bay, traces of green carbonate of copper were found in a quartz-felspar rock, associated with soft soapy calcareous rocks like those at Coxheath and Gabarus.

At North-east harbour and Skye mountain copper pyrite in small veins cutting felsite rocks, mined to a small extent.

Gillis Lake road, yellow and purple copper pyrite, scattered through a large mass of compact and brecciated felsite; in places calcareous and full of a soft soapy talcose material. Some mining was done at this place by Mr. Burchell.

Brooks near the Coxheath road at Battlemans above the mineral spring, traces of copper ore.

Green island; specks of iron and copper pyrite in small quartz veins cutting dark grey felsite; of no economic value.

Shore east of Big harbour; veins of copper ore traversing diorite, schist and gneiss; have been worked to some extent.

Stewarts brook; small specks of copper pyrite in veins and beds of limestone, with schist, felsite, quartzite and diorite.

Jerome brook; copper pyrite in quartz-veined syenite and compact red felsite with diorite. Mined to some extent.

On Mainland, west side of Great Bas D'Or lake, opposite Man of War point, copper pyrite in a compact bluish-gray gneiss; the ore by assay gave, copper 14.28 per cent.

Coxheath mountain; probably the largest of these deposits at present known in this district. Opened first about twenty years ago and worked at intervals since that time. A large amount of capital expended in development works and mining plant. The ores are copper and iron pyrite in bodies sometimes a 1 g. extent, occurring in felsite which is often much fissured and broken; the ores carry small amounts of gold and silver. In the deposit there is a small quantity also of calcite and quartz. The first work was done in 1880, and four shafts have been sunk to depths of 300, 420, 100 and 45

feet. Numerous trenches and trial pits have also been made, in order to prove the extent of the deposit. The last shaft was sunk in 1892. Work has been suspended for several years. When examined by H. P. Brumell in 1892 he reported the cupriferous belt as 1,500 feet thick in which ore bodies occurred in veins from two to twenty feet wide. The underground workings consist of tunnels and drifts. A large quantity of ore estimated at from 2,000 to 3,000 tons has been extracted, portions of which have been hand-picked and partly crushed and jigged, but apparently no shipments of the ore have been made with the exception of small amounts for sampling. The quantity of copper in the ore is given in the last report of the Nova Scotia Department of Mines as seven per cent, from a sample taken across the ore pile. The expenditure of money in the development has been very large, but the area has not yet been placed on a paying basis.

George River mountain; R. A. L. Watson's area, chalcopryite, some of high values.

George River mountain, Alex Matheson area, chalcopryite.

French road, Cape Breton Co.; J. A. McKenzie & Co. chalcopryite.

Cheticamp. The copper at this place was referred to by Mr. Fletcher in several of the early reports on this district as far back as 1882. He says of the locality (Report, 1882-84, p. 95 H.) 'For some years prior to 1865 a company was engaged mining for copper ore at Cheticamp, and in 1864 about 12 men were employed. A shaft was sunk to a depth of 106 feet and connected with an adit 410 feet in length. An air shaft 30 feet in height was also cut from the adit-level to the surface of the ground, but not proving productive the works were discontinued. They are situated in the vicinity of the trap and sandstones at the base of the Carboniferous. Professor Howe mentions that green and blue carbonate of copper, gray and yellow copper ore in calcite and chrysocolla are found at Cheticamp, probably at this mine or at Jerome brook, as well as perfect crystals eight inches long of red felspar in the pre-Cambrian syenite of the neighbourhood.'

Quite recently the property has been taken up by the Eastern National Copper Co. which has begun development work at Grandin brook, L'Abime river. The ore which is chiefly chalcopryite occurs in schists, and the ore bearing zone is said to have a breadth of 70 to 100 feet, but the present operations are confined to a thickness of 10 feet. The ore is reported to be mixed with galena and other minerals, and to show a small percentage of gold and silver. The copper contents run from 2½ to 5 per cent., with an average of 3 per cent. At present the work on the property is only in the development stage.

Adjoining this area is another known as the Richfield Mining Co. which is developing another ore body of presumably similar character. Along this shore of the island similar pyritic deposits are found in small quantity at several points north of Cheticamp, as at Poulet cove, near Money point and at Cape North. These are practically all copper pyrites in felsitic rocks.

From the evidence as yet presented regarding these pyritic areas, it would seem that the occurrences at most of the localities mentioned are too limited in extent to be of much economic importance. The largest ore bodies appear to be at Coxheath and near Cheticamp.