

rock composed of calcite, white pyroxene and chromiferous garnet,\* and in other serpentines and magnesian rocks of the eastern townships; in Newfoundland, at the Union Mine, Tilt Cove, as arsenical nickel, millerite, cloanthite, and as nickel-bearing pyrrhotite; and more recently in New Brunswick, Canada, near St. Stephen, as nickel-carrying pyrrhotite.

In Newfoundland, at Tilt Cove, on the north side of the Great Bay of Notre Dame, which neighbourhood I visited in 1888 and 1891, nickel ores have been mined during several years, at the Union Mine, where they have been found associated with copper sulphurets and iron pyrite very similar to those of the district of Sudbury. A few lines relating their geological situation and a table showing the quantity of nickel produced formerly by the Union Mine are not here out of place, and will perhaps be found interesting.

The sulphuretted ores of copper, chiefly chalcopyrite associated with iron pyrite and nickel, are observed as being disseminated in grains and layers in the chloritic slates and dioritic beds; also concentrated in the folds and dislocations of magnesian rocks, and in white quartz veins near the same horizon.

These chloritic slates, which are very ferruginous, occur above and below the serpentine of the Quebec group of the lower silurian series. This group, says

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\* "Mines et Minéraux de la Province de Québec," par J. Obalski, Ingr. des Mines du Gouvernement, 1889-90.