

NOTES ON SOME NORTH AMERICAN PYRRHOTITES AND OTHER
MINERALS CONTAINING NICKEL.

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It is a well-known fact that Pyrrhotite, or Magnetic Iron Pyrites, frequently, if not invariably, contains nickel, generally with cobalt in various proportions, amounting together from traces up to nearly six per cent., and that most of the nickel of commerce is derived from this mineral.

The following notes contain in the first place the results of the examination of a few varieties of Pyrrhotite, occurring in Nova Scotia, New Brunswick, and the United States, chiefly with reference to presence or amount of nickel and cobalt, and they show also that remarkable differences exist in the intensity of the magnetism displayed, which ranges from distinct polarity in the mass, down to very feeble attraction by a magnet in the finely powdered state of the mineral, and further, that the most feebly magnetic of the specimens examined is that containing the largest per centage of nickel. The subsequent notes relate to other species from Nova Scotia and Newfoundland.

Pyrrhotite from Cape Breton Island, N. S. Of this mineral, four pieces were examined, they were all polar in action on the magnetic needle, one piece being very strongly so; the mineral was in the massive state, with, however, somewhat lamellar structure, associated with quartz. Portions of each of the four pieces were taken together for analysis, the object being to get an average of the whole, which, for the following metals, amounted to

Oxides of nickel and cobalt . . . 0.50 per cent.

in these, on separation by potassium nitrite, there proved to be at least

Metallic nickel 0.36 per cent.

and there was a trifling loss in the operation. The locality of this specimen, I should say, I find is not certainly known to the person from whom I obtained it.