

which show conclusively the individuality of the mineral, the composition of Pyrrhotite and Pentlandite being as follows:—

	PYRRHOTITE	PENTLANDITE
Sulphur . . . . .	40	36.0
Iron . . . . .	60	41.9
Nickel . . . . .	(up to 6?)	22.1
	<hr/> 100	<hr/> 100.0

The nickel obtained in this and in a qualitative analysis gave no indication of cobalt with borax before the blowpipe. On comparison of the percentage of nickel with that in the mineral from Cape Breton Island above, and of the respective magnetic powers, it appears that the polar mineral contains only 0.36 per cent. of "nickel," while this metal in the scarcely magnetic species from Lowell approaches ten times that amount.

*Mispickel from Montague, Halifax Co., N. S.* This mineral, frequently associated with gold, which it sometimes holds in visible quantity, in various parts of this Province, has before been shown to contain cobalt at the locality indicated (Mineralogy of Nova Scotia, p. 6), by experiments made at Freiberg. The specimen now referred to gave me, approximately

Metallic Cobalt . . . . . 0.09 per cent.,  
containing manganese, as shown by the soda test before the blowpipe.

*Mispickel from Lunenburg Co., N. S.* This was from a gold district some 50 miles S. W. of the preceding. Qualitative tests showed small quantities of both nickel and cobalt. I may mention that mispickel occurs here in exceedingly well-defined crystals of brilliant lustre.

*Matrix of Pickeringite, Newport, N. S.* When in 1863 I published (Journal of the Chemical Society) the analysis of Pickeringite, which resulted in the establishment of a new group of salts and minerals (Pseudo-alums, Odling, Outlines of Chemistry, p. 282, and "Halotrichite Group" Dana, Mineralogy, 5th Ed., p. 651), I showed that the N. S. mineral contained some two thousandths of nickel and cobalt, and that I failed to find these metals in the rock from which the mineral had been formed. The method of attack on the rock used at the time was fusion with carbonated alkali. I have since found that by treating about 50 grains of the slate, taken (by myself) from the interior about two feet from the outer edge, with aqua regia, distinct evidence of the presence of both metals was obtained from the rock, which looked quite free of any sulphides or other minerals of metallic lustre.

*Millerite from Tilt Cove, Newfoundland.* A specimen of "nickel ore" given to me last year proved to be Millerite; it was