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ANALYSES OF SERPENTINE FROM ABBITIBBE

and Green Mineral from Carboniferous Conglomerate New Brunswick.

The serpentine from an island in Lake Abbitibbe, mentioned page 6 and partly described by Mr. McOuat on page 128 of the present report, has since been more fully examined. It has a hardness of a little over 4 and specific gravity of 2.77. When treated with a mixture of equal parts of sulphuric

* The small bricks above described are exhibited in the Geological Survey Museum.

acid and water it is almost instantaneously decomposed. Little black grains were left with the silica and found to consist of chromic iron.

Analysis gave,

Silica.....	38.48
Alumina.....	4.15
Protoxide of iron	9.24
Magnesia	35.73
Oxide of nickel.....	.28
Chromic iron.....	.51
Loss on ignition.....	11.60
	99.99

An examination of the green mineral in the Lower Carboniferous conglomerate at Harvey, N.B., and mentioned on pages 6 and 184, has also been made. It has a hardness of about 3 and specific gravity of 2.75. The colour is leek-green and the lustre dull,—in places sub-resinous. Before the blowpipe it whitens and fuses on the edges to a glassy white enamel. Sulphuric acid decomposes it, but only partially.

Analysis gave,

Silica.....	66.84
Alumina.....	19.66
Peroxide of iron.....	2.12
Lime.....	.34
Magnesia.....	.60
Potash	3.54
Soda.....	.06
Loss on ignition.....	5.66
	98.82

From the above it will be seen that this mineral resembles pyrophyllite in some of its characters. It is, however, harder and contains a larger quantity of alkalis and less alumina. Judging from its appearance and hardness, it might readily be mistaken for serpentine.

^m Calculated as protoxide.