

REPORTS OF PROF. C. H. HITCHCOCK.

GEOLOGIST TO THE STATE OF MAINE.

WILLIS RUSSELL, Esq.,

DEAR SIR: At your request I have visited and examined the bed of copper ore in Lot No. 26, Ranges 1 and 2, in South Ham, Canada East, and the following is the result of my examination: —

The rock carrying the ore is a gray siliceous dolomite, checked with numerous segregated veins of quartz. It is a member of the Quebec group of the lower silurian system, and is the rock most commonly carrying copper in the Province.

The copper ore is the yellow sulphuret, disseminated more or less abundantly through seven feet of thickness of strata, having the course of north 60° East. The bed is situated at the base of a high bluff, and has been traced a distance of half a mile. A very prominent seam is displayed near the base of the bluff which appears to be the hanging wall.

The ore may be followed through the whole distance of seven feet, occasionally appearing richer along minor veins or irregular lines. The bed dips about 50° south 30° east. Very little work has yet been accomplished, and the full development of the extent and richness of the bed remains to be proved.

The locality is 24 miles from Arthabaska Station, on the Quebec Branch of the Grand Trunk Railway, and hence the ores will need to be crushed and concentrated before they are transported to a distance. It is not a great distance to a stream of water which, for the greater portion of the year, will yield sufficient power for this purpose. A steam-mill would appear to me to be better adapted to the purpose, since fuel is remarkably cheap in the neighborhood.

The gradual descent of the surface to the northwest will afford a considerable facility for drainage, while the necessary water for the washing of the ores is abundant.

The freight of this ore would be from \$3.00 to \$5.00 per