

THICKNESS OF THE LOWER CARBONIFEROUS MARINE LIMESTONES.

The thickness of this formation varies in the different districts. In Cumberland county, Sir W. Logan estimated the thickness of the upper part at 1,658 feet; adding the lower members, there would be a total thickness of about 2,500 feet.

In Pictou county no complete sections have been measured, and the passage to the Millstone Grit is obscure; the writer is inclined, however, to consider it as somewhat greater than in Cumberland county, and ventures to approximate it at 3,000 feet.

In the Eastern parts of Cape Breton the officers of the Geological Survey, have, as the result of a careful and systematic survey, been enabled to estimate its thickness at 4,637 feet. In these dimensions they have included the great beds of conglomerate lying at the base of the formation, part of which may belong to, or be an equivalent of, Dr. Dawson's lowest or fifth division.

In Western Newfoundland, Mr. A. Murray, the chief of the Geological Survey of that Island, estimates the thickness of the Lower Carboniferous marine formation at 2,150 feet, not including 1,300 feet of coarse conglomerate, corresponding to that found at the same horizon in Eastern Cape Breton.

HORIZON OF THE GYPSUM.

The gypsum occurs in this great volume of measures, so far as is at present known, at no fixed horizon. In the vicinity of Hillsboro, in New Brunswick, Mr. G. Matthews states that the gypsum occurs with regularly stratified bituminous limestones and marls directly overlaid by the Millstone Grit. In this district, he marks the occurrence of a series of limestones lower down in the measures, which do not appear to be gypsiferous. In Cumberland county it occurs about the middle of the series. In Pictou county it is found in the lower part of the formation, and frequently only a few yards from the Silurian strata, but does not form as prominent a feature as in many other districts.

The researches of Mr. Fletcher in Cape Breton have shown that in Sydney Harbour, it occurs a few feet below the Millstone Grit, and that on Boularderie Island, the base of the Boisdale and St. Anne's Hills, it occupies the same position, being "overlaid almost immediately by the gray sandstones of the Millstone Grit, containing characteristic fossils." About the Strait of Canso and near Baddeck, it occurs low down in the Carboniferous Limestone.