

	R.	N.
Sesquioxide of iron .....	16.98	20.52
Carbonate of iron .....	65.61	57.40
Carbonate of manganese .....	7.98	8.29
Carbonate of lime .....	2.67	4.02
Carbonate of magnesia .....	3.23	5.66
Silica .....	3.76	2.38
Hygroscopic moisture .....	.78	1.43
Sulphur .....	none.	undet.
Phosphorus .....	.013	"
Organic matter .....	trace.	none.
	101.003	98.70
Amount of metallic iron .....	43.66	42.07

Dr. T. Sterry Hunt has kindly furnished me with the following note on these specimens:—

Dr. Hunt's  
opinion on the  
Spathose ore.

"The iron ores from Merigomish, Nova Scotia, consist of an admixture of red hæmatite and sparry carbonate of iron, with considerable manganese and but little lime, magnesia and silicious matter, and they appear, moreover, from the results of their analysis, to be remarkably free from sulphur and phosphorus. Their composition is such as to make them very readily reducible with a small amount of fuel in the blast furnace, while the presence of manganese, and their comparative freedom from sulphur and phosphorus, should make them peculiarly well fitted for the production of steel, either by puddling or by cementation."

#### CLAY-IRONSTONE.

Clay-ironstone. A large number of bands of clay-ironstone were noted during my examination of the Pictou coal-field, but none of a size generally considered workable. Some thirty years ago, however, a cross-cut was driven by the General Mining Association upon the measures underlying the Main seam at the Albion mines, and several beds of ironstone were intersected. No reliable record remains of their size and quality, and the attempts which were then made to smelt them are known to have failed, but whether from mismanagement, or from the poor quality of the ore, is not certain.

At the present day these ores are better understood, and it would seem probable that some of these beds could be worked in connection with one of the seams, and smelted with some of the richer ores of the upper East River.

E. H.

MONTREAL, P.Q., 22nd June, 1870.