

direction. Many of these outcrops were small, and had been worked out after having produced a few hundred tons of ore. The principal mine, the Forsythe or Old Ironsides, has produced about 60,000 tons, and is said to have considerable ore yet in sight in the lower workings. On the surface it showed a width of 15 to 35 feet in a cut 100 feet long. The occurrence of the ore here is also peculiar, being entirely in a very impure limestone, the latter being associated with a hornblende gneiss. The limestone is white and crystalline, and the principal impurities, which form a considerable portion of the whole mass, are a light green pyroxene, quartz and graphite. The ore is of two kinds, the black magnetite ore and the so-called red ore, which is a mixture of magnetite and hematite. It is hard and compact, with imperfect cleavage, and generally shows a considerable number of flakes of graphite on a fresh fracture. Cavities showing well-crystallized calcite are also common. This ore, besides being shipped to the United States, was smelted in the old charcoal furnaces at Hull* (size 38 by 10½), and produced some excellent iron. The composition of the charge was very poorly calculated, for besides limestone, considerable amounts of clay and siliceous sand were used, which were entirely unnecessary, not only decreasing the capacity of the furnaces, but also increasing the consumption of charcoal, which was excessive, being 235 bushels per ton. The following analyses were taken from the *Canadian Geological Survey Report*.†

	Red Ore.	Black Ore.	
	I.	II.	III. (picked specimens).
Fe ₂ O ₃ , . . .	66.20	} 73.90	} 93.82
FeO, . . .	17.78		
Mn, . . .	trace	none	0.12
Al ₂ O ₃, . . .	.....	0.61	0.79
CaO, . . .	1.85	.....	0.45
MgO, . . .	0.18	1.88	0.94
P, . . .	0.015	0.027	0.08
S, . . .	0.28	0.085	0.11
CO ₂ , . . .	1.17	.....	.....
SiO ₂ , . . .	11.11	20.27	3.75
TiO ₂ , . . .	none	none	.....
Graphite, . . .	0.71	.....	.....
H ₂ O, . . .	.....	3.27	.....
	99.295	100.042	100.06
Fe, . . .	60.17	53.51	67.94
Analysts, . . .	Dr. T. S. Hunt.	Dr. T. S. Hunt.	Prof. C. F. Chandler.

* Dr. T. S. Hunt, 18th Rep. of Prog. of Can. Geol. Sur., 1866-67.

† 22d Rep. of Prog. Can. Geol. Sur., 1873-74, p. 211.