

prove highly remunerative. In Virginia, Pennsylvania, and New Jersey, in the neighboring Republic, this ore is largely worked, and as it is this compound of iron which is on the eve of bringing the metallurgical importance of the Ottawa Valley prominently before the world, through the instrumentality of the Hull Forges. We look upon it as being entitled to more than ordinary attention at our hands.

"There is," says Sir W. Logan, "a bed of Magnetic Oxide of Iron, about 90 feet thick, on Lot No. XI, VII Concession of Hull; it is surrounded by Gneiss, and appears to present the form of a dome, through the summit of which an underlying mass of limestone protrudes. It is in the Laurentian series. The ore contains between 60 and 70 of iron. It began to be worked in 1854, and was smelted at Pittsburgh, whither it was sent by Kingston, on Lake Ontario, to which it was conveyed by way of the Rideau Canal. Up to 1858, about 8,000 tons of the ore had been thus exported, but the opening of the Newborough mine, more favorably situated in regard to the shipping port, stopped the working, and no ore is now, 1862, exported from Hull." This is a condensed history of the Iron bed now in process of being worked by the Hull Iron Smelting Company, and about to constitute a new and all important epoch in connection with the Ottawa Valley.

*Specular Oxide of Iron, Synonymous with Red Hematite, Oligistic Iron, Iron Glance, &c., &c.*

This ore of iron is to be met with both in the stratified and the crystalline rocks. It has a metallic lustre, is infusible before the blow-pipe, but smelts with borax. The great locality of this ore is the Island of Elba, where it has been worked for 16 centuries. In our own immediate locality, it is found most abundantly in the Township of MacNab, at Arnprior; we have seen, also, some very fine specimens from Torbolton and Fitzroy. Specular iron ore is not so rich in metal as the magnetic oxide, as it yields only 55 per cent of pure metal. When it assumes a fibrous character it is called and known as Red Hematite, and is generally found in reniform masses, as in Saxony and in Cornwall, and at Ulverton, in Lancashire, England. When mixed with argillaceous compounds, or other impurities, it is familiarly known by the name of Red Lead. At

Ticonderago, in the neighboring Republic, it is found in considerable quantities, and pulverized and used as a polishing powder. Most of the plate iron and iron wire of England are manufactured from this ore. It is extensively used in the button trade as a polisher, and the ore most in use for this purpose comes from Spain. The ore before alluded to as existing in MacNab Township is very valuable in itself, and every facility for working it exists on the spot. The specular oxide has heretofore proved somewhat refractory in the furnace, but the inconvenience is overcome by mixing with it the other ores of iron. For this purpose the magnetic oxide has been largely shipped, both from the Hull Mines and from Mud Lake, Rideau Canal, when an iron answering all required purposes has been the result.

*Bog Iron Ore, Hydrated Per Oxide of Iron or Brown Iron Ore.*

This ore is generally found in detached portions at the bottom of shallow lakes and morasses, thence its name, Bog iron. It possesses sundry characteristics common to specular ore, and produces about the same amount of iron. It is made up of numerous aggregated fibres, and in colour is invariably some shade of brown; it is very brittle and possesses no magnetic power. On some occasions we meet with it in a more or less pulverized condition and assuming the appearance of an ochre, but it differs from all the other ores of iron in containing water in large quantities, not simply absorbed, but constituting a characteristic part of the ore, being chemically combined with it in the proportion of one sixth.

Bog iron ore is found in limited quantities in England, France and Siberia, but in Germany, France and Austria it is extensively worked. At Salisbury, Connecticut, United States, it exists to an unlimited extent, and has been worked beyond a century, and yielding from this locality alone, the large quantity of upwards of two thousand tons of iron annually.

The iron obtained from Bog Ore is said to excel in toughness and hardness, and to be preferable to red iron ore on that account, whilst the purer varieties on being melted with charcoal may be readily converted into steel of an excellent quality.

Bog iron is of more recent origin than any of the other ores of iron, and its deposition