It's Not Pollution... it's Magnetite!

John A. Brebner, December 2015

What's that black stuff along the waterline on the Sandbanks Beach separating West Lake from Lake Ontario?

I asked myself the same question a few years ago.

It's not oil, it's not pollution. It's magnetite.

Magnetite (Fe_3O_4) is one of three commonly occurring iron oxides, and was carried southward along with the sand grains to glacial Lake Iroquois during the last ice ages that ended some 12,000 years ago.

Scraped from the Canadian Shield by the unrelenting pressure of an ice sheet more than 3 km high, it was brought into today's Great Lakes from mineral rich deposits in northern Ontario and Quebec, (or perhaps washed in from the Charity Shoal meteorite crater just east of the County... for the benefit of the more imaginative!)

There's a lot of magnetite here, and that was one reason why early commercial enterprises failed while trying to exploit the local sand.

That sand was too fine for brick-making, and had far too much of those iron oxides for glass making.

(See West Lake Brick story...)

Still, it's not difficult to "mine" that resource today. All you need is a magnetic sweeper, available at most hardware stores, and a little patience. And on a day when the surf is high, it can be found suspended in the water as well in the dark specks in the dried sand above the surf line.

Images at right all made on the Lake Ontario beach along the West Lake bar.

Image 13-6260; John A. Brebner

Image 13-6277; John A. Brebner

Image 13-7352; John A. Brebner