the iron content of concentrates was brought up to over 70 per cent., while the titanium content of this concentrate was less than 2 per cent.

The concentration ratio in one series of tests was practically thirteen units of crude material to one of concentrates. Three separations and two intermediate crushings were used. This, however, does not imply that commercially all these steps would be necessary.

The estimate of the tonnage of iron content in the Natashkwan sands is 500,000 tons of magnetic iron concentrate, averaging 67%. The necessary conditions of working are that the sand be concentrated wet; that the capacity of the concentrating plant be large, since the season is short; and that the machines be of strong and simple construction. The estimated cost of a dredging plant capable of handling 5,000 cubic yards of sand per day, with auxiliary plant for retreating and briquetting, is $623,200. The total operating expenses for one year turning out 100,000 tons of briquet yearly, are placed at $270,000. In other words, the cost of briquettes at Natashkwan harbour would be about $2.70 per ton, the freight to Philadelphia about $1.50, and the selling price at the latter point, $5.02. Considering all the various factors this gives a paper profit of 83 cents per ton.

In a construction sense, Mr. Mackenzie's report is encouraging. It would seem, however, that much more time will have to be spent in checking up details of tonnage, extraction, and markets.

GAYLEY DRY BLASTS

Professor Josef Von Ehrenwerth has contributed to the proceedings of the Iron and Steel Institute (Great Britain) a very clear statement of experience with the Gayley dry blast at Etna blast furnaces.

It will be remembered that when the first figures concerning the Gayley dry blast were published they were met with incredulity. It could not be understood how such a marked saving in fuel could be effected by eliminating most of the water from the air that was supplied to the furnace. The equation appeared to be lopsided, as there was no proportion between the actual amount of fuel necessary to disassociate the water contained in the atmosphere as compared with the saving recorded.

Prof. Von Ehrenwerth's statements give a very clear view of the facts.

He states that the economic advantage of drying the blast is greater the lower the temperature of the blast, and the higher the temperature of the waste gases at which the furnace previously worked. The losses due to conduction and radiation, are, naturally reduced in proportion as the temperature of the waste gas is lowered. Hence, with the same periods between tapping, the blowing engines and stoves can handle a larger production without actually increasing their duty. The melting process is accelerated, the silicon percentage is increased, and the sulphur content lessened.

The supreme advantage of uniform working is also secured. Loss by flue dust is reduced, and in general the fuel consumption is lessened from one and all of these causes. The adoption of dry blast is certain to prove advantageous, says Prof. Von Ehrenwerth, for blast furnaces working with high blast temperature and yet with high gas temperature, and for furnaces in localities where the atmosphere is particularly moist. It is particularly applicable to furnaces where Bessemer pig, foundry pig, and high silicon pig are produced.

EDITORIAL NOTES

Apparently authentic reports from White Horse state that new placer deposits have been discovered on a creek that has just been christened Meander Creek. Spectacular panning results have been obtained. A modest rush is under way now, and soon the merits of the region will have been determined.

The annual report of the Dominion Steel Corporation is encouraging. After payment of common and preferred dividends the balance carried forward for this year amounts to the respectable total of $883,012.

Mr. Harley B. Curtis, of New York, has succeeded Albert Freeman as president of the McIntyre Porcupine Mines, Limited.

A second dividend payment of 10 per cent. has been declared by the Seneca-Superior Mining Company. It will be remembered that the Seneca-Superior Company operates what was formerly known as the Kerry property on Cart Lake, under lease from the Peterson Lake Mining Company. The latter company receives a 25 per cent. royalty from the former.

The average extraction at the Hollinger mill up to June 1st of this year is 95.8 per cent. The average value per ton or ore mined is reported at $21.89.

A new record for iron ore shipments from the Lake Superior district was made last month. The shipments were 7,284,212 tons, compared with 5,919,074 tons in May, 1912, and 3,684,819 tons in May, 1911.

PORCUPINE GOLD MINES CO.

In the circular announcing the offering, the president of the Porcupine Gold Mines states that a syndicate, composed for the most part of directors, bought 250,000 shares of treasury stock at 50 cents in October, 1911 Later on further amounts running in excess of $62,000 were advanced the company by certain shareholders. Other indebtedness amounts to somewhat more than $18,000. The unavoidable delay in completing the mill depleted the treasury, and after the commencement of operations it was found necessary to install a cyanide plant. This will not cost more than $30,000 and the extraction then should be 95 per cent. At the time of the strike in November, 1912, the property was shut down and it has not been re-opened as yet.