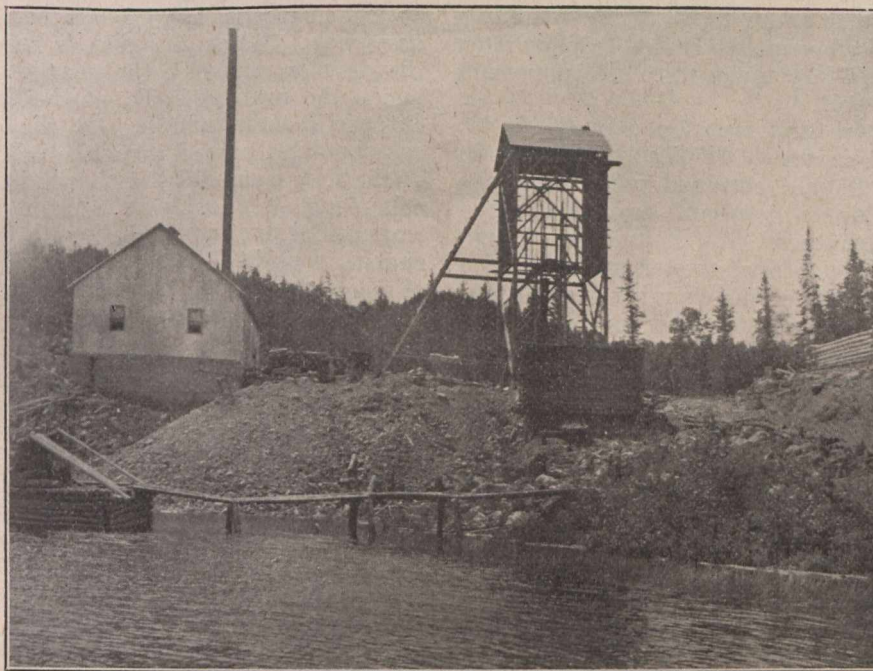


traced on the surface clear from one side to the other, a distance of a quarter of a mile and upwards. They are of frequent occurrence, and almost invariably show signs of mineral, while from some, high grade ore has been mined and sacked. Alpite veins, so called, are not frequent, but there are many strong leads of smaltite; and in some cases, a kind of impure asbestos is found. Many of the veins take the form of lenses of fine grained diabase enclosed within walls of comparatively coarse grained rock, amounting almost to a gabbro; and on one or other of the faces, lie the smal-

one 80 ounces, the other 90 ounces, per ton. This may be said to be one of the most pleasing features of the district, indicating that a large body of low grade milling ore may be expected.

All the rock is highly mineralized and very magnetic, a compass survey being impossible. Practically every vein shows cobalt bloom, and frequently the mixed bloom of cobalt and nickel; but chalcopyrite is not of such frequent occurrence as in some other parts of the Montreal River district, notably Bloom Lake.

As mentioned previously this region has never had



SHAFT AND POWER HOUSE, WHITE RESERVE MINE.

tite and associated minerals. The walls are so clean, and the natures of the vein rock and country so different in many cases, that it is hard to reconcile this particular mode of occurrence with the now generally accepted theory that the veins in diabase owe their origin to magmatic segregation. Veins having this structure have usually proved the richest in this district, since, in addition to the actual small lead carrying silver, the fine diabase of the lens is often impregnated with leaf silver; and two samples carefully taken which showed no visible metallic silver at all assayed,

a boom; perhaps for that very reason it is better off; for those who have claims in it have been content to do honest work and to prospect the area thoroughly, instead of promoting "Wild Cats" and shaking the confidence of the mining investor yet once more.

The photographs accompanying this article will demonstrate much more clearly than oceans of ink and reams of paper, that mining in this little-heard-of district is being carried on upon legitimate lines, and not with the view of filling the pockets of the company promoter.

GENESIS AND DEVELOPMENT OF THE COKING OVEN*

By W. Galloway.

The preparation of coke from pit coal appears to have been practised for at least 250 years. It was probably first begun owing to the increasing difficulty of procuring supplies of timber for making charcoal for metallurgical, malting, and other purposes in which the more easily obtainable and therefore cheaper coke was substituted for the more expensive charcoal. To commence with, and for many years afterwards, in fact far

into the last century, coke was for the most part made in exactly the same way as charcoal.

Large coal was stacked in circular or oblong piles in the open, partially or wholly covered over with a wet layer of fine coke-dust and with certain channels for the passage of air formed in them just above the level of the ground, and extending from their periphery to one or more vertical chimneys or holes in their centre. The circular piles were from 15 to 20 feet in diameter and 3 to 3½ feet high; the oblong piles 12 to 18 feet wide, 3 to 3½ feet high, and 30 to 50 feet long. The

*From paper read before the South Wales Institute of Engineers.