	I	II	III
ZnO	19.99	37.98	32.48—36.00
NiO		.24	
MgO	3.97	.54	
CaO		.76	
Al_2O_3	16.07	13.02	11.70
Fe_2O_3	8.01	(FeO) 5.61	
SiO_2	39.49	29.36	35.64
P_2O_5	.26		
H_2O	11.12	11.34	14.80 9.88
	98.91	98.85	

A small amount of carbon dioxide is present in the clay but this was not determined. Clays carrying considerable amounts of zinc have been frequently observed in connection with oxidized zinc ores. The analysis of such a clay from Moresnet is shown in (II) while (III) is an incomplete analysis of a zinciferous clay from Sterling Hill, N.J. These two clays have been described as distinct minerals under the names Moresnetite and Vanuxemite. They are doubtless of the same general nature as the clay from the H. B. Mine and are probably mixtures of some zinc mineral with clay.

THE ORIGIN OF THE PHOSPHATES

In the case of the deposits of zinc phosphates in Rhodesia the minerals are sometimes associated with organic remains in caves containing implements indicating that they had been occupied by men at an early period. The phosphates are sometimes deposited on bones or on bone breccias. At other times they were formed quite remote from animal phosphate deposits. The Canadian zinc phosphates as has been mentioned occur in crystalline limestone which is supposed to be carboniferous in age. The cave in the H. B. Mine had one dyke as a wall and another as roof. It was found that while the mine as a whole was unusually dry, there was an abundance of water entering the cave. The phosphoric acid necessary for the formation of the phosphates may have been derived from solution of apatite in the dykes or the source of the phosphoric acid may be in the carboniferous rocks.