The Black Band Ore Fields of Post Boy, Tuscarawas County, Ohio.

Black Band ore was first discovered in this field by Bates Croxen and David Miller, both of whom were citizens of Canal Dover at the time of the discovery. It was about the year 1872 that the first drilling was done on this territory by W. B. Rennie of New Philadelphia, at that time Manager of the Scotch Co.; after that, drilling was performed by Samuel Branner under the supervision of Bates Croxen, for Mr. A. Wilhelm, Mr. Anderson Croxen and others. This party expended $3000 for drilling of the black band ore seam, which was found on several farms in the territory, but before any development more than drilling was made, the Black Band Ore Co. was organized which was in the year 1876, by the following gentlemen: Mr. A. Wilhelm, then of Canal Dover, Cyrus W. Field, of New York, Gen. A. J. Warner, of Marietta, and Mr. Patton, of Pittsburgh, Pa.

The first purchase of ore land this company made in the Post Boy ore field, amounted to $30,000 and there has been several tracts purchased since. In the year 1876, operations by way of development commenced, and from that date to the year 1886, the ore was hauled in wagons from the mines to Post Boy station on the C. & M. R. R., the company paying as high as sixty cents for the hauling of 2240 pounds. They were soon to realize that the hauling was consuming a large share of their products, and determined to build a tramway from Post Boy station to the different mines. The cars they used carried on an average one and a half tons each, the trains being hauled by horses. There are at present, four mines in operation on the Post Boy ore field, viz.: Booth Hill, Gibbon Hill, Coates Hill, operated by the Black Band Ore Company; the fourth mine, the Camp Morris, is operated by Cox, Morris & Howells.

The ore from these mines is shipped to furnaces in different parts of the State, it being especially adapted for the making of foundry iron. This remarkable deposit of black band ore lies over No. 7, or the upper Freeport coal, and when regularly deposited is from eighteen inches to six feet in thickness. A sample of the ore after having first been calcined, was analyzed by Prof. Wormley, who reported the specific gravity as 3.411, water .25, iron sesquioxide 75, selicous matter 17.02,

allumina .6, manganize 1.65, lime 2.8, magnezia 1.48, phosphoric acid .773, trace of sulphur, total 99.573, metallic 52.5. The thickest ore, as a rule, is found in the swamps and after making a careful geological survey of the ore field, I find that the deposits lie very similarly to the No. 1, or Massillon coal vein which is remarkable in this particular. The deposits of this ore are very irregular and when found on a farm, or on one hill, it does not follow that it is present in any of the hills in that immediate neighborhood.

Another characteristic is, that where it has been discovered the deposits have invariably been large ones. Like all mineral fields there are many disadvantages and drawbacks which in this field are probably greater than in some of the coal fields, as it very often happens in this field, that the main opening for haulage has to be made in the highest point of the territory owing to the lowest place being in such a position that it would be impossible to get transportation for the product of the mine as the hills are very high and the outlets into the valley below are very few, consequently, the openings have to be made in the most convenient place for an outlet to the valley.

Another important feature in selecting a place to open a mine in this field is to secure the most advantageous place for kiln ground, as the ore has to go through a very careful process of calcining after it comes from the mine and before it is ready for the market. On its removal from the mine it is stacked on the ground in large kilns containing from 800 to 1000 tons, the height of which, should not exceed six or eight feet; the width and length are not important and can be made to suit the size of the kiln. After the kiln is finished the ore is then cracked in small pieces over the surface, then screenings from the kilns already burned are put in, and then it is fired. It has to be carefully watched while in the process of burning, for if at any time it is neglected, or the screenings slip from the side, exposing the surface ore to the air, the draft will cause the cold air to penetrate the kiln. When this happens, instead of roasting or cooking the ore, it causes it to melt, or run into a solid mass of iron; this makes it very expensive to break, which cannot be done except by the powerful strength of dynamite. The base of the Bird Run valley is about forty feet below No. 5 seam of coal, which invariably necessitates the building of an incline plane to lower the ore from the mines to the valley below. Although it is necessary to open the mines on the dip side of the vein, it furnishes another advantage, that of getting rid of the water without the aid of pumps; the plan generally adopted in this field is to put in a syphon. I have a syphon working successfully in the Camp Morris mine where there is a

large amount of fall on the outside to counteract the dip of the mine on the inside. I think as long as the mine does not dip more than from twenty-five to twenty-eight feet it will continue to work as successfully in the future as it has in the past.

One of the most interesting papers of the meeting was next read by Mr. James W. Haughee, District Mine Inspector from Nelsonville, on the Dog Mines of Muskingum County. This paper produced more inquiries than any paper previously read as the system of drawing coal from the mines by dogs, was by many present thought to be a thing of the past, and its general use in mines in any portion of the State created no little surprise. A vote of thanks was then given to Mr. Haughee for his paper.
