



MAMMOTH HOT SPRINGS.

grant, New World and Sheepeater districts. The ore has only been utilized in the fluxing of the more valuable metals with which it is found as a by-product. The day is dawning when it will be used in manufacturing mouldings of castings and mining machinery.

The coal industry of Park county is one of the oldest in Montana, the deposits at

HORR

yielding an annual output of many thousand tons of the best quality of lignite coal.

This coal mining town is located on the Park Branch railway, about forty-five miles above Livingston. The Yellowstone river forms its eastern boundary and the base of the Cinnabar mountain range its western limit.

The history of its coal industry dates back to 1864, when the Montana legislature, convening at Bannock, gave a company the sole right to mine coal from Cinnabar mountain. It was under the name of the "Red Streak Mountain Coal Company," and was taken from the Devil's Slide about a mile below the present townsite. Its development at this point finally ceased to occupy the mind of the public, and in 1875 G. W. Reese discovered the more favorable croppings at the present workings. He was returning home from a hunting trip, and, although much fatigued, lost no time in returning to the site where he staked out a claim of 160 acres.

After developing this property to a satisfactory extent it was sold to Major J. L. Horr in 1883, who

still retains the ownership of five-sixths of this mine, together with that of some three hundred more acres of coal land.

In 1887 the Park Coal and Coke company was formed for the improvement and development of these mines on a more extensive scale than previously. The enterprise was set on foot by H. F. Brown, the president of the company. He believed that the extent of the measures and the excellent coking qualities of the coal justified the expenditure necessary in erecting coke works. This move was gradually strengthened by the enlistment of a number of local capitalists. The original ovens were what are known as "bank ovens," being a combination of rock and brick, with the lower portion built of fire rock, while the crowns were constructed of fire brick, shipped from Pennsylvania for that purpose.

The first series of operations consisted of twenty ovens at the base of the mountains, just above the present site of Horr. Owing to the increasing demand for coke an addition of twenty ovens was made soon after, thus demonstrating the successful coking character of the coal.

In August, 1889, the management of the company was bestowed upon J. H. Conrad, who was now the heaviest shareholder. Under his administration additional ovens were erected and improved machinery introduced. Butte, East Helena, Great Falls and Anaconda were the main shipping points

for the coke, while they also supplied the demand upon the company for fuel coal.

The mines of the company are situated some distance back from the ovens and are developed by over a mile of tunnels through the coal, exposing an apparently inexhaustible supply. At first the coal was delivered to the bunkers by cars drawn by mules, but this method becoming inadequate a large stationary engine and hoist were put in position to furnish the motive power.

The coal bunkers are situated near the mines and have a capacity of many hundred tons. From these bunkers the coal used in the ovens was conveyed by means of a tramway to the bunkers in use at that point, while another tramway furnished transportation to the railroad for the fuel coal, delivering it directly into the cars.

By the mule and tramway method the cost of transporting the coal to the ovens was from twenty-five to thirty cents per ton, while the additional incidental expense made it practically impossible to reap a dividend on capital invested. In 1892 J. J. Howell, George Welcome and J. J. Rhoads proposed and constructed a flume from the mines to the oven vats, said flume being 10x12 inches and carrying a full head of water on an incline of four inches in eight feet. The chutes were so arranged at the mines that the coal entered this flume and was carried to the vats at the ovens by a current of water, and at the same time subjected to a thorough washing, thus performing this double office at the average cost of



NATURAL BRIDGE ON THE BOULDER.