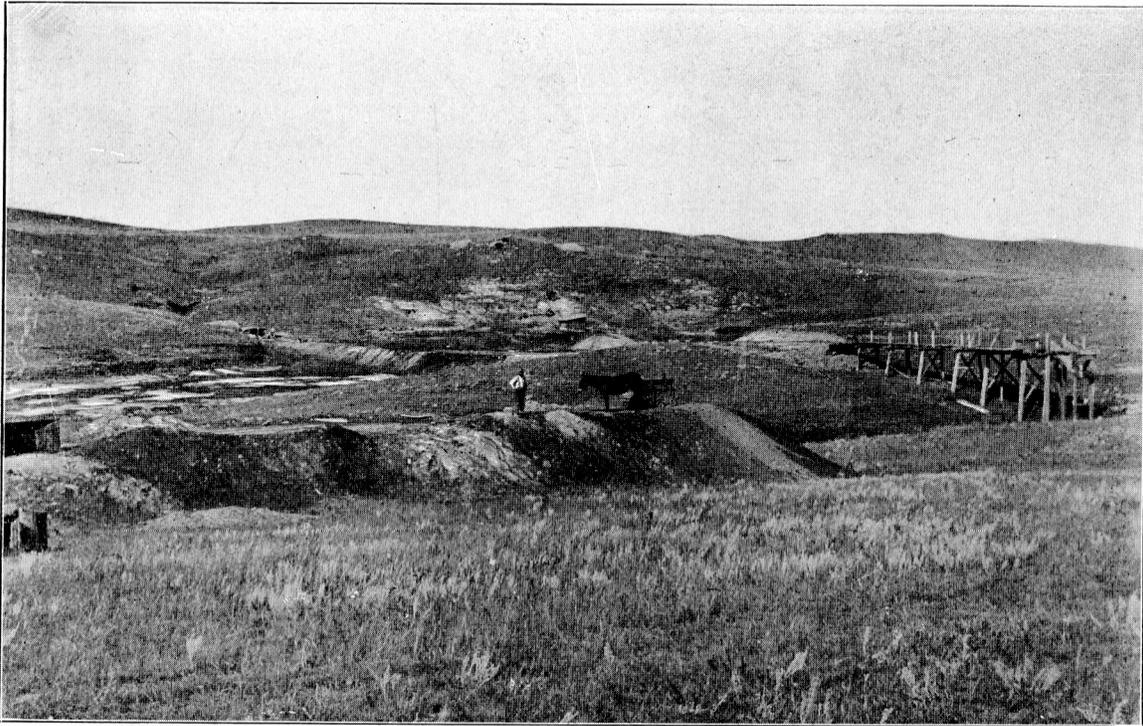


The Mine of the Consolidated Coal Company at Lehigh.—A remarkably fine seam of coal directly on the railroad, varying in thickness from twelve to sixteen feet, has been developed by this company. It outcrops along the Little Heart river for about three miles, from three to six miles east of Dickinson, and on account of the proximity of the mine to this city the coal is known throughout certain parts of the state as "Dickinson coal." Between Dickinson and Lehigh the first good exposure of this seam occurs in Township 139, Range 95, Section 7. The river here is cutting into a bluff of Laramie clays on the right side, while on the left is a large alluvial flat underlain with recent gravels which lie directly above twelve feet of coal. The lignite has been mined here both in the bluff by drifting and along the edge of the flat by stripping. The amount of coal that can be won by removing twenty feet of sand and gravel here is very large, the flat at this point embracing at least twenty acres. It is possible that in spots old stream channels are cut through the coal, reducing the thickness materially and even removing it altogether. Still, making due allowance for this possibility, the locality affords an inviting opportunity for strip-pit mining on a large scale. Practically the same conditions prevail a little further east and north of the track, and the lignite is mined at a number of points by stripping.

Thirty feet above the thick seam at these points a three-foot seam is frequently exposed, and above this an equal distance a thinner and more variable seam. The whole series is shown in figure 12, where the black bands represent lignite.



North Dakota Geological Survey.
Plate XXVI.
The Burton Mine at Sims.

The Burton Mine at Sims.

At the Lehigh mine the thick seam is twenty feet higher than at the exposure a mile to the west.

The characteristics of the seam are the same at both points, and, although there is a break in the exposure of half a mile, it may be safely affirmed that but one thick seam is exposed in this locality, and the difference in elevation is to be accounted for by the unevenness of the surface on which the coal was deposited. The seam contains no clay and only a foot or two at the top consists of the inferior "slack" coal. The clip of the seam

is slight, variable and
ing to the
southeast.

Fig. 12, Section at the Lehigh mine.

The "butt entry" system of mining is employed, which consists of running the rooms directly from the the mine entries. Entries are twelve feet high and from ten to twenty feet wide. The coal forms a great arch for a roof and practically no timber is used in the mine. Rooms are cut twenty feet wide, separated by six-foot pillars. When an area is about to be abandoned, the roof of the rooms is dressed down so that only two or three feet of coal are left. The great thickness of the seam facilitates mining, and the miners earn large wages at 40 cents a ton for room work and 60 cents for entries. The mine is practically free from water, the small amount entering it (October, 1902) being removed by a windmill. For ventilation air shafts with burning fire pots at the base are used. All hauling is done by horses, the large entries allowing the use of large animals, and a single horse brings to the surface cars containing three or four tons at one haul. A photograph of the tiple and side track at this mine is given in plate XXVII.