

Electric Mine, Township '160, Range 89. Section 12.-The Electric mine is situated directly opposite the Smith-Kenmare

mine on the Des Lacs lake. The mine is but a few rods distant from the main track of the Soo road, from which a spur is built. The past summer was partly consumed in the installation of the electric plant, which furnishes not only light for the mine, but power to the drill and undercut machines. One Morgan-Gardiner undercut machine is now in use, which will undercut the lignite, removing material from a space six feet wide, four feet long and five inches thick, in three and one-half minutes. Four more of these machines have been ordered. The outside equipment is sufficient for an output of 500 tons of lignite daily, but during the summer one carload only, mainly from the entries, was the extent of the output.

The seam measures between four and seven feet at this point, and shows a fairly uniform grade of lignite from top to bottom, as appears from the results of analyses, which are as follows :

Sample four feet above floor :	PER CENT
Volatile matter	34.41
Fixed carbon	57.95
Ash	7.64
Total	<u>100.00</u>
Moisture	32.90
Sample three feet above floor :	PER CENT
Volatile matter	36.56
Fixed carbon	59.19
Ash	4.25
Total	<u>100.00</u>
Moisture	35.00
Sample from bottom :	PER CENT
Volatile matter	34.44
Fixed carbon	56.58
Ash	6.98
Total	<u>100.00</u>
Moisture	35.10
Sample from top of seam :	PER CENT
Volatile matter	36.58
Fixed carbon	56.87
Ash	6.55
Total	<u>100.00</u>
Moisture	34.80

The moisture represents practically the full amount in the lignite as it stands in place in the mine. After exposure to the air for three weeks it falls to 15 per cent. This is true of lignites throughout the state.

This mine is worked double entry, and room and pillar, and ventilation is secured by a continuous fire at the base of an air shaft. The mine is comparatively dry, as but twenty barrels of water are pumped out in a day. In running the entry to this mine, a slip of twenty feet, with slickensides, was struck. (See figure 7.) The present mining is done twenty feet above the floor of the outside entry, and the loaded cars in their descent draw the unloaded to the top of the grade. The slip in this mine is a type of a very common occurrence in the mines along the river. Plate XXII shows the power house of this mine.