where the ground has been levelled and prepared for the construction of roasting piles.

In laying out ground for roast-piles, several important points have to be considered :

1. The economy of labour ;
2. The direction of prevailing winds ;
3. Protection of roasting ground from violent winds ;
4. Protection from drifted snow ;
5. Level of roasting ground, which must be as high as the spot to which the ore is to be transported, or at least, as high as the elevator, which is to raise it to the required level.

In building a pile, the corners of the rectangular space on which it is to be erected should be indicated by stakes or stones, and the sides of the area by lines drawn on the ground to guide the workman.

The first layer is formed by six inches in fine ore, which will prevent the baking and adhering to the ground of the coarse ore and make a net horizon between the worthless and the valuable stuff.

This layer is overlaid by wood from one and a half to two feet in thickness, on which lie the coarser ore and "ragging" to a depth of about seven feet ; then "fines," which cover the heap and concentrate the heat.

With reference to Copper Cliff Mine, let us now quote what Dr. E. D. Peters says in his paper published in the *Transactions of the American Institute of Mining Engineers*, vol. xviii.