

A REVIEW OF CONDITIONS IN THE DEPARTMENT OF
MINING ENGINEERING

Made for Principal's Committee

The trend of mining operations, including ore dressing and the smelting of non-ferrous minerals, shows the following influences which bear directly upon the education of the mining engineer:-

1. Operations are conducted on a much larger scale than formerly. The Utah Copper Company at its Bingham Canyon Mines in Utah has mined up to 70,000 tons per diem of metal-bearing, and an equivalent amount of barren, material. This is a steam-shovel mine, but breaking, shovelling and transporting 140,000 tons of material in 24 hours is decidedly impressive. Miami Copper Company hoists through one shaft 18,000 tons of ore per diem.

2. This large-scale mining has necessitated the use of larger-scale equipment. Power shovels are now being used in mines with a dipper capacity of 20 cubic yards.

3. Technical control of the operations is becoming more thorough and more exacting. This applies to all the stages of prospecting, mining, ore dressing and metallurgy.

4. Electrification is going on at a rapid rate. Even large power shovels, churn drills and other machines, which were formerly operated by steam, are now electrically driven.

5. Manual labour is being replaced by machines to a very great extent.