provided and the mine is still subject to "air blasts," owing to failure of support in old workings. The management is confident, however, that mining can be safely carried on at much greater depth if the stopes are promptly filled after the ore is extracted. The installation of the new hoisting engine is evidence of faith in the present methods.

Aside from the problems arising from the great pressure at the depth where mining is to be carried on, there are big problems in hoisting. The two companies are attacking this problem in different ways. Their success in overcoming such problems as depth has increased may well lead one to have confidence that the engineers of the Quincy and Calumet and Hecla companies will in both cases give good exhibitions of the possibilities of mining copper at still greater depths.

ONTARIO'S GOLD PRODUCERS

There has just been published by the Ontario Bureau of mines a report on mining in the Province during 1918. This contains the statistical review by L. W. Gibson, Deputy Minister of Mines, and the usual reports of the inspectors of mines. There is also presented the first report of the Joint Peat Committee and the report of the Advisory Gas Board. The publication is Part 1 of Vol XXVIII. Part II, entitled "Abitili—Night Hawk Lake Gold Area," the authors being C. W. Knight, A. G. Burrows, P. E. Hopkins and A. L. Burrows, was published some time ago.

A preliminary report on production in 1918 was published in March 1919 and much of the other information in this final report was given out by the Bureau several months ago. There is much new matter, however, bearing on progress in 1918 and in many cases information gathered during 1919 by the staff of the Mines Bureau has been incorporated.

An analysis of the gold production of Ontario shows that there was milled during 1918 875,593 tons of ore which yielded 411,878 oz. gold valued at $8,502,480 and 73,753 oz. silver valued at $71,366, a total of $8,-573,846. Of this $7,833,965 is credited to Porcupine and $636,667 to Kirkland Lake area. The 816,037 tons of ore from Porcupine mines yielded an average of $950 per ton and the 53,523 tons from Kirkland Lake mines yielded $11.81 per ton. The tonnage milled and the gold produced for every producer in Ontario is given.

Ten mines contributed to the Porcupine output in 1918,—Hollinger, McIntyre, Porcupine Crown, Dome Lake, Schumacher, Porcupine V.N.T., Dome Davidson, West Dome and Newray. Several of these are not producing at present owing to the high cost of operating.

The chief producer outside the two main areas was the Croesus. From this property 692 tons averaging $93.61 per ton was taken in 1918. The mine has been closed down for some time. The Patricia now idle obtained $10,113 from 1,502 tons of ore.

In Western Ontario the chief gold producers in 1918 were the St. Anthony, which is now idle.

While several of the properties which produced some gold in 1918 are at present idle, it is expected that the 1920 output will be much larger than that of 1918. The chief producers Hollinger and McIntyre are making great headway and the Dome is again in operation after a long period of non production. Progress of the Kirkland Lake mines was halted by labor troubles in 1919, but it is expected that the favorable development of this area will soon be reflected in increased production.

Assistance to the gold mining industry is coming from an unexpected source—the high rate of exchange. During the war the cost of gold mining increased rapidly and has remained high. The operators have been in an unenviable position as regards sale of their product, the price being fixed. It has been frequently been argued that the price of gold is too low, but the arguments did not help the producers in their battle wih increased costs. In the present exchange situation the gold producers have an advantage as welcome as it was unexpected. The selling price of gold in Canada remains nominally as before, but with a premium in acordance with exchange that makes it posible to secure the same price as could be obtained in the United States.

THE JOINT COMMITTEE OF TECHNICAL ORGANIZATIONS

The Joint Committee of Technical Organizations was formed in Toronto during the war to bring together engineers for war work. The several technical organizations having Toronto branches each sent representatives. The Committee did useful work during the war and it is now planned to put the organization on a peace basis. It has served the purpose for which it was brought into existence, but there seems to be good reason for the perpetuation of such organization as it bring together men from several branches of the engineering profession.

The first representative of the Toronto branch of the Canadian Mining Institute on the Joint Committee was Mr. W. E. Legsworth. He did not long continue to attend the meetings of the Committee, however, for his keen interest in the work started by the organization led to his being selected for the important position of Director of Vocational Training where he found so much work to do in all parts of the Dominion that he had to give up entirely his engineering practise Mr. Legsworth succeeded in interesting Prof. H. E. T. Hamilton in the work and the latter appointed Director for Ontario, built up an organization that did splendid work. The early meetings of the Joint Committee therefore were in no small measure responsible for bringing from the ranks of Toronto many engineers, two men who did work of great public value; work that has been creditable to the engineering profession and of great assistance to thousands of return soldiers.

The work of the Joint Committe has been naturally varied for there were many different things to occupy its attention. The Dominion Government evidently approved of the work, for during the war it granted money to help defray the expenses. This grant is no longer available and the new work and new methods of financing it make reorganization necessary.

The Toronto branch of the Canadian Mining Institute at a meeeting on Jan. 31, decided in favor of proposals to reorganize the Committeee and to appoint representatives. There was some discussion as to whether there was further need for the Joint Committee, and there was opinion expressed that such a Committteee might take too much authority on itself and undertake to act as representative of all the local technical societies.