underground so as to drive a big hydroelectric plant for a month. It is even possible to show that the expense of the nuclear explosives is small enough to make such an operation attractive. However, in a steady operation the nuclear explosions would have to be repeated approximately once a month. The cost of maintaining the equipment under such conditions makes this possibility look most unattractive.

A variant of this plan, however, may turn out to be most hopeful.* One may explode a nuclear charge of a megaton or more 2 or 3 miles underground in a region which for reasons of geological history happens to be at a high temperature. The nuclear explosion will not be used for producing heat but only for cracking the rock which already contains much greater amounts of heat energy. Thus a single 10-megaton nuclear explosion might make accessible a heat reservoir corresponding to 100 megatons. One attractive use of this possibility may be the distillation of sea water. At a depth of 2 or 3 miles the pressure exerted by a water column would be greater than the critical pressure of water. As a consequence, distillation can be carried out in a thermodynamically favorable manner without recourse to the usual expensive multi-effect distillation. Some plans have been considered in which sea water would be poured down into this broken underground region produced by the explosion. It is hoped that the porosity and permeability in the rubble resulting from the collapse of the cavity formed by the explosion would be sufficient to contain the salt left behind in the distillation process. If these hopes turn out to correspond to reality, sweet water could be obtained at a cost between $5 and $50 per acre foot. While in my opinion this is not very

*The following ingenious possibility was suggested by Professor George Kennedy of U. C. L. A.