The convulsions which closed the Potsdam period protruded through this formation enormous vertical walls of



Fig. 30. Outlines of Lake Superior.

molten rock, known by the general name of "trap," or dolerite, or delessite. The bursting through of these igneous materials tilted up the broken edges of the sandstone, and form-

ed between the lines of outburst deep valleys, which have become the bed of the lake. The sandstone which plunges beneath the water's surface on the northwest side of Kewenaw Point reappears on Isle Royale, which was formed, like Kewenaw Point, by an outburst of dolerite (Fig. 32).



Fig. 31. Section across Lake Superior, along the line XX, Fig. 30. a, a. The water level. b. Trap outburst north of the lake. c. Trap outburst forming Isle Royale. d. Trap outburst forming Kewenaw Point. e. Lake Superior sandstone and conglomerate. f. Eözoic and other rocks underlying the sandstone.

From the north side of Isle Royale the sandstone glides under the water again, and reappears upon the northern shore of the lake. The basin of the lake is therefore a geological valley—a "synclinal" valley—formed by the igneous eruptions upon the northern and southern shores. Its origin, as will be seen, is entirely different from the origin of any of the other lake basins of the chain.

The escape of the molten rocks of the region fused out the copper and silver, which were disseminated through the neighboring strata, and accumulated them in masses of great commercial importance. An enormous dike of