

PART II

ORE DEPOSITS

CHAPTER III

ORES OF GOLD

GOLD AND ITS QUALITIES—Gold (at. wt., 197.2; sp. gr. 19.3; melting-point, 1950° F.; standard price, 84s. 11½d. per oz.) is the most precious of the widely-used metals, and owes its influence on history and industry to its beauty, scarcity, and to the high malleability which renders it easy to work. As it does not combine with oxygen it does not tarnish or rust, and it can be used for decoration in extremely thin films as gold leaf. Its heaviness makes it convenient for coins. It must have been one of the first metals used by man, for its grains are widely distributed, conspicuous, and easily wrought into ornaments.

GOLD IN SEA-WATER—Gold occurs in nearly every country which contains old rocks, and as it is claimed to be a universal constituent of sea-water, in which it would occur as a double chloride, it should be precipitated by light and organic matter into most marine deposits. The view that gold and silver are normal constituents of sea-water was based upon their presence in Muntz metal which had been used as sheathing of a brig, the *Nina*, after three years' cruise in the Pacific (*Proc. R. Soc.*, viii, 1857, p. 294); the gold and silver were attributed—except for the slight amounts in the original metal—to electrolytic deposition from sea-water. This possibility was supported by Sonstedt's claim in 1872 to have detected gold in the Irish Sea. The weightiest evidence for the general existence of gold in the water of the oceans is that of Liversidge. Doubts have often been thrown upon