By Chas. H. Clapp the same rocks are referred to as the Vancouver group, which he has mapped and subdivided as follows:—

Vancouver group.
- Jurassic (?)—Metchosin volcanics (basalt, tuff, etc.).
- Jurassic or Triassic—Sicker series (andesitic flows, tuff, etc.).
- Lower Jurassic—Sutton formation (crystalline limestone).
- Lower Mesozoic, possibly, in part, Paleozoic—Vancouver volcanics (andesite, amygdaloid porphyries, tuff, etc.).
- Jurassic or Triassic (?)—Nitinat formation (crystalline limestone).

R. G. McConnell, in Memoir No. 38, Canadian Department of Mines, Geological Survey, refers to the deposits of magnetite on Texada Island as occurring at and near the contact of quartz diorites and crystalline limestone classified as the Marble Bay formation, also at the contact between quartz diorite and porphyrites assigned to the Texada group by O. E. LeRoy, of the Canadian Geological Survey. McConnell considers that the quartz diorite should be tentatively assigned to the Upper Jurassic age, the porphyrites to the Lower Jurassic, and the Marble Bay limestone to either the Triassic or Jurassic periods, but states that the ages assigned are tentative only, as definite fossil evidence is wanting.

ORE-DEPOSITS.

The general characteristics of the bodies of magnetite on the coasts of both Vancouver and Texada Islands show marked similarity as regards the genesis of the ore-structure of the bodies and associated minerals. All of the authorities agree that the genesis of the magnetite ore is due to contact replacement of the limestone, and sometimes also of the contact basic igneous rocks, and that the most important deposits belong to the contact-metamorphic type, although in Clapp's report he refers also to deposits occurring as impregnated schists in the Sicker series, as well as replacement or segregation deposits in the Sooke gabbro. The writer's observations show that the contact-metamorphic and replacement or segregation deposits are the only types that at present, at least, have commercial value; in fact, such is also the opinion of Mr. Clapp, as expressed in his report quoted.

The structure of each of the contact-metamorphic deposits examined by the writer is that of a mass or lens usually forming the end or flank of a ridge or occurring as a steep cliff standing out as a prominent landmark, which on account of its hardness has escaped destruction from the forces of erosion and denudation. These masses or lenses often reach dimensions of great extent in superficial area, sometimes several hundred feet in length and more than 100 feet in width, but have irregular outlines.

GENESIS.

Chas. H. Clapp, in the Memoir No. 13, Southern Vancouver Island, of the Geological Survey, 1912, pages 192, 193, gives the following theory of the origin of the contact deposits of magnetite, which is quoted below because the majority of the deposits examined by the writer belong to that type:—

"As the occurrence of the magnetite bodies is restricted to the contacts of the marble and the intrusive plutonic rocks, there can be little question that they owe their origin to the contact action of the plutonic rocks on the marble. This conclusion or theory has been substantiated by observations in many parts of the world. The original limestones, to judge from the residual lenses now remaining, and from the absence of other sedimentary rocks in the Nitinat formation, were comparatively pure carbonates of lime and magnesia. Although the Nitinat marbles have been invaded by the granitic rocks to such an extent that the present masses are virtually large 'roof pendants' in the batholiths, in no case do pure marbles occur