hydraulic plant to work these gravels. It is possible that other gravel deposits, sufficiently large to pay for the establishment of a plant, occur in other parts of the Leech River valley. As far as known these deposits are small, but the western portion of the valley has never been explored. Although the deposits of the San Juan valley are low-grade, thorough examination may reveal enough gravel to warrant the establishment of a plant designed to work large quantities of low-grade material. Thorough prospecting of the gravels on the upland between the two major valleys is also advised.

The upper parts of the Franklin River, China Creek, and Nanaimo River flow in a mountainous district formed of the Vancouver meta-volcanics, with intercalated lenses of limestone, both of which have been invaded by large granitic batholiths. Considerable mineralization has taken place near the contracts, and it is probable that the small amount of gold in the above-mentioned streams has been derived from mineral deposits of the character. As far as seen, the gravel deposits of these streams, which are likely to be gold-bearing, are very bouldery and restricted in amount.

Along the west coast of Vancouver Island, except where fringed by the Tertiary deposits, black sands which contain gold occur in the beaches. The gold, however, is quite flaky and would probably be saved only with considerable difficulty, as has proved to be the case farther north along this coast. The actual amount of black sand in the beaches of southern Vancouver Island does not appear to be large. Mr. Gallop, who has prospected the gravels and sands in the vicinity of Sombrio River, reports the occurrence of native mercury in the sands. The mercury was probably derived from such deposits as are known to occur on Cinnabar Creek, near Sechart, on the northwest side of Barkley Sound.

Vein and Impregnated Deposits.

Continuing, Mr. Clapp states that in the southeastern part of Vancouver Island many of the quartz-feldspar veins, which were probably formed during the intrusion of the upper Jurassic granitic rocks, have been prospected for gold entirely without success. The true nature of these veins, or apophyses, has apparently not been recognized; for since the feldspar has altered to sericite, it resembles on the weathered surface white milky quartz, and the veins have, therefore, the appearance of ordinary quartz veins. The veins also contain pyrite, which altering to limonite has stained the exposed surfaces, still further hiding the true character of the veins. On microscopic examination, feldspar is always seen to be present, and usually in excess. Such veins as these have not been shown elsewhere to be gold-bearing, and it is not likely, therefore, that they contain gold in commercial quantities in southern Vancouver Island, and their prospecting should be discouraged.

Mineralized shear zones occur throughout the limestone and meta-volcanics of the Vancouver group, but are best developed near the contracts with the intrusive granitic rocks. Similar mineralized shear zones also occur in the granitic rocks themselves, especially near the contacts. Deposits of this character are usually more important as possible sources of copper, but they also contain small amounts of gold. A typical example is the deposit on the Alfreda claim, situated on the east slope of Gordon River valley, three miles above the mouth. Here the diorite has been tremendously sheared, forming a shear zone about 25 ft. in width, which strikes N. 50 deg. W. The sheared diorite has the appearance of a chloritic or amphibole schist, but its true nature is readily recognized on microscopic examination. Although traces of the original minerals and texture are maintained, the sheared rock is composed chiefly of secondary minerals, which include sericite, uralite, biotite, muscovite, chlorite, and a little epidote. In the shear zone quartz lenses have been developed partly by replacement. The quartz of the lenses occurs in irregular, usually very small, grains, up to 2 or 3mm. in diameter. Associated with the quartz is a very little plagioclase feldspar and sericite. The quartz contains disseminated grains of pyrite and magnetite, which have altered somewhat to limonite, and is cut by later veinlets of quartz and calcite. The quartz rock is said by the owner of the claim, Mr. T. M. Baird, to assay $2 a ton in gold and 5 oz. of silver. Unless considerably larger bodies of higher-grade are found, these deposits are of little or no commercial importance.

SPECIAL CORRESPONDENCE

ONTARIO.

COBALT, ELK LAKE AND GOWGANDA

The discovery of some high-grade ore on the old King Edward mine at Cross Lake now being operated by the York Ontario under a five year lease, is of some interest. Too much importance can easily be attached to the discovery in as much as the King Edward has always yielded pockets of high grade ore and very rich wall rock, but general values were too small to make much profit. The new vein reported is at the adit level running parallel to the No. 5 vein which was always the strongest in the mine. The mine in former days was always staffed and mined on the scale of a big property, now that it is being operated on the basis of a prospect with a small force of men and at a minor expense it may be made to yield a profit.

It is understood that the Beaver Consolidated which secured the property of the Erie Cobalt as a water reserve, may try to find some silver there. The Erie was once famous on the Cobalt stock market, but as far as can be ascertained never produced an ounce of silver. The condition of the Cobalt market is now such however that it appears worth while to revive even such faint hopes as the Erie.

Application has been made to the Mining Commissioner for permission to pump out Kerr Lake in order that the silver that undoubtedly lays under its waters may be mined. According to the plans filed it is proposed to place a raft on Kerr Lake and pump the water into Giroux Lake, but these are probably only provisionary, and other means of emptying the lake may be adopted. Which ever way is taken there appears little doubt that the famous lake will be made accessible to mining operations this year.