Hermina Copper Mine.

A large amount of work has been done at the Hermina mine where several shafts were sunk along a distance of more than a mile, running from southeast to northwest. The nearest workings to the Massey mine are on a hill about two miles to the west, where shaft No. 1 was sunk to a depth of 400 ft., according to Mr. John Thomann, who was in charge of the property as caretaker. The shaft is in green chloritic schist, but a belt of coarse quartzite runs for 200 paces north 70 degrees east, with a vertical dip a little to the southwest. The green schist is cut by veins of quartz with some chalcopyrite.

Shaft No. 2 is a little northeast of the road on quartz veins in coarse granite, and is said to be about 25 ft. deep. Two other small openings in granite with some greenstone occur a little southeast.

No. 3 shaft, the most important of the Hermina workings, is said by the caretaker to be 500 ft. deep, and a large amount of drifting has been done at different levels. The shaft is in a valley between hills of granite, including masses and bands of green schist. No quartzite was observed here. The granite is partly fine grained and partly coarse and pegmatitic. It has entirely the appearance of the Laurentian; and from the low hill tops one can see the pinkish granite and gneiss extending for a long distance to the north. The rock dump shows much green schist and quartz.

A fifth of a mile northwest of shaft No. 3, there is another small shaft on a large quartz vein in granite, with strips of green schist. Granite and greenstone extend for a mile southwest from No. 3 shaft along the railway to Walford, and the whole surroundings of the mine suggest Laurentian and Keenwatin rocks, except for a small patch of quartzite on the road between No. 3 and No. 2 shafts. The presence of this quartzite and of the strip near No. 1 shaft make it probable that both granite and greenstone are later than the Sudbury series.

From the descriptions just given it will be seen that the Massey and Hermina copper deposits follow roughly the contact of the granite with the sedimentary series but that the ore is mainly found in green schist. They are not contact deposits in the strict sense, however, but may occur a quarter of a mile north or south of the actual contact either in the sedimentary series or in the mass of eruptives. There has been a considerable amount of faulting and fracturing of the rocks along this line, as shown by crush breccias and the numerous quartz veins, though the ore itself is more apt to accompany the schist than the quartz.

SURF INLET GOLD MINE, PRINCESS ROYAL ISLAND, B.C.

The Vancouver, B. C. "Daily Province" lately published some particulars of the taking up, under option of purchase, by the Tonopah Belmont Development Co., of a gold mining property on Princess Royal island, British Columbia. The following gives the greater part of the article that was printed in the "Daily Province," and, as well an official account of the property, printed last year:

"For the past four years a Vancouver company has been carrying on development work on a gold prospect at Surf inlet, on the west coast of Princess Royal island. The Surf Inlet Mines, Limited, the owners of the property, have just closed a deal with the Tonopah Belmont Development Co., concerning which the following is the first authentic information available.

"The terms of the deal are that the Tonopah company proceeds immediately with further development work, and while no amount is stipulated to be spent on such work, it is estimated it will require an expenditure of about $150,000. If, at the end of a year, the results are satisfactory to the Tonopah company, it will pay to the Surf Inlet Mines, Limited, the sum of $150,000 in cash, take over the property, and will organize a company to operate it. The Surf Inlet Mines, Limited, will have a one-fifth interest in the new company, for which it will be allotted that proportion in shares in that company.

"The Tonopah company has appointed Mr. F. W. Holler to take charge of the work, and he has arrived in Vancouver for the purpose. He is placing orders for machinery, which will include air compressors and drills, and is sending up 25 men with supplies to erect the necessary buildings preliminary to engaging the mine staff. The work will be superintended by Mr. Holler himself for the present. Steam power will be used to operate the compressor.

"In the event of the mine being taken over by the Tonopah company a hydro-electric plant, and a mill capable of treating 500 tons a day, will be installed. The latter will include stamp batteries, tube mills and cyanide plant, and will constitute the largest gold mining plant in British Columbia.

"The property was examined during the winter by Mr. Humphries, consulting engineer for the Tonopah Belmont Development Co., and other members of their engineering staff; Mr. Heller, president of the company, has several times visited Vancouver in connection with the deal. The reports stated that the development work done by the Surf Inlet Mines, Limited, had made available about 150,000 tons of ore, of an average value of $6.60 a ton making total value of about $1,000,000. This comes very close to the estimate made by Mr. C. S. Verrill, M.E., of Vancouver, who was called in by the company about a year ago to make a report on the property. The development work was carried out under direction of Mr. F. M. Wells, superintendent of the Surf Inlet Mine, Limited.

"The Tonopah Belmont Development Co. has its head office at 501 Bullitt Building, Philadelphia, Pa.; it is one of the strongest mining companies operating in Nevada. It operates at Tonopah two mills, each of a capacity of 500 tons a day, and has ore developed of a net value of $15,000,000. The ore averages about $20 a ton, mostly in silver. The officers of the company are: President, Clyde A. Heller; vice-president, W. M. Potts; secretary-treasurer, K. Kitte; assistant secretary-treasurer, R. G. Wilson.

"The Surf Inlet Mines, Limited, is capitalized at $1,000,000, of which shares to about $800,000 have been allotted. The directors are: President, Captain Duff Stuart; vice-president, E. A. Cleveland; treasurer, A. H. Wallbridge; Jonathan Rogers, A. B. Clabon, Dr. Burnett and A. H. MacNeill, all of Vancouver. B. G. Hawkins, of the office of Messrs. Cleveland & Cameron, civil engineers, Vancouver, is secretary.

"The deal was arranged by T. M. Verrill, who has been at work on it for some time, his personal knowledge of the property and recommendation of it as an investment carrying much weight with the Nevada men with whom he was personally acquainted.

"The Surf Inlet mine is well situated for the development of cheap hydro-electric power, so that, in the