

THE GEOLOGY AND ORE DEPOSITS
OF
PHOENIX
BOUNDARY DISTRICT, BRITISH COLUMBIA

BY
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CHAPTER I.

INTRODUCTION.

General Statement.

The Boundary district entered the ranks of the copper producing centres of British Columbia in 1900, and ever since has held the leading place in the Province, and for some years has been the premier copper producing district in Canada. According to the annual reports to the Minister of Mines of British Columbia, the ore mined and smelted in the Boundary district during the first decade (1900 to 1909) of production, contained 247,895,303 pounds of copper, as well as an important amount of gold and silver.

The principal mines of the district are: the Knob Hill-Iron-sides, Gold Drop, Rawhide, Monarch, Snowshoe, and War Eagle, situated at Phoenix; the Oro Denoro and Emma at Summit; and the Mother Lode and Sunset at Deadwood near Greenwood (Fig. 1, p. 13).

Phoenix afforded exceptional facilities for the study of the relations of the ore bodies through the extensive underground development of the several mines, and a detailed survey was made of the camp during the summer of 1908. The primary object of the survey was to secure all available information regarding the enormous low grade ore bodies and their geological relations, which, when properly correlated, it was hoped might

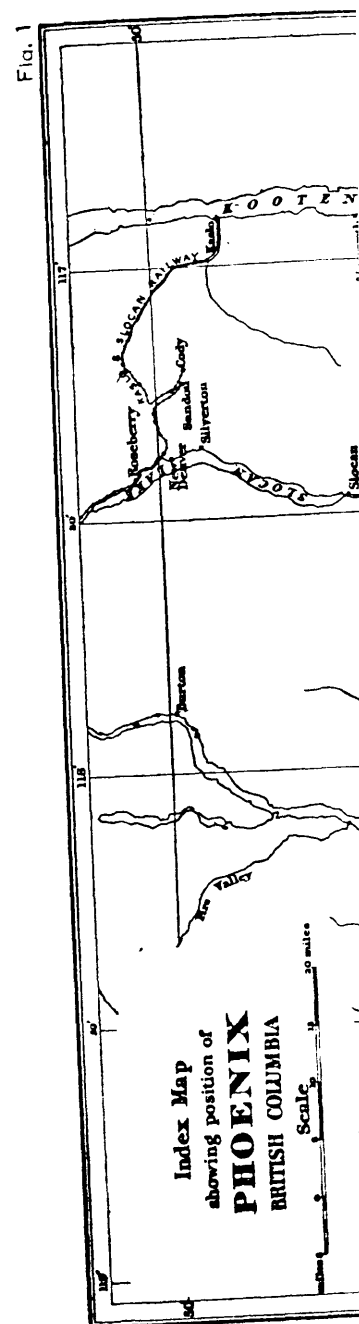
be of material assistance to mining development at Phoenix. It was also hoped that the broader relations could be applied with benefit at other mines, operated elsewhere in the district, where the ore bodies had similar associations. In a measure it is felt that such practical results have been obtained, and that much of the general information relating to the ore bodies may be used to advantage elsewhere in the district, in the case of mineralized zones similar to those occurring at Phoenix.

Field Work and Acknowledgments.

The particular area studied at Phoenix and in the vicinity is about 2 square miles in extent and includes all the principal mines of the camp. This report is based on the results of 3½ months field work in 1908, supplemented by information secured during brief visits to Phoenix in 1909 and 1910.

The topographical work was in charge of Mr. W. H. Boyd, the resulting map being published on a scale of 400 feet to an inch with a 20 foot contour interval. The geological work, both areal and economic, was in charge of the writer, who was assisted by Mr. C. W. Drysdale. The mapping of the areal geology was controlled by transit and stadia surveys, while the mine plans of the several companies served as a basis for geological work underground.

Acknowledgments are due to the officials of the Granby Consolidated Mining, Smelting, and Power Company, the Consolidated Mining and Smelting Company of Canada, and the Dominion Copper Company (now the New Dominion Copper Company), for their courteous and willing co-operation in permitting free access to all the underground workings, and the use of all available information connected with the mines. Permission was kindly given by the officials to publish such mine plans as appear throughout the report. The writer wishes to acknowledge his especial indebtedness to Messrs. A. B. W. Hodges, O. B. Smith, and C. M. Campbell for helpful suggestions and criticisms during the progress of the work, to Mr. Charles Biesel who placed two houses at the disposal of the party for the summer of 1908, to Mr. George Rumberger for information relating to the early history of Phoenix, and to the Messrs. McRae for permission to reproduce two of their photographs (Plate I, Plate IIA.)



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