

Mineral Deposits Between Lillooet and Prince George, British Columbia.

CHAPTER I.

INTRODUCTION.

This memoir is based on information obtained during a reconnaissance of the known occurrences of mineral deposits of possible economic value lying within the area served by the Pacific Great Eastern railway between Lillooet and Prince George (Fort George), British Columbia (Figures 1 and 2). The country adjacent to this railway between Squamish and Lillooet was examined by Charles Camsell¹ in 1917. The area traversed by the railway for some 75 miles north of Lillooet was examined and geologically mapped by G. M. Dawson.²

In 1918 certain minerals were urgently required for war purposes. Several of these minerals were said to occur in the area in question and the writer was instructed to examine and report on them. The territory covered in 1918 extends from Lillooet to about 140 miles north. Three and one-half months were consumed in field work, and of that period six weeks were spent in examining deposits distant, by road and trail, from 16 to 60 miles from the railway line. In 1919 two and one-half months were spent in completing the exploration along the railway line as far as Prince George about 300 miles north of Lillooet, and an additional month was devoted to the area traversed in 1918.

Nearly the whole of the first season was spent within the southern portion of the field, but the time taken in visiting outlying deposits during both the first and second seasons made any attempt at areal mapping on a comprehensive scale impossible. Sketch topographic maps were made of the principal deposits reported on and as much detailed geological work as possible was done in their vicinity. A certain amount of prospecting was also done whenever time allowed.

The mineral deposits examined are unusually diversified in character and some of them are of uncommon occurrence. They include hydro-magnesite, epsomite, sodium carbonate, clays, deposits of diatomaceous earth, lignite, muscovite and peridot, chromite, molybdenite, as well as occurrences of minerals carrying values in silver, lead, copper and gold, manganese, and nickel. Certain of these minerals that were quoted at high prices during the time the field investigation was made, are now scarcely saleable. There is, however, a prospect of a demand arising for them within a year or two. Others are not strictly "war minerals" and the demand for them has not been affected to so great a degree. Some of the deposits represent new and unexploited assets and will become more valuable as the country develops.

This report does not treat of any part of the Cariboo placer gold deposits which lie to the northeast, which have been the subject of special study by B. R. MacKay of this department.

¹Camsell, Charles. *Geol. Surv., Can., Sum. Rept.*, 1917, pt. B, pp. 12B-23B.

²Dawson, G. M., "Report on the area of the Kamloops map-sheet, British Columbia." *Geol. Surv., Can., Ann. Rept.*, 1894, vol. VII, pt. B.