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Note to accompany Maps of the Principal Auriferous Creeks of the Cariboo Mining District, British Columbia.

In 1885 and 1886 Mr. Amos Bowman was engaged in geologically examining the Cariboo mining district of British Columbia, the expense of the undertaking being borne jointly by the Geological Survey of Canada and the Government of British Columbia. Mr. Bowman was assisted by Mr. James McEvoy, and for a part of the time by Messrs. S. P. Tuck and L. R. Voligny. The year 1885 was necessarily given chiefly to geographical and topographical work, but in the following year Mr. Bowman devoted most of his own time to the geological and mining features. His general report was published by the Geological Survey in the volume for 1887-88, together with a geological map of the district on a scale of two miles to an inch, and maps on a large scale of Hixon Creek (2) and Island Mountain and Mosquito Creek (1).

It was intended to follow the report above mentioned by a second, in which detailed descriptions should be given of the principal auriferous creeks of the district. Maps of these creeks were prepared by Mr. Bowman and lithographed, but as he had in the meantime been obliged to sever his regular connection with the Survey in favour of urgent private business, the final correction and printing of these maps was only completed after long delays, and in June, 1894, Mr. Bowman died, without having written any descriptive matter to accompany these mining maps.

As the maps themselves contain, in the form of notes, the principal data required to make them intelligible, it appears under the circumstances to be best now to issue them to the public, particularly as the present renewed interest in mining in Cariboo is likely to render them of considerable immediate utility.

The place of each of the eight maps enclosed, is indicated on the general geological map first referred to. They are accompanied by one section on a separate sheet, that of Harvey Creek.

In addition to the notes printed upon the maps themselves, the following brief explanation may be of service in connection with them.

The superficial deposits, to which they chiefly apply, are in the Cariboo mining district, broadly divided into those of pre-glacial and

those of post-glacial age. Where the boulder-clay is present, it separates these two classes of deposits, of which the first-mentioned may be included in the later Tertiary (probably for the most part Pliocene) while the second class are described as Pleistocene, and are no doubt largely made up of the rearranged material of the older beds, as well as of that of the boulder-clay. Both classes of deposits are largely represented by gravels, but sands and silts are also not wanting. The old pre-glacial channels of the streams are usually filled to a considerable depth by Tertiary or Pleistocene deposits, or both, and in the Tertiary gravels of the valleys, most of the highly auriferous ground worked by deep drifting, as well as much that has been worked open-cast, occurs. The actual channel or "gutter" of the old stream usually contains the richest accumulations of "heavy" gold, but much of the "side ground" is also often remunerative. The gold worked in the beds and banks of the present streams is generally associated with the Pleistocene or post-glacial gravels, and deposits of the same character and age form "benches" or terraces along many of the valleys, at varying heights. These, where they contain sufficient gold, are best situated for the purposes of hydraulic mining. The approximate contour-lines and sectional diagrams will be found of special importance in this connection.

The old channels of the various streams are marked upon the maps by heavy red lines, or where unproven and more or less conjectural as to position, by heavy broken lines. The area known, or supposed to be occupied by the Tertiary deposits (in so far as these lie below the present drainage level) are indicated by a heavy red stipple, while post-glacial gravels and sands are shown by a light red stipple. Parallel horizontal red lines indicate finer alluvial deposits of still more recent date, often old lake beds, floored with silts or clays.

It must be remembered, however, that our actual knowledge of the older or Tertiary deposits is chiefly derived from shafts and other sinkings made into them, and that the newer beds may elsewhere conceal important extensions of them.

Much information on the position of the richer parts of the deposits in the several valleys, may be obtained by noting the distribution of the areas where placer mining has been carried on, as well as those parts of the buried channels which have actually been worked by drifting. Further details respecting the yield of different parts of the creeks will be found recorded in the "Mineral Wealth of British Columbia" by the writer, included in the report of the Geological Survey for 1887-88; also in the annual reports of the Minister of Mines of British Columbia.

GEORGE M. DAWSON.

Geological Survey of Canada, April, 1895.