OROGRAPHY OF THE SELKIRK RANGE.

tained in it are those of the Selkirk series, which is believed to represent the upper part of the Bow River series, together with the whole of the Castle Mountain group of the Rocky Mountain section. The position of the main axis of this synclinal nearly corresponds with Loop ereck, on the rnilway, to the west of Glacier station, while a subordinate synclinul trough runs immediately to the east of the same station and nearly coincides with the actual watershed in the pass.

The eastern edge of this synclinal is believed to be bounded by a great fault, which is supposed to cut the line of railway near Cedar creek (about a mile and a half below Surprise creek) and to run on southward along the upper part of Beaver valley. This fault seems to have the character of a number of those found by Mr. McConnell in an adjacent part of the Rocky Mountains, viz., that of a fractured anticlinal, thrust up on the west side in consequence of pressure acting from that direction.

To the east of this great fault, the section shown in figure 1 must yet be considered largely hypothetical, as the structure here becomes more compliented and there is reason to suspect further extensive faulting. There are, however, grounds for the belief that, in a wide additional synclinal on this flank of the range, together with the repetition of a great part of the Selkirk group, still higher strata representing the *Graptolite*-bearing shales and the Helysites beds of the Roeky Mountains are included. The section ends on the east at the upper Columbia valley, the line of which is coincident with an important anticlinal exposing rocks of the Castle Mountain series, which dip westward into the base of the Selkirks and eastward into the opposite base of the Rocky Mountains.

Figure 1-Sketch section through the Selkirk Range, British Columbia.

ATCHERIN ADD MIAN

THICKNESS.

If the writer is correct in attributing a total thickness of about 40,000 feet to the Cambrian (with such part of the Cambro-Silnrian as may be included in the upper portion of the Castle Mountain group) of the Selkirk range, the entire thickness of the Paleozoic obtained by adding to this that of the remaining higher members of the adjacent part of the Rocky Mountains would be about 49,000 feet. Supplementing this with the thickness of the Kootanie and other formations of the Cretnecous, seen either in the Rocky Mountains or in the neighboring foot-hills toward the east, we obtain a total of 69,000 feet.

Though, however, the sections which give this enormous aggregate are all comprised within a distance, measured across the axis of disturbance, of little more than 100 miles, it is improbable that the whole of the beds in their maximum thickness ever formed a single column. The Cambrian evidently thickens greatly at its western margin, where not only has the upper part of the Paleozoic not yet been found, but where also there is reason to believe