

case the drift has travelled for a distance of 100 miles or more. Pebbles from other rocks are known to have been borne over great distances, although the evidence is not always so unmistakable as in the case of the hematite pebbles, when attributing the distribution of certain portions of the drift to glacial movements.

Judging by the character of the drift deposits which have been described, and from observations made in other portions of the Yukon territory, it is evident that running water, still water and ice have all contributed directly towards their accumulation.

During the glacial epoch glaciers descended the Stewart valley from the elevated region around its upper waters. At the period of maximum accumulation the valleys were all filled with moving ice and only the upper portions of the higher mountain groups were uncovered.

The general level of the ice in that area was about 5,000 feet above sea level. In the vicinity of Frazer falls the ice reached a level of 4,000 feet and the westerly limit of glaciation occurs near the mouth of the McQuesten river. Although the ice sheet was thick enough to over-ride several of the ridges and lower mountains its movement appears to have been controlled to some extent by the topography, for at the few places where glacial groovings and striae were observed they indicated a movement in the direction of the principal valley.

The events of the glacial period have affected the topography of the Stewart River basin both by erosion and deposition. The hills were smoothed and rounded in outline and the valleys were widened by the removal of rock waste from their slopes, and this material was transported and irregularly deposited at certain localities where the margin of the ice sheet was constant for some length of time during its withdrawal.

In the higher mountain groups glacial activity continued and sent down ice through side valleys after the main valley glaciers had retreated. The river at several points has cut through mounds of unsorted drift which were probably the terminal moraines of these local glaciers. These local glaciers extending across the main valleys acted as obstructions to the drainage, and extensive lakes were formed into which the glacial streams washed their burden of debris, the coarser material being deposited near the point of discharge, and the finer material such as rock flour being carried farther before deposition.

ECONOMIC GEOLOGY.

That portion of the region which is best worthy of the attention of the miner in search of placer gold is the area situated east of Mayo lake and south of the Beaver river.