

## ECONOMIC POSSIBILITIES OF YUKON—CAIRNES

White rivers. Gold is also reported to have been found on Albert creek which drains into Sekulmun lake, as well as along various streams draining into Teslin lake and river, also along Big Salmon river, and on a number of the smaller tributaries of the Upper Yukon.

As concerns the future of the placer mining industry of Yukon, much is still to be expected from the as yet unprospected areas included in the vast unknown 83 per cent of the territory. Of this 134,000 square miles, certain areas or belts are especially promising from a geological point of view. In the Klondike, two main conditions appear to account for the extreme richness of the placer deposits. In the first place, the country rock or general bedrock consists dominantly of the old, probably Pre-Cambrian schists, which are much metamorphosed and highly mineralized; and secondly the district has not been glaciated, consequently whatever gold became concentrated in the stream gravels, whether old or recent, remained there until the miner arrived, and was neither swept away and scattered by glacial ice, nor became buried under boulder clay or other glacial accumulations. The old schistose rocks contain a great amount of irregularly distributed quartz, either in masses, veins, or lenses of all shapes and ranging from microscopic to several feet in thickness; and the placer gold of the Klondike originally occurred in these old schistose rocks, associated largely with the quartz. As the hills and valley walls became worn down by subaerial destructive processes, the gold originally contained in the disintegrated rock material became gradually concentrated by the streams, and was accumulated in the gravels which are being mined to-day.

In various parts of Yukon where glaciation has been effective, including Kluane and other well known districts, the valleys have been invaded by vast masses of glacial ice which has scoured the sides and floors of these depressions, and in some cases has transported and scattered the stream gravels with their gold content. Also whether or not the old gold-bearing gravels have been disturbed, the former channels with whatever of the original gravels and gold they may still have contained, became buried under vast quantities, often hundreds of feet in thickness, of boulder clay and other glacial accumulations. Thus even