

area. A third area of about a square mile occurs on Mistinikon lake about a mile south of the mouth of Powell creek.

LITHOLOGICAL CHARACTER.

The Kiask series includes conglomerate, arkose or greywacke, and slate members. Alteration of some of the upper arkoses has produced types rather highly calcareous.

Conglomerate.

The basal conglomerate of the Kiask series varies a great deal in thickness and composition from place to place. On Rahn lake, in Bannockburn township, where only erosion remnants of the basal conglomerate are seen, it is composed of the debris of a white granite cemented together with a small amount of black argillaceous matrix. At this point it lies directly on the surface of a rhyolite, and occasional pebbles of rhyolite and other Keewatin rocks are present.

At the west end of Boyer lake, in eastern Montrose, the conglomerate again lies directly on the rhyolite. This locality is the only one where red granite pebbles were observed in the conglomerate. The pebbles throughout a thickness of several feet at the base were largely of red granite and coarse pegmatite with red feldspar; above this the red granite was replaced by the more characteristic white granite debris. The layer of conglomerate is rather thin, in the neighbourhood of 25 to 30 feet, and is overlain by a few feet of a pebbly argillite identical with the slate conglomerate of the Cobalt series. Over this lies a fine-grained, rather soft greywacke which will be described later.

In the western part of Midlothian township, along Niven's line, there are about 300 feet of interbedded conglomerate and coarse arkose. It increases rapidly in thickness to the east and in the neighbourhood of Fault lake, about 3,000 feet of conglomerate appears to have been piled up. To the southeast of Fault lake the conglomerate thins again, and south of Midlothian lake there is only a coarse grit in places with an occasional pebble.

The basal part around Fault lake is a heavy granite conglomerate, so completely made up of granite debris that on badly weathered surfaces the outlines of the pebbles are lost and the rock in places might be taken for a white granite. White, subangular granite boulders of all sizes up to 1 foot in diameter form approximately 95 per cent of the rock. The remainder consists of various coloured cherty tuffs, rhyolite, and serpentine. The granite varies in composition from syenite to types with about 15 per cent of quartz. The grain of most of the pebbles is very coarse. There is little matrix, and what occurs is apt to be rather quartzose.

The white granite part of the conglomerate around Fault lake is about 200 feet thick. At this horizon its character changes abruptly, and there appears the more characteristic greenish-grey conglomerate of the Kiask series, as seen around Midlothian lake. It is beautifully exposed between Fault lake and Midlothian lake, by a recent fire which has swept the surface free of vegetable debris. Although it still contains granite pebbles and boulders up to 1 foot or more in diameter, such pebbles constitute only