

broken face. The Kiask series on the contrary contains practically no such debris. Reddish granite pebbles were observed in the conglomerate at the west end on Boyer lake, but in no other locality. The most painstaking search failed to reveal reddish beds or grains of red feldspar in the rocks at any other place, or in any horizon of the series.

STRUCTURE.

Internal.

Stratigraphy. In the Midlothian area the Kiask series consists of conglomerate at the base, overlain by a band of slate, then by thick beds of arkose or grit. The conglomerate varies both in thickness and composition from place to place. Around Fault lake the base consists of about 200 feet of the heavy, white, granite conglomerate previously described, overlain by 2,000 to 3,000 feet of greenstone conglomerate. The conglomerate thins to the east and to the west. On Niven's line the total thickness is only about 300 feet, and all the exposed rock is greenstone conglomerate, so that the granite conglomerate is either quite thin or altogether lacking. Between the south end of Midlothian lake and Lloyd lake the conglomerate is also only 200 to 300 feet thick, and in one place is almost altogether replaced by a coarse grit.

Directly overlying the conglomerate a bed of black argillite or slate was observed on Midlothian lake, on Niven's line, and on the Midlothian-Montrose boundary. This bed is about 50 feet in thickness. It was not traced through the area, but its location above the conglomerate in both cases and its uniformity of thickness renders it probable that it is continuous between these points.

Beds of arkose or grit interspersed toward the base with beds of conglomerate overlie the slates. The beds of conglomerate are few and average about 6 feet in thickness. The grits vary in texture from coarse material carrying small pebbles the size of a pea to very fine-grained greywackes or sandstones. At least 6,000 feet of these arkoses are exposed on Midlothian lake. The total thickness is not known, owing to the lack of sufficient good outcrops for structure determinations. The arkose and its interbedded conglomerates are composed almost entirely of material drawn from the underlying rhyolites and their associated beds of cherty tuffs.

The relation of the carbonated arkoses found in Montrose township on both sides of Midlothian creek, to the arkoses of Midlothian lake, is not known, as the exposures were not good enough for structure determinations. They were concluded, however, to overlie them, since such carbonated phases were not found anywhere on Midlothian lake above the conglomerate.

In the Bannockburn area the succession differs somewhat from that of the Midlothian area. The base, which has been seen on Boyer lake, Rahn lake, and north of Sinclair lake, is a white granite conglomerate, about 30 feet in thickness. At the west end of Boyer lake the lower 5 or 6 feet of the conglomerate contains many pebbles of granite and pegmatite containing red feldspars instead of white. Such a condition was not observed elsewhere. The pebbles of the granite conglomerate are embedded