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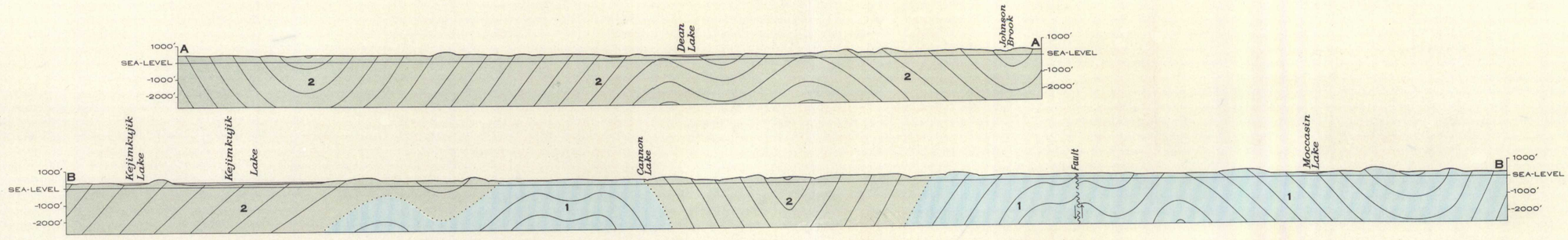
ISSUED 1938



Structure sections along lines A-A and B-B

PHYSICAL FEATURES

The area is a plain of low relief sloping to the southeast over which are scattered more than 600 symmetrical hills composed of debris deposited beneath the ice sheet that at one time occupied the region. These hills, known as drumlins, are elliptical in plan, from one quarter to one mile long, and up to 200 feet high. Their longer axes follow directions varying between N. 10°W. and N. 45°W. Usually the highest point is near the northwest end and frequently the southwest side of the hill is the steeper. The drumlins make good farms and it is their presence that give rise to the agricultural district of Lunenburg and Queens counties. They are common everywhere except along the northern margin of the area and in the southwest corner between Kejimkujik and Rossignol lakes. On the barrens around Whiteburn and north of Tupper lake outcrops of bedrock are plentiful. Elsewhere glacial drift hides the bedrock except in a few places as along the shores of lakes and streams.

GENERAL GEOLOGY

The area is underlain by sedimentary rocks belonging to the Meguma or Gold-bearing series and granite invading these rocks. The Meguma series is presumably of late Precambrian age. It consists of two formations. The older formation is the Goldenville (1) and it consists mainly of grey or blue-grey quartzite (whin) that weathers pale grey. Narrow beds of blue-grey to green-grey slate occur with the quartzite but form only a small part of the formation and are poorly exposed. Upwards in the formation the quartzite becomes more argillaceous, slate bands become commoner and wider, and at the summit of the formation in a zone a few hundred feet thick, the Goldenville quartzite grades into the overlying Halifax slate. The boundary between the two formations is placed at the highest exposed bed of quartzite.

The lower part of the younger member of the Meguma series, the Halifax formation (2), consists of green-grey and grey slates and argillites such as are well exposed around the Pleasant River Barrens dome. These pass upwards into purple, blue-grey, green-grey, grey and black slates that are softer and cleave more readily than the slates of the lower part of the formation.

The granite (3) that occupies the northeast and northwest corners of the area and that outcrops on islands in Minard bay, Kejimkujik lake, is part of a great body extending from Halifax into Digby county. It is a coarse, grey to grey-pink, biotite granite in places holding large crystals of feldspar. Many inclusions of altered sediments lie in the marginal part of the granite body.

STRUCTURAL GEOLOGY

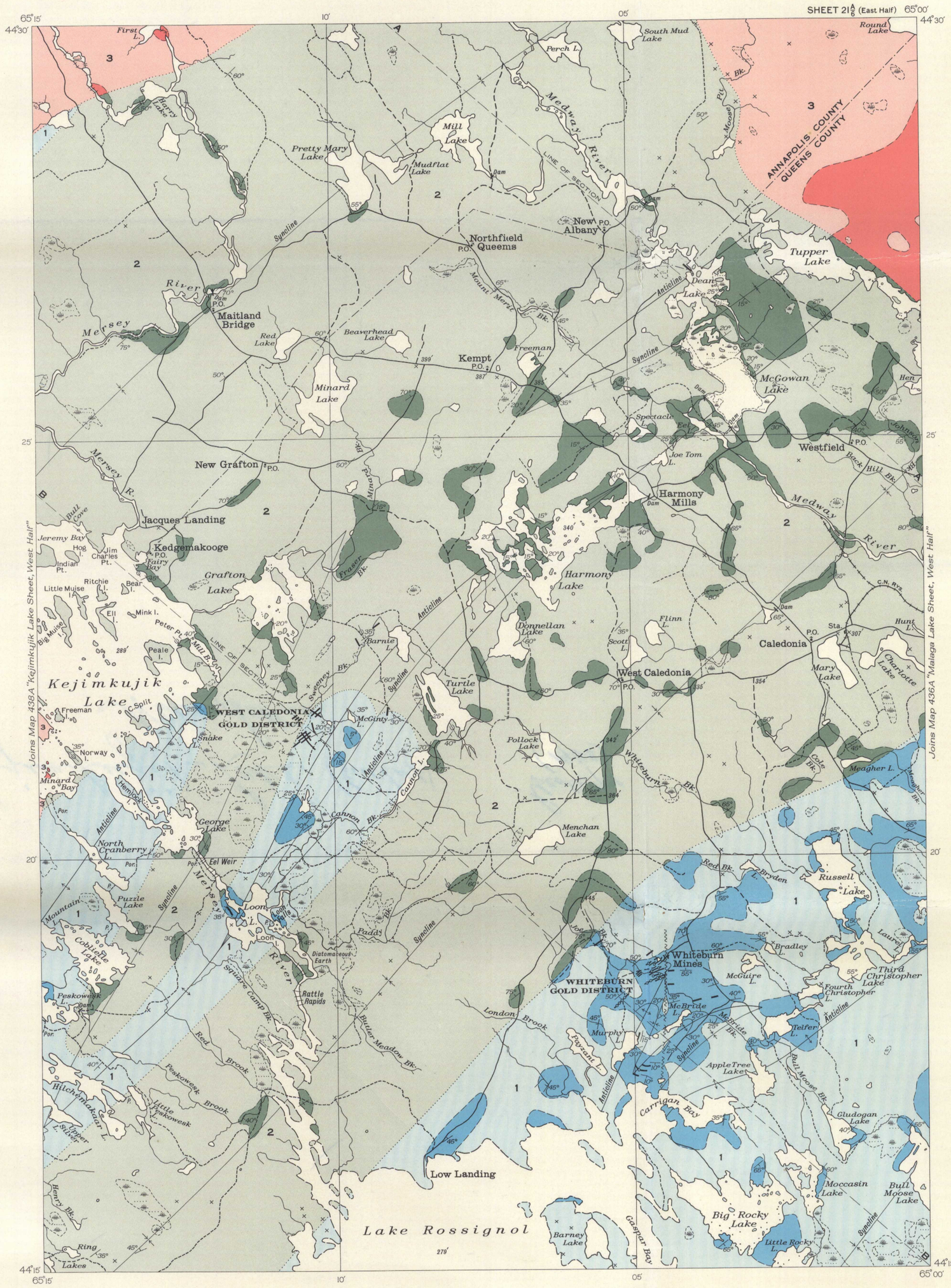
The Meguma or Gold-bearing series lies in a succession of gentle folds without known overturning. The quartzites are smoothly folded. The slates exhibit many minor folds and fractures. The details of the structure on which the Whiteburn gold district is situated are imperfectly known but there is little doubt that the area is crossed by a north-south fault that caused a large horizontal displacement.

ECONOMIC GEOLOGY

Gold-bearing quartz veins have been found in two areas. In the Whiteburn district from which more than 10,000 ounces of gold have been produced, the veins (chiefly interstratified veins) occur on a plunging anticline and most of them lie west of a north-south fault that crosses the structure. Scattered quartz veins have been found east of the fault but have yielded only a small amount of gold.

In the West Caledonia gold district, quartz veins occur on a plunging dome. On the north side of this dome, rich gold-bearing quartz has been found in the drift. Much trenching has been done in an attempt to find the source of the gold and a few quartz veins have been found.

Gold-bearing quartz veins may occur in the anticlinal area of Goldenville quartzite along the south shore of Kejimkujik lake but the drift here is so thick as to render prospecting very expensive and therefore little has been attempted.



LEGEND

NOTE:– Outcrops or areas of outcrops of a formation are shown by deep colour; inferred extensions of a formation beneath drift are shown by a lighter tint of the same colour. Small outcrops are shown thus: ×

PALAEOZOIC
DEVONIAN
3 — Granite

PRECAMBRIAN (?)
MEGUMA (GOLD-BEARING) SERIES
2 — HALIFAX FORMATION: black, grey and green slate and argillite
1 — GOLDENVILLE FORMATION: quartzite (whin) and slate

Quartz veins
Shaft deeper than 50 feet
Bedding (inclined, vertical)
Anticlinal axis
Synclinal axis
Fault (defined, assumed)
Glacial striæ

Road (well travelled)
Road (not well travelled)
Trail or portage
Railway
Bridge
Post Office
County boundary (approximate)
Dam
Fall or rapid
Marsh
Height in feet

Compiled and reproduced from surveys by the Bureau of Geology and Topography, and from information supplied by Federal Government Departments. Geology by E. R. Faribault, P. Armstrong (1935), and J. T. Wilson (1936).

Approximate magnetic declination, 22° West

SCALE, 1 INCH TO 200 MILES

MAP 437A

KEJIMKUJIK LAKE SHEET

(EAST HALF)

ANNAPOLIS, AND QUEENS COUNTIES
NOVA SCOTIA

Scale, ~~63,360~~ or 1 Inch to 1 Mile

Miles 1 0 1 2 3

Kilometres 1 0 1 2 3 4 5

437A

437A