

### LEGEND

**QUATERNARY RECENT**  
 Mainly muck

**PLEISTOCENE GLACIO-LACUSTRINE DEPOSITS**  
 Sand  
 Silt  
 Clay

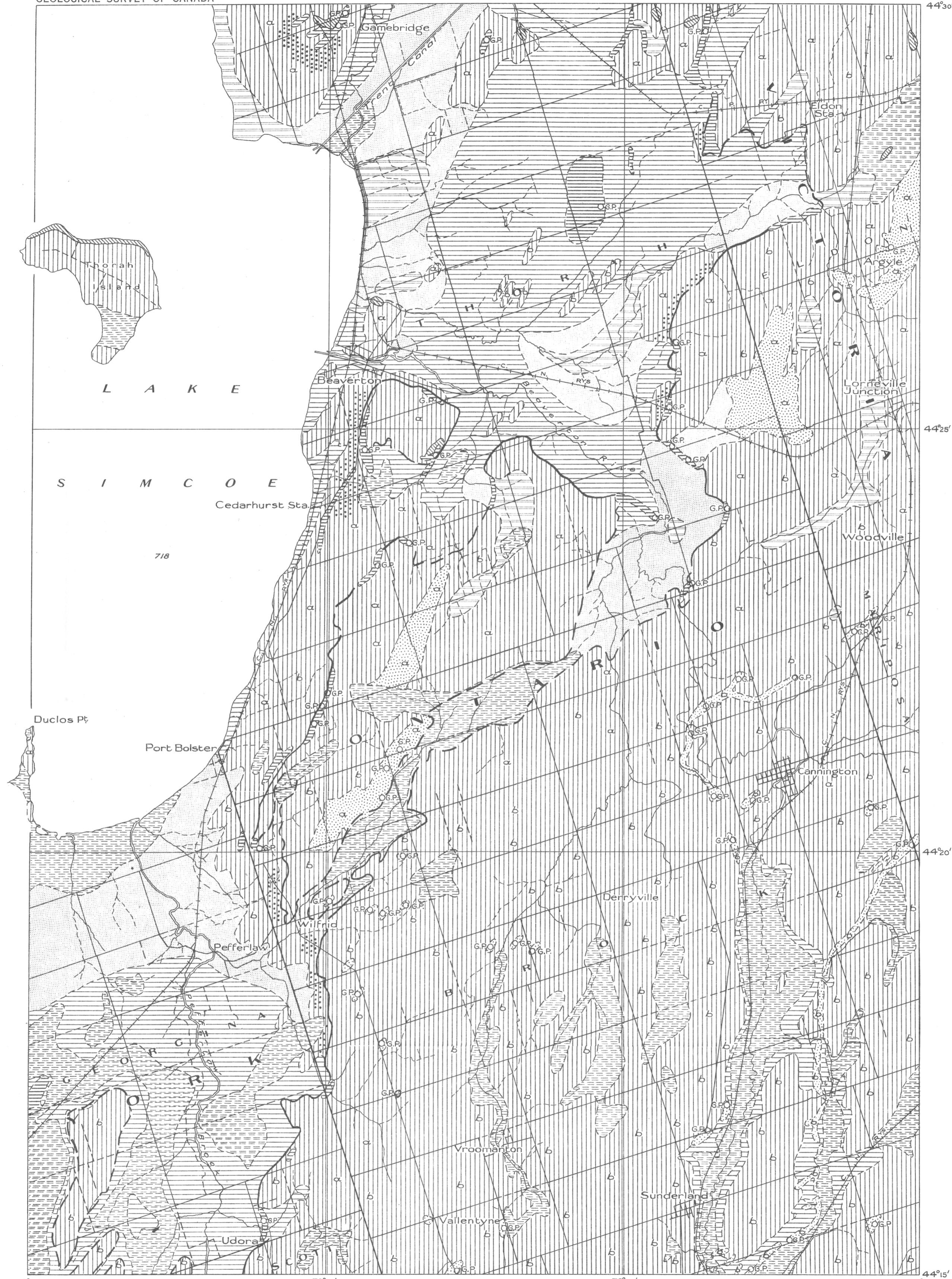
**GLACIO-FLUVIAL DEPOSITS**  
 Beach sand and gravel  
 Sand and gravel; a, kame; b, esker

**GLACIAL DEPOSITS**  
 Calcareous till; a, ground moraine; b, drumlin

**BEDROCK OUTCROPS**  
 Palaeozoic: mainly limestone

Abandoned shoreline (main Algonquin beach) .....  
 Wave-washed terrace .....  
 Gravel pit ..... O.G.P.

Geology by W. A. Johnston, 1914; R. E. Deane, 1947  
 Descriptive notes by R. E. Deane



### DESCRIPTIVE NOTES

Relief in the Beaverton map-area varies from 718 feet, the level of Lake Simcoe, to 1,060 feet in the southeast corner. The northern half of the area is a relatively flat plain broken here and there by low drumlins and by bluffs of glacial Lake Algonquin. The southern half is gently undulating to rolling, due mainly to the occurrence of drumlins and eskers. Ordovician limestone is exposed or is near the surface along the north side of the map-area, just south of Beaverton, and along the north shore of Thorah Island. The limestone dips gently to the southwest, and is covered by glacial and glacio-lacustrine deposits that become increasingly thicker in that direction.

Beaverton River and its tributaries form the principal drainage system. The river itself is sluggish and meandering, and its course south of Cannington is through an extensive swamp. The only other stream of consequence is Pefferlaw Brook in Georgina township. These streams follow pre-Wisconsin drainage channels, as indicated by bedrock data from ground-water surveys.

Deposits of glacial origin include ground moraine and drumlins, and consist mainly of calcareous, boulder-clay till. The depth of the ground moraine varies from a few inches, near bedrock exposures in the north, to more than 100 feet in the south. The surface of the ground moraine is gently undulating except where interrupted by drumlins. The latter are scattered throughout the area, and are particularly abundant west of Cannington. They vary from elongated forms 10 to 20 feet high, in the north, to oval or irregular hills as much as 120 feet high, in the south. Stratified sand and gravel deposits are commonly found on the tops or sides of the higher drumlins east and south of Wilfrid. These deposits form an intrinsic part of the drumlins, and are above the highest level of glacial Lake Algonquin, but as they have no common elevation and as no visible trace of former shoreline exists, it is improbable that they are of glacio-lacustrine origin formed in temporary glacial lakes prior to Lake Algonquin. Some of the thicker deposits are important local sources of gravel.

Glacio-fluvial deposits of sand and gravel occur in several localities within the map-area. Most of them are irregular in shape and composed mainly of gravel. They are mapped as kame deposits, but their elongation and general orientation in the direction of ice movement might suggest that they are drumlins. An esker in the southeast part of the map-area, forms a sinuous, southerly trending ridge of sand and gravel 20 to 50 feet high, 100 to 200 feet wide, and 8 miles long. It exhibits numerous branches and is interrupted by several gaps, particularly in the southern part of the ridge. A shorter, more sinuous and disconnected esker extends to the north and west of Cannington. These eskers are good local sources of gravel.

Glacio-lacustrine deposits of sand, silt, clay, and beach sand and gravel occur throughout most of the area formerly covered by Lake Algonquin. The lower parts of the abandoned lake bed are floored with varved clays, which grade upward to unlaminated clay, silt, and finally, sand. Beach sand and gravel in the form of beach ridges, spits, and bars are common at the level of the main Algonquin water-plane. The bars and spits generally form the best commercial sources of gravel. Minor deposits of sand and gravel occur at lower levels of Lake Algonquin. Some of the depressions and valleys above the old Algonquin shoreline are floored with sand and clay deposited in temporary, melt-water lakes formed during the retreat of the glacier, or represent, in part, the finer material washed down from the surrounding slopes.

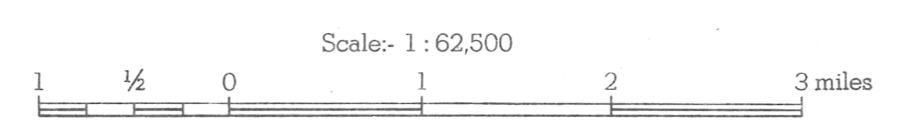
Recent deposits of muck and peat occupy most of the depressions where the drainage is poor or has been impeded, and occur both above and below the Algonquin shoreline. The sequence is commonly 2 to 5 feet of muck underlain successively by sand, silt, clay, and till.

The main Algonquin shoreline can be traced from Udora northeast across the map-area. It follows an irregular course represented by numerous bays and promontories. The bluffs are higher in the south, where the water was deeper offshore and where wave action was not impeded by islands and inlets. Numerous islands existed near the Algonquin shoreline; in the southern part of Georgina township they were the tops of drumlins, but south of Beaverton, in Thorah township, a flat-lying island was formed of Ordovician limestone. Wave-cut and wave-built terraces were formed just below the Algonquin shoreline: the material in the wave-cut terraces is a boulder strewn till; in the wave-built terraces it is sand and gravel.

79°15' 79°10' 79°05' 44°15' 44°20' 44°25' 44°30'

BASE MAP SURVEYED BY THE TOPOGRAPHIC SURVEY. CARTOGRAPHY BY THE GEOLOGICAL MAPPING DIVISION, 1948.

PRELIMINARY MAP 48-12  
**BEAVERTON**  
 ONTARIO, YORK AND VICTORIA COUNTIES  
 ONTARIO



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