



SURFICIAL GEOLOGY, QUYON, ONT. AND QUE. 31 F/9 E2

SCALE 1:50,000

LEGEND

SURFICIAL DEPOSITS AND TERRAIN FEATURES

QUATERNARY

- 13 Organic deposits: muck and peat; mainly peat bogs and poorly drained areas supporting fen, swamp, marsh and meadow vegetation
- 12 Alluvial deposits: stratified sand, silty sand, silt and silty clay; includes fluvial deposits, sand bars and spits of modern floodplain of present streams
- 11 Fan deposits: stratified sand, silty sand, silt and silty clay; alluvial deposits of small tributary streams from the rock knob upland of the Precambrian basement laid down along the foot of the Eardley escarpment on the abandoned clay floor of the Champlain Sea following emergence
- 10 Landslide deposits: marine clay, silty clay, silt and marine, deltaic, estuarine and fluvial sand; aprons and fans of hummocky topography underlain by tilted or slumped blocks of clay with or without a thin capping of fine sand; includes deposits spread out over the floors and terraces of the abandoned Ottawa River channels and along the valley sides of present day streams; resulting from slope failures along the abandoned channel and terrace bluffs or along the active present day valley bluffs; 10a, modified or beveled by fluvial erosion of the Ottawa River
- 9 Aeolian deposits: uniform, fine-grained, buff sand; derived from marine, deltaic, estuarine or river channel sands laid down in the Champlain Sea and the fluvial channels and terraces of the early Ottawa River; these were subsequently reworked and blown by wind into dunes; this unit is used where the flat surface of the original deposit has been completely transformed into hummocky topography
- 8 Estuarine and river channel and terrace deposits: stratified, buff, medium sand, unfossiliferous; fluvial deposits on the floors of former estuarine and river channels and terraces of the early Ottawa River; locally the upper part of this sand has been reworked by wind into low dunes; the estuarine environment progressively replaced the fluvial environment and was itself replaced by the river
- 7 Eroded and/or modified marine deposits: mainly marine clay as described in unit 4, but locally overlain by a thin layer of alluvial silt and silty clay; estuarine and river channel floors and terraces of the ancestral Ottawa River cut in marine clay following emergence of the map-area above the level of the Champlain Sea; the upper part of these sediments is unfossiliferous and somewhat less calcareous and consists of laminated red and greenish grey clay

MARINE-CHAMPLAIN SEA 12,800 to 10,000 years BP approx.

- 6 Marine beach deposits: gravel and sand, fossiliferous; derived mainly from the reworking by the Champlain Sea of older glacial or glacio-fluvial deposits; includes abandoned raised beaches, bars, spits, beach ridges, boulder beaches and boulder pavements
- 5 Marine sand: uniform, fine-grained, buff to grey sand, fossiliferous; shallow-water facies of off-shore sediments of the Champlain Sea; upper part of this sand is buff and has often been reworked by wind into low dunes; when exposed in fresh cuts below the chemically weathered zone this sand is grey in colour
- 4 Marine clay: blue-grey clay, silty clay and silt, calcareous, fossiliferous; deep-water facies of off-shore sediments of the Champlain Sea; the upper part of these sediments is somewhat less calcareous; locally this unit is overlain by a thin layer of sand

MARINE-GLACIAL - 12,800 to 10,000 and 12,800 years BP and/or older

- 3 Marine beach deposits overlying ice-contact and/or ice-frontal outwash deposits: gravel and sand, fossiliferous, underlain by unfossiliferous deposits of well sorted and bedded gravels, cobbles and sands; some places these contain boulder barricades or ramparts and local lenses or pockets of till
- 2 Glacio-fluvial ice-contact and ice-frontal outwash deposits: gravel and sand, well sorted and bedded, mainly coarse to medium-grained, with numerous cobbles and boulders, buff to grey, unfossiliferous; includes outwash plains, outwash fans, valley trains, kame terraces, kames and esker ridges deposited by fluvio-glacial meltwaters during deglaciation; either not submerged or little modified by postglacial marine inundation
- 1 Bevelled or modified till deposits: compact, grey to brown when leached and oxidized, siliceous, sandy glacial till; topography flat to gently rolling with surface materials reworked and winnowed by the marine waters of the Champlain Sea and by the estuarine and fluvial waters of the ancestral Ottawa River; includes bouldery, washed till on slopes and on abandoned channel floors which grades downwards into unmodified till; 1a, small unmodified till deposits lying above an elevation of 198m. (650'), the approximate limit of submergence in this area north of the Ottawa River

BEDROCK AREAS

- 8 Limestone, dolomite and/or sandstone: mainly bare limestone, dolomite and sandstone - and locally shale-bedrock; includes areas thinly veneered by Quaternary unconsolidated sediments up to 1m. (3') thick, most commonly consisting of washed and reworked glacial till and limestone, dolomite or sandstone slabs and shingles; limestone, dolomite and sandstone normally occur as tabular outcrops

- PRECAMBRIAN
- Intrusive and metamorphic rocks: mainly bare, hummocky or rolling areas composed of crystalline intrusive and metamorphic rocks of Precambrian age; includes areas thinly veneered by Quaternary unconsolidated sediments up to 1m. (3') thick; below an elevation of 198m. (650') this cover commonly consists of washed and reworked glacial till which in many places has been reduced to a sprinkle of glacial erratics resting directly on the bedrock

- Geological boundary
- Bedrock scarps
- Former strandline positions of Champlain Sea indicated by flights of abandoned marine beaches
- Estuarine and river channel bluffs cut in marine clay
- Fluvial channel scars showing flow direction in abandoned estuarine and river channels and terraces
- Head scarp of landslide
- Ridge crests of tilted or slumped blocks of clay and sand in landslide areas
- Depositional pattern of alluvial fan
- Abandoned postglacial river channels; valley walls, gullies and present day drainage ways; includes some man-made field and road side drainage ditches

- Fossil locality

- Gravel or sand pit

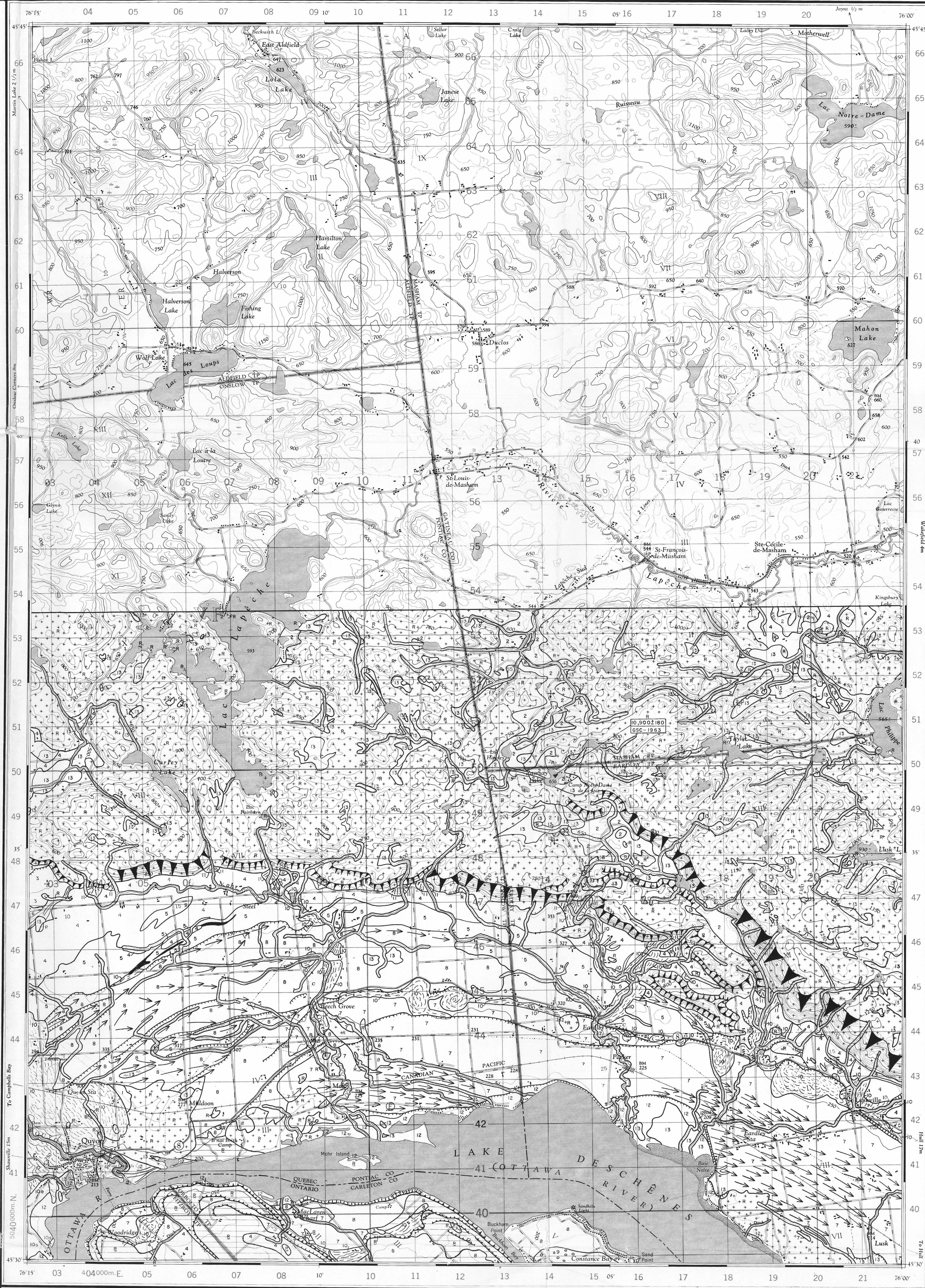
- Locality of specimen, dated in years by radiocarbon method

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Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada

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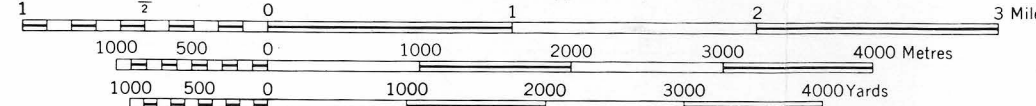


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QUYON  
QUEBEC-ONTARIO

SCALE 1:50,000

1.25 inches to 1 mile approximately



CONTOUR INTERVAL 50 FEET

Elevations in Feet above Mean Sea Level

Transverse Mercator Projection  
North American Datum 1927

Copies may be obtained from the  
Map Distribution Office  
Dept. of Mines and Technical Surveys,  
Ottawa.

## REFERENCE

- Boundaries:  
international, with monument  
provincial  
county or district  
township or parish  
Horizontal control point, with elevation  
Bench mark, with elevation  
Spot elevation, precise, approximate  
Historical site, Cemetery  
Mine or open cut, Quarry  
Sand or gravel pit
- weather... more than 2 years  
weather... 2 years to 10 years  
weather... less than 2 years  
r cut line  
multiple track  
single track  
underpass, overpass  
Tunnel; Drawbridge  
Power line; Telephone line

## REFERENCE

- House; Building  
School  
Church; Church with spire  
Post Office  
Radio Station  
Tower; Chimney  
Well; Tank  
Cutting  
Embankment  
Cliff  
Contours:  
elevation  
depression  
approximate
- Foreshore flats  
Lighthouse  
Wharf or pier; Breakwater  
Levee or dyke  
Rocky reef  
Swamp or marsh  
Inundated land, seasonal  
Intermittent lake, stream  
Indefinite shoreline, stream  
Rapids, large, small; Bridge  
Ditch or flume  
Snowfield; Glacier  
Wooded area, unclassified, scrub  
Vineyard; Orchard

## INDEX TO ADJOINING SHEETS

31 F/8 FORT COULVILLE	31 F/9 QUYON	31 F/10 KAZABAZUA
31 F/7 COBURN	31 F/9 RENEW	31 F/10 ARNPRIOR
31 F/8 LOW	31 F/9 OTTAWA	31 F/10 WAKEFIELD

QUYON

31 F/9 EAST

EDITION 2 ASE