

TOPOGRAPHY: The base map was compiled in the field (1972) using grid points from enlargements of aeromagnetic series maps 40980 [62 $\frac{1}{4}$], and 40970 [62 $\frac{1}{4}$] and detail from airphotographs 18880, 19688, 19689, 19805 and 19806. The place names are from Canadian Hydrographic Service Map 6248, supplemented by names given for field use and for reference only in this paper.

LEGEND:

General

Exposure is 100 to 25 per cent along most shorelines; the limits of large gaps in the exposure are shown:

Spot exposures in areas of sparse outcrop:

Limits of mapping in 1972:

Shore line

Shoals which are potential sources of information but which were not above water when visited, or which have been used to extrapolate units though permanently submerged.

Section lines for the stratigraphic succession on which the correlation chart (Appendix III) is based:

Structure and Lithology

Lithologic boundary: exact, approximate, assumed:

Lithologic unit too narrow to show boundaries: exact, approximate

Major fault: assumed

Minor fault: exact

Lithologic boundary, primary foliation: stratigraphic tops unknown, upright, overturned: (mean attitudes)

Gneissic foliation, schistose foliation, slaty cleavage: (mean attitudes)

Fracture cleavage: (mean attitudes)

Fold hinge lines and axial planes: (mean attitudes): caused by D₁...deformation caused by D₂...deformation

Lineations parallel to fold hinge lines: (mean attitudes): caused by D₁...deformation caused by D₂...deformation

Economic geology

- copper carbonate stain ▲
- chalcocite and pyrrhotite ▲
- chalcocite and pyrite ▼
- pyrite ○
- pyrrhotite and pyrite ●
- heavy iron oxide stain □

Rock units:

Prefix G indicates a member of the gneissic terranes, which are here presumed, in general, to be earlier than the recognisably volcanic or sedimentary rocks. The major units are numbered, the sub-units lettered and the sub-sub-units have lower case Roman numerals. The sub-units in stratigraphic sequence are designated with upper case letters; where the succession of the sub-unit is unknown it is given a lower case letter. The smaller the number, or the nearer the letter to A, the earlier the unit is stratigraphically. There is no chronologic succession implied in units G1 to G9.

- G1 tonalite gneiss: patches of alkali mobilisate
 - a) coarse-grained: (normal type): cream to orange cloud-shaped feldspar: lensy quartz: poor to moderate gneissic foliation, poor gneissic layering
 - b) as a): little or no quartz
 - c) coarse- to medium-grained: (as a): strong gneissic foliation: poor granulation: poor gneissic layering
 - d) coarse- to medium-grained: lensy feldspar porphyroblast remnants: extremely thin lenses of quartz in fine-grained melanocratic matrix: strong granulation and gneissic foliation: poor gneissic layering
 - e) medium- to fine-grained: melanocratic: low visible feldspar: moderate granulation: moderate gneissic and/or schistose foliation: grades into G3B
 - f) very fine-grained: melanocratic: strong granulation: strong gneissic and/or schistose foliation
 - g) coarse- to medium-grained: grey: may be granulated or cataclased
 - h) quartz diorite (?): granitic or gneissic texture: red or grey alkali mobilisate affecting a) to g)
- G2 tonalite gneiss: melanocratic: schistose foliation: sparse large feldspar porphyroblasts, and fewer quartz porphyroblasts
- G3 streaky tonalite gneiss:
 - a) coarse-grained: poor granulation: strong gneissic foliation: poor layering
 - b) fine-grained: commonly speckled or streaky appearance: strong granulation: strong gneissic foliation: poor layering: grades into G1e
 - c) very fine-grained: melanocratic: strong granulation: strong fine gneissic foliation
- G4 tonalite gneiss: coarse-grained: diamond texture
- G5 tonalite gneiss: cataclastic derived from G1 and G2 predominantly during D₂ deformation: angular feldspar fragments and round or lensy quartz grains in fine-grained matrix: melanocratic or leucocratic: may have gneissic layering
 - a) commonly coarse- to medium-grained: reddened feldspar and green, chloritic matrix
 - b) commonly coarse- to medium-grained: leucocratic reddened feldspar
- G6 tonalite gneiss: medium- to fine-grained: leucocratic: recrystallized cataclastic derived from G1 and G2: strong foliation
- G7 schist: muscovite-rich
- G8 schist: chlorite-rich
- G9 heterogeneous gneisses and schists resembling greenstone units
- G10 amphibolite and feldspathic amphibolite intrusions (?)
 - a) fine- to very fine-grained amphibolite: may degenerate to chlorite schist
 - b) fine to medium-grained speckly gabbro or amphibolite
 - c) coarse-grained amphibolite
- G11 gabbro intrusions: remnant pyroxene: medium- to coarse-grained
- G12 granodiorite: medium-grained: white-grey, cream-weathering: microcline-lacking
- G13 granodiorite: medium-grained: grey: resembles G1g: microcline-lacking: not used on map
- G14 granodiorite: medium-grained: purple-brown, cream-brown weathering: microcline-lacking
- 15 rhyolite: light grey: flows and breccia
- 16 basalt:
 - A. dark-green flows: massive and pillowed; scoriaceous, red, flow contact zones: thin interflow sediments: minor feldspar porphyry intrusions
 - E. schistose flows: medium-green andesite schistose tuffs
- c. orange-red dacite porphyry intrusions
- 17 andesite (mafic): medium-green flows and tuff: associated banded sedimentary rocks
 - a. massive flows: some schistose
 - b. pillowed flows
 - c. dark-green, pocky tuffs
- 18 andesite (felsic) and dacite flows and tuffs: associated banded sedimentary rocks
 - a. light-green pillowed dacite flow
 - b. massive medium-green andesite flows: banded sedimentary greenstones
 - c. pillowed medium-green andesite flows
 - d. dark-green, pocky tuffs
 - e. phyllite: banded sedimentary greenstones
 - F. light-green dacite flows
 - G. dark-green, leucocene-rich, mafic andesite flows
- 19 andesite tuffs: associated sedimentary rocks
 - A. medium-green, mafic dacite pillowed flows
 - B. light grey-green, felsic dacite, pillowed flows and breccia: minor banded tuffs
 - i as 20A
 - C. medium-green schistose, pocky tuff
- 21 gabbro intrusions: as 20C1
- 22 basalt volcanic rocks: minor felsic volcanic rocks: associated sedimentary rocks
 - a. medium-grained, basalt flows and/or intrusions
 - b. banded fine-grained quartzite
 - c. phyllite
 - d. dacite porphyry flows and associated tuffs(?)
- 23 basalt flows and intrusions: minor sedimentary rocks
 - A. fine-grained, or "spotty" basalt flows with red contact zones, and intrusions
 - E. very coarse feldspar porphyritic gabbro
 - C i "spotty" gabbro: mafic phenocrysts
 - ii "spodgy" gabbro: feldspar clots
 - d. fine-grained gabbro
 - e. minor gabbro auto-intrusions
 - f. brown, fine-grained, gabbro
 - g. banded, fine-grained quartzite
- 24 andesite volcanic and associated sedimentary rocks
 - A. massive to schistose, medium-green to grey-green, featureless, andesite greenstones
 - B. banded, tuffaceous sedimentary greenstones
 - C. schistose, medium-green, featureless, andesite greenstones
- 25 phyllite and feldspathic wacke
 - A. schistose, featureless greenstones interlayered with phyllite and feldspathic wacke
 - E. banded phyllite
 - C. massive feldspathic wacke
 - D. schistose feldspathic wacke
- 26 andesite: heterogeneous greenstone, volcanic and associated sedimentary rocks
 - A. featureless massive greenstone flow (?)
 - B. featureless schistose greenstone
 - c. feldspar porphyry, diorite (?) intrusion
 - D i banded, schistose greenstones
 - ii light-green, rusty spotted, andesite flow
 - iii very banded, schistose greenstones
 - e. feldspar porphyry, diorite (?) intrusion
 - F i banded, schistose greenstone
 - ii cream-grey, banded, rhyolite tuff or chert
 - iii banded schistose greenstone
 - G. schistose: greenstone tuff, feldspar porphyry diorite (?) intrusion, and phyllite
 - h. feldspar porphyry diorite (?) intrusion
- 27 dacite feldspar porphyry intrusions
- 28 diorite, coarse grained, felsic, leucocratic intrusion
- 29 rhyolite and dacite volcanic rocks
 - a i medium-grey rhyolite flow
 - ii fine to coarse rhyolite breccia
 - iii very coarse rhyolite breccia
 - iv dark grey breccia: few feldspar and moderate mafic rock fragments set in a mafic tuffaceous matrix
 - b. dacite, green-grey, feldspar and hornblende porphyry intrusions

- c. dacite flow
- d. cream-grey, phyllitic, rhyolite tuff
- 30 basalt, and minor rhyolite, volcanic rocks: phyllite
 - A. dark- to medium-green, massive basalt flows and tuffs: may resemble 23C1
 - i minor intercalated rhyolite flows (?), breccias, and tuffs(?)
 - B. phyllite
 - C. dark green, pocky tuff
- 31 andesite (felsic) and dacite volcanic rocks: minor phyllite
 - A. light-grey, pillowed andesite flow
 - B. light-grey-green, laminated, variegated, red-spotted, andesite tuff
 - C. dark green, pocky tuff
 - D. light-grey-green, hornblende porphyry, amygdular andesite (felsic) flow
 - E. dark-green, pocky tuff
 - i tuff contains a thin flow as 17D
 - F. green-brown, massive andesite flow
 - G i dacite breccia
 - ii brown-grey andesite intrusion
 - iii andesite tuff and breccia
 - H. light-grey, pillowed andesite flows with flow breccia: minor light-green tuff
 - I. dark green, massive andesite (mafic) flow and pocky, red-spotted tuff
 - J i phyllite
 - ii yellow-green, very banded, andesite flow (?)
 - K. light-grey-green, pillowed andesite flow
 - L i fine andesite tuff and graded crystal tuff
 - ii coarse andesite breccia
 - W. light grey green andesite flows
 - i pillowed, hornblende and feldspar porphyry flow
 - ii reddened area (fumarole?)
 - n. red-and-green speckled andesite intrusion
- 32 diorite (felsic) grey-green intrusions:
 - a. feldspar porphyry
 - b. fine-grained
 - c. schistose zone or phyllite
- 33 dacite and rhyolite volcanic rocks
 - A. light-grey-green, pillowed, andesite (felsic) flow
 - B. thin, light-grey, massive and amygdular, dacite and rhyolite flows
 - C. pillowed dacite flow
 - D i grey-green, amygdular, feldspar porphyry dacite flow
 - ii grey, pillowed dacite flow
 - iii pink-and-green striped, amygdular dacite
- 34 andesite (felsic) volcanic rocks
 - A. light-grey-green, hornblende porphyry, massive andesite flows
 - B. pillowed andesite flow, as 34A
 - C. feldspar porphyry flow, as 34A
 - D. massive andesite flows and intrusions as 34A
 - i amygdular hornblende porphyry, with dacite intrusion
 - ii feldspar porphyry and epidotised bombs
 - iii pillowed
- 35 dacite and andesite (felsic) flows
 - A. grey-green, red-spotted, andesite flow
 - E. brown-green, banded, andesite flow
 - C. light-grey-green pillowed dacite flow
 - D. light-grey-green, banded, dacite flows: some pillowed or dark-green spotted
 - e. feldspar porphyry andesite intrusions or flows may be equivalent to 34C
 - F. dark-to-medium-green, massive to schistose, diorite (mafic) intrusion
- 36 andesite volcanic, and associated sedimentary rocks
 - A i red-and-green variegated tuff
 - ii dark-green chlorite schist
 - F. massive, grey-green, textureless greenstones: banded towards the base: intercalated schists
 - C. dark-green chlorite schist: some phyllite
 - D. brown-grey-green feldspar porphyry andesite flow
 - E. coarsely layered, cyclically banded, greenstone tuffaceous sediments
 - F. finely laminated, greenstone tuffaceous sedimentary rocks and phyllites
 - G. thin flows, tuffs and associated sedimentary rocks
 - i thin massive flow
 - ii grey-green, red-spotted flow (?)
 - iii laminated tuff
 - iv dark green chlorite schist
 - H. grey-green, red-spotted, layered tuff
 - i i grey-green, finely laminated tuff
 - ii dark-green chlorite schist
 - J. phyllite: reddened near contact with 37
 - k. gabbro (?) intrusion
- 37 feldspathic volcano-sedimentary suite
 - a. normal red-feldspar, medium-grained phases: flow (?), crystal tuff and derived feldspathic wacke: minor aplite intrusion
 - b. fine-grained phase
 - c. darker, derived feldspathic wacke only
- 38 andesite fragmental volcanic rocks
 - A. medium- to brown-green tuff: some red-spotted layers: some white feldspar crystal tuff
 - E. pink-and-green banded, fine grained tuff: some layers phyllitic
- 39 banded greenstone carbonate-rich sedimentary rocks interlayered with minor phyllite and feldspathic wacke
- 40 greystone feldspathic wacke
 - A. below unit 38
 - E. above unit 38: with minor phyllite
- 41 interlayered andesite greenstone volcanic and associated sedimentary rocks and phyllite: moderate to strongly sheared
 - A. grey-green, schistose diorite intrusion?
 - B. phyllite
 - C. grey-green, red feldspar, feldspathic wacke or diorite intrusion (?)
 - D. red-and-green variegated andesite tuff
 - E. dark-grey-green, schistose diorite intrusion (?)
 - F i light-grey-green schist and phyllite
 - ii banded phyllite
 - G. medium green, schistose greenstone
 - H i dark grey-green, medium-grained, diorite intrusion (?)
 - ii dark grey-green, schistose diorite intrusion (?)
 - iii phyllite
 - iv medium-green schist
 - I. grey-green schistose greenstone intrusion or flow: minor phyllite and banded limonite stained quartzite
- 42 strongly layered, heterogeneous greenstone andesite volcanic and derived sedimentary rocks
 - A. largely, sheared andesite flows and tuffs from 17 and 18
 - B. largely, andesite tuffs and derived wackes and mudstones: some graded beds
 - c. minor andesite intrusions
 - d. polymictic conglomeratic mudstone
- 43 andesite extrusive and associated diorite intrusive rocks
 - A i green-black speckly gabbro
 - ii transition zone
 - iii light-grey-green hornblende porphyry, diorite
 - B. light-grey-green andesite (felsic) flows: some pillowed: some amygdular: some feldspar porphyry
 - i basalt flow (?)
 - C. grey-yellow-green diorite intrusion
 - D. light-grey-green andesite (felsic) flows: some pillowed: some amygdular: some feldspar porphyry
 - i fine-grained sedimentary rock
 - E. grey-yellow-green diorite intrusion
 - F. brown-green to red-green, amygdular, andesite (felsic) flows
 - i pillowed flow
 - G. grey-yellow-green, layered, diorite intrusion
- 44 granodiorite: medium to fine-grained: white to pink: microcline bearing
- 45 a. granodiorite: fine-grained: red: microcline-bearing
 - b. granodiorite: medium-grained: red: sulphide-rich: microcline-bearing
- 46 granodiorite: medium-grained: grey: microcline-bearing
- 47 feldspathic arenite to feldspathic wacke: some cross and graded bedding
 - a. quartz/feldspar-rich: sparse phyllite layers
 - b. quartz/feldspar-rich: many phyllite layers
 - c. quartz/feldspar-poor: sparse pebbles
 - d. quartz/feldspar-rich: minor polymictic conglomerate
 - e. carbonate rock
 - f. schistose mylonite derived from 47
- 48 schistose, contact-metamorphosed (?) sedimentary rocks: (closely associated spatially with 50)
 - a. talc-carbonate-chlorite rock
 - b. quartz-feldspar-carbonate-chlorite rock
 - c. iron formation i magnetite-grunerite-rich
 - ii stilpnomelane-rich
- 49 quartzite: fine-grained: white to green
- 50 serpentized dunite and peridotite intrusions
 - a. not texturally differentiated
 - b. layered: some layers with bleb texture
 - c. sheared serpentinite

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 1981
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