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GEOLOGICAL SURVEY OF CANADA · COMMISSION GÉOLOGIQUE DU CANADA

Canada

LEGEND

This legend is common to all four maps in this open file
Blank boxes indicate units that are not present on this map

Area between the heavy dotted lines

QUATERNARY
PLEISTOCENE AND RECENT

Qa — *Gravel, sand, silt, and clay*

TERTIARY
EOCENE

Tg — *Garnet-biotite quartz diorite dykes; unfoliated and crosscutting*

LATE PALEOCENE-(?)EARLY EOCENE

TQg — ***Quottoon pluton:** hornblende ± biotite quartz diorite and tonalite; in 103I/4 includes felsic biotite ± garnet-bearing tonalite; medium to coarse grained; strongly foliated and locally lineated*

CRETACEOUS
ALBIAN-CENOMANIAN (?)

[ ] — *Dyke complex adjacent to and probably partly comagmatic with Ecstall pluton; dykes constitute 40-80% of area, country rock forms the remainder. Dyke lithologies include straight, crosscutting garnet aplite and leucocratic pegmatite; fine grained, leucocratic garnet-biotite quartz monzonite and granodiorite; titanite-epidote-biotite quartz diorite and granodiorite; and amphibolite*

ALBIAN-CENOMANIAN

KEg — ***Ecstall pluton:** epidote-hornblende-biotite quartz diorite to granodiorite; unfoliated except within 1 km (generally less than 300 m) of its margin; in 103H/11 includes foliated, fine grained, epidote-free, leucocratic garnet-biotite quartz diorite*

JURASSIC-EARLY CRETACEOUS (?)

[ ] — *Mafic and ultramafic plutonic rocks; coarse grained, locally weakly lineated hornblende diorite, gabbro and rusty weathering coarse hornblendite*

JURASSIC
EARLY JURASSIC

[ ] — ***Foch Lake orthogneiss:** titanite-epidote-biotite tonalite gneiss; medium grained, typically contains plagioclase megacrysts; weakly to strongly foliated*

[ ] — ***Johnson Lake orthogneiss:** epidote-biotite-hornblende tonalite gneiss; medium grained; strongly lineated and weakly to strongly foliated*

DEVONIAN
MIDDLE DEVONIAN

DBo — ***Big Falls orthogneiss:** muscovite-biotite-hornblende tonalite augen gneiss; locally garnet- and epidote-bearing; medium grained; well foliated*

PROTEROZOIC(?)-PALEOZOIC
MIDDLE DEVONIAN AND/OR OLDER

Pv — ***Metavolcanic unit:** **Pv**: mafic and intermediate metavolcanic rock with minor metasedimentary and felsic metavolcanic interlayers; locally pyritiferous; strongly foliated and lineated; mafic component is fine grained amphibole ± chlorite schist, locally with relict clastic texture; intermediate component is biotite quartzofeldspathic semi-schist; minor quartzite, semi-pelitic to pelitic schist, and quartz-rich semi-schist of probable volcanic protolith. **Pvm**: marble [103H/13]*

Psc — ***Metasedimentary clastic unit:** epidote-rich, hornblende-biotite gneiss; fine to medium grained; locally contains epidote-rich and granitoid clasts; well developed foliation and lineation*

Psq — ***Quartzite unit:** **Psq**: white to grey, locally pyritiferous quartzite interlayered with lesser amounts of biotite-hornblende gneiss, fissile mica schist, black phyllite to meta-argillite, semi-pelitic to pelitic schist; well foliated. **Psqa**: amphibolite bands, probably dykes [103H/14]. **Psqm**: marble [103H/13, 14]*

Pn — ***Layered gneiss unit:** epidote-hornblende-biotite quartz diorite and granodiorite gneiss and garnet amphibolite; some epidote+garnet pods; medium grained; well defined compositional layering on a scale of tens of centimetres; strongly foliated and locally lineated*

Areas outside the heavy dotted lines

QUATERNARY
PLEISTOCENE AND RECENT

Qa — *Gravel, sand, silt, and clay*

TERTIARY
LATE PALEOCENE-(?)EARLY EOCENE

TQqd, mi — ***Quottoon pluton:** **TQgd**: hornblende-biotite granodiorite; **TQqd** [103H/11, 14]: biotite-hornblende quartz diorite; **TQqdn**: quartz diorite and abundant gneiss; **TQqd** [103I/4]: quartz diorite, minor diorite and granodiorite; **TQmi**: migmatitic plutonic rock*

CRETACEOUS
ALBIAN-CENOMANIAN

KEqd,d, gd,qm — ***Ecstall pluton [104H/11, 13]:** **KEqm**: hornblende-biotite quartz monzonite; **KEgd**: biotite-hornblende granodiorite, hornblende-biotite granodiorite; **KEqd**: biotite-hornblende quartz diorite. **Ecstall pluton [103I/4]:** **KEqm**: quartz monzonite, minor granodiorite; **KEgd**: granodiorite, minor quartz diorite and quartz monzonite; **KEqd**: quartz diorite, minor diorite and granodiorite; **KEd**: diorite, minor quartz diorite*

JURASSIC-CRETACEOUS(?)

[ ] — *Gneissic diorite-migmatite complex*

[ ] — *Aplitic, garnetiferous quartz monzonite (may in part or whole be Paleozoic)*

PROTEROZOIC(?)-PALEOZOIC

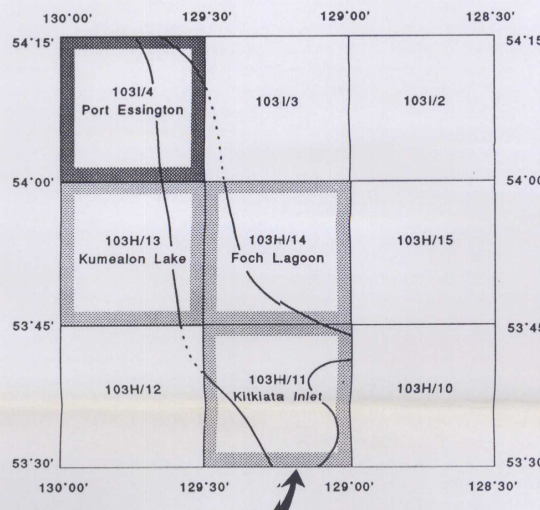
[ ] — *Mainly metasediments: hornblende-biotite-plagioclase amphibolite and schist; biotite schist (locally garnetiferous); sericite-epidote schist; graphitic schist; quartzite; crystalline limestone; conglomerate; minor lit-par-lit gneiss, agmatite, and granitic rocks; may in part be equivalent to **Psc**, **Psq** and **Pn***

PMn — *In 103I/4: grey biotite ± hornblende gneiss and amphibolite; minor sillimanite ± garnet gneiss. In 103H/14: granitoid gneiss, gneissic quartz diorite, rusty fine grained gneiss and schist, migmatite; minor garnet-sillimanite-biotite schist and crystalline limestone. May be equivalent to **Psq** and **Pn***

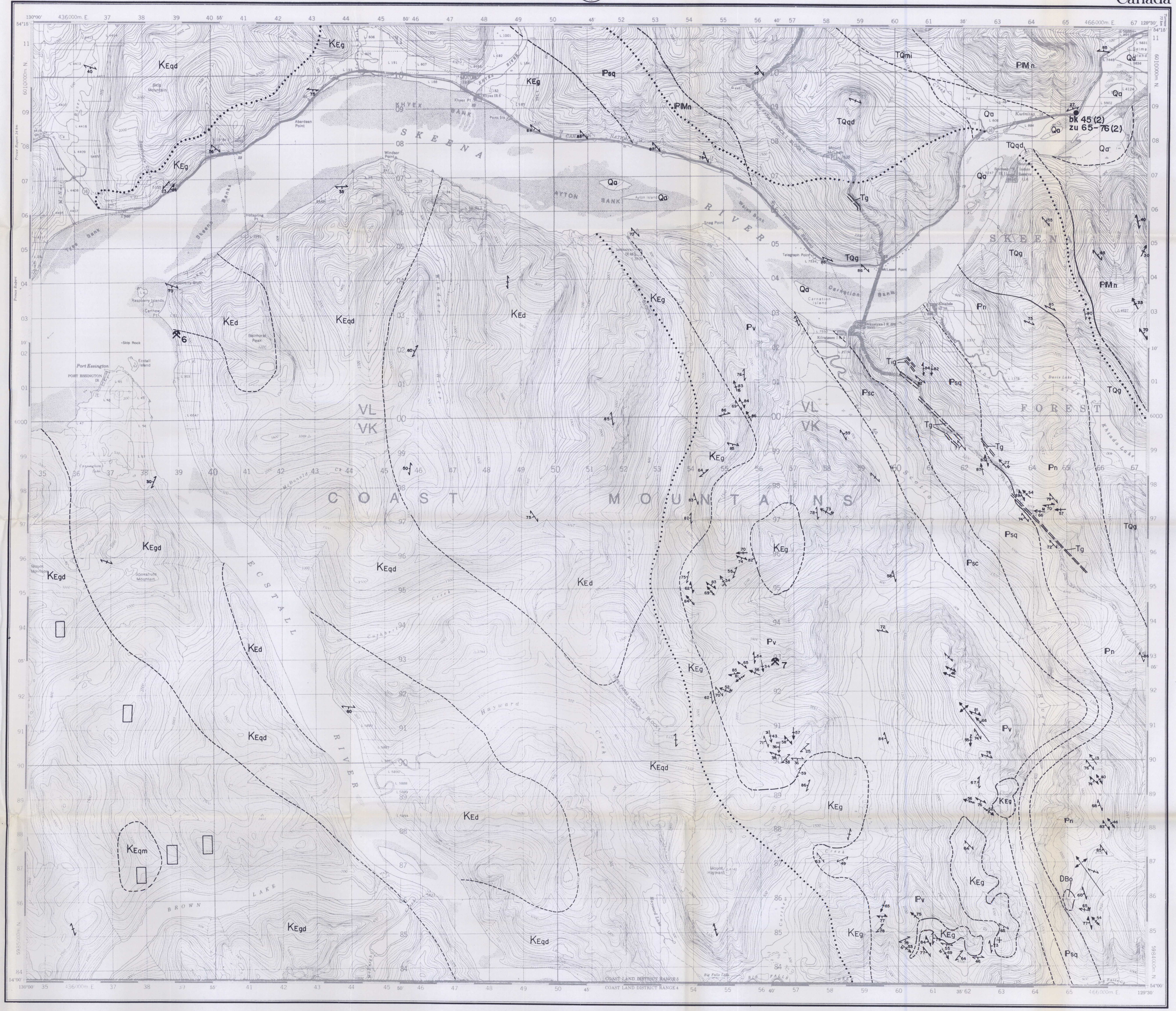
[ ] — *Massive to thickly layered crystalline limestone*

SYMBOLS

- *Limit of detailed mapping by Gareau*
- *Geological contact (defined, approximate, assumed)*
- *Fault (assumed)*
- *Foliation (inclined, vertical, absent)*
- *Lineation (inclined mineral, inclined stretching, vertical)*
- *Dominant or average axial surface in area of intense small-scale folding (Inclined, vertical)*
- *Dominant or average hinge line in area of intense small-scale folding (unspecified vergence, s-fold, z-fold, vertical)*
- *Axial trace of synform (arrow indicates plunge)*
- *Axial trace of antiform (arrow indicates plunge)*
- *Dominant fracture set*
- *Plagioclase megacrysts*
- *K-feldspar megacrysts*
- *Radiometric dates (Ma):*
  hk = K-Ar date on hornblende
  bk = K-Ar date on biotite
  zu = U-Pb date on zircon
  Sources of data: (1) this study; (2) Woodsworth et al. (1983); (3) van der Heyden (1989)
- *Mineral deposit (number is MINFILE number; see sheet 2 for list)*



Area between the lines is the approximate extent of the Scotia-Quaal metamorphic belt and of the area mapped in detail during this study



PORT ESSINGTON
BRITISH COLUMBIA

Scale 1:50 000 Échelle

O.F. 2327 (handwritten correction: 3)

Sheet 4 of 4

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