

PRECAMBRIAN GEOLOGY OF THE INDIAN LAKE MAP AREA

LEGEND

- DU** Overburden of sand and gravel, eskers
- WOPMAY OROGEN**
- PF** PEGMATITE: white, coarse grained granite +/- muscovite, biotite, tourmaline.
- PH** HEPBURN INTRUSIVE SUITE: biotite granites or anorthositic (PHgd); diorites and quartz diorites (PHdt) commonly with microcline megacrysts, pegmatite (PHpt), locally Rapakivi textured.
- PD** DIABASE/GABBRO: dykes and sills including metamorphosed equivalents.
- CORONATION SUPERGROUP**
- S** SNARE GROUP: Undifferentiated, thin to thickly bedded shale, siltstone, sub-greywacke, dolomite, quartzite, quartz pebble conglomerate and metamorphosed equivalents.
- sp** GNEISS AND SCHIST derived from the Snare Group: Rusty coloured rocks characterized by the presence of K-feldspar, a granodioritic composition, local leucosome and amphibolite facies mineralogy.
- ss** SHALE-SILTSTONE: including slates, spotted slates and sub-greywacke.
- d** DOLOMITE: finely bedded dolomite and muddy dolomite.
- cs** CALCIFEROUS ROCKS: sandstone and siltstone with calcite and calcisilicate minerals.
- q** QUARTZITE: white to grey, quartz rich sandstone, gritty sandstone, orthoquartzite, limy sandstone and arkose.
- c** QUARTZ PEBBLE CONGLOMERATE: clean, mostly close-packed quartz pebbles (minor granite, rhyolite, amphibolite) with minor argillaceous, sandy or limy matrix, pebbly grit.
- PM** MIGMATITE & GNEISS: probably derived from Snare Group and/or equivalents to the Yellowknife Supergroup, with local granulite facies mineralogy.
- AM** MIGMATITE & GNEISS: derived in part from Archean rocks; derived in part from equivalents to the Yellowknife Supergroup metametasedimentary rocks (AMs); with amphibolite paleosome, derived in part from Yellowknife Supergroup metavolcanic rocks (AMv).
- AG** BASEMENT GRANITOID ROCKS: Mostly of granodioritic composition and similar to those in the Slave Province; K-feldspar eugen gneiss (KAG).
- SLAVE STRUCTURAL PROVINCE**
- FD** DIABASE: Diabase and gabbro dykes and their metamorphosed equivalents; including the Indian Diabase which intruded in a NW and ENE trending swarms.
- APan** BIOTITE GRANODIORITE: Anorogenic stocks and bosses characterized by abundant inclusions of dioritic composition derived in part from unit Av and As.
- AP** PLUTONIC ROCKS: undifferentiated plutonic rocks of granodioritic (APgd); tonalitic (APtn) and -granitic composition (APgt).
- AM** MIGMATITE, GNEISS AND SCHIST: undifferentiated, of mostly granodioritic composition with minor massive to slightly foliated anatectites:
- AMs** - migmatite derived in part from unit AG - associated with AMgs and AMsh;
- AMsh** - schlieren migmatite: with schlieren of biotite, commonly associated with MGS;
- AMgs** - biotite gneiss derived in part from unit AG; AB;
- AMv** - derived in part from unit AV - associated with MBd;
- AMb** - derived in part from unit AB (see also unit ABv);
- AMbd** - banded and layered migmatite, commonly associated with unit AMv;
- AMpt** - anatectic pegmatite.

- YELLOWKNIFE SUPERGROUP**
- MS** METASEDIMENTS: Bedded turbiditic greywacke/mudstone sub-biotite grade - undifferentiated - biotite isograd - cordierite-staurolite isograd
- ASP** - metamorphosed, porphyroblastic equivalents
- ASh** - partially migmatized (<50% leucosome)
- ASv** - hornblende gneiss and schist possibly derived from volcanoclastic detritus
- ASC** - conglomerate with volcanic clasts
- ASCP** - paraconglomerate with volcanic and granitoid clasts
- VA** VOLCANICS: undifferentiated flows, minor pyroclastic and hypabyssal rocks, of mostly mafic composition:
- AVa** - basalt and minor andesite flows, commonly pillowed
- AVt** - dacite and rhyolite pyroclastic rocks with minor flows
- AUv** - hypabyssal rocks of mostly felsic composition.
- AVa** - hornblende amphibolite dykes and sills possibly synvolcanic.
- HB** BASEMENT COMPLEX: Includes biotite, granitoid gneiss and anorthositic or granodioritic (gd) diorite (dt) and granite (gt) and tonalite composition intruded by metagabbro dykes (gb) possibly associated with yellowknife volcanics and secondary apatite and muscovite-bearing pegmatites.

- MINERALS**
  - GR** garnet
  - SL** sillimanite
  - AN** andalusite
  - ST** staurolite
  - CD** cordierite
  - SP** spinel
  - OP** orthopyroxene
  - FP** potash feldspar
  - MS** muscovite
  - AU** gold
- SYMBOLS**
  - Bedding with tops known/ overturned.
  - Bedding with tops assumed/ overturned.
  - Bedding-foliation/ overturned.
  - Foliation and dip/ dip vertical.
  - Second foliation and dip/ dip vertical.
  - Third foliation and dip/ dip vertical.
  - First, second & third lineation with plunge.
  - Air photograph linear
  - First, second & third cleft elongation and plunge.
  - First, second & third minor fold axis
  - First, second & third antiformal axes.
  - First, second & third synformal axes.
  - Contacts defined, approximate, assumed
  - Faults defined, approximate, assumed
  - Wopmay Orogen - sillimanite and biotite isograds

NOTES:  
 Unit Parameters: [a][b][c][d] [ ] optional where ...  
 a = textural modifier (=massive, amagmatic, megacrystic)  
 b = age (Archean, Proterozoic, Quaternary)  
 c = map unit in upper case refers to rock type (eg. P = pluton, S = sedimentary rock, V = volcanic rock, Metasediment)  
 d = sub-unit in lower case designates rock or composition (xx) parentheses designate local abundance only

Previous Maps

1	Lord (1942) GSC Memoir 235
2	Fortier (1949) GSC Paper A9-10
3	Ross (1960) GSC Bulletin 124
4	McGlynn & Ross (1963) GSC Paper 63-26
5	Stanton et al (1964) GSC Map 1023A
6	Tremblay et al (1965) GSC Map 1022A
7	Smith (1965) GSC Map 44-1963

(last revised Dec 20, 1985)

SCALE 1 : 125 000

