

OPEN FILE 712 - Mikkel Schau and K. Ashton

LEGEND

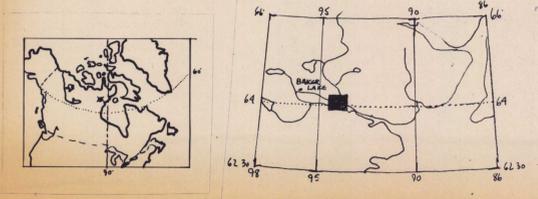
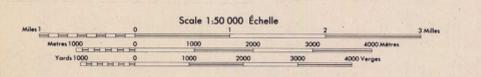
- 9 DYKES DIABASE (1.4 Ga K/A) INTRUSIVE
- 8 GRANITE LATE GRANITE TO GRANODIORITE (1.8 Ga R/S) INTRUSIVE (INTO 2.1. Zn)
- NM FAULTING (NORTHEAST SIDE DOWN AND/OR DEXTRAL MOVEMENT)
- Pd DUBAWINT GROUP (1.9 Ga U/P)
- 6 BIOTITE PYROXENE PORPHYRY DYKES AND STOCK; MARTELL SYENITE: TRACHYTE AND/OR SYENITE SILLS AND LACCOLITHS
- Pdci CHRISTOPHER ISLAND VOLCANICS: F, TRACHYTE FLOW, M. RED MUDSTONE, ST, SANDSTONE AND/OR TUFF, AG, AGGLOMERATE, BK, INTRUSIVE BRECCIA
- Pdk KAZAN ARKOSE: CROSSBEDDED, RIPPLED, RED TO BLEACHED ARKOSE
- Pdsc SOUTH CHANNEL CONGLOMERATE: CONGLOMERATE, BRECCIA UNCONFORMITY
- NE FAULTING CUT Nn AND Zn, MAY OFFSET GABBRO, PRECEDED AND COEVAL WITH Pd
- PEGMATITES (NOT SHOWN ON MAP) BIOTITE-BEARING SIMPLE PEGMATITES COMMONLY SEEN IN AG AND 4 WITH WEST OF NORTH TREND IN W AND EAST OF NORTH TREND IN E
- NS FAULTING (WEST SIDE DOWN?)
- 5 DYKE SWARM EAST-WEST TRENDING FINE GRAINED DIABASE SWARM ENPLACED ALONG CHESTERFIELD FAULT ZONE INTRUSIVE
- 4 GABBRO UNALYTTIZED, OFTEN GARNETIFEROUS, LOCALLY SHEARED WITH BIOTITE FOLIATION, MAY LOCALLY INCLUDE 5 AND 1 AND AGn; INCLUDES XENOLITHIC FRAGMENTS OF 1 AND Zn. INTRUSIVE
- 3 GRANITE WITH BLUE APATITE AND TOURMALINE ENPLACED IN, AND SHEARED BY CHESTERFIELD FAULT ZONE INTRUSIVE
- CHESTERFIELD FAULT ZONE EAST-WEST TRENDING REVERSE FAULT, LOCALLY, AND PROBABLY GENERALLY, STEEPLY NORTH DIPPING, BRINGING HIGHER GRADE ROCKS OF THE NORTH OVER LOWER GRADE ROCKS OF THE SOUTH.
- PLUTONIC COMPLEX (2.4-2.5 Ga R/S or Wn)
 - 2 A) SHEARED TO GNEISSIC, CHLORITIZED, SERICITIZED, AUGERED, GRANITIC TO GRANODIORITIC, PLUTONIC ROCK; B) GRANODIORITE COMPLEX WITH LOCALLY PORPHYRITIC PHASES AND MAGNETITE AND SPHERE-BEARING PORTIONS EXTENSIVELY DEVELOPED TO NORTH AND EAST; C) FLUORITE-BEARING, SHEARED GRANITE TO GRANODIORITE IN NORTHWEST CORNER INTRUSIVE
- ANORTHOSITE COMPLEX
 - 1 A) ANORTHOSITE BLOCKS; B) COARSE GRAINED HYPERTHENE AND CLINOPYROXENE-BEARING LABRADORITE, ANORTHOSITE TO LEUCO-GABBRO (STREAKY OR LINEATED); C) FINE GRAINED, RECRYSTALLIZED B) LAYERED WITH FELDSPAR-RICH AND PYROXENE-RICH LAYERS INTERCALATED AT CENTIMETER TO DECAMETER SCALE; E) FERRO-GABBRO TO FERRODIORITE DYKES AND LAYERS; F) CHARNOKITIC-MANGERTIC GRANOPHYRE INTRUSIVE
- GRANULITE COMPLEX (2.6 Ga+U/Ps on Zircon) UNDIFFERENTIATED GRANULITE COMPOSED OF VARIOUS PROPORTIONS OF PLAGIOCLASE, PYROXENES, ± GARNET ± QUARTZ ± PERTHITE; MAY CONTAIN PARTS OF 1
 - An P) PLAGIOCLASITE (BYTONNITE) LAYERS
 - g) GARNET-PLAGIOCLASE-QUARTZ GNEISS
 - s) KYANITE-BEARING QUARTZ-PERTHITE-GARNET-GRAPHITE-BIOTITE ROCK; LOCAL PODS OF ORTHOPYROXENITE; MAY CONTAIN PARTS OF 1, ESPECIALLY 1d
- CONTACT WITH AGn TO NORTH IS OF TWO TYPES: A) A WNW STEEPLY DIPPING SHEAR ZONE WITH BRECCIA; AND B) A SURFACE SUBPARALLEL TO NEARBY LAYERING IN WHICH MAY BE A THRUST, ALTHOUGH ALTERNATE EXPLANATIONS ARE NOT PRECLUDED.
- GNEISS COMPLEX (2.7 Ga+U/Ps on Zircon) GRANITIC GNEISSES RICH IN BIOTITE, INTERCALATED WITH AMPHIBOLITES AND LOCALLY CONTAINING INCLUSIONS OF TALC SCHISTS NOT IN CONTACT
- METASEDIMENTARY COMPLEX
 - As MIDDLE GRADE METAMORPHIC ROCKS, S, INCLUDING GARNETITES, EPIDOTE BIOTITE SCHISTS, MARBLE, TREMOLITE SCHISTS AND QUARTZ-FELDSPATHIC GNEISSES AND, M. AMPHIBOLITES LOCALLY GARNETIFEROUS
- GEOLOGICAL BOUNDARY (DEFINED, UNCERTAIN, GRADATIONAL, ASSUMED)
- BEDDING, TOPS KNOWN, UNKNOWN
- METAMORPHIC LAYERING, GNEISSOSITY AND LAYERING IN HIGH GRADE ROCKS WHERE QUARTZ, FELDSPARS AND MAFIC MINERALS ARE LAYERED ON MILLIMETER TO CENTIMETER SCALE
- MARKER BEDS IN GRANULITE
- FOLIATION, SCHISTOSITY, OFTEN ALIGNMENT OF MAFIC MINERALS, BUT MAY GRADE INTO GNEISSIC GRANITIC ROCK IN 2b
- MINOR FOLDS ARE ABUNDANT AND OF MANY GENERATIONS AND ORIENTATIONS IN THE GNEISSES, BUT ARE RELATIVELY RARE AND GENERALLY SHALLOWLY WEST PLUNGING IN THE GRANULITES
- MINOR FAULTS ARE VERY COMMON ALONG CHESTERFIELD INLET AND NO ATTEMPT HAS BEEN MADE TO PUT THEM ON MAP
- FAULTS, HIGH ANGLE FAULTS (DEFINED, ASSUMED), THICK ON DOWNDROPPED SIDE, ARROWS SHOW APPARENT MOVEMENT, POSSIBLE THRUST? DIRECTION OF FAULT
- MINERALS, Cu - MALACHITE AND LOCAL CHALCOPYRITE, Fl, PURPLE FLUORITE, Se, SERPENTINE, Sa, SAPPHIRE, S, SILLIMANITE, K, KYANITE (BASEMENT ROCKS NEAR UNCONFORMITY AND FAULTS CONTAIN PREHNITE, PUMPELLYITE, CHLORITE AND/OR EPIDOTE.

The region within 5 km of the coastline of Baker Lake and all islands in these map sheets has been designated as within a caribou crossing area. Land use regulations prohibiting geological mapping in caribou crossing areas first started in 1977 and as a result the geology on the easternmost Bowell Islands and Rio Island and the south coast of Baker Lake has not been studied by the authors. Persons entering the area must obey the Caribou Protection Regulations and notify the Land Use Section, Northern Environment Branch, Indian and Northern Affairs Department.

Geology by Wright, 1967; Donaldson, 1965; Reinhardt and Skippen, 1973; (Reinhardt, Chandler and Skippen, Open File 703, 1980); Schau and Hulbert, 1976; Schau and Ashton, 1978; Blake, 1980; compiled by Schau and Ashton, 1980.

The topography for this map was reproduced from 1:250 000 topographical map sheets, published by the Department of Energy, Mines and Resources (56D in 1956 and 56C in 1959). Users are warned that modern 1:50 000 maps, from the same source, position the 94°00W latitude ~200 m to the east so that using maps of different ages will lead to mislocations.

Air photographs covering these map areas may be obtained through the National Air Photographic Library, Topographical Survey, Ottawa, Ontario.



OPEN FILE
DOSSIER PUBLIC
712
July 1980
GEOLOGICAL SURVEY
COMMISSION GEOLOGIQUE
OTTAWA