

GEOLOGICAL MAP OF THE RAINY LAKE AND WHITE EAGLE FALLS MAP AREAS, DISTRICT OF MACKENZIE



LEGEND

QUATERNARY

- Quaternary cover: drift, talus, raised beaches

PROTEROZOIC

Great Bear Magmatic Zone

- Leucocratic syenite
- Coarse grained basaltic syenites some phases alkali feldspar perthite
- Fine grained basaltic granite
- Basaltic-quartz porphyry
- Richardson Pluton: mainly coarse grained basaltic-hornblende monzonitic gabbro with coarse clots of quartz and locally by megacrysts of alkali feldspar
- Hydrous Pluton: hornblende-diorite syenites the presence of alkali feldspar phenocrysts up to 3 cm in diameter
- Tim Pluton: medium grained hornblende-biotite monzonitic and quartz monzonitic often with fine grained patches containing potassium feldspar megacrysts
- Mafic and intermediate dykes
- Coarse crystalline mainly north-south trending perthitic dykes containing variable amounts of plagioclase, hornblende, biotite, quartz, and alkali feldspar in a fine to medium grained matrix
- Yes Pluton: medium grained hornblende-biotite and biotite-hornblende gabbro (1-3 m), quartz monzonite (1-3 m) and monzonite (1-3 m) generally contain 20-30 per cent ferromagnesian minerals, typically biotite, clin
- Plagioclase porphyry, contains alkali feldspar (1-3 mm) and irregular mafic clots sitting in a fine grained aphanitic matrix, weathering pink to dark-colored, locally brecciated country rock
- Quartz diorite, fine grained slightly porphyritic, locally brecciated older rocks a mafic gneiss
- Potassium feldspar-quartz-plagioclase porphyry
- Basaltic-quartz monzonitic intrusions, lava flows and breccia, includes rocks of several different ages (porphyritic phases 10⁷)
- Color: Quartz Monzonite hornblende-diorite quartz monzonite, minor monzonite

METAVOLCANIC SUPERGROUP

Labine Group

- Ash-flow tuffs, simple cooling units of strongly extrusive tuff generally 100-200 m thick and of various sizes, most contain 15-30 per cent broken phenocrysts of potassium feldspar, quartz, plagioclase and altered ferromagnesian minerals, some units contain highly foliated, secondary flow beds and laminated massive fragments intercalated with sandstone and conglomerate (10⁸)
- Annual Andesite: aphyric and peragite-apatite-plagioclase porphyritic andesitic lavas and breccias some flows contain conspicuous quartz and potassium feldspar porphyritic minor igneous tuff and pyroclastic breccia (intermediate phases 10⁸)

CLUT CAULDRON COMPLEX

- Urgent Point Formation: predominantly sedimentary and pyroclastic rocks deposited within Clut Calderon, interbedded sandstone, siltstone, mudstone, ashstone, crystal and lapilli tuff, pebbly conglomerate
- Ash-flow tuff number, simple cooling unit of purple weathering, lithic-rich ash-flow tuff
- White Eagle Tuff: densely welded, lithic-rich, propylitic intracolumn lacuna tuff containing 25-35 per cent broken phenocrysts of alkali feldspar, quartz, biotite, and in the tuff of secondary nature at other rocks occur in the southwest corner of the White Eagle Falls sheet
- LW1a - Outflow facies tuff, simple cooling unit of White Eagle tuff, commonly contains abundant black porous fragments to 10 cm
- LW1c - Polymictic brecciated conglomerate
- LW1d - Crystal-rich tuff
- Mandrelite member, breccia comprising dominantly angular fragments of basaltic tuff and Canard River Formation intergrading with and grades into LW1

BLACK BEAR CAULDRON COMPLEX

- Canard River Formation: andesitic, dioritic and basaltic lavas, breccia, tuff and sandstone
- Angakkak, argite-plagioclase porphyritic andesitic, dioritic and basaltic lava flows and breccia
- Explosion breccia
- Sandstone, ashstone, lapilli tuff
- Conglomerate and tuffite breccia
- Argite: ash-flow tuff
- Terra Formation: andesite, mudstone, ashstone, breccia, dolomite, minor lava
- Upper Member
- Volcanogenic lithic arkose, granular to pebbly, fine to coarse-grained, ripple laminated and cross-bedded, contains interbedded purple-brown sandstone and siltstone, minor polymictic, cobble conglomerate
- Lower Member
- LAm - finely laminated mudstone with intercalated rhythmic ashstone
- LA - rhythmic lavas and breccias
- LM - interbedded dolomite, argillite, rhythmic ashstone
- LA - sedimentary breccia
- Major Bay Tuff: rhythmic tuff, andesitic to basaltic lava and tuff, conglomerate, mudstone, breccia
- Upper Member
- Densely welded, lithic-rich, rhythmic ash-flow tuff containing 15-25 per cent broken phenocrysts of quartz, potassium feldspar and chlorite-biotite monzonitic intracolumn lacuna, weathering red to tan-colored in stratigraphically higher parts, white to pale green in lower parts
- Andesite-basaltic lapilli tuff
- Andesite-basaltic lava flows
- Volcanogenic sandstone
- Lower Member
- LM1a - plagioclase porphyritic andesite lava flow
- LM1a - sandstone
- LM1b - breccia comprising angular fragments of sedimentary rocks
- LM1c - mudstone, concretionary, purple-red
- LM1c - polymictic conglomerate
- LM1c - ash-flow tuff
- Stann Island: pillow basalt, pillow breccia, minor mudstone, ashstone
- LM2 - monomictic-welded dolomite
- Conjuror Bay Formation
- Upper Member, mudstone, ashstone, conglomerate, breccia, lapilli tuff
- Lower Member, cross-bedded quartz arenite, quartz pebbly conglomerate

Hottah Terrane

- Metasedimentary rocks, retrogressed cordierite-biotite-muscovite-quartz-feldspar rocks in the Hotah Lake area (east of Hotah, west of Hotah, and west of Hotah) and quartzites in the Conjuror Bay area

Symbols

- Geological contact (defined, approximate, gradational)
- Limit of outcrop
- Fault (defined, approximate)
- Anticline (arrow indicates plunge)
- Syncline (arrow indicates plunge)
- Bedding, top known (inclined, vertical, overturned)
- Extinct foldation
- Cleavage, schistosity (inclined, vertical)
- Strike of schistosity on horizontal surface
- Breccia
- Bullseye Pluton Alteration Halo
- Outer limit albite zone
- Outer limit magnetite-apatite-actinolite zone
- Outer limit pyrite zone
- U-Pb zircon sample locality (see in G-1, 1 sigma error). Courtesy of Neering and Van Schmus, University of Kansas.

REFERENCE

- Sheet
- all weather
- dry weather
- water wet bank
- trail, cut fire or passage
- Railway
- normal gage, multiple track
- normal gage, single track
- abandoned or under construction
- bridge, road, railway
- Cutting, embankment
- Boundary
- international, with monument
- international, without monument
- courty or district
- boundary or parish
- dark, red, etc.
- median line, with number
- High or Clear-cut
- Building, Barn
- Church
- Lighthouse
- School, Post Office
- Cemetery

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RAINY LAKE DISTRICT OF MACKENZIE NORTHWEST TERRITORIES

SCALE 1:50,000
1:25 inches to 1 mile approximately

REFERENCE

- Power transmission line
- Telephone line
- Horizontal control point, with elevation
- Black mark, with elevation
- Obelisk
- Identified or dry
- Subsidence
- Lake intermittent, variable
- Isolated and seasonal
- Marsh or Swamp
- Clay or mudflat
- Flowline flat
- Shrub or For. Breakwater
- Rocky reef
- Small island, rock lake or beach
- Cutbank
- Excavation
- Depression
- Approximate
- Cliff
- Flow

CONTOUR INTERVAL, IN FEET
Elevation in Feet above Mean Sea Level
Contours shown at 100-foot intervals
Transverse Mercator Projection

ELEVATIONS IN METRES ABOVE MEAN SEA LEVEL
ELEVATIONS EN METRES AU-DESSUS DU NIVEAU MOYEN DE LA MER
EQUIDISTANCE DES COURBES 10 METRES

WHITE EAGLE FALLS DISTRICT OF MACKENZIE NORTHWEST TERRITORIES

Scale 1:50,000 Échelle

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