OF 715

GEOLOGY

NORTHERN YUKON TERRITORY AND NORTHWESTERN DISTRICT OF MACKENZIE

LEGEND

CENOZOIC

QUATERNARY
PLEISTOCENE AND HOLOCENE

- **Qu** Hummocky or ridged moraine and lacustrine deposits; undivided
- **Qf** Fluviatile silt, sand and gravel; undivided
- **Qff** Fluviatile deposits of fans and fan aprons
- **Qgf** Glaciofluvial deposits; undivided
- **Ql** Lacustrine deposits and minor fluvial deposits; undivided
- **Qmm** Hummocky or ridged moraine in areas of mountain glaciation
- **Qml** Hummocky or ridged moraine in areas of Laurentide glaciation
- **Qd** Rock slide debris
- **Qe** Marine and estuarine deposits; undivided
- **B** Pediments mostly with thin cover of colluvium and/or organic deposits

TERTIARY AND QUATERNARY
PALEOCENE TO PLEISTOCENE

- **Tb** Sandstone and mudstone, fluviodeltaic; includes Beaufort Formation and Quaternary surficial deposits; undivided
- **Tg** Sand, silt and pebble beds in eastern Old Crow Plain

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T_R REINDEER FORMATION: sand, gravel, lignite and mud; marine and nonmarine

T_{MC} MOOSE CHANNEL FORMATION: sandstone, mudstone and siltstone; alluvial, deltaic and littoral; undivided

T_{BP} BONNET PLUME FORMATION (upper part): sandstone, mudstone and coal; fluviatile and lacustrine

CRETACEOUS AND TERTIARY
UPPER CRETACEOUS AND LOWER TERTIARY

KT_M MONSTER FORMATION: mudstone, sandstone and conglomerate; fluviatile?

CRETACEOUS
UPPER CRETACEOUS

K_{TI} TENT ISLAND FORMATION: mudstone, sandstone and conglomerate; marine and fluviatile. Includes Cuesta Creek Member at base

K_{EP2} EAGLE PLAIN FORMATION (upper part): sandstone, siltstone and shale; alluvial and deltaic

K_{BC} BOUNDARY CREEK FORMATION: bituminous shale and bentonite; marine

K_{BP} BONNET PLUME FORMATION (lower part): conglomerate, sandstone and coal; fluviatile and lacustrine

K_{dw} Sandstone and concretionary shale exposed along Porcupine River; marine

K_{EP1} EAGLE PLAIN FORMATION (lower part): sandstone, siltstone and shale; marine

MESOZOIC

LOWER AND UPPER CRETACEOUS

K_{TR} TREVOR FORMATION: sandstone, light greyish brown, mesa-forming; marine

LOWER CRETACEOUS

K_{KA} KATHUL GRAYWACKE: pebble-conglomerate, sandstone, siltstone and argillite; marine

K_{RR} RAT RIVER FORMATION: sandstone and siltstone, conglomeratic; marine

K_{AR} ARCTIC RED FORMATION: shale, concretionary, silty and siltstone; marine. May include Martin House Formation.

K_{MG} MOUNT GOODENOUGH FORMATION: shale, siltstone and sandstone; marine

Kq Sandstone, shale and quartzite; marine. Includes Martin Creek and McGuire Formations

Kbr Shale, sandstone and phosphatic iron formation; flyschoid, marine

Ksr Sandstone and conglomerate; marine

K_{HR} HORTON RIVER FORMATION: shale, black, bentonitic; marine

K_{BI} BIEDERMAN ARGILLITE: argillite, dark grey to black with thin interbeds of siltstone and sandstone

K_{MH} MARTIN HOUSE FORMATION: sandstone, glauconitic and siltstone; marine

Kwr Shale, siltstone and sandstone; marine

K_{SM} SHARP MOUNTAIN FORMATION: sandstone and conglomerate; marine

K Parsons Sandstone (informal): sandstone, siltstone and shale; marine

JURASSIC AND CRETACEOUS

JURASSIC AND LOWER CRETACEOUS

JK_{H} HUSKY FORMATION: brownish grey shale and siltstone; marine

JK_{NB} NORTH BRANCH FORMATION: sandstone and conglomerate, glauconitic; marine

JK_K KINGAK FORMATION: shale and siltstone; marine

JURASSIC

J_{PO} PORCUPINE RIVER FORMATION: sandstone, grey; marine and nonmarine

J_K KINGAK FORMATION: shale, siltstone and sandstone; marine. May include Shublik Formation

J_{BC} BUG CREEK GROUP: sandstone, quartzite, siltstone and shale; marine. Includes Murray Ridge, Almstrom Creek, Manuel Creek, Richardson Mountains and Aklavik Formations

JKu Sandstone, siltstone and shale. May include Kingak, Porupine River and Husky Formations; undivided

TRIASSIC

MIDDLE AND UPPER TRIASSIC

TR_S SHUBLIK FORMATION: limestone and sandstone, coquinoid; marine

PERMIAN

LOWER AND MIDDLE PERMIAN

P_T TAHKANDIT FORMATION: limestone, light grey, skeletal and chert, spicular; marine

P_{SP} STEP CONGLOMERATE: conglomerate, chert-pebble; fluviatile?

P_S SADLEROCHIT FORMATION: sandstone and quartzite, dark grey; marine

Po Limestone, light grey, coarse crystalline; marine

Pu Shale, siltstone and limestone; undivided; marine

P_{JC} JUNGLE CREEK FORMATION: limestone, sandstone and conglomerate, dark brownish-grey weathering

CARBONIFEROUS AND PERMIAN

CPu Limestone, siltstone and shale; undivided; marine. May include McCann Hill Chert and Nation River Formation

CARBONIFEROUS

C_E ETTRAIN FORMATION: limestone, grey, skeletal, micritic and shale; marine

C_B BLACKIE FORMATION: siltstone, shale and limestone, brown weathering; marine

C_L LISBURNE GROUP: limestone, skeletal, micritic, cherty, light grey weathering; marine. Includes Alapah and Wahoo Formations

C_{HR} HART RIVER FORMATION: limestone, dolomite and chert, brown weathering; marine

C_F | DC_F FORD LAKE SHALE: shale, calcareous, pyritic; marine. May be Upper Devonian in part.

C_{EN} ENDICOTT GROUP: shale, skeletal limestone, conglomerate and coal; marine and nonmarine. Includes Kekiktuk Conglomerate and Kayak Formation

PALEOZOIC

C_T TUTTLE FORMATION: conglomerate, sandstone and shale; fluviatile?

Mo Sandstone, shale and coal; nonmarine

DEVONIAN AND CARBONIFEROUS

DCu Limestone, shale and siltstone; undivided; marine. May include Ford Lake Shale and Hart River, Blackie and Ettrain Formations.

DEVONIAN

UPPER DEVONIAN

Dus Shale, gypsiferous, rusty weathering; marine

Dss Sandstone, feldspathic, rusty weathering, as lentil in Dus

D_I IMPERIAL FORMATION (and equivalents): sandstone, shale and siltstone; flyschoid. May include Canol Formation and Dus

D_{CA} CANOL FORMATION: shale, siliceous, black, yellowish-red weathering

MIDDLE DEVONIAN

D_H HUME FORMATION: limestone and shale; marine

Dsh Shale, dark greenish grey, and limestone, dark grey; marine

SILURIAN AND DEVONIAN
UPPER SILURIAN, LOWER AND MIDDLE DEVONIAN

SDu — Limestone, dolomite and shale; undivided; marine. Includes Delorme, Arnica, Cranswick and Ogilvie Formations

CAMBRIAN TO DEVONIAN
UPPER CAMBRIAN TO LOWER DEVONIAN

€Db — Limestone, dolomite and shale; undivided; marine

$€D_R$ — ROAD RIVER FORMATION: shale, graptolitic; limestone, argillaceous and debris flows

G — Granite, biotite, hornblende and syenodiorite, fluorite, horblende with apparent radiometric ages ranging from 364 to 220 Ma. Includes Sedgwick (G_S), Fitton (G_F), Old Crow (G_{OC}), Schaeffer (G_{SH}), Ammerman (G_{AM}) and Dave Lord (G_{DL}) intrusions.

ORDOVICIAN AND SILURIAN
UPPER ORDOVICIAN AND LOWER SILURIAN

OS_K — MOUNT KINDLE FORMATION: dolomite, fine to medium crystalline; undivided; marine

OSh — Shale, graptolitic; chert and limestone; undivided

CAMBRIAN TO SILURIAN
?UPPER CAMBRIAN TO UPPER SILURIAN

$€S_V$ — VUNTA FORMATION: limestone, fine crystalline, marine

CAMBRIAN AND ORDOVICIAN

$€O_{JR}$ — JONES RIDGE LIMESTONE: limestone and dolomite, siliceous; marine

UPPER CAMBRIAN AND LOWER ORDOVICIAN

$\boxed{€O_F}$ FRANKLIN MOUNTAIN FORMATION: dolomite, cherty, cyclic and shale; marine

CAMBRIAN

LOWER AND UPPER CAMBRIAN

$\boxed{€wm}$ Volcanic conglomerate, basaltic flows, limestone beds and exotic blocks; marine?

MIDDLE CAMBRIAN

$\boxed{€wr}$ Sandstone, conglomerate and shale; undivided; marine

LOWER CAMBRIAN

$\boxed{€_{SK}}$ SEKWI FORMATION: dolomite, silty, bright orange and yellow weathering; quartzite and varicolored shale. Includes Backbone Ranges Formation

?HADRYNIAN

$\boxed{H_S}$ SHEEPBED FORMATION: shale, dark grey to black; marine?

$\boxed{H_K}$ KEELE FORMATION: limestone, dolomite, quartzite, shale and conglomerate; marine

$\boxed{H_4}$ Limestone and dolomite, light grey and weathering; marine

$\boxed{€2}$ Dolomite, brecciated and limestone; marine

$\boxed{€1}$ Shale, silty, dolomite and quartzite; marine

PROTEROZOIC

H_3 Limestone and dolomite, light grey and buff weathering; marine

H_T TWITYA FORMATION: shale, siltstone, sandstone and dolomite; slumped; marine

H_{TI} TINDIR GROUP: shale, dolomite diamictite and basic sills and flows; undivided

H_R RAPITAN FORMATION: diamictite, variably buff, dark green and brick red; siltstone, pale red shale and iron formation; glacial-marine

?HELIKIAN

H_{LD} LITTLE DAL FORMATION: dolomite, gypsum, algal stromatolites and shale; marine

H_K KATHERINE GROUP: quartzite, shale and dolomite; undivided, marine and ? nonmarine

H_P PINGUICULA GROUP: dolomite, sandstone and shale; marine

H_Z TZESOTENE FORMATION: shale, sandstone and dolomite; marine and ? nonmarine

H_G GILLESPIE LAKE GROUP: dolomite, algal, siliceous, orange weathering; marine

Pu Quartzite, argillite, dolomite; undivided

P_{N6} NERUOKPUK FORMATION (P_{N0} - P_{N6})* Argillite, dark grey to black and sandstone, brown weathering, lithic

Pd | Pv Sills and dykes, dark greenish grey, mafic

P_{N5} Argillite, dark grey to greenish grey and limestone, dark grey, fine crystalline to cryptocrystalline

Pq Quartzite, white, fine grained, and argillite, dark grey

P_{N4} Argillite, dark grey to dark olive grey; sandstone, olive grey, lithic and chert, medium to light grey

P_{N3} Argillite, phyllitic, and siltstone, olive grey, brown weathering

P_N NERUOKPUK FORMATION: undivided

P_{N2} Argillite, olive grey; sandstone, light grey weathering and limestone, dark grey, fine crystalline

P_{N1} Phyllite, olive grey and quartzite, medium grey weathering

P_{N0} Quartzite, dark grey and phyllite, dark grey; brown weathering

*Numbering does not necessarily imply stratigraphic order. Depositional regimes unstudied.

?APHEBIAN

H_Q QUARTET GROUP: argillite and quartzite, slaty and intrusive breccias

Geology by D.K. Norris, 1980

Compiled by D.K. Norris from Geological Survey of Canada Maps 1514A through 1529A by D.K. Norris

Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada

SYMBOLS

Geological boundary (defined, approximate) . . . . . .

Fault, extension (solid circle indicates downthrown side; defined, approximate) . . . . . .

Fault (assumed projection under cover of younger deposits . . . . . .

Fault (arrow indicates relative movement; defined, approximate) . . . . . .

Fault, contraction (teeth indicate upthrown side; defined, approximate) . . . . . .

Anticline (arrow indicates plunge) . . . . . .

Syncline (arrow indicates plunge; overturned) . . . . . .

Mineral occurrence . . . . . .

Borehole (dry and abandoned, suspended gas, suspended oil, suspended gas and oil) . . . . . .

Tentative formational assignment . . . . . ? Kmg

Minerals

Copper	Cu	Lead	Pb
Phosphate . . .	P	Tungsten . . .	W
Gold	Au	Uranium . . .	U
Iron	Fe	Coal	C

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