

LEGEND

QUATERNARY

PLEISTOCENE AND HOLOCENE

- Qa** Fluvialite, glacial and marine silt, sand and gravel; undivided (in structure section 1 only)
- Qf** Fluvialite silt, sand and gravel, in part with cover of organic deposits; undivided
- Qff** Fluvialite deposits of fans and fan aprons; silt, sand and gravel, in part with cover of organic deposits
- Qml** Hummocky or ridged moraine in area of Laurentide glaciation
- Qe** Marine and estuarine deposits; mainly silt and sand; includes gravel of certain spits and offshore bars
- B** Pediments; bedrock surfaces mostly with thin cover of colluvium and/or organic deposits

TERTIARY

Eocene to ?Pliocene

- Tu** Mudstone, siltstone and sandstone; prodeltaic and fluviodeltaic; undivided (in structure section 1 only)

PALEOCENE

- Tr** REINDEER FORMATION: sand, gravel, lignite and mud; marine and nonmarine (in structure section 1 only)

CRETACEOUS

UPPER CRETACEOUS

- KTu** FISH RIVER GROUP AND BOUNDARY CREEK FORMATION: undivided (in structure section 1 only)
- KTi** TENT ISLAND FORMATION (Kck-Kti) Upper member: mudstone, shallow marine (in structure section 2 only)
- Kck** Cuesta Creek Member: conglomerate and sandstone; fluvialite
- Kbc** BOUNDARY CREEK FORMATION: mudstone, bituminous, bentonitic; marine

LOWER CRETACEOUS

- Kdr** Sandstone, conglomerate and shale; flyschoid
- Kmg** MOUNT GOODENOUGH FORMATION: shale and siltstone; marine
- Kwc** Sandstone, siltstone and shale; marine and nonmarine (in structure sections 1 and 2 only)

The new formation name Mount Goodenough is after J.A. Jelezky (in press)

JURASSIC AND CRETACEOUS

- JKk** KINGAK FORMATION: shale and siltstone; offshore marine

TRIASSIC

- Ts** SHUBLIK FORMATION: limestone, sandstone and shale; shallow marine

CARBONIFEROUS

- Cw** LISBURNE GROUP (Ca-Cw) WAHOO FORMATION: limestone, crinoidal; open marine
- Ca** ALAPAH FORMATION: limestone, dolomitic; open marine
- Cky** ENDICOTT GROUP (Ck-Cky) KAYAK FORMATION: shale, coal and limestone; marine and nonmarine
- Cxk** KEKIKTUK FORMATION: conglomerate and quartzite; fluvialite

CAMBRIAN TO DEVONIAN

- CDr** ROAD RIVER FORMATION: shale and limestone; marine
- Gs** Sedgwick Granite with apparent radiometric ages ranging between 355 and 312 Ma (in structure sections 1 and 2 only)

CAMBRIAN LOWER AND UPPER CAMBRIAN

- Cwmv** Agglomerate and limestone, mafic vesicular flows
- Cwms** Argillite, dark grey, slaty

PROTEROZOIC

- Pn6** NERUOKPUK FORMATION (Pn0-Pn6) Sandstone and argillite
- Pn5** Limestone and quartzite
- Pn4** Argillite, sandstone and chert
- Pn3** Argillite, limestone and siltstone
- Pn2** Argillite, limestone and sandstone
- Pn1** Argillite and limestone
- Pn0** Argillite (base not seen)

Numbering of Pn does not necessarily imply stratigraphic order. Depositional regimes unstudied

Geological symbols:

- Outcrop or feature examined (bedding not measurable)
- Geological boundary (defined, approximate)
- Bedding, tops known (horizontal, inclined, vertical)
- Bedding, estimated from aircraft (inclined)
- Foliation (inclined, vertical)
- Lineament
- Fault, extension (bold circle indicates downthrow side; defined, approximate)
- Fault, undesignated (defined)
- Fault (assumed projection under cover of younger deposits)
- Fault, contraction (teeth indicate upthrust side; defined, approximate)
- Fault, contraction (assumed projection under cover of younger deposits)
- Anticline (defined, approximate)
- Anticline and syncline (assumed projection under cover of younger deposits)
- Syncline (defined, approximate)
- Syncline (overturned)
- Anticline and syncline (asymmetrical; long arrow points in direction of dip of axial surface)
- Fossil locality (GSC catalogue numbers: Calgary, Ottawa, others)
- Paleontological age on fossil locality (determined, indeterminate); for explanation of geological time symbols, see Geotectonic Correlation Chart, 1532A
- Apparent radiometric age (millions of years)
- Tentative formational assignment
- Stratigraphic section
- Borehole (city and abandoned, suspended)
- Line of section

Geology by D.K. Norris, 1975

SCHEDULE OF WELLS

1. IOE Spring River YT, T.D. 2123 m
2. Pacific Imp. et al. Roland Bay YT L-41, T.D. 2752 m
3. Imperial Itakook J-17, T.D. 3810 m
4. Imperial Itakook B-20, T.D. 3290 m
5. Dome Pacific et al. Fox Natak E-56, T.D. 2694 m
6. Dome Gulf Tarsius A-25, T.D. 435 m

Note: Well listing is chronological in order of spudding date

ACKNOWLEDGMENTS

Geological synthesis based on field observations and/or paleontological determinations made by the following geologists, industry geological departments and university professors, listed alphabetically, with corresponding years of field activity where applicable: Geological Survey of Canada - E.W. Bamber, 1962; T.P. Chamney, L.D. Dyke, 1971, 1973; H. Frelbold, W.S. Hopkins, O.L. Hughes, 1962; J.A. Jelezky, D.C. McGonig, E.W. Mountjoy, 1962; B.S. Norford, D.K. Norris, 1962, 1968-73, 1975, 1976; T.P. Poulton, 1975, 1976; R.A. Price, 1962; R.M. Procter, 1962; G.C. Taylor, 1962; E.T. Tozer, T.T. Uyeno; R.K. Wanless, industry geological departments - Triad Oil Company Ltd., 1959; Union Oil Company of Canada Ltd., 1969; University of Alberta - W.N. Stewart; University of Montreal - B.L. Mamet; University of Toronto - J.B. Waterhouse.

SCHEMATIC STRATIGRAPHIC RELATIONSHIPS

Geological cartography by M.D. Wallace, Institute of Sedimentary and Petroleum Geology, Geological Survey of Canada

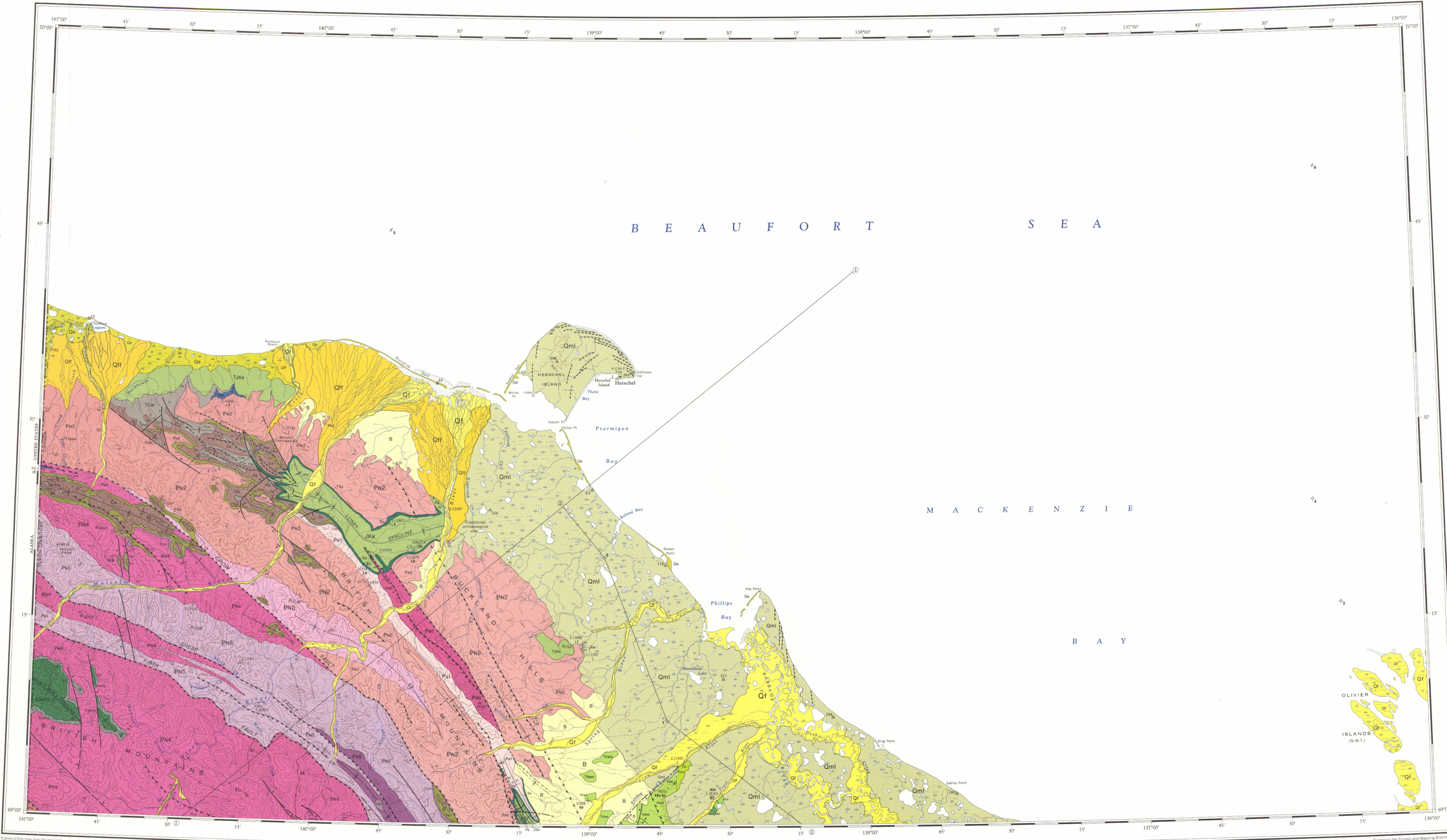
Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada

Base map from 1:250,000 scale maps (Herschel Island and part of Demarcation Point) published by the Surveys and Mapping Branch in 1962 and 1963

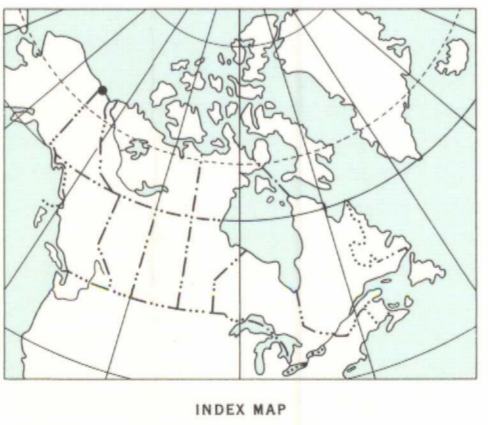
Copies of the topographical edition of these maps may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa, Ontario

Magnetic declination 1980 varies from 34° 36' 0" easterly at centre of west edge to 37° 52' 0" easterly at centre of east edge. Mean annual change 6.5" westerly

Elevations in feet above mean sea level



Copies of this map may be obtained from the Geological Survey of Canada, 601 Booth Street, Ottawa, Ontario K1A 0E8, 3303 - 33rd Street NW, Calgary, Alberta T2S 2A7



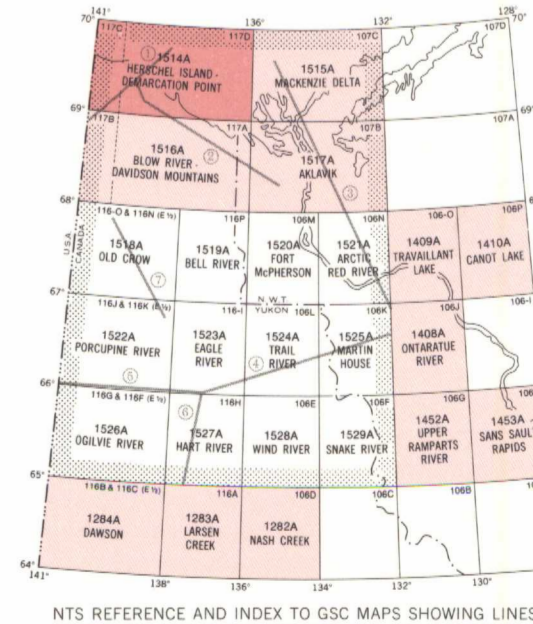
MAP 1514A
 GEOLOGY
HERSCHEL ISLAND AND DEMARCATION POINT
 YUKON TERRITORY

Scale 1:250,000

Kilometres 0 6 12 18
 Miles 0 4 8

Transverse Mercator Projection
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THE STRUCTURE SECTION DIAGRAM AND GEOTECTONIC CORRELATION CHART FOR THE AREA COVERED BY MAPS 1514A TO 1529A ARE AVAILABLE SEPARATELY AS SHEETS 1530A AND 1532A



NTS REFERENCE AND INDEX TO GSC MAPS SHOWING LINES OF SECTION FOR STRUCTURE SECTIONS. SEE SHEET 1530A (Depositional Regimes defined by shaded areas)

MAP 1514A
HERSCHEL ISLAND AND DEMARCATION POINT
 YUKON TERRITORY

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1514 A