Énergie, Mines et Ressources Canada | Energy, Mines and Resources Canada

GEOLOGICAL SURVEY OF CANADA | COMMISSION GÉOLOGIQUE DU CANADA

Canada

GEOLOGY OF HAZELTON MAP AREA (93 M)

BRITISH COLUMBIA

Scale 1:250,000 Échelle

Miles 5 0 5 10 15 20 Miles
Kilometres 5 0 5 10 15 20 25 30 Kilometres

CONTOUR INTERVAL 500 FEET
Elevations in Feet above Mean Sea Level
North American Datum 1927
Transverse Mercator Projection

ÉQUIDISTANCE DES COURBES 500 PIEDS
Élevations en pieds au-dessus du niveau moyen de la mer
Système de référence géodésique nord-américain 1927
Projection transverse de Mercator

Produced by the SURVEYS AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND RESOURCES, Ottawa, 1976, from the third edition compiled and produced by the DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES, Victoria, B.C. Updated from aerial photographs and 1:50,000 maps. Information current as shown in diagram.

Magnetic declination 1975, varies from 27°46' easterly at centre of west edge to 27°40' easterly at centre of east edge. Mean annual change decreasing 3.2'

1973
1972

Roads:
hard surface, all weather ..... dual highway / more than 2 lanes
hard surface, all weather ..... 2 lanes / less than 2 lanes
loose or stabilized surface, all weather ..... 2 lanes or more / less than 2 lanes
loose surface, dry weather .....
cart track .....
trail, cut line or portage .....

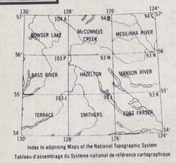
FOR COMPLETE REFERENCE SEE REVERSE SIDE

Établie par la DIRECTION DES LEVÉS ET DE LA CARTOGRAPHIE, MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES, Ottawa, en 1976, d'après la troisième édition, mise à jour et publiée par le MINISTÈRE DES TERRES, FORÊTS ET RESSOURCES HYDRAULIQUES, Victoria, C.B. Mise à jour à l'aides des photographies aériennes et des cartes 1:50,000. Renseignements à jour tels qu'indiqués au diagramme.

La déclinaison magnétique pour 1975 varie de 27°46' Est au centre de la limite Ouest à 27°40' Est au centre de la limite Est. Variation moyenne annuelle décroissante 3.2'.

Routes:
pavée, toute saison ..... 2 chaussées séparées / plus de 2 voies
pavée, toute saison ..... 2 voies / moins de 2 voies
gravier aggloméré, toute saison ..... 2 voies ou plus / moins de 2 voies
de gravier période sèche .....
de terre .....
sentier, percée ou portage .....

POUR UNE LISTE COMPLÈTE DES SIGNES, VOIR AU VERSO



Index to adjoining Maps of the National Topographic System
Tableau d'assemblage du Système national de référence cartographique

O.F. 2322

LEGEND

TERTIARY

MIOCENE

IMv Basalt

EOCENE or younger

IEs **Tzezakwa Creek sediments:** sandstone, siltstone, conglomerate, shale, coaly shale and coal; interbedded tuff, tuffaceous siltstone, and fanglomerate; continental, fluvial

EOCENE

OOTSA LAKE GROUP (IEv)

IEv Rhyolite/rhyodacite flows, ash flows, breccia, tuff; subordinate andesite, basalt, and intercalated volcaniclastic sediments; includes some subvolcanic intrusive rocks

TB **Babine intrusions:** biotite-hornblende-feldspar porphyries (TBp), biotite porphyry (TBb); hornblende porphyry (TBh); diorite-microgabbro (TBd); granodiorite (TBg); quartz monzonite (TBq); rhyolite (intrusive equivalent of Ootsa Lake Group) (TBr)

TK **Kastberg intrusions:** biotite-hornblende rhyodacite porphyry, massive leuco-rhyolite

PALEOCENE

lPs **Moricetown sediments:** sandstone, conglomerate, siltstone, shale, and coal; epiclastic volcanic sediments; most clasts are andesitic and dacitic volcanics similar to the Kasalka Group

lPv **Moricetown volcanics:** andesite flows and flow breccia

CRETACEOUS

UPPER CRETACEOUS

KASALKA GROUP (uKK)

uKK Hornblende-feldspar-porphyritic andesite-dacite flows, flow breccia, breccia; rhyolite to dacite flows and ash flow tuff, breccia; minor basalt and andesite feldspar porphyry; intercalated lacustrine, fluvial and lahar volcaniclastic sediments and tuffaceous sediments; includes sills, dykes and intrusive domes. **Brian Boru Formation** (uKKu); **Suskwa volcanics** (uKKg); **Cronin volcanics** (uKKq); **and French Peak volcanics** (uKKx)

LKB **Bulkley intrusions:** mainly granodiorite; lesser quartz monzonite, quartz diorite; minor diorite and granite; feldspar-, feldspar-hornblende-biotite and feldspar-quartz-eye porphyry

LOWER AND UPPER CRETACEOUS

SUSTUT GROUP (KT)

KT **Tango Creek Formation:** chert-, quartz-, and mica-bearing polymictic fluvial conglomerate, sandstone, siltstone, and coaly shale

LOWER AND(?) UPPER CRETACEOUS: Hauterivian, Albian, and(?) Cenomanian

EKg Gabbro, diorite, monzodiorite, monzonite, and granodiorite

SKEENA GROUP (LKRs, LKRv, LKv, LKcg, LKs, LKK)

LKRs **Red Rose Formation:** sandstone, siltstone, argillite, chert-pebble conglomerate, reddish sandstone, gritty mudstone; mainly fluvial, common detrital muscovite, partly coeval with KT

LKRv **Rocky Ridge Formation:** subaerial, alkaline, basaltic-andesitic augite-feldspar-porphyry flows, tuff, breccia, lahar, and intercalated volcaniclastic sediments

LKv Subaqueous greenstone, coarse to fine grained breccia, tuff, and volcaniclastic sediments; interbedded with Albian shale

LKcg **Hanawald conglomerate:** chert-pebble conglomerate

LKs **Kitsumkalum shale, Hauterivian - Albian(?):** black shale, interbedded thin bedded sandstone and siltstone; commonly concretionary and pyritiferous

LKK **Kitsuns Creek Formation:** feldspathic and volcanic sandstone, siltstone, shale, polymictic volcaniclastic conglomerate, coal, and carbonaceous sediments

JURASSIC AND CRETACEOUS

LATE JURASSIC(?)

LJd Hornblende diorite

MIDDLE JURASSIC TO LOWER CRETACEOUS: Callovian to Hauterivian

BOWSER LAKE GROUP (UJB - UJKB, UJN, UJT, MUJA)

UJB - UJKB **Undivided Bowser Lake Group (Mount Thomlinson assemblage), Oxfordian - Hauterivian** (UJB and UJKB)**:** interbedded, epiclastic feldspathic and volcanic conglomerate (clasts locally are granitoid), sandstone, siltstone, shale, and argillite; minor coal and carbonaceous units; black, uniform pencil shale (UJKBs)

UJN **Netalzul Formation, Oxfordian:** feldspar-hornblende-porphyry andesite flows, breccias, tuff, and lahar; minor intercalated volcaniclastic sediments

UJT **Trout Creek Formation, Upper Oxfordian:** interbedded, thick bedded conglomerate, sandstone, siltstone, shale, and coal; marine and nonmarine; polymictic volcanic and conglomerate containing granitoid clasts

MUJA **Ashman Formation, Callovian - Lower Oxfordian:** interbedded, well bedded, marine feldspathic sandstone, greywacke, siltstone, and argillite; minor conglomeratic lenses and thin bedded limey argillite; commonly concretionary

JURASSIC

LOWER AND MIDDLE JURASSIC (Sinemurian to Bajocian)

EJgb Coarse grained diabasic gabbro sills, correlative with the Ankwell Member

HAZELTON GROUP (MJS, LMJHv, LJN - LMJN, LJA, LJAv, LJT)

MJS **Smithers Formation, Aalenian - Bajocian:** interbedded, well bedded, shallow marine, volcaniclastic tuffaceous sandstone, siltstone, greywacke, grit, ash, and lapilli tuff; minor conglomerate and sharpstone conglomerate; local glauconitic feldspathic sandstone

LMJHv **Saddle Hill volcanics, Aalenian - Bajocian?:** interbedded, reddish, subaerial tuffaceous mudstone, andesitic to rhyolitic flows, ash-flows, ash and lapilli tuff, breccia, lahar, and intercalated volcaniclastic sediments; locally interbedded with glauconitic sandstone of the Smithers Formation

LJN - LMJN **Nilkitkwa Formation, Pliensbachian - Bajocian:** well bedded, thin to thick bedded, distal marine tuffaceous argillite, shale, siltstone, greywacke, ash and lapilli tuff, ash-flow rhyodacite tuff, basaltic tuff and breccia; minor limestone, conglomerate and sharpstone conglomerate

LJA **Nilkitkwa Formation, Ankwell Member, Toarcian:** massive bedded, subaqueous greenstone, basalt breccia, flows, tuff, broken pillow breccia, peperite breccia underlying massive bedded reddish subaerial basalt flows, flow-top breccia, and intercalated volcaniclastic sediments; minor thin limestone biohems and lenses; minor rhyolite; isolated subaqueous basalt-andesite lenses (LJAv)

LJT **Telkwa Formation, Sinemurian - Pliensbachian:** massive to thin bedded, mainly andesitic, calc-alkaline volcanics; includes basalt, andesite, dacite and rhyolite flows, breccia, lapilli and ash tuff, and intercalated volcaniclastic sediments; dominantly submarine volcanics between Babine and Takla valleys; dominantly subaerial red volcanics in Driftwood and Nilkitkwa ranges; epiclastic and volcaniclastic sediments and lahar interbedded with subaerial reddish volcanics in the Hogem Ranges

EJT **Topley Intrusions:** quartz diorite, diorite, minor granite

TRIASSIC AND JURASSIC

UPPER TRIASSIC AND LOWER JURASSIC

TJSi **Sitlika assemblage:** epidote-amphibolite facies metapelite, metaconglomerate, metavolcanics and marble

TRIASSIC

UPPER TRIASSIC

STUHINI GROUP (uTs)

uTs **Savage Mountain Formation, Carnian and Norian:** subaqueous, augite porphyry flows, breccia, tuff, broken pillow breccia, peperite breccia, shale, greywacke; minor limestone and feldspar porphyry

CARBONIFEROUS AND PERMIAN (may include UPPER TRIASSIC)

CACHE CREEK GROUP (PPc, PTcu)

PPc Interbedded oceanic shale, chert, limestone, and greenstone volcanics

PTcu Serpentinite

SYMBOLS

Stratigraphic or intrusive contact (defined, approximate) .....
Approximate outcrop limits .....
Bedding (inclined, vertical) .....
Foliation (inclined) .....
Fault (defined, approximate; solid circle indicates downthrown side) .....
Thrust fault (teeth indicate upthrust side) .....
Anticline (trace of axial plane) .....
Syncline (trace of axial plane) .....
Average paleocurrent direction .....
K-Ar date (Ma); b: biotite, h: hornblende, r: whole rock; (c) date by N.C. Carter ... x 72h

SOURCES OF INFORMATION

Previous work: J.E. Armstrong, 1938; A. Sutherland Brown, 1951-1955; N.C. Carter, 1965-1972; M. Wolfhard, 1973.

Geology by: T.A. Richards, 1972-1977; O.L. Jeletzky, 1974, 1976; T.P. Poulton, 1973; H.W. Tipper, 1973; G.J. Woodsworth, 1973.

Compilation by: T.A. Richards, 1990.

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$8.00