



LEGEND

Coloured legend blocks indicate map units that appear on this map.

QUATERNARY
Q Recent alluvium, Pleistocene till, marine drift

TERTIARY
UPPER OLIGOCENE TO LOWER PLOCENE
Ts SKOKUN FORMATION: sandstone, conglomerate, shale, coal

UPPER OLIGOCENE TO LOWER PLOCENE
TM MASSET FORMATION (mainly Graham Island): dominantly aphyric, mafic to felsic flows and pyroclastic rocks; local epiclastic interbeds. Feldspar is the dominant phenocryst phase; pyroxene is present in mafic rocks but rare in felsic ones; quartz is rarely present; phenocrysts are less than 3 mm in size and constitute less than 40% of the rock volume

TMa Aphyritic, <5% feldspar phenocrysts (0.5-1 mm)
TMb Felsic flows and/or domes, minor pyroclastics and breccias. Flows and domes are flowbanded at the mm scale, the matrix is chalky; the base of flows may be vitreous, upper portions of flows contain drusy-quartz-filled vugs
TMc Felsic pyroclastics, commonly lithic-rich with conspicuous welding textures
TMd 15-40% feldspar phenocrysts (0.5-2 mm); contains <1% feldspar phenocrysts about 3 mm in length
TMe Felsic flows and/or domes, minor pyroclastics and breccias. Flows and domes are flowbanded at the mm scale, the matrix is aphanitic; lithic clasts are common in some flows
TMf Felsic pyroclastics, commonly lithic-rich with conspicuous welding textures
TMg <10% quartz phenocrysts (0.5-1 mm), plus feldspar phenocrysts
TMh Felsic flows and/or domes, Cherty, aphanitic matrix, drusy-quartz-filled vugs in upper parts of flows, 0.5-1 mm quartz phenocrysts, <35% 0.5-1 mm feldspar phenocrysts
TMi Felsic pyroclastics, commonly lithic-rich with distinctive welding textures
TMj <10% pyroxene phenocrysts plus feldspar phenocrysts
TMk Felsic flows and minor pyroclastics with pyroxene (<0.5 mm across) as cores of feldspar and as glomerocrysts; matrix is aphanitic and flowbanded
TMl Felsic flows and minor pyroclastics having 3-40% feldspar phenocrysts. Feldspar phenocrysts are slightly rounded to subhedral, 0.5-3 mm in size, with altered cores; pyroxene occurs as 0.5 mm long subhedral laths and as glomerocrysts with feldspar; matrix is dense, black and aphanitic to vitrophytic
TMm Mafic unit undifferentiated: basalt, basaltic andesite and andesite flows; minor felsic flows, pyroclastics and interflow breccias; rare sedimentary intercalations. Mafic flows and breccias contain feldspar phenocrysts with or without pyroxene, rare olivine and biotite.
TMn Basalt, basaltic andesite and andesite flows. Flows are aphyric, aphanitic and flowbanded
TMo Felsic phenocrysts, with or without pyroxene
TMp Basalt, basaltic andesite and andesite flows; may be vesicular and/or amygdaloidal. Matrix is sugary, ophitic to subophitic

REWORKED EPICLASTICS
TMa Fine to coarse grained sandstone and conglomerate, heterolithic; rare plant fragments and thin coal beds
TMb Debris flow deposits of primary volcanic origin, monolithic and poorly sorted

EOCENE AND OLIGOCENE
TV Unnamed volcanic rocks (Moresby Island and southern Graham Island); may contain some MASSET FORMATION; intercalated mafic to felsic lava flows and pyroclastic rocks; local epiclastic interbeds

TK Keno plutonic suite (U-Pb: 27-48 Ma; K-Ar: 24-40 Ma): fine-grained, seriate and locally micritic hornblende-biotite quartz monzonite, biotite granite, biotite-hornblende quartz diorite, hornblende gabbro; hornblende-biotite-plagioclase porphyry; rare agmatite
TKa Dykes (K-Ar: 43.7 Ma): andesite, basalt, some felsic rocks; fine- to medium-grained, aphyric, diabasic texture; rare feldspar and/or hornblende phenocrysts

Tah Unnamed shale: black fissile shale; sandstone; minor conglomerate and coal

CRETACEOUS
LOWER AND UPPER CRETACEOUS
QUEEN CHARLOTTE GROUP (Kq-Ksh)
SAKONIAN
uKsh Unnamed shale: black fissile shale; shale with calcareous concretions; rare sandstone
uKv Unnamed volcanic unit: feldspar-phyric andesite flows and pyroclastics
uKhc HONNA FORMATION: conglomerate; sandstone; minor shale

CONIACIAN AND YOUNGER
uKv Unnamed volcanic unit: feldspar-phyric andesite flows and pyroclastics

ALBIAN TO LOWER TURONIAN
KHs HADA and SKIDEGATE FORMATIONS undivided: sandstone; shale
KS SKIDEGATE FORMATION: thinly interbedded sandstone and shale; thick to massive sandstone with interbedded shale
KH HADA FORMATION undivided: sandstone; shale
Kuh UPPER HADA FORMATION: shale and concretionary shale
Kih LOWER HADA FORMATION: sandstone and concretionary sandstone

UPPER JURASSIC AND LOWER CRETACEOUS
TITHONIAN TO APTIAN
IKL LONGARM FORMATION: sandstone; conglomerate and pebbly sandstone; shale, concretionary shale, minor sandstone

JURASSIC
MIDDLE TO LATE JURASSIC
mJb Burnsby Island plutonic suite (U-Pb: 158-163 Ma; K-Ar: 145-164 Ma): medium-grained, equigranular, liberally veined biotite-hornblende quartz monzonite; hornblende-biotite quartz monzonite; muscovite-biotite hornblende-biotite-plagioclase gabbro and diorite
mJc San Christoval plutonic suite (U-Pb: 171-172 Ma; K-Ar: 145-166 Ma): medium-grained, equigranular, mafic inclusion-bearing (biotite-) hornblende quartz diorite, quartz monzonite and diorite; unit includes Hunter Point, Kindakun Point and Berastof agmatite complexes; foliated inclusions and prismatic hornblende are characteristic

MIDDLE JURASSIC
UPPER BATHONIAN AND LOWER CALLOVIAN
mJh NORESBY GROUP: sandstone; conglomerate

LOWER JURASSIC
MAUDE GROUP (LJS - LJP): fissile shale; fine- to medium-grained sandstone; minor limestone
TOARCIAN AND LOWER ALENIAN
IJP PHANTOM CREEK FORMATION: fine- to coarse-grained fossiliferous sandstone
LOWER AND MIDDLE TOARCIAN
IJW WHITELAVES FORMATION: shale containing septarian and limestone nodules; minor sandstone
PLIENBACHIAN AND LOWER TOARCIAN
IJF FANNIN FORMATION: luffaceous sandstone; shale containing septarian nodules; siltstone; minor limestone
UPPER SINEMURIAN AND LOWER PLIENBACHIAN
IJG GHOST CREEK FORMATION: shale; siltstone; minor flaggy limestone

UPPER TRIASSIC AND LOWER JURASSIC
uTJK KUNGA GROUP (uTJs - uTJs): fine-grained sandstone; limestone

UPPER NORIAN TO SINEMURIAN
uTJs SANDILANDS FORMATION: fine-grained sandstone; limestone; luffaceous sandstone

UPPER CARIAN TO MIDDLE NORIAN
uTSP PERIL FORMATION and SADDLER LIMESTONE undivided: massive, grey, crystalline limestone; grey, medium-bedded limestone

LOWER TO MIDDLE NORIAN
uTLP PERIL FORMATION: dark grey, medium-bedded limestone

UPPER CARIAN AND LOWER NORIAN
uTSL SADDLER LIMESTONE: massive, crystalline, grey limestone; lesser accessory chert

UPPER TRIASSIC
CARIAN
uTK KARLUTSEN FORMATION: basalt flows; breccia; tuff; minor limestone

FOSSIL IDENTIFICATIONS:
 Radiolaria: E.S. Carter
 Conodonts: M.J. Orchard
 Pollen and Spores: J.M. White
 Foraminifera: B.E.B. Cameron
 Triassic Molluscs: E.T. Tozer
 Lower Jurassic Molluscs: H.W. Tipper, P.L. Smith
 Middle Jurassic Molluscs: T.P. Poulsen, R.L. Hall, H.W. Tipper
 Upper Jurassic Molluscs: J.A. Jelezky
 Cretaceous Molluscs: J.W. Haggart

Geology by R.I. Thompson, 1987-1988 and C. Evenchick, 1987, with assistance from P. Benham and L. Macdonald, 1987, O. Thompson and C. Greig, 1988
 Compiled by R.I. Thompson, 1989
 Cartography by B. Sawyer, G. L'Esperance, R. Franklin and E. Yorath

SYMBOLS:
 Stratigraphic or intrusive contact (defined, approximate, inferred)
 Outcrop or outcrop area examined in field
 Bedding, tops known (inclined, vertical, overturned)
 Fault, steeply dipping to vertical, sense of motion not determined (defined, approximate, inferred)
 Fault, extensional (symbol also applied to vertical faults; solid circle indicates downthrown side; defined, approximate, inferred)
 Fault, contractional (synonymous with thrust fault; teeth indicate upthrown side; defined, approximate, assumed)
 Strike slip fault (arrows give sense of displacement)
 Anticline (trace of axial plane; upright; overturned)
 Syncline (trace of axial plane; upright; overturned)
 Fossil locality, GSC catalogue number

MAP 3-1990
GEOLOGY
CUMSHEWA INLET
 BRITISH COLUMBIA
 Scale 1:50 000 - Échelle 1/50 000
 Universal Transverse Mercator Projection / Projection transversale universelle de Mercator
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COORDINATE GRID:
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 Thompson, R.I.
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Codes of this map may be obtained from the Geological Survey of Canada, 600 Booth Street, Ottawa, Ontario K1A 0S8, 2333-82nd Street N.W., Calgary, Alberta T2L 2A7, 100 West Pender Street, Vancouver, B.C. V6B 9B8

