

Geological Survey Branch

OPEN FILE 1994-14

GEOLOGICAL COMPILATION
SKEENA-NASS AREA
WEST CENTRAL BRITISH COLUMBIA

NTS 93E, L, M; 94D; 103G, H, I, J, P; 104A, B

Geology compiled by:

Don MacIntyre, Chris Ash and Jim Britton

SCALE 1:250 000



*A contribution to the Mineral Potential Project and funded in part by
the Corporate Resource Inventory Initiative*



LEGEND

LAYERED ROCKS

QUATERNARY

Qal	Unconsolidated glacial till and poorly sorted alluvium.
------------	---

PLIOCENE to RECENT

Qvb	Basalt; flow, breccia, plugs and dikes (94D); basaltic flows, tuff, scoria; olivine and plagioclase porphyritic (103P).
QNv	MAITLAND VOLCANICS: (remnants or outliers of a Pliocene shield volcano) basalt breccia, vesicular basalt, volcanogenic sediments and pillow lava (104A).

MIOCENE to PLEISTOCENE

CHILCOTIN GROUP

Nc	Olivine basalt flows; thick, massive, columnar jointed, flat lying; includes Poplar Butte volcanics (93L). Olivine basalt necks and plugs (93E).
-----------	--

EOCENE to LOWER MIOCENE

ENDAKO GROUP

eNv	Basalt and andesite; massive, vesicular and amygdaloidal minor breccia and tuff; aphyric to bladed plagioclase porphyritic.
eBc	BUCK CREEK FORMATION: andesite and basalt flows, fine grained, amygdaloidal, flat lying; includes dacite to basalt, mostly andesite, 43-48 Ma (93L).
egv	GOOSLY LAKE FORMATION: trachyandesite, trachyte and basalt; tabular feldspar phenocrysts, glomerophenocrysts to 1 cm; includes minor syenite (93L).

NEWMAN VOLCANICS

env	Dacite to andesite hornblende-biotite-feldspar porphyry flows, breccia and tuffs; extrusive equivalent of the Babine Intrusions; may include high-level intrusions 52 Ma (93L).
------------	---

OOTSA LAKE GROUP

eo	Predominantly rhyolite; flow banded; spheroidal, quartz and biotite phyric phases, felsite; may include small intrusions 49-53 Ma. (93E. L, M); Includes: WHITESAIL VOLCANIC COMPLEX: rhyodacite to rhyolite flows, ash-flow tuff, debris flows, porphyritic dacite, crystal-lithic air fall tuff, andesite flows and breccia. Includes Arete Mountain and Swing Peak outliers (93E).
-----------	---

PALEOCENE and EOCENE or Younger

pes	Sandstone, siltstone, conglomerate, shale, coaly shale, coal; interbedded tuff, tuffaceous siltstone and fanglomerate; continental, fluvial origin; polymictic; clasts of feldspar and hornblende porphyry, rhyolite, chert, argillite. Eocene palynomorphs. Includes Tzehakwa Creek sediments (93M), Driftwood beds (93L), Seaton beds (93M), Thautil River sediments (93E), Moricetown sediments (93M).
------------	---

UPPER CRETACEOUS to EOCENE

uKTs	Conglomerate, sandstone, siltstone, shale; clasts of chert, metaquartzite and quartz; Upper Cretaceous palynomorphs; includes Burns Lake beds and sediments overlying Kasalka Group rocks north of Mt. Cronin (93L); may in part be correlative with PEs; overlain by Buck Creek formation at Rose Lake (93L).
uKev	Rhyolite to dacite flows, breccias and tuffs; isolated areas may be correlative with Kasalka (uKk) or Ootsa Lake (Eo) groups.

SUSTUT GROUP

ITsb	BROTHERS PEAK FORMATION: conglomerate, sandstone, siltstone and acid tuff; minor coal; <i>Paleocene to Eocene</i> ? (94D).
uKST	TANGO CREEK FORMATION: conglomerate, sandstone, and siltstone; minor coal; <i>Cenomanian to Turonian</i> (94D); chert-quartz-mica bearing polymictic fluvial conglomerate, sandstone, siltstone and coaly shale (93M).
uKs	Greywacke, conglomerate, shale, locally carbonaceous; volcanic conglomerate and sandstone with locally derived detritus, volcanic clast-chert pebble conglomerate in Goosly Lake area (93L).

LOWER TO UPPER CRETACEOUS

KASALKA GROUP

uKk	Predominantly hornblende-feldspar-porphyritic andesite flows and related lahars, debris flows, volcanic breccias and epiclastic beds; also includes lesser hornblende-biotite-feldspar-phyric dacite to rhyodacite, aphyric to augite-phyric basaltic andesite, flow-banded quartz phyric rhyolite, hornblende-biotite-bearing lapilli and crystal tuff. Overlies older rocks with angular discordance. Basal member is a red polymictic conglomerate; porphyritic flows are in part the extrusive equivalent of the Bulkley Intrusions; includes Mt. Cronin volcanics (93L), Brian Boru Formation (93M), Tip Top Hill volcanics (93L), Owen Lake volcanics (93L), Lamprey Creek volcanics (93L), Louise Lake volcanics (93L).
------------	--

LOWER CRETACEOUS

SKEENA GROUP

IKs	Undifferentiated marine sedimentary rocks; sandstone, siltstone, argillite and chert pebble conglomerate.
IKRR	RED ROSE FORMATION: sandstone, siltstone, argillite, chert-pebble conglomerate and mudstone; mainly fluvial, common detrital muscovite; <i>Albian, lower Albian to Cenomanian</i> .
IKRv IKv	ROCKY RIDGE VOLCANICS: Subaerial to subaqueous alkaline basalt to basaltic andesite, augite-feldspar phyric; locally pillowed and amygdaloidal; minor greenstone, green to maroon air fall tuff, breccia, lahar and intercalated volcanoclastic sediments; includes Mt. Ney volcanics (IKv) in 93E.

IKcg	HANAWALD CONGLOMERATE: chert-pebble conglomerate (93M); includes sandstone and siltstone and is commonly micaceous (103I).
IKsh	KITSUMKALUM SHALE: black shale, interbedded thin-bedded sandstone and siltstone; commonly concretionary and pyritic; <i>Hauterivian to Albian</i> (93M).
IKk	KITSUNS CREEK FORMATION: feldspathic and volcanic sandstone, siltstone, shale, polymictic volcanoclastic conglomerate, coal, carbonaceous sediments; <i>Berriasian to Hauterivian</i> (93L).
IKm	McEVOY FORMATION: monotonous, thin to thickly interbedded, dark grey siltstone, shale, and sandstone with minor coal, limestone and conglomerate; non-marine; <i>Barremian to Albian</i> (104A).

GAMBIER GROUP

IKG	Thick-bedded andesite to rhyolite flows, tuff and breccia; minor conglomerate, sandstone and siltstone; <i>Hauterivian in whole or in part</i> (93E).
------------	---

MIDDLE JURASSIC TO LOWER CRETACEOUS

GRAVINA ASSEMBLAGE

JKG	Marine argillite and greywacke: interbedded andesitic to basaltic volcanic and volcanoclastic rocks, metamorphosed to amphibolite grade; depositionally overlies Alexander Terrane rocks (103I/J).
------------	--

BOWSER LAKE GROUP

uJKB	UNDIVIDED; interbedded epiclastic feldspathic and volcanic conglomerate, sandstone, siltstone, shale and argillite; minor coal and carbonaceous units <i>Oxfordian to Hauterivian</i> (93M, 103P, 94D).
uJKBA	FACIES A ("SANDSTONE-SILTSTONE-MUDSTONE ('DEEP') TURBIDITE FACIES" in 104A): intercalated siltstone to silty mudstone with interbeds of very fine to fine-grained sandstone; minor chert arenite (104A).
uJKBA'	FACIES A' ("FINE-GRAINED SANDSTONE AND SILTSTONE FACIES" in 94D): >90% black siltstone and fine-grained sandstone; <10% medium-grained chert arenite and lenses of chert-pebble conglomerate (94D).
uJKBB	FACIES B ("SANDSTONE, SILTSTONE FACIES" in 94D; "OPEN SHELF CLASTICS" in 104A): dark siltstone interbedded with fine and medium-grained sandstone, locally containing coquina and rare conglomerate; thinly layered to massive; sedimentary structures include parallel lamination, ripple marks, flaser bedding and bioturbation (94D, 104A).
uJKBC	FACIES C: ("CONGLOMERATE, SANDSTONE, SILTSTONE FACIES" in 94D; "NONMARINE FACIES" in 104A): 70% siltstone and fine and medium-grained sandstone with 30% chert-pebble conglomerate and minor chert arenite; includes minor coal, in situ roots and abundant plant fossils (94D, 104A).
uJKBD	FACIES D ("BUFF-WEATHERING SANDSTONE, SILTSTONE FACIES" in 94D): 50% medium grained poorly bedded sandstone and 50% laminated and massive siltstone and fine grained sandstone, interlayered in 1 to 10 m intervals; lack marine fossils and detrital mica; have rare plant fossils (94D).
uJKBP	FACIES P: ("PYRITIC SILTY MUDSTONE FACIES" in 104A): pyritic, siliceous, tuffaceous silty mudstone; fine to medium-grained lithic arkose (104A, 104B).

uJKc	CURRIER FORMATION: alternating shale, siltstone, sandstone, coal and carbonate; thin to thick bedded, dark grey to black; nonmarine to marginal marine; coal seams up to 3 m; the main coal-bearing unit in the Groundhog-Klappan coalfield (latest Jurassic to Early Cretaceous: Oxfordian to Kimmeridgian, Tithonian or Berriasian) (94D, 104A).
uJBs	Sediments: sandstone, siltstone, argillite and conglomerate; minor coal; <i>Upper Oxfordian</i> (94D).
uJBcg	Chert-pebble and granule conglomerate (104B).
uJBv	basalt and andesite flows, breccia, tuff and lahar; <i>Upper Oxfordian</i> (94D).
uJN	NETALZUL FORMATION: feldspar-hornblende-porphry andesite flows, breccias, tuff and lahar; minor intercalated volcanoclastic sediments; interbedded with uppermost Trout Creek beds; <i>Oxfordian</i> (93L, M).
uJTC uJT	TROUT CREEK FORMATION: interbedded conglomerate, sandstone, siltstone, shale and coal; marine and non-marine; polymictic conglomerate with volcanic and granitoid clasts; <i>Upper Oxfordian</i> ; (93L, M, 103I). .
muJA	ASHMAN FORMATION: argillite and siltstone; minor sandstone and tuff; <i>Callovian to lower Oxfordian</i> (94D). Dark grey, thin-bedded siltstone and shale; with lenses of chert-pebble conglomerate and compositionally similar fine to coarse sandstone; <i>late Bajocian to early Oxfordian</i> (104B, 93M, L, E).

LOWER TO MIDDLE JURASSIC

HAZELTON GROUP

JH	UNDIVIDED: Calcalkaline volcanics, mainly andesite and dacite pyroclastics, flows and derived volcanoclastic sedimentary rocks; <i>Hettangian to Aalenian</i> (103P, 104A, B).
mJHtw	Brecciated and fractured dark green and grey siliceous siltstones (104B).
mJHb ImJHpv JHpv	Pillow basalt and thinly bedded black and white siliceous tuff (104B); pillow lava, broken pillow breccia; andesitic and basaltic flows (103P); mainly pillow lava, pillow breccia; minor mudstone (104B).
ImJHs mJs	SMITHERS FORMATION: marine, shallow-water feldspathic sandstone, siltstone, argillite, greywacke; locally glauconitic and limy; minor ash, crystal and lapilli tuff, volcanic breccia, volcanic-pebble conglomerate, limestone; very fossiliferous; <i>Aalenian to Bajocian</i> (94D, 93M).
mJsv	SMITHERS FORMATION: lapilli tuff, accretionary tuff, brownish-red to dark grey, thickly bedded to massive (93E).
ImJN	NANIKA FORMATION: cream coloured, reddish and dark grey rhyolite flows, breccia and tuff; minor siltstone and sandstone (93E).
ImJv	SADDLE HILL VOLCANICS: interbedded reddish, suberial tuffaceous mudstone, andesitic to rhyolitic flows, ash-flows, ash and lapilli tuff, breccia, lahar and intercalated volcanoclastic sediments; locally interbedded with Smithers Formation <i>Aalenian-Bajocian?</i> (93M).

ImJHpj	"Pyjama Beds": black and white banded, laminated siliceous siltstones; well bedded (1 to 30 cm) black siltstone with pale green to white, fine to medium-grained tuff layers (1-3 cm thick); rusty weathering; <i>Toarcian to Bajocian</i> (94D W½).
ImJHS	SALMON RIVER FORMATION: Dark grey to black, thin-bedded, carbonaceous siltstones and fine sandstones; minor intraformational conglomerate; locally includes thin interbeds of ImJHpj; mafic pillow lava, minor intermediate distal tuff; <i>Toarcian to Aalenian</i> (104B, 103P; 104A W½).
ImJHSpv	SALMON RIVER FORMATION PILLOW LAVAS: Mainly basaltic to andesitic pillow lavas, pillow breccias and hyaloclastites, with dark to light grey volcanic clasts in a calcareous, silty matrix which locally contains microfossils; includes siltstone interbeds; <i>Toarcian to Aalenian</i> (104B).
ImJHD	MOUNT DILWORTH FORMATION: Light-weathering, intermediate to felsic pyroclastic rocks, including dust, ash, crystal, lithic, lapilli and welded tuff. Locally pyritiferous (5 to 15%) and gossanous. Rare chalcedonic veins; <i>Toarcian to Aalenian</i> (104B).
IJH	LOWER HAZELTON GROUP (UNDIVIDED): Intermediate tuffs and flows (feldspar ± hornblende porphyritic) with interbeds of immature sedimentary rocks; minor conglomerate and limestone. Includes Jack, Unuk River and Betty Creek formations; <i>Hettangian to Pliensbachian</i> (104B).
IJHB	BETTY CREEK FORMATION: Heterogeneous, purple, maroon, grey and green, massive to bedded pyroclastic and sedimentary rocks; <i>Sinemurian to Pliensbachian</i> (104B).
IJHu	UNUK RIVER FORMATION: Green and grey, intermediate tuffs and flows (feldspar ± hornblende porphyritic) with locally thick interbeds of fine-grained immature sedimentary rocks; minor conglomerate and limestone. Hettangian to Sinemurian (104A, 104B)
IJHv	Purple, maroon, and green andesite, lapilli tuff, crystal tuff, and pillow lavas; plagioclase and augite phyric (=Betty Creek formation; 104B/15) (104B).
IJHsl	Black graphitic siltstone, stratiform diagenetic pyrite to several per cent; minor tan weathering sandstone, plagioclase crystal tuff, peperite flows, siltstone with carbonaceous plant fragments (104B).
IJHs	SEDIMENTARY UNIT: black siltstone, limestone, green and purple volcanic breccia, sandstone, polymictic conglomerate (103P).
IJHvi	INTERMEDIATE VOLCANIC UNIT: green and maroon andesitic pyroclastic rocks; feldspar ± hornblende andesite porphyry; maroon siltstone, sandstone and conglomerate; minor limestone (103P).
IJHvf	EPICLASTIC AND FELSIC VOLCANIC UNIT: maroon and green volcanic conglomerate, breccia and minor sandstone; black siltstone, argillite, wacke and limestone; dacitic pyroclastic rocks and feldspar-porphyritic flows (103P).
IJC	CARRUTHERS MEMBER: basalt and andesite flows, breccia, pillow breccia and tuff (94D).
IJE	EAGLE PEAK FORMATION: red to brick-red crystal-lithic tuff, tuffaceous mudstone, lapilli tuff, red volcanoclastic sediments; minor amygdaloidal basalt, grey rhyolitic ash flow and marl; formerly Red Tuff Member of the Nilkitkwa Formation; overlies the Nilkitkwa Formation and underlies the Smithers Formation; <i>mainly Toarcian?</i> (93L).

IJA	ANKWELL MEMBER: massive to bedded, subaqueous greenstone, basalt breccia, flows, tuff, broken pillow breccia, reddish subaerial basalt, flow-top breccia and intercalated volcanoclastic sediments; thin limestone bioherms and lenses; minor rhyolite; isolated basalt-andesite lenses; interbedded with Nilkitkwa marine sediments; <i>Toarcian</i> (93M).
IJN	NILKITKWA FORMATION: shallow to deep marine sediments; shale, greywacke, sandstone, siltstone, bioclastic limestone, limestone reef, feldspathic epiclastics, conglomerate, ash tuff, felsic and granitic clasts in basal conglomerate; <i>upper Sinemurian to Toarcian/Bajocian</i> (93E,L,M, 94D).
IJk	KISTELAS VOLCANICS: rhyolitic breccia, tuff, welded tuff; minor flow banded rhyolite; age unknown but assumed to be a facies of the Telkwa Formation; includes metamorphosed equivalents; <i>lower Sinemurian?</i> .
IJt	TELKWA FORMATION: maroon, green and purple subaerial andesitic to dacitic pyroclastic rocks, feldspar-phyric andesite flows and related fragmental rocks; augite-phyric to aphyric basalt flows and flow top breccia, thin interflow epiclastic beds, well bedded lapilli, crystal and ash air-fall tuff, accretionary lapilli tuff, welded quartz-feldspar-phyric ash-flow tuff, ignimbrite, lahar, volcanic breccia, volcanoclastic sedimentary rocks (93E,L,M, 103P).

JURASSIC

Jgn	Gneiss, minor hornfels; possibly an alteration zone only (103P).
Jph	Phyllite, schist, semischist; possibly an alteration zone only (103P).

TRIASSIC TO LOWER JURASSIC

utJv	Greenstone, leucogranitic sills, underlies boulder conglomerate on the north face of Mt. McKendrick; may be correlative with Stuhini Group (93L).
-------------	---

UPPER TRIASSIC

TAKLA GROUP

utTM	MOOSEVALE FORMATION: andesitic and basaltic volcanic conglomerate, breccia, sandstone, tuff and argillite (94D).
utSM	SAVAGE MOUNTAIN FORMATION: basic augite porphyry basalt flows, breccia, pillow breccia, tuff and interbedded bladed-feldspar porphyry (94D).
utTD	DEWAR FORMATION: tuff, sandstone and argillite; minor limestone and breccia (94D).
utTv	Volcanics: basic to intermediate flows, breccia and tuff; probably includes intrusive members (LTrgb); green phyllite and phyllitic schist; minor sediments (east of the Ingenika-Pinchi Fault zone, 94D).
utTs	Sediments: argillite, tuff, sandstone, phyllite, and phyllitic schist; limestone and skarn (east of the Ingenika-Pinchi Fault zone, 94D).

STUHINI GROUP

uts	UNDIVIDED: Brown, black and grey, mixed sedimentary rocks interbedded with medium to dark green, mafic to intermediate volcanic and volcanoclastic rocks (pyroxene ± hornblende ± biotite porphyritic). Minor, intermediate to felsic tuffs and limestone lenses. Mainly Norian but may range in age from Ladinian to Hettangian (e.g. in 104B);
utsv	Pale green-grey tuffs, tuffaceous siltstone, augite-phyric and aphyric basalt flows (104B).
utsvm	Mainly mafic volcanic rocks; olivine and augite porphyry basalt flows, pillow volcanics and breccias, minor siltstone, sandstone, wacke and limestone (103P).
utss	Thick, poorly bedded augite-bearing volcanic tuffaceous sandstone, common sharpstone conglomerate (104B); black siltstone, argillite, shale, black wacke, sandstone, limestone (103P).
uts	interbedded greenstone and augite porphyry flows, breccia, green tuff, tuffaceous argillite, siltstone, minor conglomerate. Includes Carnian to Norian Savage Mountain Formation (93M).

KARMUTSEN GROUP

tk	Fresh, dark grey, massive pillow basalt with epidote and quartz filled vugs and stringers (103J/NE).
-----------	--

UPPER PALEOZOIC (?) to MIDDLE JURASSIC or younger

GAMSBY METAMORPHIC COMPLEX

RMg	Schistose and mylonitic felsic and mafic flows, tuff, lesser volcanogenic sediments; possible metamorphosed equivalent of IJT; lesser amphibolite and luecogneiss; undifferentiated tonalitic to granodioritic orthogneiss; minor marble and skarn; metamorphosed to greenschist and amphibolite (?) facies (transition zone between Coast and Intermontane belts, 93E).
------------	--

PERMIAN, TRIASSIC and JURASSIC

SITLIKA ASSEMBLAGE

Pts	sericite, chlorite, siliceous schist and phyllite, minor marble; includes Asitka, Takla and Hazelton groups and possibly parts of the Bowser Lake Group (94D); Epidote-amphibolite facies metapelite, metaconglomerate, metavolcanics and marble (93M)..
------------	--

PENNSYLVANIAN to JURASSIC ?

CACHE CREEK ASSEMBLAGE

PTCs	Siliceous phyllite, metachert, marble (94D).
PMcv	Greenstone and amphibolite (94D).
PMcs	Interbedded oceanic shale, chert, limestone and greenstone volcanics (93M).
PMcum	Ultramafic rocks, commonly serpentinite (93M).

LOWER PERMIAN to UPPER TRIASSIC

P_c	Limestone, white crystalline limestone, thin-bedded black limestone, dolomitic limestone with chert nodules, minor interbedded volcanoclastic rocks; may include Upper Triassic black shales (93L).
----------------------	---

PERMIAN

ASITKA GROUP

P_A	basalt, rhyolite, tuff, chert, argillite and carbonate (94D).
----------------------	---

PERMIAN AND OLDER

PENNSYLVANIAN and PERMIAN

LAY RANGE ASSEMBLAGE

PPLT	includes both Lay Range Assemblage and Takla Group (94D).
PPL	basic volcanics, calcareous phyllite, quartzite and limestone (94D).

DEVONIAN, CARBONIFEROUS AND PERMIAN

STIKINE ASSEMBLAGE

IP_s	Undivided strata of probable Permian or older age; includes carbonate; flow-layered and spherulitic rhyolite and flow breccia; intermediate tuff, lapilli tuff, ash-flow tuff; basalt and andesite flows, tuff and sills (104B).
IP_v	Grey-green cherty volcanics, tuff, breccia; minor greywacke; includes metamorphosed equivalents (103I).
IP_{sc}	Mainly white limestone and marble; locally medium bedded to massive, fossiliferous; thin-bedded micrite, calcareous mudstone; minor amounts of chert, tuff, quartzite, argillite, slate and schist (104A, 104B), <i>Sakmarian to Artinskian</i> (103I).
CPN_v	NEWMONT LAKE FORMATION: hornblende-plagioclase-porphyritic andesite, andesite flow breccias and conglomerate; also includes flow-layered rhyolite, lapilli, plagioclase and crystal tuff; thinly bedded siliceous limestone lenses (104B).
CPN_c	NEWMONT LAKE FORMATION: algal limestone, thin laminated, dark grey to black (104B).
CPE	ELBOW MOUNTAIN METAMORPHIC COMPLEX: metapelite, felsic gneiss, metabasite, metaconglomerate. Tentatively correlated with mid-Paleozoic rocks of the Yukon-Tanana Terrane (104B).
CP_s	STIKINE ASSEMBLAGE (UNDIFFERENTIATED): Coralline reef limestone and intercalated mafic to felsic flows and volcanoclastic rocks; siliceous siltstone, turbidite, chert and conglomerate. In part, strongly deformed (104B).
CP_{sv}	Foliated grey-green plagioclase porphyry, phyllitic and tuffaceous siltstone and wacke (104B).
CP_{ss}	Pale green to light grey phyllitic siliceous siltstone; minor chert and ribboned chert.
uCS_v	Maroon tuff and lapilli tuff; ash-flow tuff, deformed tuff and sediments; massive amygdaloidal basalt (104B).

uCSc	Grey, thin-bedded, fetid and dolomitic limestone, maroon and green tuff and cherty siltstone (104B).
uCSs	Siltstone, sandstone and tuffaceous wacke, lesser chert (104B).
uCScg	Maroon volcanic conglomerate; poorly sorted with tuff interbeds (104B).
ICSt	Grey-green acidic tuff breccia and minor flows (104B).
ICSc	Bioclastic limestone; buff silty dolomitic units, medium bedded to massive, grey (104B).
DMsv	Mafic to intermediate plagioclase-pyroxene-phyric lapilli tuff, lapilli tuff-breccia and flows; plagioclase-phyric amygdaloidal andesite(?) flows; rhyolite and rhyodacite lapilli tuff-breccia (104A).
DSu	Undivided metavolcanics and metasediments (104B).
DSv	Basalt and andesite, pillowed flows and breccia, hyaloclastite; mafic tuff, siliceous dust tuff, felsic welded tuff; quartz-eye rhyolite, rhyodacite, flow breccias, subvolcanics; massive amygdaloidal basalt and related hyaloclastite; pillow basalt (104B).
IDSc	Deformed grey and buff thin-bedded to massive coralline marble and limestone (104B).
IDss	Thin-bedded siltstone, sandstone, argillite (104B).
IDsst	Green and red-purple schistose tuff and minor flows (104B).
IDsx	Intensely deformed gneissic, schistose and mylonitic rocks along Forrest Kerr fault zone (104B).

ORDOVICIAN to TRIASSIC

ALEXANDER TERRANE

IJar	Moffat rhyolite, light grey to white metarhyolite or rhyodacite, generally with well developed strongly contorted flow banding and breccia composed of angular lapilli to block sized rhyolite clasts; <i>U/Pb zircon age, 188 Ma</i> (103J).
Otas	Light to dark green phyllite composed mainly of chlorite, sericite, albitic plagioclase and minor epidote; elongate, flattened clasts of green volcanic rock up to 4 cm accross common, locally the unit is intercalated with beds of stretched-pebbel conglomerate.
Otasq	Thin to thickly bedded impure to micaceous quartzite with thinner interlayers which may include crystalline limestone, skarn, garnet-biotite schist and quartz-feldspar biotite schist. Locally limestone interbeds are dominant.
Otasa	Metasedimentary rocks of predominantly amphibolite facies: includes siltstone, mudstone, shale, mafic and felsic volcanics, limestone, quartzite and conglomerate.
Otasg	Metasedimentary rocks of predominantly greenschist facies; includes black to dark grey graphitic schists, intercalated pale and dark schists and intercalated chlorite and sericite schists.

OtaV	Volcanic rocks; weakly metamorphosed; includes tuff, agglomerate and volcanic breccia, rhyolite tuffs and flows, chlorite schist and greenstone; also includes mappable intercalations of both OtAs and OtAl.
OtaI	Limestone and marble; coarsely crystalline, massive, grey and greyish buff weathering, in general thickly bedded.
Otgb	Gabbro sills and dykes. considered to be plutonic phase of OtaV; includes mafic plutonic rocks on Dundas Island.

MIDDLE DEVONIAN and / or OLDER

NISLING TERRANE (COAST BELT)

PRv	Metavolcanic rocks; mafic and intermediate metavolcanic rocks with minor metasedimentary and felsic metavolcanic interlayers; locally pyritic; strongly foliated and lineated; mafic component is fine-grained amphibolite ± chlorite schist, locally with relict clastic texture; intermediate component is biotite quartzofeldspathic semischist; minor quartzite, semipelitic to pelitic schist and quartz rich semischist of probable volcanic protolith.
PRsc	Metasedimentary rocks; locally clastic, epidote rich, hornblende-biotite gneiss; fine to medium grained; locally contains epidote-rich and granitoid clasts; well developed foliation and lineation.
PRsq	Quartzite unit: white to grey, locally pyritic quartzite interlayered with lesser amounts of biotite-hornblende gneiss, fissile mica schist, black phyllite to meta-argillite, semipelitic to pelitic schist; minor amphibolite bands, probably dikes; well foliated.
PRn	Layered gneiss; epidote-hornblende-biotite quartz diorite and granodiorite gneiss and garnet amphibolite; some epidote ± garnet pods; medium grained; well defined compositional layering on a scale of tens of centimetres; strongly foliated and locally lineated.

PALEOZOIC - TERTIARY (?)

CENTRAL GNEISS COMPLEX (COAST BELT)

RTc	Orthogneiss, migmatite, granitoid gneiss, amphibolite; subordinate unfoliated plutonic rocks; includes areas of undifferentiated ET (Tsaytis plutonic Suite) (93E).
RTcg	Granitoid gneiss, gneissic quartz diorite, rusty fine-grained gneiss and schist, migmatite; minor garnet-sillimanite-biotite schist, crystalline limestone, dioposidic skarn, garnet-staurolite-kyanite schist (103 I&J).
RTClg	Buff-grey leucogneiss and migmatite (103J/E½ and 103I/W½).
RTCb	Grey biotite ± hornblende gneiss; dark grey layered amphibolite, minor sillimanite ± garnet gneiss. (103J/E½ and 103I/W½).
RTCa	Amphibolite, varies from coarse-grained amphibolite to amphibolite gneiss commonly gradational into well foliated diorite (103J/E½ and 103I/W½).
RTcm	Migmatitic plutonic rocks (103J/E½ and 103I/W½).
RTCm	Marble, calcsilicate rock; possible metamorphic equivalent of Pts and PMGm.

RTcs

Quartz-feldspar-biotite schist, hornblende schist, amphibolite; lesser granitoid gneiss; minor marble and granitoid dikes; amphibolite facies.
Metasedimentary rocks; hornblende-biotite-plagioclase amphibolite and schist; biotite schist (locally garnetiferous), kyanite-staurolite-almandine mica schist, sericite-epidote schist (103H).

UPPER PROTEROZOIC

INGENIKA GROUP

Pe

ESPEE FORMATION: limestone; locally oolitic and pisolitic; minor dolostone (94D).

Pt

TSAYDIZ FORMATION: sericitic phyllite (94D).

Ps

SWANNELL FORMATION: quartzofeldspathic, gritty sandstone, siltstone, shale and conglomerate; metamorphic equivalents from chlorite to kyanite grade (94D).

INTRUSIVE ROCKS

TERTIARY

Tg

Granite, granodiorite; generally fresh unfoliated to weakly foliated, biotite generally greater than hornblende (103I).

PALEOCENE TO EOCENE?

egn

Gneissic rocks of the Coast plutonic Complex (103P).

eg

COAST PLUTONIC COMPLEX (50 - 65 Ma): granitoid batholith and stocks. Medium to coarse-grained, biotite $\pm$ hornblende granite; granodiorite; minor quartz diorite. Includes co-genetic dike swarms (103P, 104A, 104B).

GREAT GLACIER PLUTON: fresh, massive, equigranular hornblende-biotite monzogranite; 51 ± 1 Ma U/Pb zircon age; K/Ar biotite- hornblende ages range from 50.7 ± 0.8 to 53.0 ± 4.3 Ma (104B).

HYDER PLUTONIC SUITE (50 - 65 Ma): Granitoid batholith and stocks. Medium to coarse-grained, biotite $\pm$ hornblende quartz monzonite, granite, granodiorite; minor quartz diorite. Includes co-genetic dike swarms (not shown); 54.8 ± 1.3 Ma, U/Pb zircon age (104B).

Granite, granodiorite; generally fresh, unfoliated to weakly foliated, biotite greater than hornblende (103I).

eqm

ERIN STOCK: granodiorite to quartz monzonite, locally K-feldspar phyrlic; 45 ± 2 Ma Ar-Ar biotite age (103P).

BITTER CREEK STOCK: quartz monzonite (103P).

HYDER BATHOLITH: Biotite quartz monzonite to granodiorite with sphene, $\pm$ hornblende; medium to coarse grained, locally feldspar porphyritic; 48.8 ± 2 Ma K-Ar biotite age (103P, 104A, 104B).

LEE BRANT STOCK (104B): Light grey to pink, coarse K-feldspar porphyritic, hornblende-biotite quartz monzonite; 54 ± 2 Ma (K/Ar (hornblende) age)

egd

BOUNDARY STOCK: biotite granodiorite with sphene $\pm$ hornblende; medium grained; 50.8 ± 2 Ma K-Ar hornblende age (104B).

efp

Feldspar porphyry (unit 8f of Grove, 1986) (103P).

egI

GOOSLY INTRUSIONS: syenomonzonite to gabbro stocks and dykes; bladed feldspar phenocrysts; 48-54 Ma (93L).

eA

ALICE ARM INTRUSIONS: quartz monzonite, biotite quartz monzonite porphyry, sericite quartz monzonite porphyry; 52.6 to 54.5 Ma K-Ar ages (103P).

EB

BABINE INTRUSIONS: predominantly hornblende-biotite-feldspar porphyry plugs and dikes; also includes biotite porphyry and hornblende porphyry (ebp); quartz porphyry (ebq); rhyolite porphyry (ebr); granodiorite, quartz monzonite and quartz diorite to diorite porphyry (ebg), diorite (EBd); 50-52 Ma (93M, 93L).

er

Rhyolite, quartz-feldspar porphyry; plugs, domes and dikes. Possible intrusive equivalent of Ootsa Lake Group rhyolitic flows..

en

NANIKA INTRUSIONS: grey to pink, porphyritic (enp) to non-porphyritic granite, quartz monzonite, granodiorite; includes minor rhyolite and quartz porphyry as small stocks, plugs, dykes and sills; 47-54 Ma (93E).

ek

KASTBERG INTRUSIONS : biotite-hornblende rhyodacite porphyry, massive leuco-rhyolite (93M).

eq

QUANCHUS INTRUSIONS: grey to pink feldspar porphyry of granitic to quartz dioritic composition, lesser non-porphyritic granite, granodiorite (93E).

eT	TSAYTIS PLUTONIC SUITE: granodiorite, quartz monzonite, tonalite, granite; generally fresh and with biotite > hornblende; commonly well-foliated; restricted to the Coast Belt.
ETg	STROHN CREEK PLUTON: massive, medium-grained hornblende-biotite monzogranite with very coarse K-feldspar phenocrysts (104A). MT. BOLOM and EAR LAKE PLUTONS: grey to pink porphyritic to equigranular granodiorite, quartz monzonite, granite; generally high level and unfoliated; K-feldspar megacrysts common (93E). Includes ETqm..
ETgd	Mainly granodiorite.
ETqm	Quartz monzonite, quartz-eye porphyry and felsite. Equivalent to Kastberg Intrusions (94D).
ETqmd	SADDLE LAKE PLUTON: Medium-grained, equigranular to K-feldspar porphyritic, hornblende-biotite quartz monzodiorite; 58 ± 4 Ma K/Ar (biotite, hornblende) ages range from 48-62 Ma (104B).

LATE CRETACEOUS to EARLY TERTIARY (PALEOCENE)

KT	QUOTOON PLUTON: medium to coarse grained hornblende ± biotite quartz diorite to tonalite; differentiated phases include tonalite KTt, quartz diorite KTqd, granodiorite KTgd and migmatitic quartz diorite orthogneiss KTgn (57-59 Ma, S. Gareau, 1989; 60 Ma, van der Hayden, 1989).
KTg	Granodiorite, quartz monzonite, quartz diorite; lesser granite; biotite or biotite-hornblende; generally unfoliated and non-porphyritic (93E).
KTd	Diorite, gabbro, microdiorite, syenodiorite; partly equivalent to Kasalka intrusions (93E).
LKTg	Quartz diorite, diorite, granodiorite, fresh to strongly altered, unfoliated to weakly foliated, possibly correlative with the Bulkley Intrusions (103I).

LATE CRETACEOUS

LKm	Monzonite, biotite phyric (104B).
LKd	Pre- to post-kinematic granodiorite, tonalite, granite; generally fresh, local ductile deformation; unfoliated to strongly foliated. (103I).
LKg	Pre- to syn-kinematic granodiorite, tonalite, generally strongly altered and cut by mafic dike swarms (103I). Granodiorite, quartz monzonite, granite, lesser tonalite; generally equigranular and unfoliated to weakly foliated, includes Musclow, Horetzky Dyke (93E). Equigranular hornblende-biotite granodiorite and quartz diorite; minor muscovite-garnet granite to granodiorite; weakly foliated to unfoliated; restricted to Coast Belt.
LKgd	Mainly granodiorite.
LKgbd	Mainly gabbro and diorite.
LKqm	Mainly quartz monzonite.

LKB	BULKLEY INTRUSIONS: biotite-hornblende granodiorite (LKB _{gd}) to quartz diorite (LKB _g), diorite (LKB _d), quartz monzonite (LKB _{qm}), rhyolite and quartz-feldspar porphyry (LKB _r); feldspar porphyry, biotite-hornblende-feldspar porphyry, biotite-feldspar porphyry, hornblende feldspar porphyry (LKB _{fp}); minor andesite, felsite, aplite, alaskite and intrusive breccia; stocks, plugs, sills and dykes; 64 to 84 Ma (93E, M, L).
------------	---

LKkd	KASALKA INTRUSIONS: crowded hornblende granodiorite porphyry, porphyritic hornblende-augite microdiorite; small stocks and volcanic necks (93E).
-------------	--

MIDDLE CRETACEOUS

MK	ECSTALL BELT: Estall, Pitt, Butedale and Kitkiata plutons: unfoliated to strongly foliated granodiorite (MK _{gd}), quartz monzonite (MK _{qm}), quartz diorite (MK _{qd}), diorite (MK _d), granite (MK _g). Radiometric ages range from 94-110 Ma; van der Hayden, (1989).
-----------	---

MKgb	AXELGOLD INTRUSION: layered gabbro and minor plugs of gabbro and diabase (94D).
-------------	---

MKqd	Quartz diorite, granodiorite, leuco-granodiorite, minor granite; includes Johanson Creek stock ;Kliyul Creek pluton; Fleet Peak stock; stock West of Hogem batholith (94D).
-------------	---

MKqmd	HOGEM BATHOLITH: foliated quartz monzodiorite; mostly the Mesilinka pluton (94D).
--------------	---

MKdk	Dyke complex of garnet aplite and leucocratic pegmatite; fine-grained leucocratic garnet biotite quartz monzonite and granodiorite, titanite-epidote-biotite quartz diorite and amphibolite. Adjacent to and possibly in part, comagmatic with the Ecstall pluton, complex constitutes from 40 to 80 % of the outcrop area (103H).
-------------	--

MKdn	Lineated and foliated gneissic metadiorite
-------------	--

EARLY CRETACEOUS

EK	MCCAULEY ISLAND PLUTON: Medium to coarse-grained, massive, isotropic to weakly foliated, hornblende-biotite granodiorite (EK _{gd}), quartz monzonite (EK _{qm}), quartz diorite (EK _{qd}), diorite (EK _d) and granite (EK _g); Radiometric ages range from 123-131 Ma (van der Hayden, 1989).
-----------	---

Kd	Layered diorite gabbro complex, generally greenschist facies, little ductile deformation (103I E½).
-----------	---

EKg	Biotite granodiorite; medium-grained, equigranular, unfoliated; restricted to Coast Belt.
------------	---

EKdn	Mainly foliated meta diorite (103G, H)
-------------	--

EKgbdn	Mainly foliated meta diorite and gabbro (103G).
---------------	---

EKgb	Mainly gabbro (103H).
-------------	-----------------------

JURASSIC or TERTIARY

JTg	Diorite; granite (e.g. at Flory Lake); granodiorite e.g. at Nelson Glacier (104A, B).
------------	---

JTp	Feldspar porphyry; unit 8f of Grove (1986) where his age assignment (Tertiary) is suspect; e.g. NE of Knipple Lake and E of Bear Glacier (104A).
------------	--

JTm	HAWILSON MONZONITE: heterogeneous, pink to grey, fine-grained leuco-monzonite (104B); monzonite e.g. near Strohn Lake at head of Bear Creek (104A).
------------	---

JURASSIC to CRETACEOUS (?)

JKqd	Quartz diorite, tonalite, brittle to ductile deformation commonly intensely to weakly foliated (103I E ^{1/2}).
JKd	POISON PLUTON: leucocratic biotite-hornblende quartz diorite or gabbro (104A). Greenschist facies diorite-tonalite complexes with lesser metavolcanic rocks unfoliated to weakly foliated (103I E ^{1/2}).
JKum	MAFIC-ULTRAMAFIC COMPLEX: coarse- grained, locally weakly lineated hornblende diorite and gabbro and associated rusty weathering coarse hornblendite; contains xenoliths of foliated country rock, possible Alaskan-type affinity; pre 115Ma, probably post early Jurassic (S. Gareau, 1991) (103H).

JURASSIC

Jqm	Post kinematic stocks; porphyritic to non-porphyritic, pink, quartz monzonite, biotite-hornblende grandiorite, quartz monzodiorite; unfoliated plutons (93E, 93L)
Jg	Pink granodiorite to granite, strongly altered, unfoliated, intense brittle deformation (103I)

LATE JURASSIC

LJd	Hornblende diorite (93M).
------------	---------------------------

MIDDLE to LATE JURASSIC

MLJ	BANKS ISLAND BELT: Medium to coarse-grained, unfoliated to well foliated, quartz diorite (MLJqd) and granodiorite (MLJgd) with hornblende > biotite; quartz monzonite (MLJqm) white weathering massive, coarse grained to locally aplitic with biotite > hornblende (160-155 Ma) (van der Hayden, 1989).
MLJg	GAMSBY COMPLEX: well-foliated, green, chloritized quartz diorite; lesser augen gneiss and chlorite schist; may grade into tKb. Includes Whitecone pluton (93E).
MLJd	diorite
MLJdn	metadiorite

MIDDLE JURASSIC

MJqd	mainly quartz diorite.
MJg	TRAPPER PLUTONIC SUITE: weakly to well-foliated quartz diorite, granodiorite and tonalite: lesser granite, orthogneiss; greenschist to amphibolite facies (93E).
MJd	THREE SISTERS PLUTONIC SUITE (172 - 177 Ma): Medium to coarse-grained gabbro, diorite and syenite. (104B). MOUNT CHOQUETTE PLUTON: hornblende diorite, locally with bladed plagioclase porphyry phases; 152.4 ± 4.8 Ma K/Ar (hornblende) age (104B); dark green, felty textured diorite, with interstitial pyroxene (104B/15).
MJqmd	WARM SPRINGS MOUNTAIN PLUTON: fresh, massive, locally heterogeneous, biotite-hornblende quartz monzodiorite; 177 ± 1 Ma U/Pb (zircon) age; 159.1 ± 2.4 Ma K/Ar (biotite) age (104B).

MJgb	COPPER KING GABBRO: melanocratic olivine-pyroxene gabbro (104B). NICKEL MOUNTAIN GABBRO: melanocratic olivine-pyroxene gabbro, locally orbicular; includes small, satellitic plugs and dikes (104B).
MJdn	DOC METADIORITE: mesocratic, lineated and foliated, locally gneissic, biotite-hornblende meta-diorite; 170.6 ± 1.7 Ma Ar/Ar (hornblende) age (104B) DOC APLITE: folded, aplitic monzonite sill, $172 \pm$ Ma U/Pb (zircon) age (104B).

EARLY JURASSIC

EJ	Monzodiorite (EJmd), quartz monzodiorite (EJqm), quartz diorite (EJqd) and leucocratic porphyry plugs (EJp). Includes Jensen Peak batholith (EJqmd); Fleet Peak pluton (foliated EJmd); Johanson Lake stock (EJqmd); Darb Lake stock (EJqd); Asitka Peak stocks (EJqd); McConnell Range stocks (EJqmd); Fredrikson Peak stocks (EJqmd); leucocratic porphyry plugs adjacent to the Sustut River (EJp) (94D).
EJT	TOPLEY INTRUSIONS: granodiorite, quartz diorite, diorite (EJTd), minor granite (93L)
EJd	GAMSBY COMPLEX.: hornblende diorite, tonalite; lesser greenstone and felsic metavolcanic rocks; cut by granodiorite, tonalite and metabasalt dykes; metamorphosed to greenschist facies; includes Tahtsa Complex and southern part of Morice Lake plutonic complex (93E).
EJgb	Coarse-grained diabase, gabbro sills (93M).
EJm	Pink, unfoliated porphyritic to equigranular biotite monzonite; lesser quartz diorite and granodiorite; includes Redslide pluton 181 ± 8 Ma KAr. (93E).
EJg	TEXAS CREEK PLUTONIC SUITE: Fine to coarse-grained quartz diorite, monzodiorite, quartz monzonite; syn to post-volcanic intrusions. Equigranular to porphyritic, phaneritic to aphanitic; includes hypabyssal equivalents of Hazelton Group extrusive rocks, 185 - 205 Ma (104B).
EJp	ESKAY PORPHYRY: Grey-green, plagioclase $\pm$ K-feldspar $\pm$ hornblende $\pm$ biotite porphyry with up to 50% coarse to fine-grained phenocrysts in an aphanitic groundmass; a hypabyssal stock of dacitic or granitic composition; 186 ± 2 Ma U/Pb (zircon) age (104B). KNIPPLE PORPHYRY: Dark grey, plagioclase $\pm$ K-feldspar porphyry with up to 25% coarse glomeroporphyritic phenocrysts in an aphanitic groundmass; a hypabyssal stock or massive flow (104B). INEL STOCK: altered feldspar (15%) and quartz (5%) porphyry with a fine-grained groundmass; chemical composition = monzodiorite; 190 ± 3 Ma U/Pb (zircon) age (104B). Leucocratic to holofelsic, quartz feldspar porphyry and felsite intrusions; hypabyssal stocks (104B).
EJmd	MELVILLE PLUTON: Light to dark grey, locally pink, medium-grained, equigranular, biotite-hornblende diorite, monzodiorite and monzonite (104B). LEHTO PLUTON: Coarse K-feldspar $\pm$ hornblende porphyritic monzodiorite; equigranular monzonite and quartz diorite (104B). MITCHELL INTRUSIONS: Fine to coarse-grained quartz diorite, monzodiorite, quartz monzonite; syn to post-volcanic intrusions. Equigranular to porphyritic, phaneritic to aphanitic (104B). RED BLUFF PORPHYRY STOCK: K-feldspar phyrical monzodiorite to granodiorite; 195 ± 1 Ma U/Pb (zircon) age (104B).

EJgd	SUMMIT LAKE (BERENDON GLACIER) STOCK: coarse-grained hornblende granodiorite; 192.8 ± 2 Ma U/Pb (zircon) age (104B). TEXAS CREEK BATHOLITH: coarse-grained hornblende granodiorite; 206.5 ± 6 Ma K/Ar (hornblende) age; includes orthoclase $\pm$ hornblende porphyritic phase; 195.0 ± 2 Ma U/Pb (zircon) age (104B).
EJqm	McLYMONT CREEK PLUTON: hornblende-biotite quartz monzonite to monzogranite with coarse K-feldspar phenocrysts; 189.2 ± 3.1 Ma K/Ar (hornblende) age; $192 +8/-1$ Ma U/Pb (zircon) age (104B).
EJd	RED MOUNTAIN (GOLDSLIDE) STOCK: hypabyssal, hornblende-plagioclase porphyritic granodiorite to diorite stock; 160 ± 5 and 200 Ma Ar/Ar (hornblende) ages (103P).
EJm	ZIPPA MOUNTAIN COMPLEX: gabbro-syenite-quartz monzonite-porphyry complex; ca. $200-211$ Ma U/Pb (zircon) age; K/Ar (biotite, hornblende) ages range from 76.6 ± 1.3 to 167.2 ± 3.8 Ma (104B).
EJFO EJJO	Weakly to strongly foliated medium-grained, epidote-bearing, biotite $\pm$ hornblende tonalite orthogneiss. includes the Foch Lake (EJFO) and Johnson Lake (EJJO) bodies; plagioclase megacrysts (up to 5 cm) characteristic of the Foch Lake body, $190-192$ Ma intrusive age (S. Gareau, 1991).

TRIASSIC to TERTIARY

tT	Granitoid intrusions of probable Triassic to Tertiary age e.g. N of Elbow Mountain; granite (tTg); granodiorite (tTgd); quartz diorite (tTqd), (104B).
-----------	--

LATE TRIASSIC to EARLY CRETACEOUS

tKb	BLACK DOME COMPLEX: pre kinematic gabbro to granodiorite complex of layered gabbro and diorite, tonalite, granodiorite, lesser mafic dyke swarms, amphibolite and gneiss, strongly foliated to unfoliated ; part of Gamsby Complex (93E)
------------	--

TRIASSIC OR JURASSIC

tJg	Granitoid intrusions of probable Triassic to Jurassic age (104B).
tJmd	ISKUT RIVER (BRONSON) STOCK: plagioclase $\pm$ K-feldspar phyric monzodiorite of Triassic to Jurassic age; ca. 225 to 197 Ma U/Pb (zircon) age (104B).
tJd	JOHN PEAKS STOCK: dark green, mesocratic to melanocratic, medium to coarse-grained hornblende diorite, with pervasive propylitic alteration (104B). UNUK METADIORITE: massive, foliated to gneissic, mesocratic to melanocratic, fine to coarse-grained, hornblende diorite to gabbro; possibly same age as the McQuillan Ridge pluton (LTrd) (104B).
tJm	Fine-grained and potassium feldspar porphyritic monzonite, granodiorite; includes Loon Lake stock, Newmont Lake graben, (104B).

LATE TRIASSIC

Ltqm	SERAPHIM MOUNTAIN PLUTON: fresh, massive, leucocratic, homogeneous quartz monzonite or monzogranite; 212.8 ± 3.7 Ma K/Ar (hornblende) age (104B).
Ltqdn	BUCKE GLACIER STOCK: light grey, medium-grained, gneissic to foliated, hornblende-biotite meta-quartz diorite; 221 ± 1 Ma U/Pb (zircon) age (104B).

Ltd	STIKINE PLUTONIC SUITE: massive to gneissic, fine to medium-grained, hornblende-biotite diorite, quartz diorite, 220 - 230 Ma (104B). McQUILLAN RIDGE PLUTON: light grey, medium-grained, equigranular, biotite-hornblende diorite to monzodiorite; 226 $\pm$ 5/- 2 Ma U/Pb (zircon) age (104B). KATETE MOUNTAIN PLUTON: heterogeneous diorite complex which contains pegmatitic hornblendite, fine to medium-grained biotite-hornblende diorite and lesser amounts of hornblende gabbro and monzodiorite; 227.5 $\pm$ 5.0 Ma K/Ar (hornblende) age (104B).
Ltgb	Gabbro, diabase, hypabyssal augite porphyry intrusions (94D).
Ltum	Alaskan-type ultramafics; gabbro, hornblendite, pyroxenite and dunite (94D).

MIDDLE-LATE TRIASSIC

MLt	CAPTAIN COVE PLUTONS: medium-to coarse-grained hornblende>biotite quartz diorite (MLtqd) and quartz monzonite (MLtqm), weakly foliated to massive with a well-developed foliation near their margins (MLtdn). Radiometric age of 231 Ma (van der Hayden, 1989) (103G).
------------	--

LATE PALEOZOIC and ? TRIASSIC

LRtum	Alpine ultramafics; serpentinite, serpentized peridotite, greenstone (94D).
--------------	---

PALEOZOIC (?)

Rd	Diorite, quartz diorite, and gabbro complexes, lesser mafic dykes, amphibolite and greenstone, locally abundant altered greenstone, granodiorite and quartz monzonite; metamorphosed to greenschist facies (Tahtsa Complex) and amphibolite facies (Black Dome Complex) (93E)
-----------	---

LATE DEVONIAN

LD	FORREST KERR PLUTONS: Biotite granite to tonalite (LDg); hornblende diorite (LDd); quartz monzonite (LDqm), quartz diorite (LDqd); 370 $\pm$ 6 Ma U/Pb zircon age (J. Logan, 1993); 346 $\pm$ 10 Ma Ar/Ar biotite age (104B).
-----------	---

MIDDLE DEVONIAN

MDBo	BIG FALLS ORTHOGNEISS: medium-grained, well foliated muscovite-biotite-hornblende tonalite augen gneiss, locally garnet and epidote-bearing. (from S.Gareau).
-------------	---

PALEOZOIC (CARBONIFEROUS and DEVONIAN)

DC	DELTA RIVER PLUTON/ SWEDE POINT PLUTON: altered quartz diorite (DCqd), granodiorite (DCg), mylonitic granodiorite (DCdg) and gabbro (DCgb).
-----------	---

References

- Alldrick, D.J. (1985): Stratigraphy and Structure in the Anyox Area; in Geological Fieldwork 1985, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Paper 1986-1, pages 211-216.
- Alldrick, D.J. (1986): Anyox Property File Map; B.C. Ministry of Energy Mines and Petroleum Resources, File Number M.I. 103P 265 -- Anyox, 1:25 000 (103P / SW).
- Alldrick, D.J. (1987): Geology and Mineral Deposits of the Salmon River Valley, Stewart Area (104A, 104B); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1987-22, Scale 1:50,000.
- Alldrick, D.J., Dawson, G.L., Boshier, J.A. and Webster, I.C.L. (1986): Geology of the Kitsault River Area; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1986-2, Scale 1:50,000.
- Alldrick, D.J. and Britton, J.M. (1988): Geology and Mineral Deposits of the Sulphurets Area (104A/5, 12; 104B/8, 9); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1988-4, Scale 1:50,000.
- Alldrick, D.J., Britton, J.M., Webster, I.C.L. and Russell, C.W.P. (1989): Geology and Mineral Deposits of the Unuk Area (104B/7E, 8W, 9W, 10E); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1989-10, Scale 1:50,000.
- Alldrick, D.J., Britton, J.M., MacLean, M.E., Hancock, K.D., Fletcher, B.A. and Hiebert, S.N. (1990a): Geology and Mineral Deposits of the Snippaker Area (104B/6E, 7W, 10W, 11E); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1990-16, Scale 1:50,000.
- Alldrick, D.J. and Britton, J.M. (1991): Sulphurets Area Geology (Parts of NTS 104A/5W, 12W, 104B/8E, 9E); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1991-21, Scale 1:20,000.
- Alldrick, D.J. and Britton, J.M. (1992): Unuk Area Geology (Parts of NTS 104B/7E, 8W, 9W, 10E); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1992-22, Scale 1:20,000.
- Armstrong, J.E. (1944); *Geological Survey of Canada* Paper 44-23, p.23-44.
- Bacon, W.R. (1956): Preliminary Map Granduc Area; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Scale 1 inch=1 mile (1:63,360).
- Baerg, R. and Bradish, L. (1989): Geological, Geochemical, Geophysical and Drilling Report on the Todd Creek Property; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 18800, 41 pages.
- Boronowski, A. (1990): Geological and Geochemical Assessment Report on Diamond, Noonday Fraction, Noonday 4-7 Fractions, Hope 1,2,5,6 Fractions, Silver Dollar and S.L. 2 Claims of the Terminus Property; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 20976, 17 pages.

- Bray, A.D., Bull, K.F., Hinderman, T.K. and Singh, R. (1992): 1991 Diamond Drill, Geological, Geochemical and Environmental Base Line Study Program on the Red Mountain Property; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 22417, 68 pages.
- Carter, N.C. (1971): Zym, Pany, Kom, Natan; in *Geology, Exploration and Mining in British Columbia 1970*, *B.C. Ministry of Enrrgy, Mines and Petroleum Resources*, pages 189-193. (103I/08E)
- Carter, N.C. and Grove, E.W. (1972): Stewart, Anyox, Alice Arm and Terrace Areas; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Preliminary Map 8, scale 1:250,000 (103P/S½).
- Carter, N.C. (1973): Geology of the Northern Babine Lake Area, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Preliminary Map 12, (93L).
- Carter, N.C. (1981): Porphyry Copper and Molybdenum Deposits West Central British Columbia; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Bulletin 64.
- Carter, N.C. and Kirkham, R.V. (1969), Geological Compilation Map of the Smithers, Hazelton and Terrace Area, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Preliminary Map 69-1, (93L, 93M).
- Chapman, J. Vanmereskerken, M. and Hards, J. (1991): Assessment Report on the Ruby Silver Project; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 21172, 20 pages.
- Church, B.N. and Barakso, J.J. (1990): Geology, Lithogeochemistry and Mineralization in the Buck Creek Area, British Columbia, *B.C. Ministry of Energy, Mines and Petroleum Resources* Papre 1990-2, 95 pages.
- Cookenboo, H.O. (1989): Lithostratigraphy, Palynostratigraphy, and Sedimentology of the Northern Skeena Mountains and their Implications to the Tectonic History of the Canadian Cordillera; unpublished M.Sc. thesis, The University of British Columbia, 131 pages. [No map but some useful figures and definitions of McEvoy, Currier, Devils Claw fms]
- Cookenboo, H.O. and Bustin, R.M. (1989): Jura-Cretaceous (Oxfordian to Cenomanian) Stratigraphy of the North-central Bowser Basin, Northern British Columbia; *Canadian Journal of Earth Science*, Volume 26, pages 1001-1012.
- Cookenboo, H.O. (pers. comm., June 1993): Hand-drawn map showing distribution of main formations in 104A/14, 15, 16; Scale 1:250,000.
- Crawford, M.L., Hollister, L.S. and Woodsworth G.J. (1987): Crustal Deformation and Regional Metamorphism Across A Terrane Boundary, Coast Plutonic Complex, British Columbia; *Tectonics*, Volume 6, Number 3, pages 343-361.
- Desjardins, P., Lyons, L., Pattenden, S. and MacIntyre, D.G. (1990): Geology of the Thautil River Area, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open file 1990-5
- Desjardins, P. and Arksey, R. (1991): Geology of the Lamprey Creek Area, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open file 1991-1
- Di Spirito, F. and Krohman, D. (1988): Geological, Geophysical and Geoche+mical Report on the Ben Ali Property; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 16633, 31 pages.

- Diakow, L. and Mihalynuk, M. (1987): Whitesail Lake Area: Geology and Epithermal Bold and Silver Prospects; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1987-4.
- Diakow, L. and Koyanagi, V. (1988): Geology of the East Half Whitesail Reach and Northeast Half Chikamin Mountain Map Sheets; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1988-2.
- Diakow, L. and Drobe, J. (1989): Geology and Mineral Occurrences in North Newcombe Lake Map Sheet; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1989-1.
- Diakow, L. and Timmerman, J. (1990): Geology of the Nanika Lake Map Area; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1990-15.
- Douglas, B.J. (1986): Deformational History of an Outlier of Metasedimentary Rocks, Coast Plutonic Complex, British Columbia, Canada; *Canadian Journal of Earth Sciences*, Volume 23, pages 813-826.
- Drummond, A.D. (1961): Geology of the Alice Arm Area, British Columbia; M. Sc. thesis, *University of British Columbia*, ??? pages (103P/06)
- Duffell, S. and Souther, J.G. (1964): Geology of Terrace Map Area, British Columbia; *Geological Survey of Canada*, Memoir 329, 117 pages. (103I, E½)
- Eisbacher, G.H. (1973): Sedimentary History and Tectonic Evolution of the Sustut and Sifton Basins, North-central British Columbia; *Geological Survey of Canada*, Paper 73-31, Map 14-1973, Scale 1:250,000.
- Evenchick, C.A. (1991): Structural Relationships of the Skeena Fold Belt West of the Bowser Basin, Northwest British Columbia; *Canadian Journal of Earth Sciences*, Volume 28, pages 973-983.
- Evenchick, C.A. (1991): Jurassic Stratigraphy of East Telegraph Creek and West Spatsizi Map Areas, British Columbia; in Current Research, Part A, *Geological Survey of Canada*, Paper 91-1A, pages 155-162.
- Evenchick, C.A. (1992): Bowser Basin Facies and Map Units in Southwest Toodoggone Map Area, British Columbia; in Current Research, Part A, *Geological Survey of Canada*, Paper 92-1A, pages 77-84.
- Evenchick, C.A., Mustard, P.S., Porter, J.S., and Greig, C.J. (1992): Regional Jurassic and Cretaceous Facies Assemblages, and Structural Geology in Bowser Lake Map Area (104A), British Columbia; *Geological Survey of Canada*, Open File 2582, 17 pages.
- Evenchick, C.A. and Porter, J.S. (1993): Geology of West McConnell Creek Map Area, British Columbia; in Current Research, Part A, *Geological Survey of Canada*, Paper 93-1A, pages 47-55.
- Fletcher, B.A. and Hiebert, S.N. (1990): Geology of the Johnny Mountain Area (104B/11E); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1990-19, Scale 1:10,000.
- Gaba, R.G. (1992): Geology and Mineral Resources of the Babine Mountains Recreation Area; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Paper 1992-5.
- Gareau, S.A. (1988): Preliminary study of the Work Channel Lineament in the Ecstas River Area, Coast Plutonic Complex, British Columbia; in Current Research, Part E, *Geological Survey of Canada*, Paper 88-1E, pages 49-55. (103H)

- Gareau, S.A. (1989): Metamorphism, Deformation and Geochronology of the Ecstall-Quaal Rivers Area, Coast Plutonic Complex, British Columbia; in Current Research, Part E, *Geological Survey of Canada*, Paper 89-1E, pages 155-162. (103H)
- Gareau, S.A. (1991): Geology of the Scotia-Quaal Metamorphic Belt, Coast Plutonic Complex, British Columbia; *Geological Survey of Canada*, Open File 2337, includes four 1:50 000 Map sheets NTS 103 H/11, 13, 14, 103 I/4.
- Gareau, S.A. (1991): The Scotia-Quaal Metamorphic Belt: A Distinct Assemblage with Pre- early Late Cretaceous Deformational and Metamorphic History, Coast Plutonic Complex, British Columbia; *Canadian Journal of Earth Sciences*, Volume 28, pages 870-880.
- Greig, C.J. (1993): Geology of Oweegee Dome, Delta Peak (104A/12) and Taft Creek (104A/11W) Map Areas, Northwestern British Columbia; *Geological Survey of Canada*, Open File 2688, Scale 1:50,000.
- Grove, E.W. (1986): Geology and Mineral Deposits of the Unuk River - Salmon River - Anyox Area; B.C. Ministry of Energy, Mines and Petroleum Resources, Bulletin 63, 152 pages. (103P)
- Hanson, G. (1923): Reconnaissance Between Kitsault River and Skeena River, B.C.; *Geological Survey of Canada*, Summary Report, 1922, Part A, pages 35-50.
- Hanson, G. (1924): Reconnaissance Between Skeena River and Stewart, B.C.; *Geological Survey of Canada*, Summary Report, 1923, Part A, pages 29-45.
- Hanson, G. (1929): Bear River and Stewart Map-areas, Cassiar District, B.C.; *Geological Survey of Canada*, Memoir 159, 84 pages.
- Hanson, G. (1935): Portland Canal Area, British Columbia; *Geological Survey of Canada*, Memoir 175, 179 pages, (103P/5, 6, 11, 12), Scale 1:253,440.
- Heah, T.S.T. (1990): Eastern Margin of the Central Gneiss Complex in the Shames River Area, Terrace, British Columbia; in Current Research, Part E, *Geological Survey of Canada*, Paper 90-1E, pages 159-169 (103H).
- Heah, T.S.T. (1991): Mesozoic Ductile Shear and Paleogene Extension Along the Eastern Margin of the Central Gneiss Complex, Coast Belt, Shames River Area, Near Terrace, British Columbia; *unpublished M.Sc. Thesis*, University of British Columbia, 155 pages (103 H).
- Hedde, D.W. (1967): Geological Report on Mineral Lease No. 150, Bear River Pass Area, Skeena Mining Division; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 1109, 4 pages.
- Henderson, J.R., Kirkham, R.V., Henderson, M.N., Payne, J.G., Wright, T.O. and Wright, R.L. (1992): Stratigraphy and Structure of the Sulphurets Area, British Columbia; in Current Research, Part A; *Geological Survey of Canada*, Paper 92-1A, pages 323-332.
- Hill, M.L. (1982): Geology of the Redcap Mountain Area, British Columbia; in Current Research, Part B, *Geological Survey of Canada*, Paper 82-1B, pages 267-268.
- Hill, M.L. (1985): Geology of the Redcap Mountain Area, British Columbia; *unpublished Ph.D. thesis*, Princeton University, Princeton, New Jersey, 216 pages.

- Hill, M.L., Woodsworth, G.J. and van der Hayden, P. (1985): The Coast Plutonic Complex near Terrace, B.C.: A metamorphosed western Extension of Stikinia; *Geological Society of America*, Abstracts with Programs, Volume 17, page 362.
- Hutchison, W.W. (1967): Prince Rupert and Skeena Map-Area, British Columbia (103I W1/2, 103J E1/2); *Geological Survey of Canada*, Paper 66-33, 27 pages.
- Hutchison, W.W., Berg, H.C. and Okulitch, A.V. (1979): Skeena River, British Columbia-Alaska, Sheet 103; *Geological Survey of Canada*; Map 1385A, scale 1:1000000. (103JE½, 103I W½)
- Hutchison, W.W. (1982): Geology of the Prince Rupert - Skeena Map Area, British Columbia; *Geological Survey of Canada*; Memoir 394, 116 pages. (103JE½, 103I W½)
- Jakobs, G. (1993): Jurassic Stratigraphy of the Diagonal Mountain Area, McConnell Creek Map Area, North-central British Columbia; in Current Research, Part A, *Geological Survey of Canada*, Paper 93-1A, pages 43-46.
- Kerr, F.A. (1935): Stikine River Area, Cassiar District, British Columbia; *Geological Survey of Canada*, Map 311A, Scale 1 inch to 2 miles (1:126,720).
- Kerr, F.A. (1948): Lower Stikine and Western Iskut River Areas, British Columbia; *Geological Survey of Canada*, Memoir 246, 94 pages.
- Kikauka, A. (1989): Geological and Geochemical Report on the Lode 3,4,5,6 and 8 Claim Group, Skeena Mining Division, British Columbia; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 19723, 9 pages.
- Kirkham, R.V. (unpublished): manuscript maps for the Hudson Bay Mountain area (93L)
- Kirkham, R.V. (1991): Provisional Geology of the Mitchell-Sulphurets Region, Northwestern British Columbia (104B/8,9), *Geological Survey of Canada*, Open File 2416, Scale 1:20,000.
- Kirkham, R.V. (1992): Preliminary Geological Map of the Brucejack Creek Area, British Columbia (Part of 104B/8); *Geological Survey of Canada*, Open File 2550, Scale 1:5,000.
- Koo, J. (unpublished): manuscript maps of the Telkwa coalfield, 93L.
- Lefebure, D.V. and Gunning, M.H. (1989): Geology, Geochemistry and Mineral Occurrences of the Bronson Creek Area (104B/10W, 11E); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1989-28, Scale 1:25,000.
- Lewis, P.D. (1992): Structural Evolution of the Iskut River Area: Preliminary Results; in Metallogenesis of the Iskut River Area, Northwestern B.C., Annual Technical Report - Year 2, Mineral Deposit Research Unit, *The University of British Columbia*, pages 2.1-1.23, Scale 1:20,000.
- Lewis, P.D. (pers. comm., May 1993): Unpublished Geology Map of the Iskut River Area; Mineral Deposit Research Unit, Scale 1:31,250.
- Logan, J.M., Koyanagi, V.M. and Drobe, J.R. (1990b): Geology, Geochemistry and Mineral Occurrences of the Forrest Kerr - Iskut River Area, Northwestern British Columbia (104B/15 and part of

- 104B/10); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1990-2, Scale 1:50,000.
- Logan, J.M., Koyanagi, V.M. and Rhys, D. (1993a): Geology and Mineral Occurrences of the Galore Creek Area (104G/3); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Geoscience Map 1993-1, Scale 1:50,000.
- Logan, J.M., Koyanagi, V.M. and Rhys, D. (1993b): Geology and Mineral Occurrences of the Galore Creek Area (104G/4); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Geoscience Map 1993-2, Scale 1:50,000.
- Logan, J.M. and Drobe, J.R. (in preparation): Geology along the Forrest Kerr Creek and Mess Creek Faults, Iskut River Area, Northwestern British Columbia; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Bulletin, Scale 1:50,000, (104B/15 and part of 104B/10).
- MacIntyre, D.G. (1985): Geology and Mineral Deposits of the Tahtsa Lake District West Central British Columbia; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Bulletin 75.
- MacIntyre, D.G. and Desjardins, P. (1988): Geology of the Silver King - Mount Cronin Area, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1988-20.
- MacIntyre, D.G. and Desjardins, P. (1989): Geology of the Telkwa River Area, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1989-16.
- MacIntyre, D.G., Desjardins, P., Mallett, P. and Brown, D. (1987): Geology of the Dome Mountain Area, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1987-1.
- MacLeod, S.E. and Hills, L.V. (1990): Conformable Late Jurassic (Oxfordian) to Early Cretaceous Strata, Northern Bowser Basin, British Columbia: a Sedimentological and Paleontological Model; *Canadian Journal of Earth Science*, Volume 27, pages 988-998.
- McCrossan, E. (1990): Report on the Ore Mountain Property, near Stewart, British Columbia; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 20622, 38 pages.
- MEMPR (1978): Bowser Lake (104A); Aeromagnetic Map 7779G, *B.C. Ministry of Energy, Mines & Petroleum Resources*.
- MEMPR (1978): Nass River (103P); Aeromagnetic Map 7769G, *B.C. Ministry of Energy, Mines & Petroleum Resources*.
- Metcalfe, P. and Moors, J.G. (1993): Refinement and Local Correlation of the Upper Snippaker Ridge Section, Iskut River Area, B.C.; in *Geological Fieldwork 1992*, B. Grant and J.M. Newell, Editors, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Paper 1993-1, pages 335-339.
- Metcalfe, P. (1993): Snippaker and Bronson Areas, Iskut River Area, B.C.; in *MDRU Annual Report for 1993*, Scale 1:25,000.
- Mihalynuk, M.G. and Ghent, E.D. (1986): Stratigraphy, Deformation and Low Grade Metamorphism of the Telkwa Formation near Terrace, British Columbia; *Geological Survey of Canada*, Paper 86-1B, pages 721-726. (103I/08)

- Mihalynuk, M.G. (1987): Metamorphic, Structural and Stratigraphic Evolution of the Telkwa Formation, Zymoetz River Area (NTS 103 I/8 and 93L/5), Near Terrace, British Columbia; M.Sc. Thesis, *The University of Calgary*, 128 pages. (103I/08)
- MINFILE 104A (1993): Bowser Lake Mineral Occurrence Map (NTS 104A); *Ministry of Energy, Mines and Petroleum Resources*, MINFILE, released March 1993.
- MINFILE 104B (1989): Iskut River Mineral Occurrence Map (NTS 104B); *Ministry of Energy, Mines and Petroleum Resources*, MINFILE, released February 1989.
- MINFILE 93L (1989): Smithers Mineral Occurrence Map (NTS 93L); *Ministry of Energy, Mines and Petroleum Resources*, MINFILE, released September 1989.
- MINFILE 93M (1992): Hazelton Mineral Occurrence Map (NTS 93M); *Ministry of Energy, Mines and Petroleum Resources*, MINFILE, released March 1992.
- MINFILE 94D (1992): McConnell Creek Mineral Occurrence Map (NTS 94D); *Ministry of Energy, Mines and Petroleum Resources*, MINFILE, released September 1992.
- Money, P.L. (1959): Geology of Hawkesbury Island; *unpublished M.Sc. thesis*, University of British Columbia, 159 pages. (103H)
- Newmont Mining Corporation (undated): Unpublished Geology Maps for 104B/7E, 8E, 8W, 9E, 9W, 10E; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Property File, Scale 1:31,250.
- O'Donnell, A.J. (1991): Geology and Diamond Drilling Report on the Unuk River Project (Unuk and Coul Claim Groups), Skeena Mining Division; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 22113, 66 pages.
- Padgham, W.A. (1958): Geology of the Ecstall-Qaal Rivers Area, British Columbia; *unpublished M.A.Sc. thesis*, University of British Columbia, 202 pages.
- Panteleyev, A. (1981): Berg Porphyry Copper Molybdenum Deposits, Geological Setting, Mineralization, Zoning and Pyrite Geochemistry; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Bulletin 66.
- Porter, S. (1992): Elbow Mountain Crystalline Complex, Iskut River Map Area, Northwestern British Columbia; in Current Research, Part A; *Geological Survey of Canada*, Paper 92-1A, pages 309-313.
- Read, P.B., Brown, R.L., Psutka, J.F., Moore, J.M., Journeay, M., Lane, L.S. and Orchard, J.J. (1989): Geology, More and Forrest Kerr Creeks (Parts of 104B/10, 15, 16 and 104G/1,2); *Geological Survey of Canada*, Open File 2094, Scale 1:50,000.
- Richards, T.A. (1975): McConnell Creek Map-area (94D East Half) Geology; *Geological Survey of Canada*, Open File 342, Scale 1:250,000.
- Richards, T.A. (1980): Geology of the Hazelton (93M) Map Area; GSC, Open File 720.
- Richards, T.A. (unpublished): Geologic map and mineral deposit tables for the Smithers Area (93L); GSC.

- Richards, T.A. (1990): Geology of the Hazelton Map Area (93M); GSC, Open File 2322.
- Roddick, J.A. (1970): Douglas Channel - Hecate Strait Map Area, British Columbia; *Geological Survey of Canada*, Paper 70-41, 56 pages. (103H, 103G E½)
- Roots, E.F. (1957): Stikine River Area, British Columbia (104A, B, G, H, I, J); *Geological Survey of Canada*, Map 9-1957, Scale 1 inch = 4 miles (1:253,440).
- Runkle, D.E. (1979): Geology and Geochronometry of the Coast Plutonic Complex Adjacent to Douglas, Sue and Loretta Channels, British Columbia; M. Sc. Thesis, *The University of British Columbia*, Vancouver, 96 pages. (103H/10,11)
- Ryan, B. (unpublished): manuscript maps of the Telkwa coal fields.
- Schofield, S.J. and Hanson, G. (1922): Geology and Ore Deposits of Salmon River District, British Columbia; *Geological Survey of Canada*, Memoir 132, 81 pages.
- Schroeter, T., Lane, B. and Bray, A. (1992): Red Mountain; in Exploration in British Columbia 1991, Part B, *B.C. Ministry of Energy, Mines and Petroleum Resources*, pages 117-125
- Silversides, D.A. (1961): Geology of the Roundy Creek Area (Alice Arm, B.C.); B. SC. thesis, University of British Columbia, 52 pages. (1 inch to 1000 feet scale geology map; 103P/ 05 & 06)
- Smitheringale, W.G. (1976): Report on the 1976 Exploration Program and Exploration potential of the Bear Pass Property and Rufus Creek - Bear River Pass Area, near Stewart, British Columbia; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 6382, 62 pages.
- Souther, J.G. Brew, D.A. and Okulitch, A.V. (1979): Iskut River, British Columbia-Alaska (Sheet 104, 114); *Geological Survey of Canada*, Map 1418A, Scale 1:1,000,000.
- Stuart, R.A. (1960): Geology of the Kemano-Tahtsa Area; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Bulletin 42.
- Sutherland Brown, A. (1960): Geology of the Rocher Deboule Range; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Bulletin 43.
- Tipper, H.W. and Richards, T.A. (1976): Geology of the Smithers Area, GSC, Open File 351. Scale 1:125,000.
- Tipper, H.W., Campbell, R.B., Taylor, G.C. and Stott, D.F. (1974): Parsnip River, British Columbia (Sheet 93); *Geological Survey of Canada*, Map 1424A, Scale 1:1,000,000.
- Tipper, H.W., Campbell, R.B., Taylor, G.C. and Stott, D.F. (1974): Parsnip River, British Columbia (Sheet 93); *Geological Survey of Canada*, Map 1424A, Scale 1:1,000,000.
- van der Heyden, P. (1989): U-Pb and K-Ar Geochronometry of the Coast Plutonic Complex, 53° N to 54° N, British Columbia, and implications for the Insular-Intermontane Superterrane Boundary; Ph. D. Thesis, *The University of British Columbia*, Vancouver, 392 pages. (103H, 103G E½)
- van der Heyden, P. (1990): Eastern Margin of the Coast Belt in West-central British Columbia; *Geological Survey of Canada*; Paper 90-1E, pages 171-182.

- Vogt, A.H. (1989): Assessment Report on Geological/Geochemical Work on the Following Claims: Nelson 1,2,3, Skeena Mining District; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 19424, 11 pages.
- Wheeler, J.O., Brookfield, A.J., Gabrielse, H., Monger, J.W.H., Tipper, H.W. and Woodsworth, G.J. (compilers) (1991): Terrane Map of the Canadian Cordillera; *Geological Survey of Canada*, Map 1713A, Scale 1:2,000,000.
- Wheeler, J.O. and McFeely, P. (compilers) (1991): Tectonic Assemblage Map of the Canadian Cordillera and Adjacent Parts of the United States of America; *Geological Survey of Canada*, Map 1712A, Scale 1:2,000,000.
- Woodcock, J.R. and Gorc, D. (1982): Todd Creek Porperty; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 10404, 15 pages.
- Woodsworth, G.J., Crawford, M.L. and Hollister, L.S. (1983): Metamorphism and Structure of the Coast Plutonic Complex and Adjacent Belts, Prince Rupert and Terrace Areas, British Columbia; GAC, MAC, CGU, Joint Annual Meeting - Victoria, British Columbia, Field Trip No. 14, 41 pages.
- Woodsworth, G.J., Loveridge, W.D., Parrish, R.R. and Sullivan, R.W. (1983): Uranium-lead Dates from the Central Gneiss Complex and Ecstall Pluton, Prince Rupert Map Area, British Columbia; *Canadian Journal of Earth Sciences*, Volume 20, pages 1475-1483. (103JE½, 103I W½)
- Woodsworth, G.J., Hill, M.L. and van der Heyden, P. (1985): Preliminary Geologic Map of Terrace (NTS 103I, East Half) Map Area, British Columbia; *Geological Survey of Canada*, Open File 1136, scale 1:125000.
- Woodsworth, G.J. and Orchard, M.J. (1985): Upper Paleozoic to Lower Mesozoic Strata and Their Conodonts, Western Coast Plutonic Complex, British Columbia; *Canadian Journal of Earth Sciences*, Volume 22, pages 1329-1344. (103J/7).
- Woodsworth, G.J. and Richards, T. (1988): Prince Rupert to Smithers Transect; Geological Association of Canada, Northern Cordilleran Workshop, *unpublished Field Guide*.
- Woodsworth, G.J. (unpublished): manuscript map of the Whitesail Lake area.
-

Recommended citation:

MacIntyre, D.G., Ash, C.H. and Britton, J.M. (1994): Geological Compilation, Skeena-Nass Area, West Central British Columbia (NTS 93 E, L, M; 94D; 103 G, H, I, J, O, P; 104 A, B); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1994-14