

CENOZOIC (?) AND OLDER

COAL HABITUS GROUP (NEW)

MESOZOIC

VANCOUVER GROUP

SEDMENTARY DIVISION

LEGEND

QUATERNARY
PLEISTOCENE AND RECENT
29 Boulder clay, stratified sands, gravels, and clays; beach deposits; recent alluvial deposits

TERTIARY (?) OR LATEST CRETACEOUS
? PRE-OLIGOCENE
28 ? SOOKE INTRUSIONS: minor to ? medium-sized bodies of granite-porphyr, diorite-porphyr and holocrystalline gabbro; associated small dykes and sills (felsitic, porphyritic and amygdaloidal) of rhyolitic, dacitic and diabasic composition

CRETACEOUS
EARLY UPPER CAMPANIAN
27 NANAIMO GROUP (CEDAR DISTRICT EQUIVALENTS ONLY): arkoses or arkosic sandstones dull brown, whitish grey or buff, fine to rarely coarse-grained, locally gritty; minor fine pebble conglomerate and grit interbeds near the base

CENOMANIAN ? AND TURONIAN
26 UPPER SHALE UNIT: irregular interbedding of dark grey siltstone and shale with numerous concretions of calcareous shale and impure limestone; considerable interbeds of fine to coarse-grained greywacke and minor interbeds of grit and pebble conglomerate near the base

ALBIAN
25 BLUMBERG FORMATION (new): pebble to boulder conglomerate, green-grey to brown, rich in clasts of Coast intrusions; minor interbeds of grit, coarse to fine grained greywacke and arenaceous shale

APTIAN
24 COARSE ARENITE UNIT: subgreywacke to subarkose (and some quartzose sandstone), light coloured, mostly coarse to medium grained, commonly gritty and pebbly, almost exclusively non-marine and locally carbonaceous to coaly; considerable dark grey, mostly fine grained and silty greywacke and similarly coloured strongly arenaceous siltstone; minor interbeds of grit and conglomerate, locally thin seams of coal

MID-TO LATE BARREMIAN
22 BARREMIAN FINE-GRAINED GREYWACKE UNIT: greywacke, dark grey to green-grey (or bluish grey) fine to very fine grained and silty, massive-looking, spherulitically weathering and containing numerous concretions, lenses and interbeds of lighter coloured calcareous greywacke; considerable similarly coloured sandy to very sandy siltstone; minor coarse grained greywacke, grit, and fine pebble conglomerate at the base

LOWER BARREMIAN ? OR LATEST HAUTERIVIAN
21 INCONGRUOUS COLONICUS CALCARENITES: bioclastic limestone dull to brown grey, fine to coarse; impure; considerable pods, lenses and interbeds of calcareous, arenaceous and/or pebbly shale; some calcareous greywacke, grit and fine pebble conglomerate; minor coarsenedimentary breccia of bioclastic limestone and other rock types

HAUTERIVIAN
19 HAUTERIVIAN SILTSTONE UNIT: siltstone, dark grey, more or less sandy, massive-looking, some similarly coloured, fine grained, silty greywacke; numerous small to large, usually fossiliferous concretions of limy siltstone or impure limestone

LATE VALANGINIAN
18 BUCHIA CRASSICOLLIS GREYWACKE: greywacke, green-grey to dark grey, fine to medium grained, mostly more or less calcareous; minor interbeds, lenses and rows of concretions of strongly calcareous greywacke or arenaceous limestone; some grit and pebble conglomerate at the base

JURASSIC
MIDDLE JURASSIC
17 COAST INTRUSIONS (may include some undifferentiated ? Sooke intrusions): granodioritic, dioritic, and gabbroic, holocrystalline to coarse porphyritic intrusions, light grey to dark grey or dark green, with abundant xenoliths of Vancouver Group rocks; similar felsitic, porphyritic and amygdaloidal minor intrusions

LOWER JURASSIC
15 ? PLEINSBACHIAN TOARCIAN GREYWACKE UNIT: greywacke, blue grey to brown grey, coarse to fine-grained often tuffaceous, gritty and pebbly; considerable interbeds and lenses of grit and pebble conglomerate in the lower part; considerable interbeds of dark grey, arenaceous to tuffaceous marine argillite and black, carbonaceous to coaly, plant-bearing argillite in the upper part

? PLEINSBACHIAN
14 ? DARK-GRAY VOLCANIC UNIT: lavas, dark grey, ? andesitic, strongly amygdaloidal to strongly porphyritic; some interbeds of similarly coloured pyroclastics

SINEMURIAN
13 UPPERMOST SINEMURIAN ARGILLITE UNIT: argillite, black to grey, mostly pure, medium to heavily bedded; some arenaceous limestone, greywacke, and calcareous grit; locally some waterlain volcanic tuff

12 UPPERMOST SINEMURIAN VOLCANIC UNIT: volcanic breccia, green-grey to brown, mostly coarse to medium and waterlain (pillow breccia); lavas, grey, green or speckled-lavender, intermediate, amygdaloidal to porphyritic, commonly rich in pillow structures; considerable mostly coarse and tuffaceous volcanic clastics

11 MATTHEWS ISLAND FORMATION (new): argillite, light grey to black, mostly intermediate to heavily bedded, arenaceous and/or tuffaceous, mostly calcareous; minor interbeds of calcareous greywacke, arenaceous grey limestone, grit and fine pebble conglomerate; minor waterlain pyroclastics in the middle part

? HETTANIAN
10 GRAY VOLCANIC UNIT: lavas and volcanic breccias, bluish grey to dull grey, intermediate, porphyritic to amygdaloidal, mostly rich in pillow structures; similarly coloured massive lavas and pyroclastics

? HETTANIAN
9 CHERRY LIMESTONE UNIT: limestone, dark grey to black, thinly bedded to laminated, mostly cherty and with numerous laminae, inclusions and interbeds of black to grey chert; minor interbeds of calcarenites, calcareous sedimentary clastics and waterlain pyroclastics

? HETTANIAN ? OR YAND OLDER
8 BASAL JURASSIC VOLCANIC UNIT: pyroclastics and lavas, lavender to maroon, intermediate to acidic, often rich in phenocrysts of pink to orange sodic plagioclase; pyroclastics, mostly coarse and unsorted to poorly sorted; variable amounts of dark grey to dark green pyroclastics and lavas

UPPER TRIASSIC (?) AND OLDER
RHAEIAN ? AND/OR LATEST NORIAN
7 HECATE COVE FORMATION (new): irregular interbedding of blue-green to grey-green, waterlain (commonly with pillow structures) volcanic breccia with argillaceous and limy matrix, poorly rounded and sorted volcanic conglomerates, and coarsenedimentary limestone breccia; variable amounts of thin-bedded, waterlain volcanic tuff, tuffaceous greywacke, tuffaceous argillite and impure limestone

LATE UPPER NORIAN
5 SUTTON FORMATION: limestone, grey to black, cryptocrystalline, pure to impure; mostly well bedded, contains considerable interbeds of massive to indistinctly and heavily bedded limestone; numerous interbeds of calcareous, dark grey to black argillite; some interbeds of calcareous greywacke and grit; some interbeds of waterlain volcanic tuff and breccia near the top

LATE UPPER NORIAN
4 ARENACEOUS MEMBER: greywacke, green-grey to brown-grey, fine to coarse grained, tuffaceous; considerable interbeds of dark grey to black arenaceous and/or tuffaceous argillite; minor interbeds of grit, pebble conglomerate, and impure limestone; locally some interbeds of waterlain volcanic breccia and tuff

NORIAN
3 THINLY BEDDED MEMBER: argillite, grey to black, mostly calcareous, tuffaceous and/or arenaceous, mostly thinly bedded; locally considerable interbeds of dark grey to black impure limestone; some fine grained greywacke; locally minor tuffaceous argillites

UPPER KARNIAN AND NORIAN
2 QUATSINO FORMATION: limestone, light grey to black, cryptocrystalline to coarse crystalline, pure to impure, massive to thinly bedded, variable but minor volcanics; minor calcareous argillites near the top

KARNIAN AND ? OLDER
1 KARMUTSEN SUBGROUP (UNDIVIDED): lavas, dark green to dark grey, porphyritic to amygdaloidal ? basic; minor waterlain pyroclastics; minor tuffaceous limestone

Geology by J.A. Jelletzky 1953, 1954 and 1968, 1969

To accompany Bulletin 242 by J.A. Jelletzky

Geological cartography by the Geological Survey of Canada

BARREMIAN ? AND LATEST HAUTERIVIAN
23 BARREMIAN VARIEGATED CLASTIC UNIT: irregular interbedding of various marine to non-marine, often arenaceous to coaly clastics ranging from dark grey siltstone through various greywacke and arkose to grit and pebble or boulder conglomerate; some thin seams of coal locally

LATE VALANGINIAN ? AND HAUTERIVIAN
20 LATE VALANGINIAN ? AND HAUTERIVIAN GREYWACKE-CONGLOMERATE UNIT: greywacke, grey to green, mostly coarse to medium grained and gritty to pebbly; similarly coloured pebbles to boulder conglomerate, poorly rounded; minor interbeds of black to grey arenaceous siltstone and fine grained silty greywacke

UPPERMOST TRIASSIC AND LOWER JURASSIC
16 UNDIVIDED VOLCANIC DIVISION: the same rock types as in units 7 to 15 inclusive

UPPER KARNIAN AND NORIAN
6 UNDIVIDED SEDIMENTARY DIVISION: includes all rock types listed in units 2 to 5

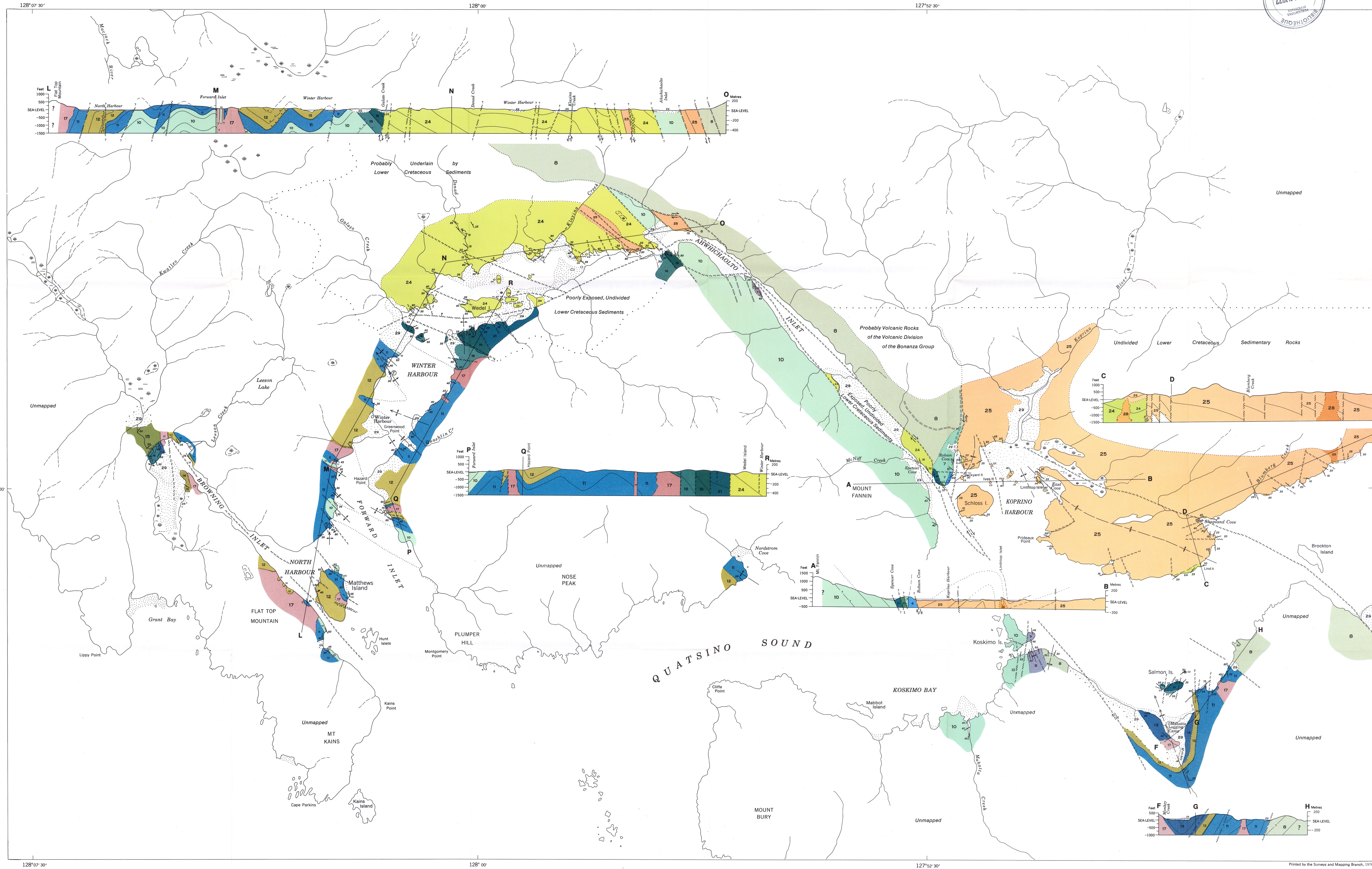


Figure 18
Mesozoic and ? Tertiary rocks of Quatsino Sound, British Columbia.

