available in digital format for use with GIS and database programs.

complex or the Hazelton Group.

This open file replaces GSC open file 3454 (Evenchick et al., 1997). It incorporates new stratigraphic terminology of the Bowser Lake Group, and new understanding of the ages and stratigraphic and structural relationships of units in the Anyox Pendant based on published and unpublished UPb zircon geochronology (Evenchick and McNicoll, 2002; V.J. McNicoll, unpublished data 1998, in Evenchick et al., 1999), and follow up analysis. Files used to create this map will be

Bedrock in Observatory Inlet map area is dominated by Tertiary granitoid rocks of the Hyder Pluton. Stratified rocks in the northeast are turbidites of the Ritchie Alger assemblage of the Bowser Lake Group (Evenchick and Thorkelson, 2005), and are continuous with the Bowser Basin. The large region of stratified rocks in the west central part of the map area has intrusive contacts on the north, east, and south with the Hyder Pluton and it is in fault contact with plutonic rocks on the west. This region of subgreenschist to upper greenschist facies metamorphic rocks is known as the Anyox Pendant. Descriptions of units, stratigraphic relationships, structural style, geochronology, and interpretation of the depositional setting and evolution of the Anyox Pendant, and their implications for mineral exploration are described in Evenchick and McNicoll (2002). The east half of the pendant is underlain by Ritchie-Alger assemblage of the Bowser Lake Group. The west half of the pendant is underlain largely by Lower to lower Middle Jurassic volcanic, clastic, and intrusive rock cut by networks of shear zones. Correlation of the stratified units in the west half of the pendant with the Hazelton Group is based on stratigraphic position with respect to the Bowser Lake Group, lithology, and detrital zircon geochronology of 4 samples which constrain the maximum ages of strata to younger than ca. 186 Ma, 178 Ma, 183 Ma, and 186 Ma (Evenchick and McNicoll, 2002). North trending intrusive bodies separate stratified rocks of the western haf of the pendant into eastern, central, and western belts of volcanic and related rocks (unit JHv) stratigraphically underlies the Bowser Lake (IV). It is bounded on the west by a charged graphic unit (JC) of Jurassic and. The central and western belts of volcanic and related rocks. west, and it is bounded on the west by a sheared granitic unit (JCg) of Jurassic age. The central and western belts of volcanic and related rocks (unit JCsv) are separated by a Devonian intrusive complex (unit DCmp; Childe, 1997) which is bounded on the west by an ultramafic unit (DJCu). The name Clashmore complex was given to the western half of the pendant (Evenchick et al., 1997) because the structural complexity of the central and western volcanic belts, the sheared granitic unit, the mafic intrusive complex, and the ultramafic unit severely hampers recognition of primary relationships and because of the large number of tectonic lenses within units that may belong to other units. For example, unit JCsv, which is believed to be largely correlative with the Jurassic Hazelton Group, may include tectonic lenses of older strata; the sheared granitic unit (JCg) may include tectonic lenses of the Hazelton Group and the Devonian intrusive complex; and it is unclear whether the ultramafic unit is genetically related to the Devonian intrusive

Preliminary ages of Tertiary rocks are noted in Evenchick and McNicoll (2002). Tertiary brittle structures, including the Big Dam Fault, are described and discussed by Evenchick et al. (1999). Several mineral showings, deposits, and past producers occur in the Tertiary intrusive rocks. The majority, however, are in the Anyox Pendant. Of these, the most important historically is the Hidden Creek deposit, a large past producer. An overview of the geology and lithogeochemistry of the Hidden Creek deposit is given by Macdonald et al. (1996).

Note that UTM location values are incorrect for two geochronology points in Table 1 of Evenchick and McNicoll (2002). The correct position for Point A, EP-96-315, is 443540E and 6146400N (NAD27, Zone 9). The correct position for Point D, EP-327-2, is 438610E and 6144850N (NAD27, Zone 9).

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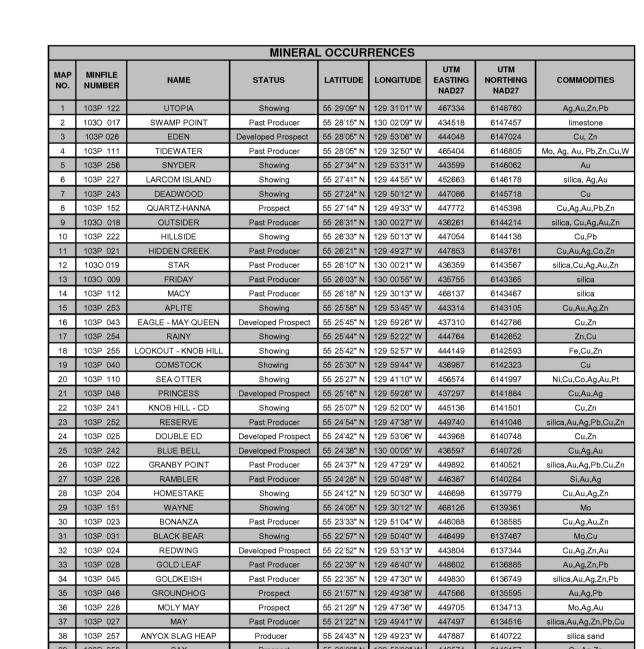
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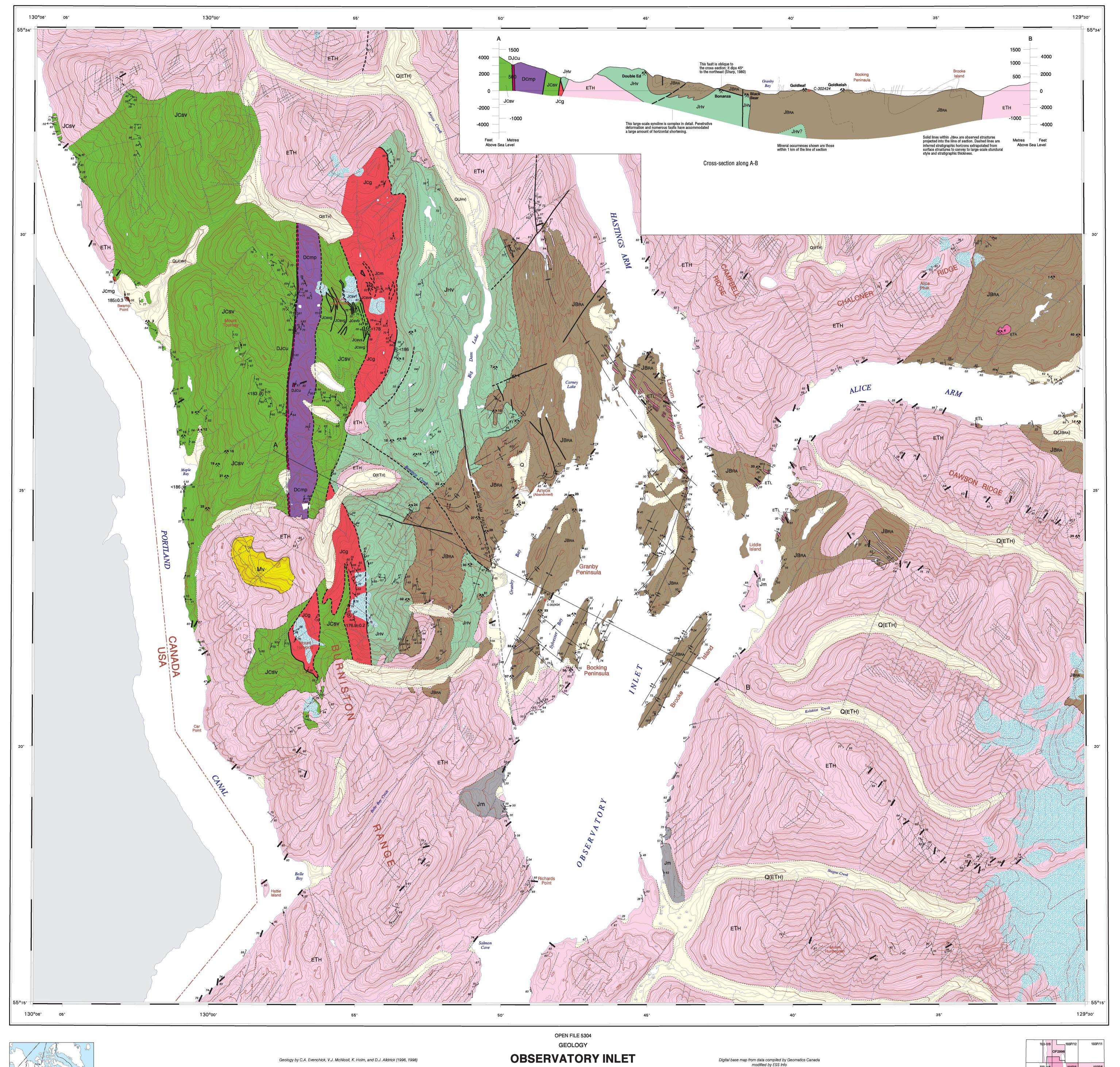
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BRITISH COLUMBIA

Scale 1:50 000/Échelle 1/50 000

Projection transverse universelle de Mercator

Système de référence géodésique nord-américain, 1927

© Sa Majesté la Reine du chef du Canada 2006

Universal Transverse Mercator Projection

North American Datum 1927

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Some icefiled limits have been modified to 1996 extents

based on airphoto and ground interpretation

Mean magnetic declination 2006, 21°36'E, decreasing 17.3' annually

Elevations in feet above mean sea level

Contour interval 100 feet

Map compilation by C.A. Evenchick (1996, 1997, 2006)

Digital geological cartography by T.D. Feeney and R.B. Cocking, and C.L. Wagner, Earth Sciences Sector Information Division (ESS Info),

Any revisions or additional geological information known to the user

would be welcomed by the Geological Survey of Canada

LEGEND

PLEISTOCENE AND RECENT Glacial till, alluvium, and colluvium; S denotes 60 year old slag heap at mouth of Anyox Creek; unit designators in parentheses are the inferred underlying bedrock

MIOCENE Volcanic breccia and flows, volcanic- and granite-pebble and cobble conglomerate. A preliminary whole rock 40 Ar/ 60 Ar age for dacite near the top of the succession is 21.8 \pm 0.4 Ma (V.J. McNicoll, unpublished data, 1998, in Evenchick et al., 1999).

LARCOM DYKE SWARM Fine-grained leucocratic granitoid dykes with plagioclase and hornblende phenocrysts; 52 ± 1 Ma (U-Pb) (V.J. McNicoll, unpublished data, 1998, in Evenchick

ALICE ARM INTRUSIONS

Quartz monzonite porphyry. PALEOCENE AND EOCENE

HYDER PLUTON Biotite-hornblende granite, quartz monzonite, and granodiorite, includes minor garnet ETH ± muscovite granite; locally with potassium feldspar megacrysts. Preliminary U-Pb ages of 5 samples range from 61 Ma to 51 Ma (V.J. McNicoll, unpublished data, 1998,

in Evenchick et al., 1999). UPPER MIDDLE TO UPPER JURASSIC

BOWSER LAKE GROUP RITCHIE-ALGER ASSEMBLAGE (submarine fan assemblage): sandstone, siltstone, and rare fine pebble conglomerate; sheet-like intervals up to tens of metres thick are dominated either by siltstone, shale, and very fine-grained sandstone or by fine- to coarse-grained sandstones; siltstone and/or fine-grained sandstone is dark grey- and black-weathering, sandstone is medium- and light-grey-weathering; abundant turbidite features (e.g. Bouma cycles, flame structures, flute-and-groove casts); marine fossils; local hornfels with metamorphic assemblage of biotite, andalusite,

muscovite, rare cordierite.

LOWER AND LOWER MIDDLE JURASSIC HAZELTON GROUP Eastern belt of metavolcanic rock; volcanic breccia, pillowed volcanic flows, massive volcanic flows, chlorite schist; minor siliceous volcanic and/or sedimentary rock, including metachert, tuff; thin mafic dykes; minor sills of diorite, and gabbro.

Highly strained metasedimentary and metavolcanic rock; age and correlation

DEVONIAN TO JURASSIC CLASHMORE COMPLEX (units JCg, JCsv, JCmg, DJCu, and DCmp)

Sheared granitic unit; cataclastic and mylonitic granitic and quartzo-feldspathic rock 176.9 ± 0.2 Ma (U-Pb); includes tectonic lenses of strained mafic rock (JCm). LOWER AND LOWER MIDDLE JURASSIC

the east and detrital zircon geochronology.

Geological boundary (defined, approximate, assumed or inferred under Q) . . .

HAZELTON GROUP Central and western belts of metavolcanic and metasedimentary rock, intruded by gabbro, diorite, and quartz dirorite; cut by a network of shear zones; includes volcanic breccia, pillowed volcanics, massive flows, chlorite schist, psammitic schist, siliceous metavolcanic or metasedimentary rock, grit, conglomerate, mafic intrusive rock, minor marble; JCsvb, JCsvs, JCsvg, and JCsvf are tectonic lenses of volcanic breccia, sedimentary rock, gabbro, and felsic plutonic rock respectively; may include older strata, but inferred to be largely Early Jurassic age based on correlation with JHV to

Biotite hornblende metagranite; inclues Swamp Point metagranite; 185.6 ± 0.3 Ma Ultramafic rock; fine tectonic(?) layering, and common fault breccia; age and correlation uncertain; spatially associated with DCmp.

Mafic intrusive complex; variety of compositions and textures, cut by a network of shear zones; 363 ± 3 Ma (U-Pb).

Trace of individual beds from ground observation and airphoto interpretation . Linear features observed on airphotos; inferred to be joints, faults, or glacial in origin . Fault, unknown displacement (defined, approximate, assumed) Fault, inferred under Quaternary . . . Normal fault, ornament on downthrown side (approximate) . . Anticline, trace of axial surface (defined, approximate, overturned) Bedding (upright, top unknown, overturned) Foliation (undivided, first generation, 20 25 30 35 40 transposition, mylonitic, gneissic) Fault (displacement sense unknown, dextral, sinistral, contractional, extensional) . . Shear zone (hanging wall up, hanging wall down) . Axial surface of fold (generation unknown, first generation) Fold axis (generation unknown, 's' fold generation unknown, 'z' fold generation unknown, first generation, second generation, crenulation) . Lineation (stretching, mineral, slicken striae) Joint (inclined, vertical) Dyke, mostly basalt (inclined, vertical) . Vein (inclined) . Fossil locality (catalogue number) . Radiometric age, U-Pb (in Ma); < before the age value indentifies oldest possible age based on age of youngest detrital zircon

BC MINFILE occurrence and map reference number. Refer to table for deposit name, BC MINFILE number, deposit status, and commodities

Cross-section

OPEN FILE DOSSIER PUBLIC that have not gone through the GSC formal

Les dossiers publics sont GEOLOGICAL SURVEY OF CANADA
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