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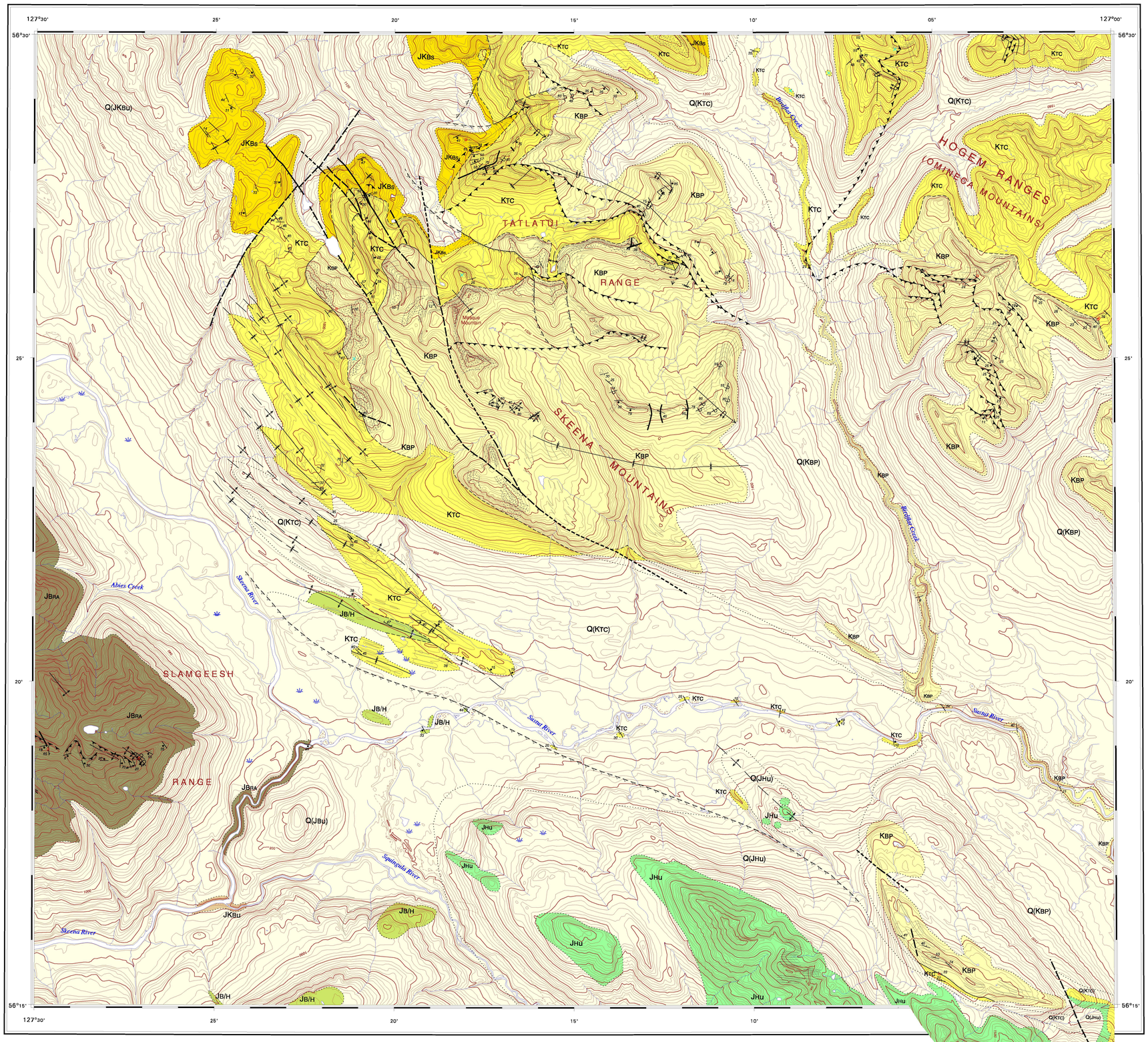
GEOLOGICAL SURVEY OF CANADA | COMMISSION GÉOLOGIQUE DU CANADA



LEGEND

CENOZOIC

QUATERNARY
PLEISTOCENE AND RECENT

Q — *Glacial till, alluvium, and colluvium; unit designators in parentheses are the inferred underlying bedrock units.*

MESOZOIC

CRETACEOUS
UPPER LOWER AND UPPER CRETACEOUS
SUSTUT GROUP (units KTc and KBP)
CAMPANIAN AND MAASTRICHTIAN

KBP — *BROTHERS PEAK FORMATION: sandstone, siltstone, conglomerate, and tuff; sandstone and siltstone are cream- and grey-weathering, tuff is cream-weathering; conglomerate in laterally continuous sheets is most common near base.*

APTIAN OR ALBIAN TO CAMPANIAN

KTC — *TANGO CREEK FORMATION: micaceous sandstone, siltstone, mudstone, and minor quartz grit and pebble conglomerate; sandstone is grey- and green-weathering, occurring as laterally continuous sheets and as lenses; siltstone and mudstone are grey-, black-, and maroon-weathering.*

JURASSIC AND CRETACEOUS
UPPER JURASSIC AND LOWER CRETACEOUS
BOWSER LAKE GROUP

JKBu — *Undivided Bowser Lake Group.*

JKBs — *SKELHORNE ASSEMBLAGE (deltaic assemblage): thinly intermixed and varicoloured siltstone, sandstone, and conglomerate (with or without coal), commonly arranged in coarsening- and thickening-upward cycles; common features of sandstone are parallel bedding, crossbedding, ripples, burrows, bivalve coquina, and brown-, green-, and grey-weathering; conglomerate is rusty- and grey-weathering, but constitutes a lower proportion (15–30%) of the unit than in the Eaglenest assemblage; conglomerate units, up to 50 m thick, cap cycles up to 70 m thick, and tops locally have megaripples; plant and marine fossils are common, and trace fossils including Skolithus and Diplocraterion are present, as are tree fragments several metres long.*

JURASSIC
UPPER MIDDLE TO UPPER JURASSIC
BOWSER LAKE GROUP

JBRA — *RITCHIE-ALGER ASSEMBLAGE (submarine fan assemblage): sandstone, siltstone, and rare conglomerate; approximately equal proportions of sheet-like intervals, up to 50 m thick, dominated either by siltstone, shale and very-fine grained sandstone, or by medium-grained sandstone; 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); conglomerate includes debris-flow deposits; marine fossils.*

JB/H — *Undivided Bowser Lake Group and upper Hazelton Group clastic rocks.*

LOWER AND LOWER MIDDLE JURASSIC
HAZELTON GROUP

JHu — *Undivided volcanic and intercalated clastic rock of the Hazelton Group; regionally includes subaerial and marine mafic volcanic rocks and epiclastic rocks; felsic volcanic rocks include sills, dykes, welded and nonwelded ignimbrite, airfall tuff breccia; epiclastic and bioclastic rocks, includes volcanic debris-flow conglomerate, breccia, conglomerate, siltstone, shale, and limestone.*

Geological boundary (defined, approximate, assumed or inferred beneath unit Q)

Trace of individual beds from ground observation and airphoto interpretation

Fault, unknown displacement (defined, approximate, assumed or inferred beneath unit Q)

Thrust fault (defined, approximate, assumed or inferred beneath unit Q); symbol on hanging-wall side

Fault, reverse (defined, approximate, assumed or inferred beneath unit Q); symbol on hanging-wall side

Fault, normal (defined, approximate, assumed or inferred beneath unit Q); symbol on down thrown side

Anticline, trace of axial surface (defined, approximate, overturned); arrow on line indicates direction of plunge

Syncline, trace of axial surface (defined, approximate, overturned)

Conglomerate

Bedding (upright, top unknown, overturned) — 25 / 15 / 15

Cleavage (inclined) — 25

Joint (inclined) — 15

Fault — 30

Fold axis — 40

Fossil locality

Outcrop examined; bedding attitude not determined (selected locations shown)

DESCRIPTIVE NOTES

This map overlaps the boundaries of volcanic arc rocks of Stikinia, the clastic Bowser Basin, and the clastic Sustut Basin. The primary intent of the map is to show the distribution and stratigraphic and structural relationships of Bowser and Sustut basin rocks. The Early to Middle Jurassic rocks of Stikinia are included to provide context and illustrate basement structures. Descriptions and interpretations of Bowser and Sustut basin rocks relevant to this map may be found in Eisbacher (1974), Evenchick et al. (2003), Evenchick and Thorkelson (2005), and McMechan (in press). The broader map context of these units is provided by Evenchick et al. (2006).

Sources of information are mapping by S. Porter in 1992, and by M. McMechan, C.A. Evenchick, and F. Ferri in 2003. Previous mapping by Eisbacher (1974).

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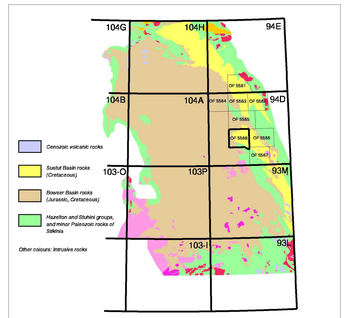
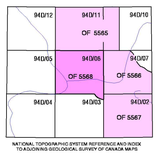


Generalized geology of Bowser and Sustut basins and location of this map



NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND INDEX TO ADJOINING GEOLOGICAL SURVEY OF CANADA MAPS

LOCATION MAP

Geology by C.A. Evenchick and S. Porter (1992), C.A. Evenchick, F. Ferri, P.S. Mustard, T.Hadlari (2003),

Digital geological cartography by C.L. Wagner, Data Dissemination Division (DDD)

Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada

GSC OPEN FILE 5568

BCMEM PETROLEUM GEOLOGY OPEN FILE 2007-3

GEOLOGY

BIRDFLAT CREEK

BRITISH COLUMBIA

Scale 1:50 000/Échelle 1/50 000

kilometres 1 0 1 2 3 4 kilometres

Universal Transverse Mercator Projection
North American Datum 1927
© Her Majesty the Queen in Right of Canada 2007

Projection transverse universelle de Mercator
Système de référence géodésique nord-américain, 1927
© Sa Majesté la Reine du chef du Canada 2007

Digital base map from data compiled by Geomatics Canada, converted to NAD27 by DDD

Mean magnetic declination 2007, 21°38'E, decreasing 18.7' annually

Elevations in metres above mean sea level

Contour interval 20 metres

OPEN FILE
DOSSIER PUBLIC
5568
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COMMISSION GÉOLOGIQUE DU CANADA
2007

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2007: Geology, Birdflat Creek, British Columbia; Geological Survey of Canada, Open File 5568; BC Ministry of Energy, Mines and Petroleum Resources, Petroleum Geology Open File 2007-3, scale 1:50 000.

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