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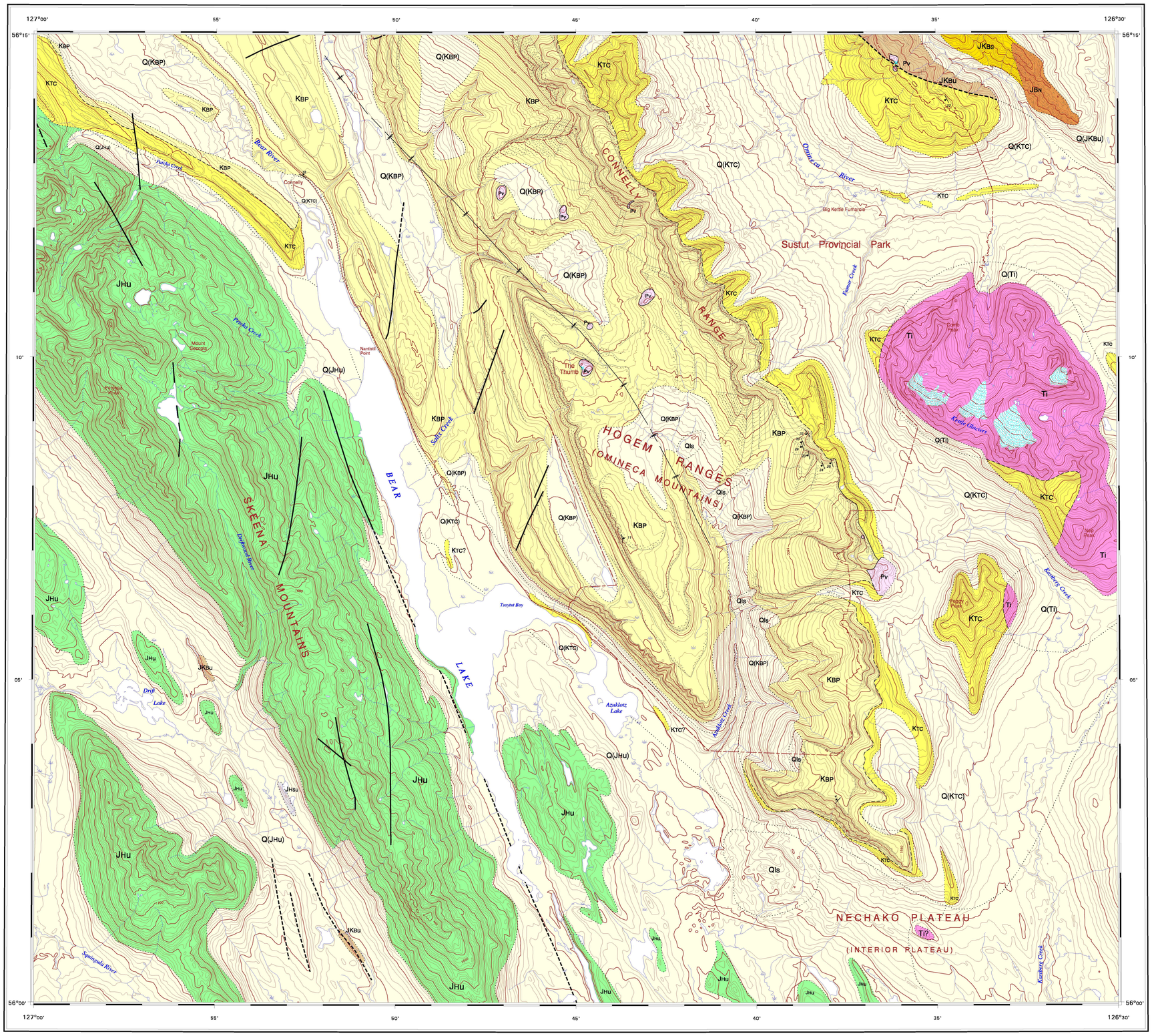
GEOLOGICAL SURVEY OF CANADA | COMMISSION GÉOLOGIQUE DU CANADA



STRATIFIED ROCKS

CENOZOIC

QUATERNARY
PLEISTOCENE AND RECENT

Q — *Glacial till, alluvium, colluvium; unit designators in parentheses are the inferred underlying bedrock units of Bowser and Sustut basins; Qls: landslide deposit.*

PLIOCENE TO (?)PLEISTOCENE

Pv — *Mafic (basalt and/or andesite) flows, dykes, and small plugs; columnar jointed, feldspar phenocrysts.*

MESOZOIC

UPPER LOWER AND UPPER CRETACEOUS
SUSTUT GROUP
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

JBN — *NETALZUL FORMATION: feldspar-hornblende-porphyritic andesite flow, breccia, and tuff; intercalated volcaniclastic sedimentary rocks, including volcanic debris-flow conglomerate.*

LOWER AND LOWER MIDDLE JURASSIC
HAZELTON GROUP

JHu — *Undivided volcanic and intercalated clastic rock of the Hazelton Group; 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.*

JHsu — *Undivided clastic rocks of Spatsizi, Salmon River, and Smithers formations and related volcanic rocks; dominated by siltstone and shale, including siliceous well bedded tuffaceous(?) siltstone, limy siltstone, calcareous to siliceous organic shale, calcareous to siliceous siltstone, fine-grained sandstone; minor constituents are mudstone, limestone, conglomerate, coarse grained arkose, basalt, and rhyolite.*

INTRUSIVE ROCKS

CENOZOIC

TERTIARY
EOCENE

Ti — *Kastberg Intrusions; quartz monzonite and felsite.*

Geological contact (defined, approximate, assumed)

Trace of individual beds from ground observation and airphoto interpretation

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

Fault, normal (defined, approximate); symbol on down thrown side

Syncline, trace of axial surface (defined, approximate)

Conglomerate

Bedding (upright)

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

Provincial park boundary

DESCRIPTIVE NOTES

This map overlaps the boundaries of volcanic arc rocks of Stikinia, the clastic Sustut Basin, and Tertiary intrusive rocks. The primary intent of the map is to show the distribution and stratigraphic and structural relationships of Sustut Basin rocks. The Early to Middle Jurassic rocks of Stikinia, from Richards (1976), are included to provide context and illustrate basement structures. Descriptions and interpretations of 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 P.S. Mustard and C.A. Evenchick in 2003 and by C.A. Evenchick, P.S. Mustard, and M. McMechan in 2006; airphoto interpretation by C.A. Evenchick in 2006; and previous mapping by G. Eisbacher (1974) and T. Richards (1976).

REFERENCES

Eisbacher, G.H.
1974: Sedimentary history and tectonic evolution of the Sustut and Sifton basins, north-central British Columbia; Geological Survey of Canada, Paper 73-31, 57p.

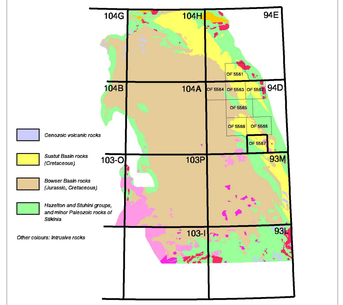
Evenchick, C.A. and Thorkelson, D.J.
2005: Geology of the Spatsizi River map area, north-central British Columbia; Geological Survey of Canada, Bulletin 577, 276p.

Evenchick, C.A., Ferri, F., Mustard, P.S., McMechan, M., Osadetz, K.G., Stasiuk, L., Wilson N.S.F., Enkin, R.J., Hadlari, T., and McNicoll, V.J.
2003: Recent results and activities of the Integrated Petroleum Resource Potential and Geoscience Studies of the Bowser and Sustut Basins project, British Columbia; in Current Research, Geological Survey of Canada, 2003-A13, 11p.

Evenchick, C.A., Mustard, P.S., McMechan, M.E., Ferri, F., Ritcey, D.H., and Smith, G.T.
2006: Compilation of geology of Bowser and Sustut basins draped on shaded relief map, north-central British Columbia; Geological Survey of Canada, Open File 5313, BC Ministry of Energy, Mines and Petroleum Resources, Petroleum Geology Open File 2006-1, scale 1:500 000.

McMechan, M.
2007: Nature, origin and tectonic significance of anomalous transverse structures, southeastern Skeena Fold Belt, British Columbia; Bulletin of Canadian Petroleum Geology, v.55 (in press).

Richards, T.A.
1976: Geology, McConnell Creek (east half), British Columbia; Geological Survey of Canada, Open File 342, scale 1:250 000.



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

LOCATION MAP

Geology by C.A. Evenchick, P.S. Mustard (2003), C.A. Evenchick, P.S. Mustard, M. McMechan (2006)

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 5567

BCMEM PETROLEUM GEOLOGY OPEN FILE 2007-2

GEOLOGY

SALIX 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

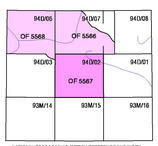
Projection transverse universelle de Mercator
Système de référence géodésique nord-américain, 1927
© Sa Majesté la Reine du chef du Canada 2007

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

Mean magnetic declination 2007, 21°31'E, decreasing 18.4' annually

Elevations in metres above mean sea level

Contour interval 20 metres



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

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2007

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2007: Geology, Salix Creek, British Columbia; Geological Survey of Canada, Open File 5567; BC Ministry of Energy, Mines and Petroleum Resources, Petroleum Geology Open File 2007-2, scale 1:50 000.

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