

LEGEND

- QUATERNARY AND RECENT**
- Q: Glacial till, alluvium, and colluvium; unit designators in parentheses are the inferred underlying bedrock units.
- UPPER LOWER AND UPPER CRETACEOUS**
- SUSTUT GROUP: CAMPANIAN AND MASTICHTHIAN: 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: 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**
- LOWER JURASSIC: HAZELTON GROUP: UTD: Toadogone Formation: subaerial andesite to diolite tuff, sandstone and siltstone.
- TRIASSIC**
- UPPER TRIASSIC: TAKLA GROUP: UTV: Agillite and coarse bedded felspar phyric mafic lava flows, aphanitic basalt, minor conglomerate, sandstone, mudstone, and limestone.
 - U-TSM: Savage Mountain Formation: agillite porphyry basalt flow, breccia, pillow basalt, tuff and interbedded bedded felspar porphyry.
 - UTD: Dewar Formation: tuff, sandstone, argillite; minor limestone and breccia.
- PALEOZOIC**
- PERMIAN: LOWER PERMIAN: ASITKA GROUP: IPA: Argillite, chert, basalt, limestone, tuffaceous and argillaceous carbonate and calcareous tuff, sericite and chlorite phyllite, greenstone amphibolite.
- INTRUSIVE ROCKS**
- JURASSIC: EARLY JURASSIC: EJ1: Hornblende-diorite monzogranite, hornblende diorite, biotite-hornblende quartz monzonite.
 - TRIASSIC: LATE TRIASSIC: LTI: Pyroxene diorite and undivided alaskan-type ultramafic intrusions.

DESCRIPTIVE NOTES

This map overlaps the boundary between the Sustut Basin and underlying Triassic to early Jurassic rocks of Sitkwa. The latter are included to provide a general context for the Sustut Basin; readers are encouraged to see Diakow (2001) and Legun (2001) for more detailed descriptions of sub map units, and for more detailed descriptions of map units. Descriptions and interpretations of Sustut Basin rocks may be found in Eliebaucher (1974) and Everchick and Thorsen (2005). The broader map context of the Sustut Basin is provided by Everchick et al. (2006).

Sources of information for mapping by C.A. Everchick, P.S. Mustard, M. McMechan, T. Hadrian, and P.S. Mustard in 2007, and by C.A. Everchick, P.S. Mustard, and M. McMechan in 2006: The distribution of Early Jurassic and older rocks is generalized from Diakow (2001) and Legun (2001). Previous mapping by Eliebaucher (1974) and Richards (1978) is incorporated.

REFERENCES

Diakow, L.J., 2001: Geology of the Southern Toadogone River and Northern McConnell Creek Map Areas, North-central British Columbia (Parts of NTS 94E2, 94D16 and 94D16). B.C. Ministry of Energy and Mines, Geoscience Map 2001-1, scale 1:50 000.

Eliebaucher, 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, 17p.

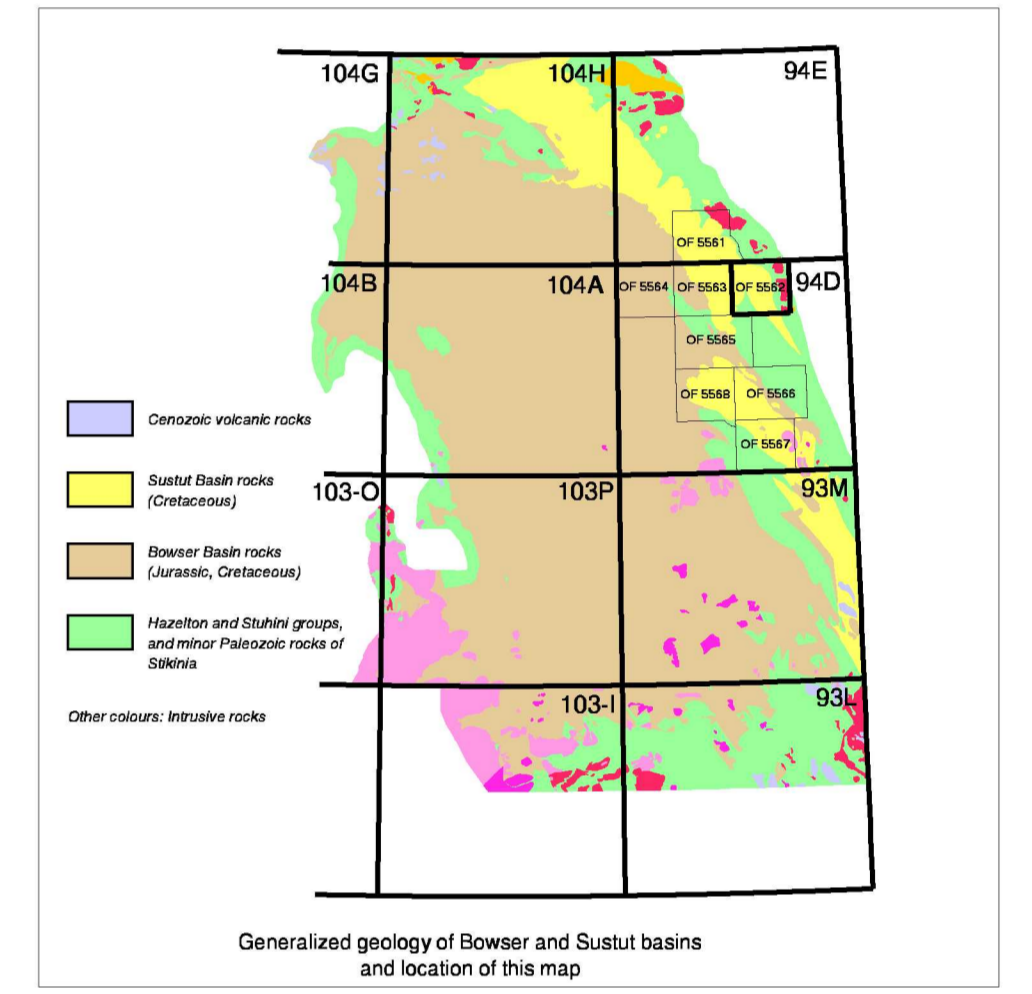
Everchick, C.A. and Thorsen, D.J., 2005: Geology of the Spatsizi River map area, north-central British Columbia. Geological Survey of Canada, Bulletin 577, 276p.

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

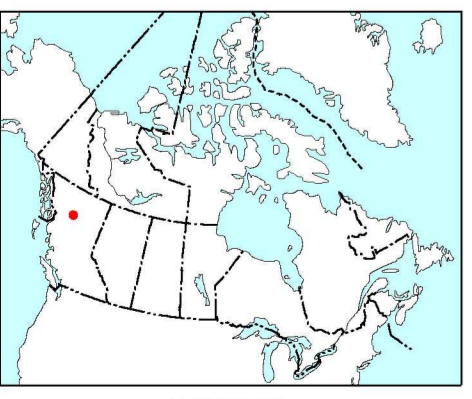
Everchick, C.A., Proulx, T.P., Tipper, H.W., and Bralick, L., 2001: Fossils and facies of the northern two-thirds of the Bower Basin, north-central British Columbia. Geological Survey of Canada, Open File 3905, scale 1:250 000.

Legun, A., 2001: Geology of the Southern McConnell Range, North-central British Columbia (Parts of 94D9, 10, 15, and 16); B.C. Ministry of Energy and Mines, Open File Map 2001-2.

Richards, T., 1978: Geology, McConnell Creek (east half), British Columbia. Geological Survey of Canada, Open File 342, scale 1:250 000.



- 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)
- Normal fault (defined, assumed or inferred beneath unit Q); symbol on down thrown side
- Thrust fault (defined, assumed or inferred beneath unit Q); symbol on hanging-wall side
- Reverse fault (defined, assumed or inferred beneath unit Q); symbol on hanging-wall side
- Strike-slip fault (defined, assumed or inferred beneath unit Q)
- Anticline, trace of axial surface (defined)
- Syncline, trace of axial surface (defined)
- Open, inclined syncline, trace of axial surface (defined); long arrow points in direction of dip of axial surface, arrow on line indicates direction of plunge
- Conglomerate
- Bedding (upright, top unknown, horizontal)
- Outcrop examined; bedding attitude not determined (selected locations shown)



Geology by C.A. Everchick (2003, 2006), P.S. Mustard (2003, 2006), T. Hadrian (2003) and M.E. McMechan (2003, 2008)

Digital geological cartography by C.L. Wagner, Data Dissemination Division (DD2)

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

GSC OPEN FILE 5562
 BCMCM PETROLEUM GEOLOGY OPEN FILE 2007-8
GEOLOGY
THORNE LAKE
 BRITISH COLUMBIA
 Scale 1:50 000/Echelle 1/50 000

Universal Transverse Mercator Projection
 North American Datum 1983
 © Her Majesty the Queen in Right of Canada 2007

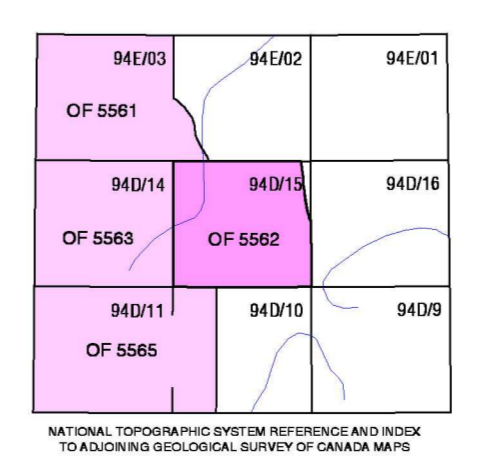
Projection Transverse universelle de Mercator
 Système de référence géodésique nord-américain, 1983
 © Sa Majesté la Reine du chef du Canada 2007

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

Mean magnetic declination 2007, 21°51'E, decreasing 19.3' annually

Elevations in metres above mean sea level

Contour interval 20 metres



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