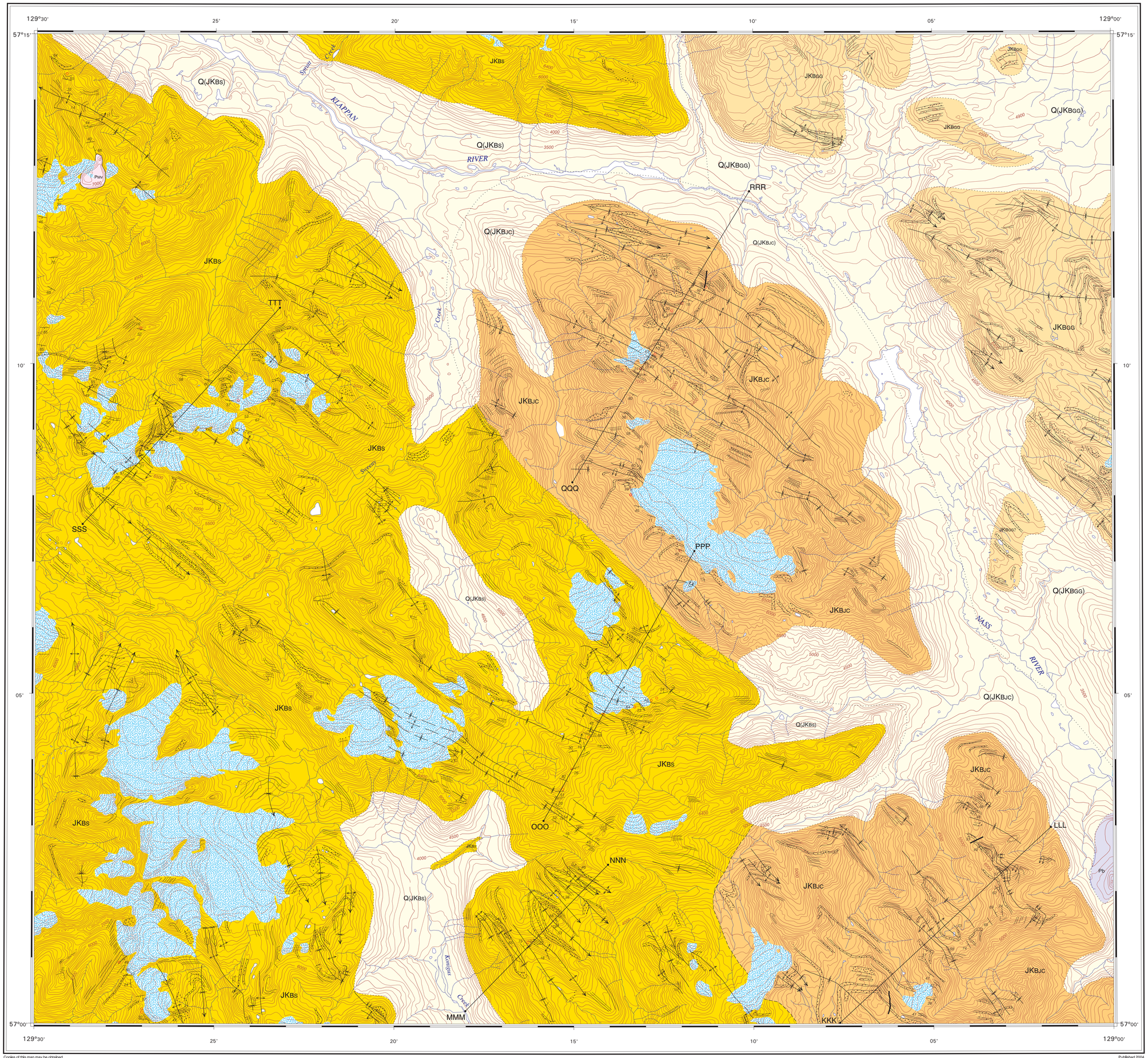
Natural Resources Canada | Ressources naturelles Canada

GEOLOGICAL SURVEY OF CANADA | COMMISSION GÉOLOGIQUE DU CANADA



Copies of this map may be obtained from the Geological Survey of Canada:
601 Booth Street, Ottawa, Ontario K1A 0E8
3303-33rd Street, N.W., Calgary, Alberta T2L 2A7
101-605 Robson Street, Vancouver, B.C. V6B 5J3

LOCATION MAP

Canada

Geology by C.A. Evenchick (1989,1990) and G.M. Green (1989)

Map compilation by C.A. Evenchick

Digital geological cartography by C.L. Wagner and R. Cocking, Earth Sciences Sector Information Division (ESS Info), D. Dunn, C. Evenchick, and D. McKee, Geological Survey of Canada

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

MAP 2037A

GEOLOGY

SWEENY CREEK

BRITISH COLUMBIA

Scale 1:50 000/Échelle 1/50 000

kilometres 1 0 1 2 3 4 kilomètres

Universal Transverse Mercator Projection
North American Datum 1927
© Her Majesty the Queen in Right of Canada 2004

Projection transverse universelle de Mercator
Système de référence géodésique nord-américain, 1927
© Sa Majesté la Reine du chef du Canada 2004

Digital base map produced by vectorization of paper copy base map from Geomatics Canada, modified by ESS Info

Mean magnetic declination 2004, 23°31´E, decreasing 15.0´ annually

Elevations in feet above mean sea level

Contour interval 100 feet

104 H/5 2035A	104 H/6 2034A	104 H/7 2033A
104 H/4 2036A	104 H/3 2037A	104 H/2 2038A
104 A/13	104 A/14	104 A/15

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

Published 2004

LEGEND

CENOZOIC

QUATERNARY
PLEISTOCENE AND RECENT

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

PLEISTOCENE

Pb — *Pillow basalt.*

TERTIARY
PLIOCENE

PMv — *MAITLAND VOLCANICS: olivine basalt flows; columnar jointed, with rare pillows and breccia; 5.2 to 4.6 Ma (K-Ar; dated rocks are in 104 H/5, /12, /13).*

MESOZOIC

JURASSIC AND CRETACEOUS
UPPER JURASSIC AND LOWER CRETACEOUS
BOWSER LAKE GROUP (units JKBs–JKBJC)

JKBJC — *JENKINS CREEK ASSEMBLAGE (nonmarine assemblage): mudstone, siltstone, fine-grained sandstone, medium-grained sandstone, and rare conglomerate and coal, commonly arranged in fining-upward cycles; sandstone is grey-, green-, and brown-weathering, and occurs as laterally continuous sheets, discontinuous sheets, and lenses; lenses are planar and trough crossbedded; fossil plants abundant, including in situ roots, and plants with delicate structure; marine fossils absent.*

JKBGG — *GROUNDHOG-GUNANOOT ASSEMBLAGE (deltaic assemblage): sandstone, siltstone, and carbonaceous and calcareous mudstone, with minor conglomerate and coal, locally arranged in fining-upward cycles; sandstone is fine- to medium-grained with planar bedding and planar-tabular crossbedding; large proportion of sandstone is thin- and thick-bedded, medium-grained, recessive drab green- or brown-weathering wacke; resistant and light grey-weathering arenite is less common and forms discontinuous sheets and lenses; finer grained strata are thinly bedded and locally include densely packed plant fossils; conglomerate sheets and lenses, which constitute 10% of the unit, are light grey-weathering, with large-scale crossbedding; plant fossils common and include in situ trees; marine fossils rare.*

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 ubiquitous, and trace fossils including* Skolithus *and* Diplocraterion *are present, as are tree fragments several metres long.*

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

Trace of individual beds from ground observation and airphoto interpretation

Fault, unknown displacement (defined)

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

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

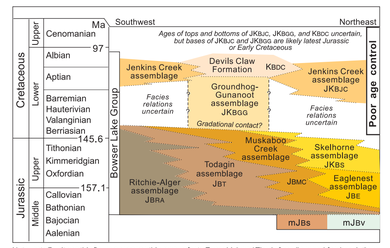
Cross-section location. The cross-sections for this map area are shown in Figure 173 of GSC Bulletin 577 (Evenchick and Thorkelson, in press) — A B

Bedding (inclined, overturned) — 30 25

Fossil location

Conglomerate

Icefield



Note: not all units on this figure appear on this map; refer to Evenchick and Thorkelson (in press) for descriptions

Figure 1. Approximate ages and relationships of units in the Bowser Lake Group

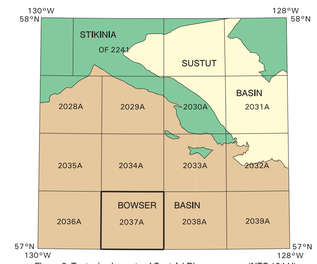


Figure 2. Tectonic elements of Spatsizi River map area (NTS 104 H) and location of NTS 104 H/3 (Map 2037A)

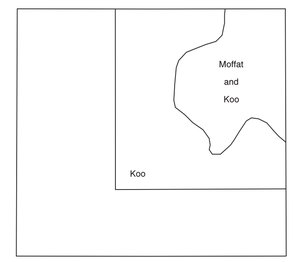


Figure 3. Reference map for NTS 104 H/3

Sources of information for this compilation are geological mapping by C.A. Evenchick, 1988–1990 and G.M. Green, 1989; and airphoto interpretation by C.A. Evenchick. Notes on the regional nature of map units and on local stratigraphy and structure are in Evenchick and Thorkelson (in press).

Alternate interpretations of parts of the map are given by Koo (1986) and Moffat (1985).

REFERENCES

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

Geological Survey of Canada
1957: Stikine River area, Cassiar District, British Columbia; Geological Survey of Canada, Map 9-1957, scale 1:253 440.

Koo, J.
1986: Geology of the Klappan coalfield in northwest British Columbia; British Columbia Ministry of Energy, Mines, and Petroleum Resources, Open File Map 1986-3, scale 1:50 000.

Moffat, I.W.
1985: Nature and timing of deformational events and organic-inorganic metamorphism in the Northern Groundhog coalfield: implications for the tectonic history of the Bowser Basin; Ph.D. thesis, University of British Columbia, Vancouver, British Columbia, 204 p.

Recommended citation:
Evenchick, C.A.
2004: Geology, Sweeny Creek, British Columbia; Geological Survey of Canada, Map 2037A, scale 1:50 000.