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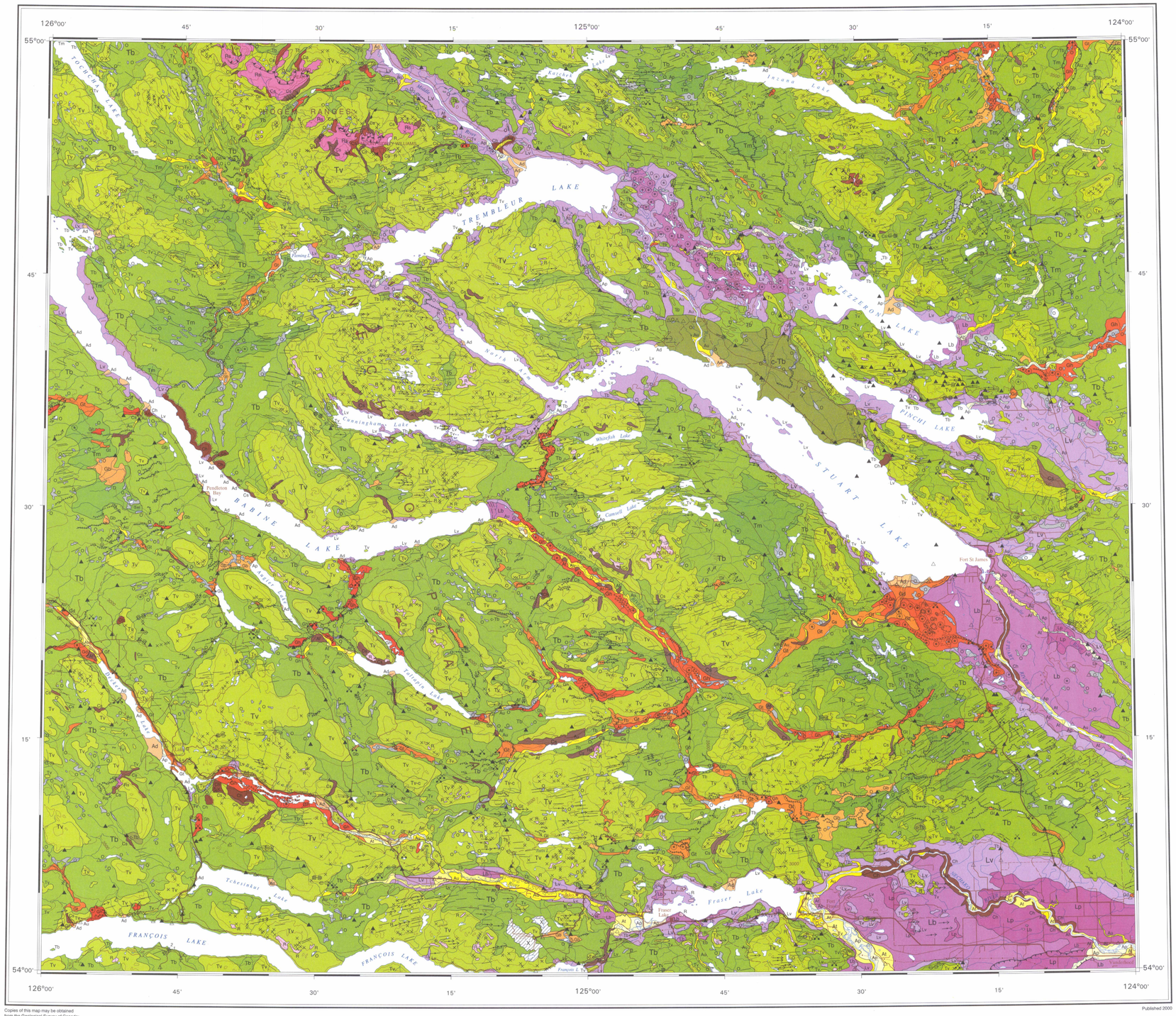
GEOLOGICAL SURVEY OF CANADA | COMMISSION GÉOLOGIQUE DU CANADA

NATMAP
CARTNAT
Canada's National Geoscience Mapping Program
Le Programme national de cartographie géoscientifique du Canada



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from the Geological Survey of Canada:
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101-605 Robson Street, Vancouver, B.C. V6B 5J3

LOCATION MAP

MAP 1986A

SURFICIAL GEOLOGY

FORT FRASER

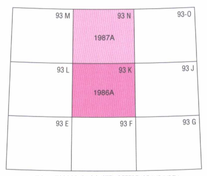
BRITISH COLUMBIA

Scale 1:250 000/Échelle 1/250 000

kilometres 5 0 5 10 15 20 kilometres

Universal Transverse Mercator Projection
North American Datum 1927

Projection transverse universelle de Mercator
Système de référence géodésique nord-américain, 1927



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

LEGEND

This legend is common to maps 1986A and 1987A

QUATERNARY

POST FRASER GLACIATION

NONGLACIAL ENVIRONMENT

X — ***ANTHROPOGENIC DEPOSITS:*** *rubble, diamicton, gravel, sand and/or clay emplaced by human activity; 1 to 10 m thick; generally form flat surfaces; primarily occur in the vicinity of mine sites*

O — ***ORGANIC DEPOSITS:*** *peat and muck; 1 to 10 m thick (typically 2 to 3 m); form fens and bogs; organic deposits too small to be shown at this scale occur within other units; common within abandoned meltwater channels*

ALLUVIAL (FLUVIAL) DEPOSITS: *gravel and sand with minor silt and clay, deposited by streams; commonly stratified; generally well sorted except in alluvial fans*

Ap — ***Floodplain sediments:*** *sand and silt, commonly include organic materials and in many places underlain by gravel; 1 to 3 m thick; occur as flat surfaces close to river level; prone to flooding*

At — ***Terrace sediments:*** *stratified sand and gravel overlain by a veneer of sand and silt; 2 to 10 m thick; form terraces well above flood level*

Ad — ***Deltaic sediments:*** *stratified sand and gravel underlain by silt and clay; 2 to 5 m thick on average; occur at the mouth of streams entering lakes*

Af — ***Fan sediments:*** *poorly sorted sand and gravel, with diamicton; 2 to 15 m thick on average; form fans at the toes of slopes; composition is dependent on source materials*

Au — ***Alluvial sediments, undivided:*** *undivided floodplain, terrace, deltaic, and fan sediments*

COLLUVIAL DEPOSITS: *diamicton and rubble accumulated from various mass wasting processes, ranging from slope wash to rock fall; composition dependent on source materials*

Ch — ***Landslide material:*** *mostly unconsolidated sediments, with texture dependent on source materials; generally 1 to 10 m thick, but may exceed 10 m near the toes of large landslides; forms hummocky accumulations on lower slopes and valley floors; commonly developed in glaciolacustrine sediments*

Cs — ***Slope colluvium:*** *rock fragments in a matrix of sand, silt, and minor clay; 1 to 5 m thick; formed by reworking of unconsolidated deposits on steep (>40°) slopes; commonly gullied*

Ca — ***Colluvial apron and talus:*** *rubble and block accumulations at the bottom of steep (> 40°) slopes forming aprons and cones; 1 to 10 m thick*

FRASER GLACIATION (WISCONSINAN)

PROGLACIAL AND GLACIAL ENVIRONMENT

GLACIOLACUSTRINE DEPOSITS: *well sorted, stratified sand, silt, and clay deposited in deep water of former glacial lakes; include sporadic sand and gravel deposited in a nearshore environment; sand, silt, and clay commonly occur as rhythmites with rare debris flow interbeds; outliers are common on adjacent units; contacts between subunits* Lp, Lb, *and* Lv *are gradational*

Lp — ***Glaciolacustrine plain:*** *well sorted, stratified sand, silt, and clay; generally >10 m thick; masks the underlying topography; locally incised*

Lb — ***Glaciolacustrine blanket:*** *well sorted, stratified sand, silt, and clay; 3 to 10 m thick; reflects topography of underlying units*

Lv — ***Glaciolacustrine veneer:*** *deep water deposits of well sorted, stratified sand, silt, and clay overlain, in places, by shallow water deposits of sand and gravel; occurs near limits of former glacial lakes; includes minor till outcrops; 1 to 3 m thick; reflects topography of underlying units*

GLACIOFLUVIAL DEPOSITS: *sand and gravel, well to poorly sorted, and commonly stratified; deposited by glacial meltwater; bedding disrupted locally as the result of the melting of supporting ice*

Gt — ***Glaciofluvial terrace sediments:*** *sand and gravel, stratified to massive; 1 to 10 m thick; perched above alluvial deposits or associated with meltwater channels*

Gb — ***Glaciofluvial blanket:*** *sand and gravel, stratified to massive; generally 1 to 5 m thick; sediment cover is continuous but the underlying morphology is visible*

Gd — ***Proglacial deltaic sediments:*** *sand and gravel with minor silt and clay; commonly overlies glaciolacustrine silt and clay; 5 to 10 m thick; form slightly inclined surfaces*

Gh — ***Ice contact deposits:*** *sand and gravel, stratified to massive and commonly faulted; generally greater than 3 m thick; form hummocky and kettled surfaces*

GLACIAL ENVIRONMENT

TILL: *pebbles, cobbles, and boulders in a sandy to clayey matrix; includes colluvium (reworked till) on steep slopes, and small inclusions of glaciofluvial sediments, especially in valley bottoms and near the mouth and banks of meltwater channels. The till surface is commonly fluted and drumlinized. Suffix '-c' denotes the presence of abundant meltwater channels (e.g. Tv-c)*

Tm — ***Thick till, rolling:*** *till cover; greater than 3 m thick; masks the underlying topography; bedrock outcrops are rare*

Tb — ***Till blanket:*** *continuous till cover with few bedrock outcrops; 1 to 3 m thick on average; conforms to and locally obscures topography of underlying units*

c-Tb — ***Pinchi Creek lens:*** *clayey till with a low clast content (10-15 %); 1 to 15 m thick; conforms to and locally obscures topography of underlying units; geographically restricted to the northeast of Stuart Lake; locally overlain by a glaciolacustrine veneer*

Tv — ***Till veneer:*** *discontinuous till cover with abundant bedrock outcrops; 1 m average thickness; reflects topography of underlying units, which are predominantly bedrock*

PRE-QUATERNARY

BEDROCK: *Sedimentary, metamorphic, volcanic, and intrusive rocks of Precambrian to Cenozoic age*

R — ***Bedrock:*** *outcrop; includes, in places, a thin veneer of till and colluvium which rarely exceeds 2 m*

Rs — ***Steep bedrock slopes:*** *outcrop with predominantly loose blocks of local bedrock and few erratics; patchy cover of till and colluvium increases in abundance downslope; steeply sloping terrain (> 40°); subject to rock falls*

- *Geological boundary*
- *Avalanche track*
- *Debris flow track*
- *Landslide scar (small, large)*
- *Dunes (inactive)*
- *Glacial lake beach*
- *Meltwater channel, large (flow direction known, unknown)*
- *Meltwater channel, small (flow direction known, unknown)*
- *Kettle hole (small, large)*
- *Esker (direction of former water flow known, unknown)*
- *Lateral moraine, ornamented on glacier side*
- *Drumlin (direction of flow known, unknown)*
- *Crag and tail*
- *Glacial fluting*
- *Glacial striae (direction of ice flow known, unknown)*
- *Cross striae (1=oldest)*
- *Cirque*
- *Arête*
- *Bedrock lineation*
- *Outcrop*
- *Gravel pit*
- *Field observation and sampling site*
- *Field observation site*

Geology by A. Plouffe, 1990-1995

Co-ordinated by A. Plouffe through the auspices of the Canada - British Columbia Agreement on Mineral Development and Nechako NATMAP Project

Digital cartography by M.M. Proulx, Geoscience Information Division

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

Digital base map from data compiled by Geomatics Canada, modified by the Geoscience Information Division

Mean magnetic declination 2000, 22°50'E, decreasing 8.9' annually. Readings vary from 22°22'E in the SE corner to 23°17'E in the NW corner of the map

Elevations in feet above mean sea level

British Columbia
Mineral Development Agreement
Canada

Contribution to the Canada-British Columbia Agreement on Mineral Development (1991-1995), a subsidiary agreement under the Economic and Regional Development Agreement.

Contribution à l'Entente Canada/Colombie-Britannique sur l'exploitation minérale (1991-1995), entente auxiliaire négociée en vertu de l'Entente Canada/Colombie-Britannique de développement économique et régional.

BC Province of British Columbia | Canada

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2000: Surficial geology, Fort Fraser, British Columbia; Geological Survey of Canada, Map 1986A, scale 1:250 000.