



LEGEND

- QUATERNARY**  
POST-GLACIAL (7-9)
- 9 BOG DEPOSITS: muck and peat
  - 8 FAN DEPOSITS: poorly sorted mixtures of gravel, sand, and silt
  - 7 ALLUVIAL DEPOSITS: sand, gravel, silt, minor muck and peat; 7a, mainly sand and gravel; 7b, mainly silt; 7c, mainly sand and gravel forming terraces along major rivers
- FRASER GLACIATION (2-6)**  
GLACIOLACUSTRINE DEPOSITS:
- 5 Beach deposits: poorly sorted gravel and sand generally less than 10 feet thick
  - 6 Lake bottom deposits: silt, clay, and fine to medium sand; 6a, mainly silt; 6b, mainly clay; 6c, mainly sand
- GLACIOFLUVIAL DEPOSITS:
- 3, 4 Low-contact stratified drift: poorly sorted sand and gravel characterized by hummocky and kettled topography; 3a, kame gravel and sand; 3b, esker gravel and sand; 3c, mainly sand, largely of lacustrine origin but deposited against and on ice
  - 4 Proglacial stratified drift: sand, gravel, and minor silt characterized by flat topography broken in places by kettle holes and terrace slopes; 4a, outwash plain, sand and gravel; 4b, outwash plain, sand; 4c, outwash delta, sand and gravel; 4d, kettled outwash plain, sand and gravel
- GROUND MORaine DEPOSITS:** till; includes minor sand, gravel, and silt within and on top of till; 2a, compact unoxidized till characterized by drumlinoid ridges, overlain in many places by rill deposits; 2b, ablation till; 2c, thin mantle (generally less than 5 feet) of compact till and associated glaciofluvial deposits (including rill deposits) on bedrock; 2d, poorly consolidated till-like mixtures overlying Plateau basalt
- PRE-FRASER GLACIATION (1)**  
GLACIAL AND NON-GLACIAL DEPOSITS: gravel, sand, silt, clay, and till deposited during two pre-Fraser glaciations; gravel, sand, silt, and clay deposited during interglacial and interstadial intervals; 1a, localities where at least two tills separated by non-glacial deposits have been observed, mostly in near-vertical cliffs
- TERTIARY**  
MIOCENE AND EARLY PLOCENE
- T Poorly consolidated to unconsolidated conglomerate (gravel) sandstone, and mudstone (clay to silt); minor diatomite, lignite (brown peaty coal), and basalt

- Areas of rock outcrop and of rock with thin discontinuous mantle of drift and colluvium . . . . . R
- Geological boundary, approximate . . . . . - - - - -
- Drumlinoid ridge, crag-and-tail hill (direction of ice movement known, unknown) . . . . . / / / / /
- Esker (direction of stream flow known) . . . . . ~~~~~
- Meltwater channel (small, large) . . . . . - - - - -
- Landslide scar . . . . . - - - - -
- Locality where age has been determined in millions of years . . . . . 6640
- Gravel pit . . . . . X
- Colluvium (see Explanatory notes) . . . . . .c

Geology by S. P. Leaming and J. E. Armstrong, 1966-67

This preliminary edition was prepared without final drafting and may be subject to revision and correction.  
Geological cartography by the Geological Survey of Canada, 1969

Topographic base-map at the same scale published by the Surveys and Mapping Branch, 1967

Magnetic declination 1969 varies from 24° 31' easterly at centre of east edge to 25° 13' easterly at centre of west edge. Mean annual change decreasing 3.7'

All elevations in feet above mean sea-level

EXPLANATORY NOTES

**SAND AND/OR GRAVEL:** in many places in the map-area evidence of the origin of these deposits is lacking and they have been included arbitrarily in the map-units shown in the legend; for example, 7c mapped as alluvial deposits may be partly or wholly glaciofluvial deposits; 6a mapped as glaciolacustrine deposits and 2b mapped as ablation till may be partly glaciofluvial deposits

**ABLATION TILL:** unsorted mixture of sand and gravel, 5 feet or more thick, believed to have been deposited from a supraglacial position through the melting of underlying stagnant ice

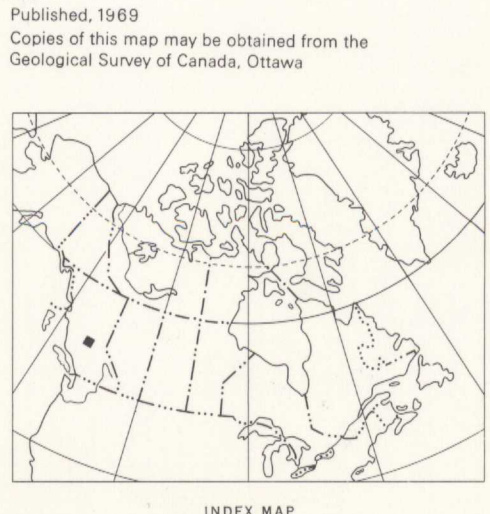
**COLLUVIUM:** deposits of mass-wasting processes and consisting of an unsorted mixture of angular to rounded gravel and rubble, sand, and silt found on most slopes. In most places too thin (less than 3 feet) to differentiate as a map-unit. Where thicker deposits (more than 3 feet) have been observed the symbol c has been put on the map

**TERRACES:** in many areas mapped as alluvial deposits (7) and glaciofluvial deposits (4)

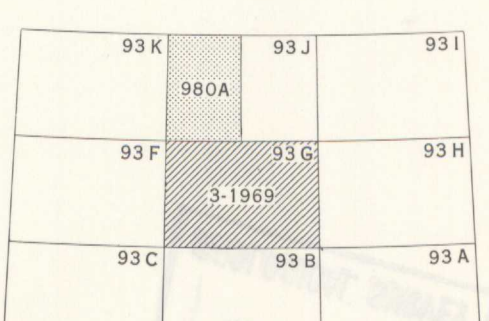
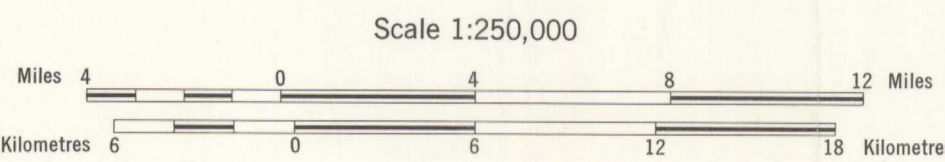
**RILL DEPOSITS:** lag gravel, channel-bottom gravel, hummocky gravel, and pockets of blackwater silt closely associated with till (2a, 2c); in general these are moraine deposits washed and channelled by meltwater. Because these deposits are so widespread no attempt was made to differentiate them as a map-unit. They are most abundant in areas exhibiting small meltwater channels

**TILL (2a and 2c lodgement):** mechanical analyses on more than 60 samples of lodgement till indicate a stone content, which varies from 5 to 50 per cent of the volume in a matrix that is predominantly clay loam or loam, although in about 20 per cent of the samples the matrix is sandy loam or silty loam. In many places the composition of the till reflects the underlying materials or nearby bedrock but exceptions are common. Where sections of till were sampled from the base to the top, the material at the base normally contains a higher percentage of the clay and silt than the material at the top, but in some places the composition is uniform throughout. The older tills (1) vary as much in composition as the youngest till (2a, 2c) and textural variations cannot be used to distinguish the various tills from one another

**FRACTIONAL UNITS (e.g. 2a<sub>1</sub>):** are used where the surface map-unit averages less than 5 feet in thickness. The upper number applies to the surface unit and the lower number to the principal underlying unit. Thus 2a<sub>1</sub> means that glaciolacustrine clay (unit 6a) extends a few feet below the surface and rests upon ground moraine (unit 2a)



MAP 3-1969  
SURFICIAL GEOLOGY  
PRINCE GEORGE  
BRITISH COLUMBIA



*B.C. Prince George  
1:250,000  
Prelim. Map Series 3-1969  
C.2*