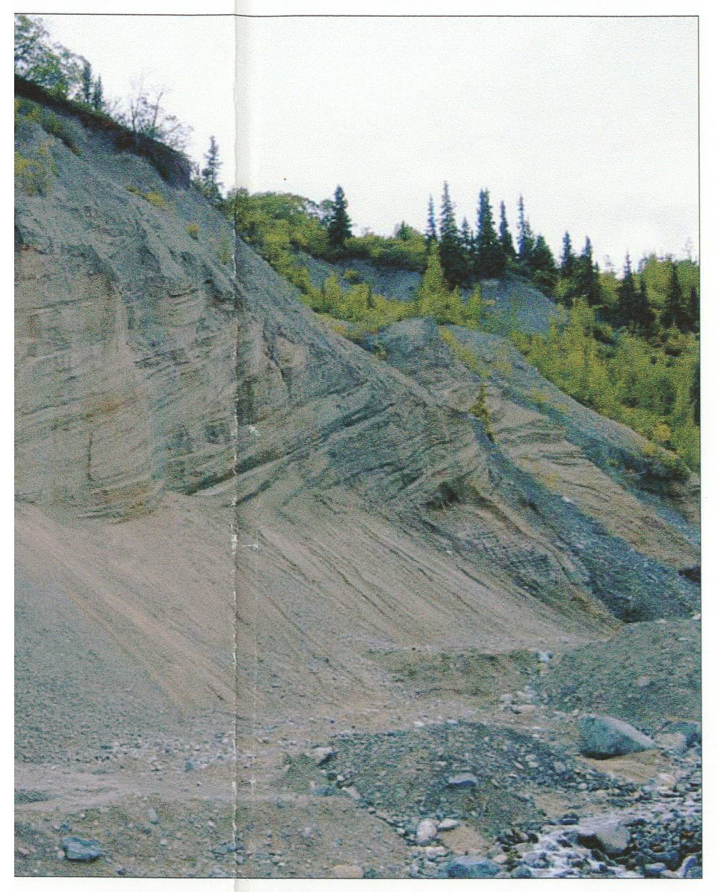
, previously deposited glacigenic sediments were extensively
glacial conditions. These resedimented deposits are common at
ial alluvial-fan sedimentation was probably very active during
tes, to the present. Wood buried less than 1 metre from the
radiocarbon date of 2270 ± 90 years B.P. (AECV-1500C)
low for at least the last two millennia. At high elevations,
le in the evolution of geomorphic features throughout much of
l landslide has occurred in the area, extending from the east side
alley (Levson, 1992). Fluvial terrace, floodplain and active
lley bottoms during the Holocene.



l foreset beds in a prograding glacioflucial delta complex, V. Levson, 2001.

lacer gold than any other stream in British Columbia and continue to support mining operations. Most activity has been ck. Much of the valley upstream of the Nolan underground minion creeks, has good potential. Depth of ice-erosion and re the main factors limiting the location and exploitation of rground mining is generally not accurately known and as a lume of auriferous gravels remaining.

acer producing stream in British Columbia and it is probable Creek, downstream of Surprise Lake, would also be highly ofluvial overburden inhibits exploration, there may be potential n and downstream of previously mined areas. On the north side are recognizable on airphotos and may represent surface annels. The most prominent linear depression, paralleling Pine lakes. Similarly, the area between the Birch Creek confluence given the historical productivity of upstream tributaries such as obable that paleochannels in that area could also be gold d consequent placer preservation potential in these areas has not

eistocene basalts and rock avalanche deposits in the Ruby od placer potential by Levson (1992) and these deposits xploited paleochannel deposits, on Ruby Creek and on others tly be small channel remnants on the valley sides, but there is n areas where the valley widens. In addition, there is buried reeks in low lying areas south of Surprise Lake. The aleoplacer was described by Levson and Blyth (1993) and, on cal characteristics, the Wright Creek valley was identified as l channel placer deposit (Levson, 1992). This interpretation ep, open-pit mine exploiting buried placer deposits along

al-fan channel deposits at the mouths of most of the historically tter, Birch, Boulder, McKee and Ruby creeks. The most r on bedrock near the paleofan apex. The continuity of the have been disrupted by glacial erosion and the depth of burial apex.

ss productive than buried channel deposits except in areas lder placer deposits. In other areas, the lower grade Holocene nt mining operations with good recovery systems are osits have not been heavily exploited to date in the region, e and typically contain finer gold than buried-channel deposits. al-fan deposits at the mouths of Boulder, Ruby and Birch lower Otter and Wright creeks. The most productive parts of coarse-gravel facies near the fan-head channels.

n mined on some creeks in the area particularly in deeply r, Ruby, lower Spruce, Snake and upper Wright creeks, where vel units. Near-surface fluvial placers in the upper parts of these deposits are generally thin. Low terraces along Spruce locally, are mineable. These gravelly deposits are extensive but er fluvial, and possibly also glaciofluvial, terrace deposits such d along Wilson Creek, just south of the map area, also have

e placers settings from geomorphic and stratigraphic points of ential for bedrock in the areas to yield gold to the placer rocks of the Atlin ophiolitic assemblage and gold quartz vein 4, 2001). Thus, areas with the best placer potential occur oded these rocks. The extent of ultramafic rocks can be naps by Aitken (1959), Lefebure and Gunning (1989), indirectly from airborne magnetic data (Dumont et al., 2001a,

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British Columbia; NTS 104N/12, Geological Survey of Canada, Open

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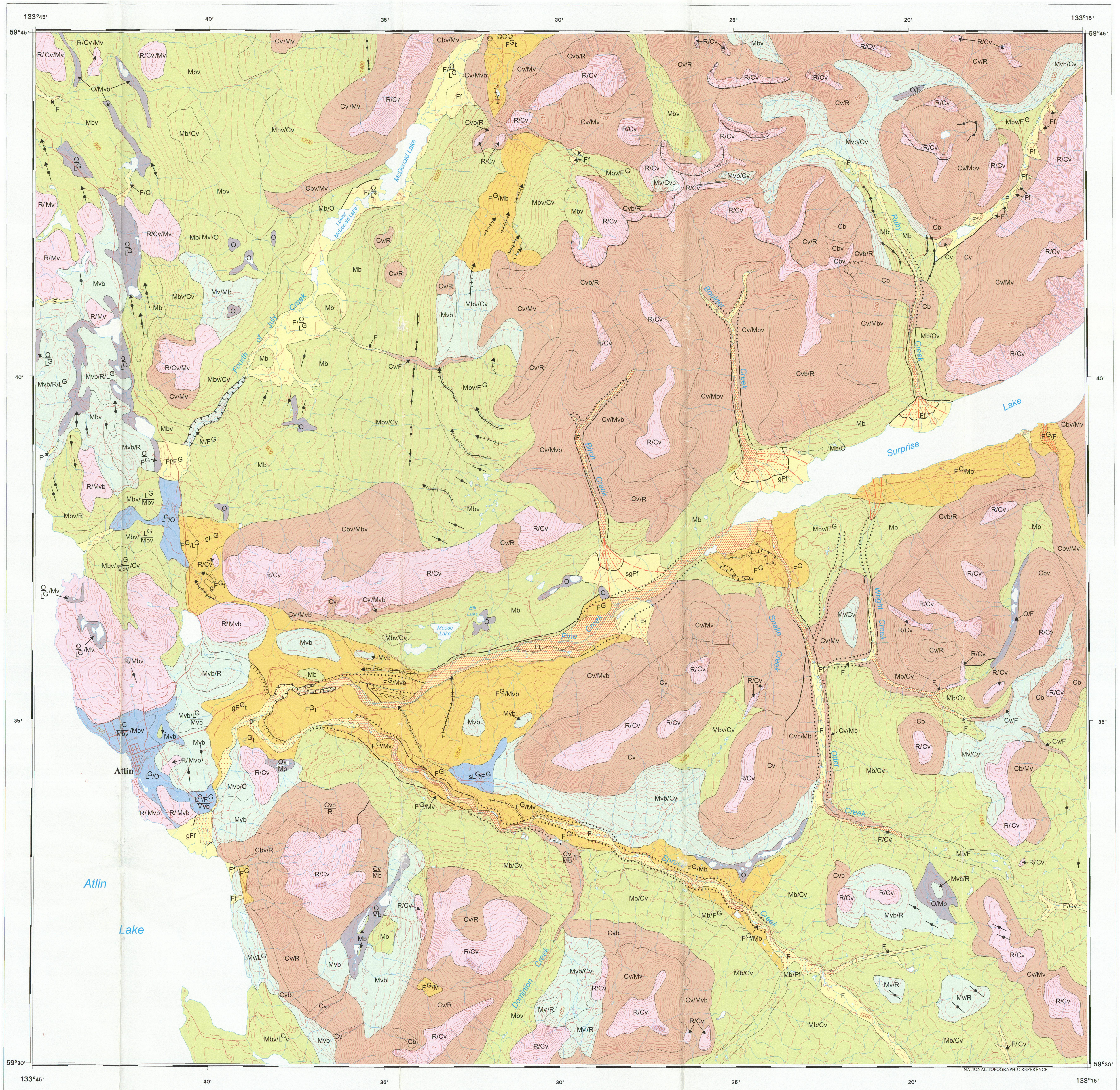

The topographic base information displayed on this map is from the British Columbia Terrain and Resource Information Management database.

QUATERNARY MATERIALS

Holocene Deposits:

O — **Organics:** material resulting from the accumulation and decay of vegetative matter; generally consists of peat and organic muds; includes bogs, swamps and marshes; occurs in poorly drained sites; often overlying glaciolacustrine sediments or clay-rich till.

F — **Fluvial sediments:** gravel, sand or silt deposited by streams and rivers; poorly to well stratified and sorted; includes floodplain and river terrace deposits (Ft) and alluvial fan sediments (Ff).

C — **Colluvium:** diamicton with variable structure and texture deposited by gravity dominated processes; generally massive and unsorted; clasts typically angular and locally derived; includes thin (< 1 m) and discontinuous veneers (Cv) of bedrock rubble and thicker (>1 m) accumulations of talus, landslide, and debris flow deposits (Cb). Colluvial veneers are commonly interspersed with bedrock outcrops (Cv/R) or morainal veneers (Cv/Mv).

Late Pleistocene Deposits:

F^G — **Glaciofluvial deposits:** mainly sands and gravels deposited by glacial meltwater during deglaciation; generally moderately to well stratified and sorted; includes kettled outwash, kames, eskers (see on-site symbols) and glaciofluvial deltas and terraces (F^Gt); frequently dissected by meltwater channels.

L^G — **Glaciolacustrine sediments**: dominantly silts, clays and fine sands deposited in glacier dammed lakes; typically horizontally stratified and well sorted; locally display features such as slump structures, ice-rafted stones and kettles; commonly occurs in low-lying areas, overlain by organics; glaciolacustrine sediments along Atlin Lake occur mainly as a discontinuous secondary unit interspersed with morainal deposits (e.g. Mbv/L^G).

Mb — **Morainal blanket:** thick till deposited by glacial ice; till is at least 1 m, but commonly several metres thick; unsorted or very poorly sorted diamicton with clasts, up to boulder size, in a clay to sand matrix; generally massive and dense; mainly occurs as an undulating till plain but locally includes drumlins, flutings and moraine ridges (see on-site symbols); commonly interspersed with glaciofluvial and glaciolacustrine sediments in valley bottoms (e.g. Mb/F^G) and higher on valley sides with till veneers (Mbv) and colluvium (Mb/Cv).

Mv — **Morainal veneer:** till deposits less than 1 m thick; diamicton similar to morainal blankets but commonly less dense and sandier in texture; surface expression controlled by the underlying bedrock topography; locally fluted; commonly occurs in mountainous areas with colluvial veneers (e.g. Mv/Cv) and as a primary component with lesser amounts of till blanket (Mvb).

R — **Bedrock:** mainly bedrock outcrop; includes areas of frost-shattered bedrock; periglacial features locally present; commonly includes discontinuous colluvial veneers (R/Cv).

Map Unit Letter Notation

surficial material → gFt ← surface expression; texture → gFt

Ov/Mb — The component (**Ov**) above the symbol stratigraphically overlies the one below (**Mb**)

Cbv/Mv — The component (**Cbv**) in front of the symbol is more extensive than the one that follows (**Mv**)

Surface Expression

b	blanket (> 1 metre)
f	fan
h	hummocky
t	Terrace
v	veneer (< 1 metre)

Textures

c	clay
z	silt
s	sand
g	gravel
b	boulder
d	diamicton

On-site Symbols

- Drumlin, crag and tail
- Fluting
- Morraine ridge (major)
- >>>> Esker (flow direction known)
- Meltwater channel (major)
- Meltwater channel (minor)
- Escarpment
- Cirque
- Kettle

Placer Geology Legend

- Areas of active and past placer mining

Areas with buried placer potential:

- fluvial paleochannels (approximate, inferred)
- alluvial-fan channels

Areas with Holocene placer potential:

- fluvial terraces and floodplain deposits
- alluvial fan deposits

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Any revisions or additional information known to the user would be welcomed by the British Columbia Geological Survey Branch and the Geological Survey of Canada.

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QUATERNARY GEOLOGY OF THE ATLIN AREA
BRITISH COLUMBIA

BRITISH COLUMBIA GEOLOGICAL SURVEY BRANCH
GEOSCIENCE MAP 2003-1

Scale: 1:50 000/Échelle 1/50 000

kilometres 1 0 1 2 3 4 kilomètres

Transverse Mercator Projection
Norht American Datum 1927

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

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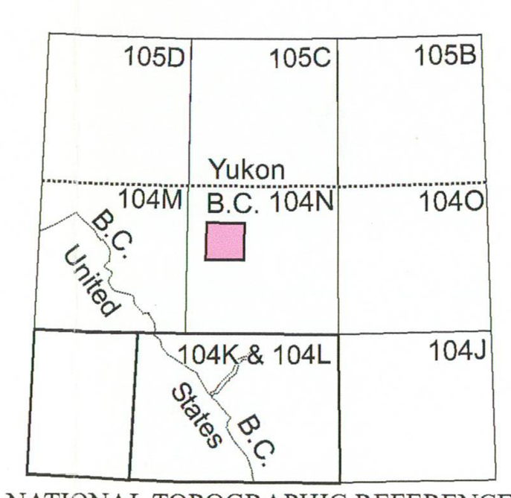
Location map



NATIONAL TOPOGRAPHIC REFERENCE

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