



LEGEND

PLACER ACTIVITY:

- Major gold-bearing streams with significant mechanized placer mining operations
- Proven or potential gold-bearing streams with some prospecting or exploration history, but no significant mechanized placer mining operations.

GLACIAL LIMITS:

- Established (Duk-Rodkin, 1999b)
- Estimated (Duk-Rodkin, 1999b)
- Interpolated (Duk-Rodkin, 1999b)
- Alternative limits based on Bostock (Jackson et al., 2001)

GLACIAL DEPOSITS:

- McConnell (ca. 22 Ka) (Duk-Rodkin, 1999b)
- Reid (ca. 200 Ka) (Duk-Rodkin, 1999b)
- Pre-Reid (from ca. 3 Ma) (Duk-Rodkin, 1999b)
- Unglaciated (Duk-Rodkin, 1999b)
- Alternative Pre-Reid; based on Bostock (Jackson et al., 2001)
- Alternative unglaciaded; based on Bostock (Jackson et al., 2001)

OTHER GLACIAL FEATURES:

- Major ice flow direction (Duk-Rodkin, 1999a)

BASEMAP FEATURES:

- Seaplane Base
- Heritage Sites
- Seaplane Base
- Tower
- Building
- Built-Up Area
- Campground
- UTM Grid Marks (10 km Spacing)
- Highway
- 2 Wheel Drive
- 4 Wheel Drive
- Trail
- Winter Trail
- Other
- Territorial Boundary
- Mining District Boundary
- Tombstone Territorial Park Boundary



CONTOUR INTERVAL 200 METRES
Elevations in Feet above Mean Sea Level
North American Datum 1983
Transverse Mercator Projection
Ten Thousand Metre Universal Transverse Mercator Grid
ZONE 7

Magnetic declination 1988 for 115.00N varies from 29°45' easterly at centre of level edge to 30°30' easterly at centre of east edge. Mean annual change decreasing 14.7.
Magnetic declination 1990 for 118.60C varies from 30°17' easterly at centre of level edge to 31°15' easterly at centre of east edge. Mean annual change decreasing 11.7.

PLACER GOLD AND GLACIATION IN THE DAWSON AREA (by G. Lowey)

Placer deposits in the Dawson area are dominated by the Klondike goldfields which extend from the Klondike River south to the Indian River, and from the Yukon River east to Flat Creek. Since their discovery over 100 years ago, the Klondike goldfields have produced an estimated 11 metric tonnes of gold, primarily from bench and creek placers that are fluvial in origin and range from Pliocene (approximately 4 million years old) to recent in age. The placer deposits have historically been classified as high-level gravel (e.g. the White Channel Gravel), intermediate-level gravel (e.g. Midnight Dome and Archibald's Bench) and low-level gravel (e.g. Bonanza and Hunker creeks and the Klondike River). Other important placer deposits are located in the Sixty Mile River area and the Stewart River - Yukon River area (i.e. Black Hills, Scroggie and Thistle Creeks).

Most of the placer gold deposits in the Dawson area are located beyond the Cordilleran glacial limits. These limits are generally grouped into three main glacial episodes referred to as the pre-Reid (about 3 million years old), Reid (about 200,000 years old) and McConnell (about 22,000 years old). Only the pre-Reid glaciation directly affected placer deposits in the Dawson area by scouring creek and river bottoms and burying high-level placers with glacial outwash called the Klondike Gravel. However, the repeated glaciations had an indirect effect on the formation of placer deposits by bringing about climatic change and cycles of aggradation and incision. It is now thought that the change from a non-glacial period to the pre-Reid glacial episode resulted in aggradation and deposition of the high-level White Channel Gravel, whereas the change from the pre-Reid glacial episode to an interglacial phase resulted in incision and erosion of the gravel and the formation of the high-level terraces. Similar cycles of aggradation and deposition of auriferous gravel deposits, and their subsequent incision and erosion, may be due to climatic change related to the Reid glaciation and the McConnell glaciation (i.e. the deposition of low-level gravel along Bonanza and Hunker creeks and the Klondike River).

DATA SOURCES AND ACKNOWLEDGEMENTS:

Placer activity was compiled using the local knowledge of Yukon Geology Program placer geologists, G. Lowey & W. LeBarge; placer occurrence locations from 1:250 000 scale Yukon MINFILE 2001 maps; gold bearing streams reported on Gilbert's (1979) "Treasure map"; and placer operation locations from the Indian and Northern Affairs Canada Placer MINFILE Database.

Glacial limits and deposits are from Duk-Rodkin's 1:250 000 scale compilation (1999b). Alternative Pre-Reid limits based on Bostock's work are also shown in the Stewart River area, as proposed by Jackson et al. (2001).

Topographic base provided by Natural Resources Canada in conjunction with Yukon Land Information Management System (LIMS). Roads and trails were modified by Department of Renewable Resources, Yukon Government.

REFERENCES:

- Duk-Rodkin, A., 1999a. Glacial limits map of Yukon Territory. Geological Survey of Canada, Open File 3694, Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, Geoscience Map 1999-2, 1:1 000 000 scale.
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- Gilbert, G.W., 1979. Yukon Placer 1979 "Treasure Map." Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada.
- Jackson, Jr., L.E., Shimamura, K., and Huscroft, C.A., 2001. Late Cenozoic geology, Ancient Pacific Margin NATMAP Project, Report 3: A re-evaluation of glacial limits in the Stewart River basin of Stewart River map area, Yukon Territory. Geological Survey of Canada, Current Research 2001-A3, 8 p.
- Yukon MINFILE - Mineral Occurrence Maps (1:250 000 scale), 2001; Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada.
- Yukon Placer MINFILE Database. Unpublished database; Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada.

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Any revisions or additional information known to the user would be welcomed by the Yukon Geology Program.

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Exploration and Geological Services Division
Yukon Region
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DAWSON AREA PLACER ACTIVITY MAP
PORTIONS OF NTS SHEETS 116 B & C AND 115 N & O
By P. Lipovsky, G. Lowey, & W. LeBarge

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