

- QUATERNARY**
- FA-B** Floodplain of river with braided channel (gravel). FA (alluvial 'active') channel. Alluvial plain, flat to undulating, common braided and channelled channels, typically organic silty sand accumulations on top of sand and gravel.
 - FA-M** Floodplain of river with meandering channel (gravel). FA (alluvial 'active') channel. Alluvial plain, flat to undulating, commonly meander scarred, typically organic silty sand accumulations on top of sand and gravel.
- QUATERNARY/TERTIARY**
- Ft** Alluvial terrace (gravel, siltstone). Flat to undulating, minor channeling, gravel and sand suspected to be on top of elevated bedrock terrace.
 - qt** Gravel alluvial terrace (gravel, siltstone). Flat to undulating, minor channeling, gravel and sand on top of elevated bedrock terrace.
 - FAI** Alluvial fan (F.A.I. siltstone). A fan-shaped sloping apron of sorted and unsorted sediment from tributary streams with a fan shape. Composed of mixture of alluvial and colluvial deposits merging with other deposits.
 - Cl** Colluvial landslide (Colluvial, humderly steep slope 35-38 degrees). Unsorted mixture of angular rock debris and sediment which covers much of the valley sides. May include some tributary alluvial fan sediments.

SYMBOLS

- Geological contact
- Terrace scarp (gravel and bedrock)
- Pingo (open-system)
- Abandoned channel
- Landslide scar and flow direction

DESCRIPTIVE NOTES

This preliminary map is based on a photo interpretation and ground checking during the 1993 and 1994 field season. The surficial materials were investigated by soil pit excavations, timing cuts, and natural exposures nearby along Yukon River and Sixty Mile River valleys. Terraces along Ten Mile and Thirteen Mile Creeks had timing cuts. Terraces along Yukon River were excavated with a small backhoe (Yukon) while those on Sixty Mile River were hand dug.

This area lies within Kondike Plateau, an unglaciated subdivision of Yukon Plateau (Bostock, 1946). Although it lies beyond the maximum extent of glaciation (Hughes et al., 1990) the influence of repeated glaciation is central Yukon (Bostock, 1990) are recorded as extensive loess deposits and periglacial features such as sand wedges. Open-system pingos also occur in the region (Hughes, 1990).

The Yukon River and its major tributaries are bordered by prominent high level terraces of presumed Tertiary age. Several of these terraces contain pebbles and cobbles overlain by sand and loess, however some are barren of loess deposits. The modern valley bottoms are entrenched in bedrock below these benches. They contain variable amounts of organic silty sediment (muck) overlying gravel. The Yukon River itself has a braided channel pattern with an anastomosing, while tributaries are commonly meandering.

Small alluvial fans occur at the mouths of higher gradient tributary creeks as they drop into entrenched valleys.

A land slide deposit occurs on the east side of Yukon River, north of Lady Joe Creek where a diamicton is exposed along the river bank.

Trace gold occurs in small amounts within the alluvial terrace and plain gravel deposits of Yukon and Sixty Mile River. It is usually fine-grained, flat, and inclusion free. Active mining was being done on Ten Mile Creek on both the creek bottom deposits and on a high level terrace deposit.

REFERENCES

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HUGHES, G.L. 1969. Distribution of open-system pingos in central Yukon Territory with respect to glacial limits. Geological Survey of Canada, Paper 69-34, 8 p.

HUGHES, G.L., CAMPBELL, R.B., MULLER, J.E. and WHEELER, J.O. 1969. Glacial limits and flow patterns, central Yukon Territory north of 65 degrees north latitude. Geological Survey of Canada, Paper 68-34.

Field assistance was provided by Diane Reed in 1994 and Farrell Anderson in 1993. Kubota excavator work was provided by Terry Thompson (Ten Mile Creek Mining). Cooperation of local placer miners (John Galtier and Jordin Gold) was also appreciated.

This map accompanies the following report:

FULLER, E.A., 1995. High level terraces along parts of Yukon River and Sixty Mile River (115N/5 East Half, 115O/5, and 115O/12), western Yukon. Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, 1:50,000.

Recommended citation:

FULLER, E.A., 1995. Surficial geological map of Yukon River and Sixty Mile River valleys, parts of 115N/5, 115O/5, and 115O/12, western Yukon. Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 1995-1 (G), 1:50,000.

Indian and Northern Affairs Canada
Exploration and Geological Services Division
Yukon Region

OPEN FILE 1995-1 (G)

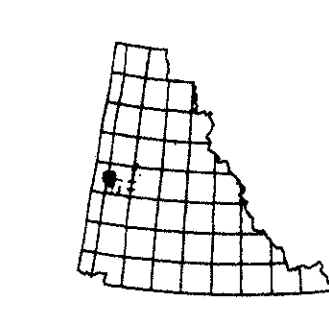
**SURFICIAL GEOLOGICAL MAP OF THE
YUKON RIVER AND SIXTYMILE RIVER VALLEYS
(PARTS OF 115O/5, 115O/12 AND 115N/9)
WESTERN YUKON**

1:50,000 SCALE

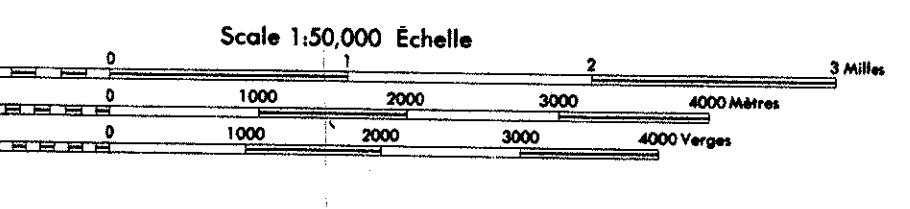
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Copies of this map, the accompanying report and Yukon Minfile may be purchased from Geoscience Information and Sales, Exploration and Geological Services Division, Indian and Northern Affairs Canada, Room 123-300 Main St., Whitehorse, Yukon Y1A 2B6. Ph. 433-667-3334 Fax 433-667-3198

115N/16	115O/13	115O/14
115N/09	115O/12	115O/11
115N/08	115O/05	115O/06



**MATSON CREEK
YUKON TERRITORY**



This National Map is prepared to a standard map projection of Canada.

Some names on this map are subject to change. Geographical coordinates are subject to the datum and datum change.

CONTINENTAL SHEET NO. 102
Edition of 1984. Map No. 102
North (NAD 83) and UTM
Projection: UTM Zone 7

UTM: The grid shown on this map is the UTM grid. It is based on the datum and datum change.

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ONE THOUSAND METRE
UNIVERSAL TRANSVERSE MERCATOR GRID
ZONE 7

UTM ZONE	UTM EASTING
7V	EA

EXAMPLE OF METHOD USED TO GET ACCURACY TO WITHIN 100 METRES
NE FOLLOWING THE SURFACE OF A 1:50,000 MAP

UTM ZONE	UTM EASTING	UTM NORTHING
7V	EA	97

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UTM ZONE	UTM EASTING	UTM NORTHING
7V	EA	97

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