



- QUATERNARY**
- Ap** Alluvial plain; flat to undulating, commonly meander scoured, typically organic silty sand accumulations on top of sand and gravel.
 - Ai** Alluvial terrace, flat to undulating, minor channelling, gravel and sand on top of elevated bedrock terraces. May include glaciofluvial and nonglacial deposits.
 - Af** Alluvial fan; sloping aggregate of sorted and unsorted sediment from tributary streams. Composed of mixture of alluvial and colluvial deposits merging with other deposits.
 - Gt** Glaciofluvial terrace; flat to undulating, braided channel patterns, composed of mixture of loess overlying sand and gravel. Ventifacts and sand wedges locally present.
 - Mgt** Glaciofluvial terrace related to McConnell glaciation. Weak soil development correlated to Stewart soils. Sand wedges lacking in surface deposits. Overlain by loess.
 - Rgt** Glaciofluvial terrace related to Reid glaciation. Soils developed in sand and gravel are brown with weak chemical weathering and are correlated to Diversion Creek paleosols. Ventifacts present locally.
 - pRgt** Glaciofluvial terrace related to pre-Reid glaciations. Soils developed are red with strong chemical weathering and clay skins correlated to Wounded Moose paleosol. Sand wedges and ventifacts common.

- SYMBOLS**
- Geological contact
 - Glacial limit
 - Terrace escarp
 - Meltwater channel (small)
 - Meltwater channel (large)
 - Abandoned channel
 - Pingo (open-system)

SURFICIAL GEOLOGY AND GEOMORPHOLOGY DESCRIPTIVE NOTES

This preliminary map is based on 1993 mapping and airphoto interpretation. Lower Stewart River valley was mapped by inspection of soil pits, sporadic natural exposures, and a few mining cuts.

This area of the Klondike Plateau is largely unglaciated. However, outwash from multiple Pleistocene glaciations occurred in Stewart River valley, and are referred to as McConnell, Reid, and pre-Reid (Bostock 1966; Hughes et al. 1969). Stewart River valley shows several terrace remnants, some can be related to these glaciations.

The Stewart River valley is dominated by valley bottom alluvium and elevated terraces. Alluvial plain refers to the modern floodplain and low-lying valley flats. Alluvial terraces refer to those which are commonly lying on elevated bedrock terraces along the valley sides. Glaciofluvial terraces occur at various elevations in the valley and are more prominent in the upper reaches. These terraces consist of gravel overlying an elevated bedrock surface, same terraces along the valley margins, and valley fill. A thin capping of aeolian silt and sand overlies the gravel deposits.

Soil development on high level terraces was used to assign designations as McConnell, Reid, and pre-Reid terraces using the criteria of soil colour, clay skins, thickness, and periglacial features (Morrison and Smith 1987). Some terraces are uncorrelated and may be as old as Tertiary.

Placer gold occurs within the alluvial terraces, alluvial plain deposits and in glaciofluvial terrace sediments. It is typically fine-grained, flat, bright, and inclusion free. Other heavy minerals include magnetite, red garnet, and hematite.

REFERENCES

BOSTOCK, H.S., 1966. Notes on glaciation of central Yukon Territory; Geological Survey of Canada, Paper 65-36, 18 p.

FULLER, E.A. and ANDERSEN F.J., 1993. Placer geology of Black Hills Creek (parts of 115O/7 & 10), Yukon Exploration and Geology 1992. Exploration and Geological Services Division, Indian and Northern Affairs Canada, p. 33-38.

HUGHES, O.L., CAMPBELL, R.B., MULLER, J.E. and WHEELER, J.O., 1969. Glacial limits and flow patterns, central Yukon Territory south of 65 degrees north latitude; Geological Survey of Canada, Paper 68-34, 9 p.

MORISON, S.R. and SMITH, C.A.S. (eds), 1987. Guidebook to Quaternary Research in Yukon, XII INQUA Congress, Ottawa, National Research Council of Canada.

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

Open File 1993-7(G)

**SURFICIAL GEOLOGICAL MAP OF STEWART RIVER VALLEY
PARTS OF 115O/8, 115P/5, AND 115P/12
1:50,000 SCALE**

by

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Copies of this map and the accompanying report (in Yukon Exploration and Geology, 1993), may be obtained at Canada Map Office, Exploration and Geological Services Division, Indian and Northern Affairs Canada, 200 Range Road, Whitehorse, Yukon Y1A 3V1 (403-667-3204; FAX: 403-668-2176).

Produced and printed by the SURVEYS AND MAPPING BRANCH, DEPARTMENT OF MINES AND TECHNICAL SURVEYS, 1991, from air photographs taken in 1949 and 1954.

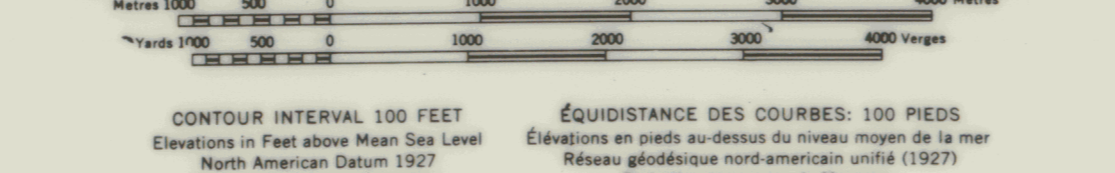
Copies may be obtained from the Map Distribution Office, Department of Mines and Technical Surveys, Ottawa.

GRID ZONE DESIGNATION	7V	FA
TO USE A REFERENCE TO MAPS OF 100 METRES		
EMERGENT STREAM JUNCTION		
ESGRI: Road number on grid line	36	
ESGRI: Road number on grid line	37	
ESGRI: Road number on grid line	38	
ESGRI: Road number on grid line	39	
MILITARY GRID REFERENCE	362315	315
Basest contour grid interval	100 metres above G.D.	

ONE THOUSAND METRE
UNIVERSAL TRANSVERSE MERCATOR GRID
ZONE 7

**ROSEBUD CREEK
YUKON TERRITORY**

SCALE 1:50,000 ÉCHELLE



MAGNETIC DECLINATION 32°05' EAST
AU CENTRE DE LA FEUILLE EN 1981: 32°05' EST
Annual change (decreasing) 3.5'

DÉCLINAISON MAGNÉTIQUE AU CENTRE
DE LA FEUILLE EN 1981: 32°05' EST
Variation annuelle (décroissante) 3.5'

The nomenclature on this map has not been submitted to the Commission canadienne des noms géographiques et par conséquent, elle pourrait faire l'objet d'une révision. Tous renseignements sur les noms doivent être acquisés par la Direction des levés et de la cartographie.

La nomenclature de la présente carte n'a pas été soumise à la Commission canadienne des noms géographiques et par conséquent, elle pourrait faire l'objet d'une révision. Tous renseignements sur les noms doivent être acquisés par la Direction des levés et de la cartographie.

