

- QUATERNARY**
- Ap Alluvial plain; flat to undulating, commonly meander scrolled, typically organic silty sand accumulations on top of sand and gravel.
  - At Alluvial terrace, flat to undulating, minor channeling, 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 scarp
  - 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, kame 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 (Morison 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 11507 & 10). Yukon Exploration and Geology 1992, Exploration and Geological Services Division, Indian and Northern Affairs Canada, p. 33-38.
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**ACKNOWLEDGMENTS**

Field assistance was capably provided by Farrell Andersen of Canada/Yukon Geoscience Office. Discussions of the placer geology with Steve Morison (Indian and Northern Affairs Canada) was appreciated. Cooperation of local placer miners was also appreciated.

This map accompanies the following report:

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**Recommended citation:**

FULLER, E.A., 1994. Surficial geological map of Stewart River valley, parts of 1150/8, 115P/5, and 115P/12, central Yukon. Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 1994-7(G), 1:50,000.

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 1150/8, 115P/5, AND 115P/12  
1:50,000 SCALE**

by  
Edward A. Fuller  
Canada/Yukon Mineral Development Agreement  
Geoscience Office

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

**PIRATE CREEK (115P/5) and GRAVEL CREEK (115P/12)  
YUKON TERRITORY**

Designed and printed by the SURVEYS AND MAPPING BRANCH, DEPARTMENT OF MINES AND TECHNICAL SURVEYS, in cooperation with the Geological Survey of Canada, Ottawa, and the Yukon Geoscience Office, Whitehorse, Yukon Territory.

352022  
703024

GRID COORDINATE	GRID COORDINATE	GRID COORDINATE
1150/9	115P/12	115P/11
1150/8	115P/5	115P/6
1150/1	115P/4	115P/3

**LEGEND**

**SYMBOLS**

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

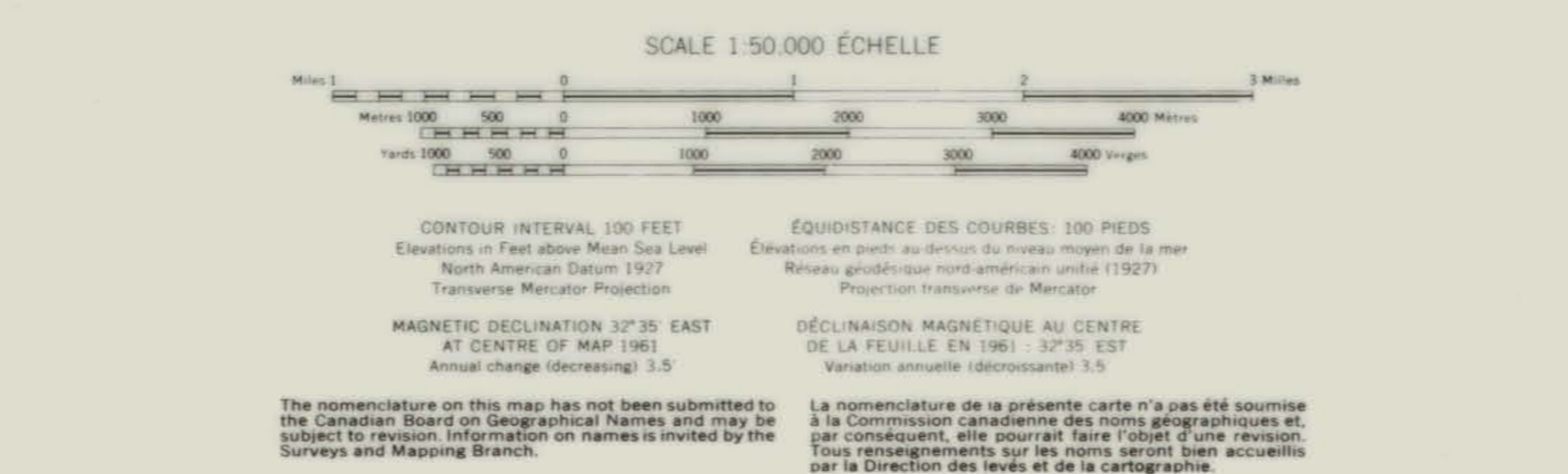
**CONTOUR INTERVAL 100 FEET**  
Elevations in Feet above Mean Sea Level  
North American Datum 1927  
Transverse Mercator Projection

**EQUIDISTANCE DES COURBES 100 PIEDS**  
Élévations en Pieds au-dessus du Niveau Moyen de la Mer  
Réseau géodésique nord-américain (datum 1927)  
Projection Transverse de Mercator

**MAGNETIC DECLINATION 37°35' EAST**  
AT CENTRE OF MAP (1981)  
Annual change (decreasing) 1.5

**DÉCLINAISON MAGNÉTIQUE AU CENTRE**  
DE LA FEUILLE EN 1981: 37°35' EST  
Variation annuelle (diminuant) 1,5

**ONE THOUSAND METRE  
UNIVERSAL TRANSVERSE MERCATOR GRID  
ZONE 8**



Building	School	Church	Light House	Power with orange	Power with black	Power with red	Power with blue
Station	Post Office	Canopy	Plane	Power line	Power line	Power line	Power line
Water	Water	Water	Water	Water	Water	Water	Water
Water	Water	Water	Water	Water	Water	Water	Water
Water	Water	Water	Water	Water	Water	Water	Water
Water	Water	Water	Water	Water	Water	Water	Water
Water	Water	Water	Water	Water	Water	Water	Water
Water	Water	Water	Water	Water	Water	Water	Water
Water	Water	Water	Water	Water	Water	Water	Water
Water	Water	Water	Water	Water	Water	Water	Water

373003  
7047624

352022  
703024

357023  
7041071

352022  
703024

352022  
703024

**SHEET 1 OF 2**

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).



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- SYMBOLS**
- Geological contact
  - Glacial limit
  - Terrace escarp
  - Meltwater channel (small)
  - Meltwater channel (large)
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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  
Edward A. Fuller  
Canada/Yukon Mineral Development Agreement  
Geoscience Office

SHEET 2 OF 2

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, 1993, from air photographs taken in 1949 and 1954.

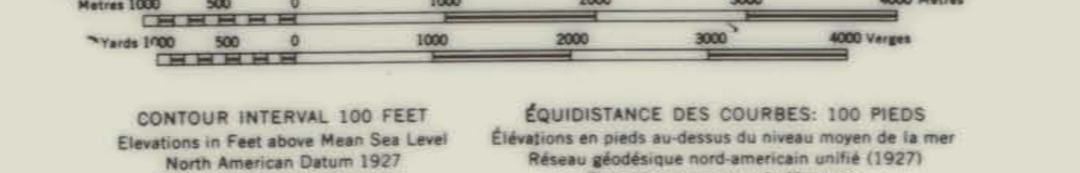
Copies may be obtained from the Map Distribution Office, Department of Mines and Technical Surveys, Ottawa.

GRID ZONE DESIGNATION	7V	FA
TO OBTAIN A REFERENCE TO MAPS USE METERS		
UNITED STATES STREAM JUNCTION		
SYMBOL	Mean water or gull flow	36
	Intermittent or low flow	37
	Seasonal or no flow	38
	Non-flowing	39
	Mean water or gull flow	31
	Intermittent or low flow	32
	Seasonal or no flow	33
	Non-flowing	34
MILITARY GRID REFERENCE	262335	315
	Mean water or gull flow	35
	Intermittent or low flow	36
	Seasonal or no flow	37
	Non-flowing	38

ONE THOUSAND METRE  
UNIVERSAL TRANSVERSE MERCATOR GRID  
ZONE 7

**ROSEBUD CREEK YUKON TERRITORY**

SCALE 1:50,000 ÉCHELLE

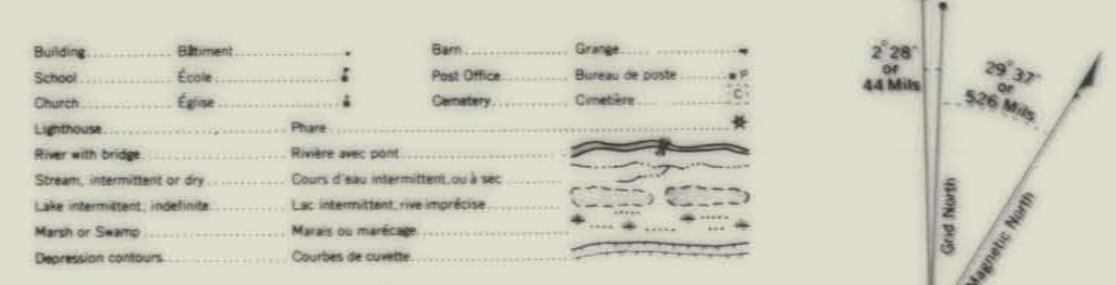
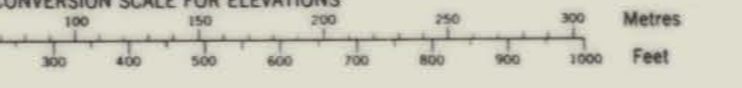


MAGNETIC DECLINATION 32°05' EAST  
AU CENTRE DE LA FEUILLE EN 1981: 32°05' EST  
Annual change (decreasing) 3.5'

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

The nomenclature on this map has not been submitted to the Canadian Board of Geographical Names and may be subject to revision. Information on names is invited by the Surveys and Mapping Branch.

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 envoyés à la Direction des levés et de la cartographie.



NATIONAL TOPOGRAPHIC SYSTEM  
SYSTÈME DE RÉFÉRENCE CARTOGRAPHIQUE NATIONAL