

DESCRIPTIVE NOTES

INTRODUCTION
This Surficial Geology Map of NTS 94-011 (Canadian Geoscience Map 125) is the product of collaboration between the Geological Survey of Canada and the British Columbia Ministry of Energy, Mines and Natural Gas as part of the Geo-Mapping for Energy and Minerals Program (GEM-EM) Yukon Basin Project.

APPROACH TO SURFICIAL GEOLOGY MAPPING
Terrain mapping and field-based geomorphic studies have led to a better understanding of the regional distribution of surficial deposits, permafrost, landslides and other geomorphic processes in the NTS 94-011 map area (Hurley and Hicks, 2010; Hurley et al., 2011a,b).

Fieldwork was undertaken in 2009 and 2010 to ground truth surficial geology polygons interpreted from air photos and satellite imagery, and to gather characteristics that could not be determined through remote sensing.

INFERRED GEOLOGICAL HISTORY
This detailed geologic map of NTS 94-011 is largely a product of underlying bedrock and geological structures, with ornamentation by the Late Wisconsinan Laurentide Ice Sheet.

Topography and drainage patterns were greatly modified during the phase of maximum ice cover (>18 °C ka BP or >214 calendar ka BP). Unconsolidated sediment thicknesses in excess of 2.5 m are observed in major valleys and it is suspected that similar drift thicknesses blanket the entire map area.

De glaciation began sometime after 18 °C ka BP (or >214 calendar ka BP) and ended before 10 °C ka BP (ca. 12 calendar ka BP), with the retreating active Laurentide ice Sheet, stagnant ice masses inwards, glaciofluvial outwash and landslide debris deposits and reworking of the regional drainage system.

Post-glaciation (<10 °C ka BP or ca. 12 calendar ka BP to present), changes in regional base-level led to episodes of channel incision and aggradation. In the early Holocene, valleys of fluvial valleys followed the last and other major rivers.

ACKNOWLEDGMENTS
Canadian Geoscience Map 125 is an output of the Geo-Mapping for Energy and Minerals Yukon Basin Project managed by Carl Oeyer and Larry Lane (GSC-Calgary).

Abstract
Canadian Geoscience Map 125 depicts the surficial geology over some 790 km² covered by the Tsinhia Lake map sheet (NTS 94-011) in northeastern British Columbia.

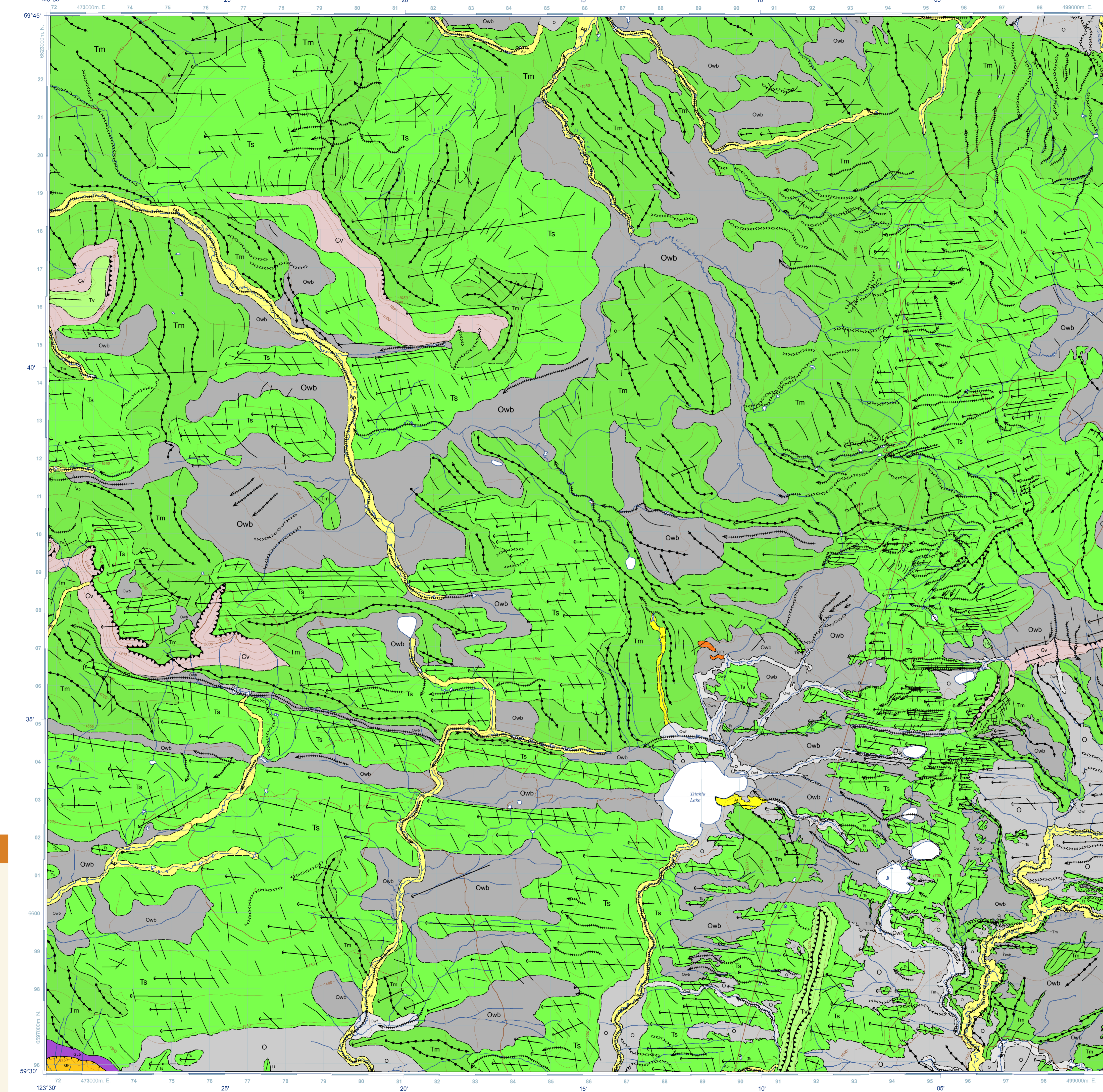
Résumé
La Carte géoscientifique du Canada 125 illustre la géologie des matériaux d'un territoire d'environ 790 km² couvert par le feuillet cartographique de Tsinhia Lake (SNRC 94-011), dans le nord-est de la Colombie-Britannique.

Table with 3 columns: CGM 121, CGM 120, CGM 119; CGM 122, CGM 125, CGM 126; CGM 109, CGM 128, CGM 127.

National Topographic System reference and index to adjoining published Geological Survey of Canada maps
Cover illustration: Drumlin ridges on the Elisha Plateau in northeast British Columbia, view west in the direction of outflow. Photograph by D.H. Hurley, 2013-103.

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CANADIAN GEOSCIENCE MAP 125 SURFICIAL GEOLOGY TSINHIA LAKE British Columbia 1:50 000



Legend and symbols for geological units and features. Includes categories: Holocene earth materials and landforms (Organic Deposits, Alluvial deposits, Late Pleistocene to Holocene earth materials and landforms), Late Pleistocene earth materials and landforms (Glaciofluvial deposits, Glaciofluvial terrace deposits, Esker ridges, Outwash terraces, Till deposits, Hummocky till, Moraine ridges, Streamlined till, Till veneer), and symbols for Geological boundary, Bedrock scarp, Major moraine ridge, etc.

REFERENCES
Bodnar, J.M., 2003a. Bathymetry, Lake Northwest Territories - Yukon Territory - British Columbia (NTS 9504). Geological Survey of Canada, Open File 4502, scale 1:50 000.
Bodnar, J.M., 2003b. Surficial geology of Fort Liard, Northwest Territories - British Columbia. Geological Survey of Canada, Open File 1790, scale 1:50 000.