



Natural Resources  
Canada

Ressources naturelles  
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## CANADIAN GEOSCIENCE MAP 297

SURFICIAL GEOLOGY

# DAHADINNI RIVER

Northwest Territories  
NTS 95-N southwest

Map Information  
Document

**Preliminary**



Geological Survey of Canada  
Canadian Geoscience Maps

2018

Canada 



## **MAP NUMBER**

Natural Resources Canada, Geological Survey of Canada  
Canadian Geoscience Map 297 (Preliminary)

## **TITLE**

Surficial geology, Dahadinni River, Northwest Territories, NTS 95-N southwest

## **SCALE**

1:100 000

## **CATALOGUE INFORMATION**

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## **RECOMMENDED CITATION**

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## **ABSTRACT**

The surficial geology represented in this map has been prepared at 1:50 000 scale and published at 1:100 000 scale. The surficial deposits cover approximately 65% of the map-area. About 40% of the total surface is covered by till (units Tb, Tv, Tp, Td, Tr, Tm, Tx). Lacustrine (units Lp, Lb, Lv, Lm and Lx) deposits cover ~7% of the area corresponding to "glacial Lake Redstone". About 15% of the area is covered by slope deposits (units Cv, Cx and Cz) the main component being landslide deposits (unit Cz). Glaciofluvial sediments (units Gt, Gp, Gd, Gf, Gv and Gx) cover about 2% of the map area forming terraces along the Dahadinni River, Marten Creek, and a northern tributary to Root River that drains between Dusky and Rouge ranges. About 2% are alluvial deposits (units Ap, Af and Ax). Peat deposits cover ~2%. Bedrock covers ~ 32% of the map area. It is represented mainly by Devonian shale, limestone and sandstone, and minor Ordovician and Silurian dolomite.

## **RÉSUMÉ**

La géologie des formations superficielles représentée sur cette carte a été préparée à l'échelle de 1/50 000 et publiée à l'échelle de 1/100 000. Les dépôts superficiels couvrent environ 65 % de la région cartographique. Environ 40 % de la surface totale est couverte de till (unités Tb, Tv, Tp, Td, Tr, Tm, Tx). Des dépôts lacustres (unités Lp, Lb, Lv, Lm, Lx) couvrent ~7 % du secteur correspondant au « Lac glaciaire Redstone ». Environ 15 % de la région est couverte par des dépôts de pente (unités Cv, Cx Cz) dont la principale composante correspond à des dépôts de glissement (unité Cz). Des sédiments fluvioglaciaires (unités Gt, Gp, Gd, Gf, Gv, Gx) couvrent environ 2 % de la région cartographique, formant des terrasses le long de la rivière Dahadinni, du ruisseau Marten et d'un affluent nord de la rivière Root qui s'écoule entre les chaînons Dusky et Rouge. Environ 2 % sont des dépôts alluvionnaires (unités Ap, Af, Ax), tandis que les dépôts de tourbe couvrent ~2 %. Le substratum rocheux occupe ~32 % de la région cartographique. Il est constitué principalement de shale, de calcaire et de grès du Dévonien ainsi que de faibles quantités de dolomie de l'Ordovicien et du Silurien.

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## **SHEET 1 OF 1, SURFICIAL GEOLOGY**

### **GENERAL INFORMATION**

Authors: A. Duk-Rodkin and D.H. Huntley

Geology by A. Duk-Rodkin and D.H. Huntley, 2006–2007

Air photo interpretation by A. Duk-Rodkin

Geomatics by D.A. Lemay and M. Le

Cartography by the Geological Survey of Canada

Map projection Universal Transverse Mercator, zone 10.  
North American Datum 1983

Base map at the scale of 1:50 000 from Natural Resources Canada, with modifications. Elevations above mean sea level are expressed in metres (NTS 95-N/1, 8) and feet (NTS 95-N/2, 7)

Mean magnetic declination 2018, 20°17'E, decreasing 23.9' annually. Readings vary from 20°24'E in the NW corner to 20°09'E in the SE corner of the map.

This map is not to be used for navigational purposes.

The Geological Survey of Canada welcomes corrections or additional information from users.

Data may include additional observations not portrayed on this map. See map info document accompanying the downloaded data for more information about this publication.

This publication is available for free download through GEOSCAN (<http://geoscan.nrcan.gc.ca/>).

This publication has been scientifically reviewed, but it has not undergone a formal edit.

### **MAP VIEWING FILES**

The published map is distributed as a Portable Document File (PDF), and may contain a subset of the overall geological data for legibility reasons at the publication scale.

### **DESCRIPTIVE NOTES**

This map area is located ~60 km west of the Mackenzie River. It is crossed in the northwest by Ravens Throat River and Dahadinni River in the east. Several ranges including the Redstone, Dusky and Rouge, in addition to Painted Mountains, extend south-southeast to north-northwest across this map area. There are two main intervening valleys (10–17 km wide) and several small intermontane valleys (2 km max. width). The valleys are structurally controlled by synclines and/or faults which extend in the same direction as the ranges. Paleo divides have been shifted to the south between 10–25 km at the headwaters of Dahadinni and Johnson rivers as result of glacial diversion and meltwater erosion by the Laurentide Ice Sheet.

This map area was inundated by glaciers associated with the Late Pleistocene Laurentide Ice Sheet. The only regions in this map-area not covered by ice were nunataks in the Rouge Range at elevations above 1545 m. The Laurentide glacier carried distinctive pink Canadian Shield granites from a minimum distance of 400 km to the east. The Laurentide Ice Sheet reached its maximum extent ~50 km west of this

map-area. The ice-sheet reached 1600 m in the central part of the map-area and up to 1300 m elevation in the Painted Mountains. This area was also affected by small cirque-glaciers which formed at elevations between 1300–1800 metres after the Laurentide maximum. Their deposits usually truncate those of Laurentide origin. However, there is evidence that the Laurentide glaciation deposited sediments in cirques that predate the Late Pleistocene glaciation. There is also evidence in this area of older montane glacial deposits in stratigraphic sections where montane till underlies Laurentide till (MIS 6–8?).

#### **ADDITIONAL INFORMATION**

The Additional Information folder of this product's digital download contains figures and tables that appear in the map surround as well as additional geological information not depicted on the map, nor this document, nor the geodatabase.

- PDF of each figure/table that appears in the CGM surround.
- Excel file of the Master Legend Table (legend symbols, descriptions, headings, etc.).

#### **AUTHOR CONTACT**

Questions, suggestions, and comments regarding the geological information contained in the data sets should be addressed to:

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#### **COORDINATE SYSTEM**

Projection: Universal Transverse Mercator  
Units: metres  
Zone: 10  
Horizontal Datum: NAD83  
Vertical Datum: mean sea level

#### **BOUNDING COORDINATES**

Western longitude: 126°00'00"W  
Eastern longitude: 125°00'00"W  
Northern latitude: 63°30'00"N  
Southern latitude: 63°00'00"N

#### **SOFTWARE VERSION**

Data has been originally compiled and formatted for use with ArcGIS™ desktop version 10.2.2 developed by ESRI®.

#### **DATA MODEL INFORMATION**

##### **No Model**

This Canadian Geoscience Map does not conform to either the Bedrock or Surficial Mapping Geodatabase Data Models. The author may have included a complete description of the feature classes and attributes in the Data\Data Model Info folder.