Canadian Geothermal Data Collection: Deep permafrost temperatures and thickness of permafrost, Version 1

USER GUIDE

How to Cite These Data

As a condition of using these data, you must include a citation:

Taylor, A., M.M. Burgess, V. Allen, and A. Wilkinson 1998. *Canadian Geothermal Data Collection: Deep permafrost temperatures and thickness of permafrost, Version 1.* [Indicate subset used]. Boulder, Colorado USA. NASA National Snow and Ice Data Center Distributed Active Archive Center. https://doi.org/10.7265/931e-dg80. [Date Accessed].

FOR QUESTIONS ABOUT THESE DATA, CONTACT NSIDC@NSIDC.ORG

FOR CURRENT INFORMATION, VISIT https://nsidc.org/data/GGD503

National Snow and Ice Data Center

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Notice: This data set was first published on the 1998 CAPS CD.
The text for this document was taken unchanged from that CD.

1 DETAILED DATA DESCRIPTION

1.1 Location

Canada, onshore and offshore, north of 60 degrees North latitude.

Northwesternmost latitude: 85 degrees north
Northwesternmost longitude: 141 degrees west
Southeasternmost latitude: 60 degrees north
Southeasternmost longitude: 60 degrees west

1.2 Time period

1965-1997; some earlier data from industry records also included

1.3 Project history

Precision temperature measurements have been made in some 150 deep wells and holes drilled in the course of natural resource exploration in the permafrost regions of Northern Canada.

1.4 Instrumentation / Methodology

In most cases, holes were logged by lowering a probe containing a thermistor incrementally down the well, in other cases multithermistor cables were left in the holes and periodic measurements taken. In the 1990's, a few holes were logged by a automatic quasi-continuous logging system. Most holes were logged annually for 5-10 years after completion of driling, and measured temperatures show the disturbance due to drilling and the gradual recovery to near-undisturbed conditions. Some holes in the collection are of depth less than 125m. Permafrost thicknesses are estimated at each well or hole from the depth of the 0 degree Celsius isotherm.

Related data sets: Other data are the large number of downhole temperature and permafrost thickness estimates taken during commercial well logging of petroleum exploration wells, and are by nature of lesser quality. These data are not included in this data set, but references to compilations of this data are provided. A short text (2000 words), tables of site locations and permafrost thicknesses with small-scale maps, and an extensive bibliography accompany the data collection. The file structure and contents of each file are well described. The text is sufficient to

locate the data of interest, and the file description is adequate for a user to recover the parameters of interest.

2 REFERENCES AND RELATED PUBLICATIONS

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Taylor, A.E. and Judge, A.S. (1975) Canadian Geothermal Data Collection - Northern Wells 1975; Earth Physics Branch, Geothermal Series 3, 170 p.

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4 DOCUMENT INFORMATION

4.1 Publication Date

1998

4.2 Date Last Updated

2021