

National Geochemical Reconnaissance

Multi-Element Lake Sediment Data Plot - Central Baffin Island Project

Lanthanum, Molybdenum, Tantalum, Uranium and Tungsten in Lake Sediment

INTRODUCTION

Large areas of Canada have been covered by stream and lake surveys carried out under the National Geochemical Reconnaissance (NGR) program. The goal of this program is to establish and maintain a nationally consistent database of field and analytical data derived from drainage sediment and water samples. Toward this end, systematic surveys have been conducted since 1973. To date (1999), more than 200 surveys have been completed to NGR standards, covering over 190,000 km² and covering 2.3 million km² throughout Canada (see Figure below). These were carried out mainly by the Geological Survey of Canada, either independently or in cooperation with provinces and territories, under various funding arrangements.

Consistent methods of sample collection, sample preparation and chemical analysis developed and employed at the GSC as the backbone of NGR surveys (Friskes and Hornbuckle, 1991). Presently, data for each NGR survey are available in hard copy and digital form. However, to simplify access to such a substantial collection of diverse information, a digital database has been created using Microsoft ACCESS® software. An entry of large contiguous blocks of data (e.g. all Labrador or Ontario lake sediment and water data) is completed, geochemical maps and reports are being produced that display and summarize the data (e.g. Friskes et al., 1997a, 1997b, 1997c). The aim of this second generation of publications is to increase awareness of NGR data and enhance applications not only to mineral exploration but in other areas as well, such as public health and environmental studies.

SELECTED REFERENCES

Friskes, P.W.B. and Hornbuckle, E.H.W.
1991: Canada's National Geochemical Reconnaissance programme. Transactions of the Institution of Mining and Metallurgy, Section B, Volume 100, p.47-66

Friskes, P.W.B., McCurdy, M.W. and Day, S.J.A.
1978a: National Geochemical Reconnaissance - Ontario compilation: distribution of nickel in 17 935 lake sediment samples. Geological Survey of Canada Open File 3378a, Scale 1:1 500 000.

Friskes, P.W.B., McCurdy, M.W. and Day, S.J.A.
1987b: National Geochemical Reconnaissance - Labrador compilation: distribution of chromium in 10793 lake sediment samples and 1131 stream sediment samples, Newfoundland (Labrador). Geological Survey of Canada, Open File 3550, Scale 1:1 000 000.

Friskes, P.W.B., McCurdy, M.W. and Day, S.J.A.
1987c: National Geochemical Reconnaissance - Ontario compilation: distribution of mercury in lake sediment. Geological Survey of Canada, Open File 3478c, Scale 1:1 500 000.

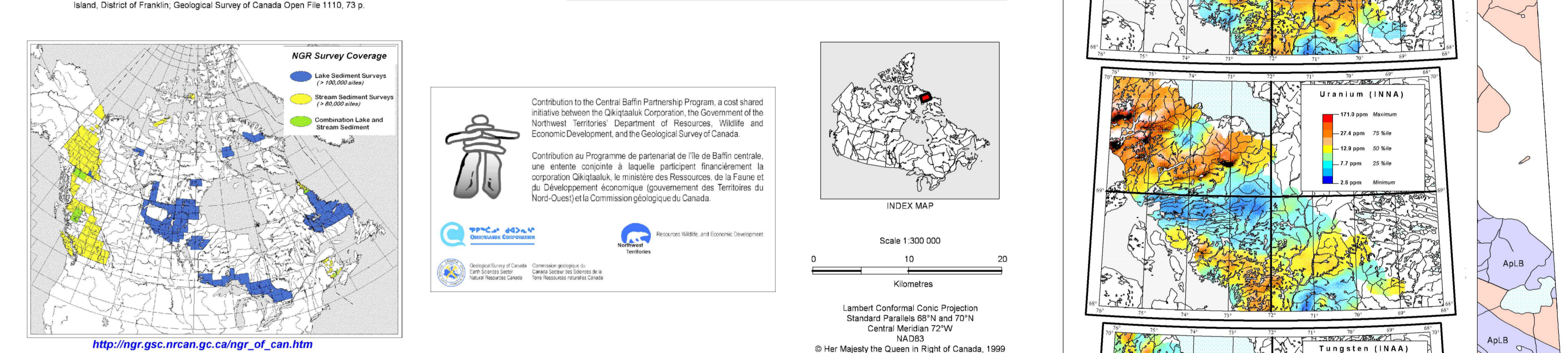
de Kemp, E.A. and Scott, D.J.
1968: Geoscience compilation of north Baffin Island and northern Melville Peninsula, Northwest Territories. Geological Survey of Canada Open File 13638, 2:10-RDM, mapscale 1:500 000.

Morgan, W.C.
1963: Geology, Lake Gillan, District of Franklin (NTS 370). Geological Survey of Canada Open File 1605A, Scale 1:250 000.

Tippett, C.R.
1964: Geology of a transect through the southern margin of the Foxe fold belt (mainly NTS 27B), central Baffin Island, District of Franklin. Geological Survey of Canada Open File 1110, 71 p.

ELEMENTAL RANGES

Element units median	Lanthanum ppm 60	Molybdenum ppm 2	Tantalum ppm 1.1	Uranium ppm 1.2	Tungsten ppm 4
0	<180	<7	<3.3	<36.0	<4
1	180 - 245	7	3.3 - 4.5	36.0 - 48.0	4
2	246 - 365	8 - 12	4.6 - 6.7	48.1 - 72.0	5
3	366 - 546	13 - 18	6.8 - 10.0	72.1 - 109.0	6 - 7
4	>546	>18	>10.0	>109.0	>7



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National Geochemical Reconnaissance
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Uranium and Tungsten in
Lake Sediment, Central Baffin Island,
NTS 27B, 27C, 37A and 37D