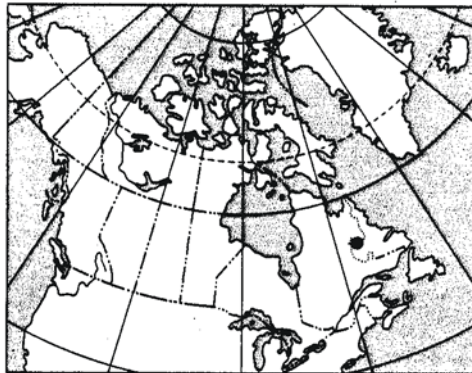


**GEOLOGICAL SURVEY OF CANADA OPEN FILE 2037
NEWFOUNDLAND OPEN FILE LAB 836
(Parts of 23I, 23J and 23O)
CANADA – NEWFOUNDLAND MINERAL DEVELOPMENT AGREEMENT (1984 – 1989)**

**REGIONAL LAKE SEDIMENT AND WATER
GEOCHEMICAL RECONNAISSANCE DATA,
WEST-CENTRAL LABRADOR**



INDEX MAP

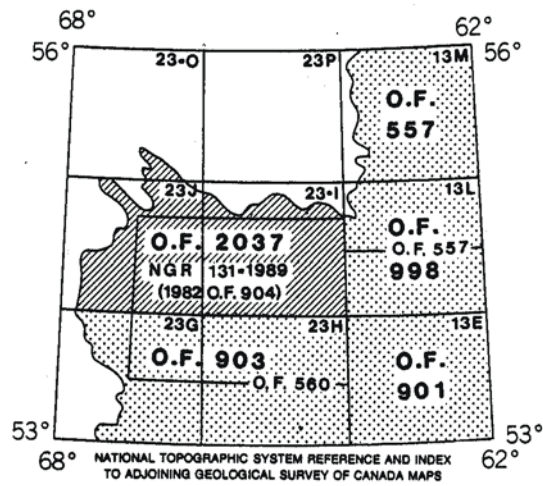
Project Director: E.H.W. Hornbrook
Project Coordinator: P.W.B. Friske
Subproject Leaders: J.J. Lynch, M. M^cCurdy
Members: C.C. Durham, A.C. Galletta, H. Gross, P. Doyle

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Hornbrook, E.H.W. and Friske, P.W.B.

1989: National Geochemical Reconnaissance Lake Sediment and Water Data, West-Central Labrador (Parts of 23I, 23J and 23O) Geological Survey of Canada Open File 2037

NATIONAL GEOCHEMICAL RECONNAISSANCE
LAKE SEDIMENT AND WATER GEOCHEMICAL DATA
LABRADOR 1989
GEOLOGICAL SURVEY OF CANADA OPEN FILE 2037, NGR 131-1989, LAB 836
(Parts of 23I, 23J and 23O)



Open File 2037 represents a contribution to the Canada – Newfoundland Mineral Development Agreement (1984-1989), a subsidiary agreement under the Economic and Regional Development Agreement. This project was funded and managed by the Geological Survey of Canada.

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**REGIONAL LAKE SEDIMENT AND WATER GEOCHEMICAL DATA, LABRADOR 1989,
GSC OF 2037, NGR 131-1989, NFLD OF LAB 836; PARTS OF NTS 23I, 23J AND 23O**

Geological Survey of Canada Open File 2037
Newfoundland Department of Mines and
Energy Open /file LAB 836.
Regional Lake Sediment and Water
Geochemical Reconnaissance Data, West-
Central Labrador, consisting of parts of NTS
23I, 23J and 23O

INTRODUCTION

Open File 2037 contains new data for gold and 25 other elements from re-analysis by instrumental neutron activation of lake sediments collected from areas of west-central Labrador in 1978 and 1982. Original analytical data selected from Open Files 560 and 904, published respectively in 1979 and 1983, for 16 elements in sediments, as well as uranium, fluoride and pH values of concomitant waters, are also included in this open file.

The original reconnaissance surveys were carried out by the Geological Survey of Canada in conjunction with the Newfoundland Department of Energy and Mines under the Canada – Newfoundland agreement on a Uranium Reconnaissance Program (1976-1982) and the Canada-Newfoundland Cooperative Mineral Program (1982-1984). Analyses of archived samples for Open File 2037 were funded under the Canada-Newfoundland Mineral Development Agreement.

The analytical results of the surveys contribute to a national geochemical data base which is used for resource assessment, mineral exploration, environmental studies, and geological mapping. Regional survey sample collection and preparation procedures, analytical methods and repeatability of results are therefore strictly specified and controlled. In this way, consistent data can be systematically obtained in different areas in different years from different analytical laboratories.

CREDITS

E.H.W. Hornbrook directed the surveys.

P.W.B. Friske coordinated the operational activities of contract and Geological Survey of Canada staff.

Contracts were let to the following companies for sample collection, preparation and analysis and were managed by the following staff of the Exploration Geochemistry Subdivision:

Collection: Marshall Macklin Monaghan
(1978) Ltd., Toronto
E.H.W. Hornbrook
Y.T. Maurice

Collection: Marshall Macklin Monaghan
(1982) Ltd., Toronto
E.H.W. Hornbrook, N.G. Lund

Preparation: Golder Associates
(1978/1982) Ottawa
J.J. Lynch

Analysis: Chemex Labs Ltd.,
(1978) North Vancouver
Barringer-Magenta Ltd.,
Toronto
Atomic Energy of Canada Ltd.,
Ottawa
J.J. Lynch

Analysis: Chemex Labs Ltd.,
(1982) Vancouver
Acme Analytical Laboratories
Ltd., Vancouver
J.J. Lynch

Analysis: Bondar-Clegg and Co. Ltd.,
(1988) Ottawa
J.J. Lynch

M. McCurdy coordinated production and edited open files.

A.C. Galletta managed the digital geochemical data and provided computer processing support.

H. Gross developed microcomputer software to produce data listings and summary statistics.

Computing services were provided by the Computer Science Centre, EMR. The plotting was done by Canada Lands Data Systems staff at Environment Canada, Hull, Quebec.

C.C. Durham and P. Doyle provided technical assistance.

DESCRIPTION OF SURVEY PROCEDURES AND SAMPLE MANAGEMENT

Helicopter-supported sample collection was carried out during the summer of 1978 and 1982.

Lake sediment and water samples were collected at an average density of one sample per 13 square kilometres throughout the 14,400 square kilometres of the west-central Labrador survey.

Sample site duplicate samples were routinely collected in each analytical block of twenty samples.

The field data were recorded on standard lake sediment field cards (Rev. 74) used by

the Geological Survey of Canada (Garrett, 1974).

In Ottawa, field dried samples were air-dried crushed, ball milled and sieved. The minus 80 mesh (177 microns) fraction was used for subsequent analyses. At this time, control reference and blind duplicate samples were inserted into each block of twenty sediment samples. For the water samples, only control reference samples were inserted into the block. There were no blind duplicate water samples.

On receipt, field and analytical data were processed with the aid of computers.

The sample site positions were marked on appropriate 1/250,000 scale NTS maps in the field. These maps were digitized at the Geological Survey in Ottawa to obtain the sample site UTM coordinates.

The sample site positions were checked as follows: a sample location map was produced on a Calcomp 1051 drum plotter using the digitized coordinates; the field contractor's sample location map was then overlaid with the Calcomp map; the two sets of points were checked for coincidence. The dominant rock types in the lake catchment basins were identified on appropriate geological maps used as the bedrock geological base on NGR maps.

Thorough inspections of the field and analytical data were made to check for any missing information and/or gross errors.

Quality control and monitoring of the geochemical data was undertaken by a standard method used by the Exploration Geochemistry Subdivision at the Geological Survey of Canada.

ANALYTICAL PROCEDURES

Instrumental Neutron Activation Analysis (INAA)

The weighed sample (generally 5 to 10 g) is irradiated for 20 minutes in a neutron flux with an approximate density of 5.3×10^{11} neutrons/square cm/second. Counting begins seven days after irradiation. The counting time is somewhat variable (6 to 11 minutes) and is matrix dependent. Counting is done on a germanium- lithium co-axial counter. The counting data is accumulated on a VAX computer and is subsequently converted to concentrations. Numerous international reference samples are irradiated with each batch of routine samples.

Elements determined by INA analyses include: Na, Sc, Cr, Fe, Co, Ni, Zn, As, Se, Br, Rb, Zr, Mo, Ag, Cd, Sn, Sb, Te, Cs, Ba, La, Ce, Sm, Eu, Tb, Yb, Lu, Hf, Ta, W, Ir, Au, Th, and U. Data for Zn, Se, Zr, Ag, Cd, Sn, Te, and Ir are

not published because of inadequate detection limits and/or precision.

Atomic Absorption Spectroscopy (AAS) and Other Analytical Methods

Note: In the following descriptions of analytical methods, the year in brackets after the elements serves, where required, to distinguish between different analytical techniques employed for 1978 and 1982 samples.

For the determination of Zn, Cu, Pb, Ni, Co, Ag, Mn, Fe and Cd, a 1 gram sample reacted with 6 ml of a mixture of 4 M HCl and 1 M HNO₃ in a test-tube overnight at room temperature. The test-tube was immersed in a hot water bath at room temperature and brought up to 90° C and held at this temperature for 2 hours with periodic shaking. The sample solution was then diluted to 20 ml with metal-free water and mixed. Zn, Cu, Pb, Ni, Co, Ag, Mn, Fe and Cd were determined by atomic absorption spectroscopy using an air-acetylene flame. Background corrections were made for Pb, Ni, Co, Ag, and Cd.

Arsenic was determined by atomic absorption using a hydride evolution method wherein the arsenic was evolved as AsH₃, passed through a heated quartz tube in the light path of an atomic absorption spectrophotometer. The method is described by Aslin (1976).

Molybdenum and vanadium were determined by atomic absorption spectroscopy using a nitrous oxide acetylene flame. A 0.5 gram sample reacted with 1.5 ml concentrated HNO₃ at 90° C for 30 minutes. At this point 0.5 mL concentrated HCl was added and the digestion was continued at 90° C for an additional 90 minutes. After cooling, 8 mL of 1250 ppm Al solution were added and the sample solution was diluted to 10 ml.

Mercury was determined by the Hatch and Ott procedure with some modifications. The method is described by Jonasson et al. (1973). A 0.5 gram sample was reacted with 20 ml concentrated HNO₃ and 1 ml concentrated HCl in a test-tube for 10 minutes at room temperature prior to 2 hours of digestion with mixing at 90° C in a hot water bath. After digestion, the sample solutions were cooled and diluted to 100 mL with metal-free water. The Hg present was reduced to the elemental state by the addition of 10 ml of 10% w/v SnSO₄ in 1 M H₂SO₄. The Hg vapour was then flushed by a stream of air into an absorption cell mounted in the light path of an atomic absorption spectrophotometer. Absorption measurements were made at 253.7 nm.

Loss-on-ignition was determined using a 500 mg sample. The sample, weighed into a 30 ml beaker, was placed in a cold muffle

furnace and brought up to 500° C over a period of 2-3 hours. The sample was left at this temperature for 4 hours, then allowed to cool to room temperature for weighing.

Uranium (1978) was determined using a neutron activation method with delayed neutron counting. A detailed description of the method is provided by Boulanger et al. (1975). In brief, 1 gram samples were weighed into 7 gram polyethylene vials, capped and sealed. The irradiation was provided by the Slowpoke reactor with an operating flux of 10^{12} neutrons/sq. cm./sec. The samples were pneumatically transferred from an automatic loader to the reactor, where each sample was irradiated for 60 seconds. After irradiation, the samples were again transferred pneumatically to the counting facility where after a 10 second delay each sample was counted for 60 seconds with six BF₃ detector tubes embedded in paraffin. Following counting, the samples were automatically ejected into a shielded storage container. Calibration was carried out twice a day as a minimum, using natural materials of known uranium concentration.

Uranium (1982) was determined using a neutron activation method with delayed neutron counting. With the exception of the irradiation facility, the method was very similar to that used by AECL in previous years; a detailed description of which is provided by Boulanger et al. (1975). A two gram sample was irradiated for 10 seconds in the Triga reactor located at Washington State University. The operating flux was 8×10^{13} neutrons/square cm/ second. After a 10 second delay, each sample was counted for 10 seconds. The counting equipment was of AECL design: calibration was done twice a day or as required. One standard was analysed after every 20 samples.

Fluorine was determined in lake sediments as described by Ficklin (1970). A 250 mg sample was sintered with 1 gram of a flux consisting of two parts by weight sodium carbonate and one part by weight potassium nitrate. The residue was then leached with water, the sodium carbonate neutralized with 10 ml 10% (w/v) citric acid and the resulting solution diluted to 100 ml with water. The pH of the resulting solution should be from 5.5 to 6.5. The fluoride content of the test solution was then measured using a fluoride ion electrode. Standard solutions contained sodium carbonate and citric acid in the same quantities as the sample solution. A detection limit of 40 ppm was achieved.

WATER ANALYSIS

NOTE: Prior to the determination of uranium (1978), fluoride and pH were measured, after which the entire sample was acidified by the addition of 1 ml concentrated HNO₃.

Fluoride in lake water samples was determined using an Orion fluoride electrode and a Model 410 (1978), 404 (1982) Orion

specific ion meter. Prior to measurement an aliquot of the sample was mixed with an equal volume of a modified TISAB solution (total ionic strength adjustment buffer). The modification consisted of adding 60 ml 8M KOH solution to the buffer. This permitted the re-analysis of fluoride in acidified water samples when required. When this analysis was required, acidified standard solutions were used for calibration.

Hydrogen ion activity (pH) (1978) was measured with a Beckman combination electrode and a Model 401 Orion specific ion meter. In (1982) pH was measured with a Broadley-James combination electrode and a Model 404 Orion specific ion meter.

For the measurement of uranium in lake waters (1978), two weeks after acidification, a 5 microlitre aliquot of the sample was removed for determination by fission track analysis. The two week waiting period ensured that any precipitated uranium was redissolved. To determine uranium, sample aliquots were placed on a polycarbonate tape and dried. The tape was then irradiated in a nuclear reactor at McMaster University for 1 hour in a flux of 10^{13} neutrons/ sq. cm./sec. The tape was subsequently etched with 25% NaOH solution and the fission tracks were counted with an optical counter fitted to a microscope. The number of tracks was proportional to the uranium concentration. Each tape contained its own calibration standards, blanks and sample duplicates.

Uranium in waters (1982) was determined by a laser-induced fluorometric method using a Scintrex UA-3 uranium analyser. A complexing agent, known commercially as Fluran and composed of sodium pyrophosphate and sodium monophosphate (Hall, G.E.M., 1979) was added to produce the uranyl pyrophosphate species which fluoresces when exposed to the laser. Since organic matter in the sample can cause unpredictable behaviour, a standard addition method was used. Further, there have been instances at the G.S.C. where the reaction of uranium with Fluran is either delayed or sluggish; for this reason an arbitrary 24 hour time delay between the addition of the Fluran and the actual reading was incorporated into this method. In practice, 500 microlitres of Fluran solution were added to a 5 ml sample and allowed to stand for 24 hours. At the end of this period fluorescence readings were made with the addition of 0.0, 0.2 and 0.4 ppb U. For high samples the additions were 0.0, 2.0 and 4.0 (20 microlitre aliquots of 55 or 550 ppb U were used). All readings were taken against a sample blank.

Table 1 provides a summary of analytical methods and detection levels.

TABLE 1. Summary of Analytical Data and Methods

Element	Detection level (1978/1982)	Detection level (1988)	Method(s)
<u>SEDIMENTS:</u>			
Zn Zinc	2 ppm	100 ppm	AAS
Cu Copper	2 ppm		AAS
Pb Lead	2 ppm		AAS
Ni Nickel	2 ppm	20 ppm	AAS/INAA
Co Cobalt	2 ppm	5 ppm	AAS/INAA
Ag Silver	0.2 ppm	2 ppm	AAS
Mn Manganese	5 ppm		AAS
As Arsenic	1 ppm	0.5 ppm	AAS/INAA
Mo Molybdenum	2 ppm	1 ppm	AAS/INAA
Fe Iron	0.02 pct	0.2 pct	AAS/INAA
Hg Mercury	10 ppb		AAS
LOI Loss-on-ignition	1.0 pct		GRAV
U Uranium	0.5 ppm	0.2 ppm	NADNC/INAA
F Fluorine	40 ppm		ISE
V Vanadium	5 ppm		AAS
Cd Cadmium	0.2 ppm	5 ppm	AAS
Sb Antimony	0.2 ppm	0.1 ppm	INAA
Na Sodium		0.02 pct	INAA
Sc Scandium		0.2 ppm	INAA
Cr Chromium		20 ppm	INAA
Br Bromine		0.5 ppm	INAA
Rb Rubidium		5 ppm	INAA
Cs Cesium		0.5 ppm	INAA
Ba Barium		50 ppm	INAA
La Lanthanum		2 ppm	INAA
Ce Cerium		5 ppm	INAA
Sm Samarium		0.05 ppm	INAA
Eu Europium		1 ppm	INAA
Tb Terbium		0.5 ppm	INAA
Yb Ytterbium		2 ppm	INAA
Lu Lutetium		0.2 ppm	INAA
Hf Hafnium		1 ppm	INAA
Ta Tantalum		0.5 ppm	INAA
W Tungsten		1 ppm	INAA
Au Gold		2 ppb	INAA
Th Thorium		0.2 ppm	INAA
<u>WATERS:</u>			
F Fluoride	20 ppb		ISE
pH			GCM
U Uranium	0.05 ppb		LIF
wt Test weight		± 0.01 g	

- AAS - Atomic absorption spectrometry
- INAA - Instrumental neutron Activation Analyses
- GRAV - Gravimetry
- ISE - Ion selective electrode
- GCM - Glass Calomel electrode and pH meter
- LIF - Laser-induced fluorescence
- NADNC - Neutron Activation delayed neutron counting

PRESENTATION AND INTERPRETATION OF GOLD DATA

The following discussion reviews the format used to present the Au geochemical data and outlines some important points to consider when interpreting this data. This discussion is included in recognition of the special geochemical behaviour and mode of occurrence of Au in nature and the resultant difficulties in obtaining and analyzing samples which reflect the actual concentration level at a given site.

To correctly interpret Au geochemical data from regional stream sediment or lake sediment surveys requires an appreciation of the unique chemical and physical characteristics of Au and its mobility in the surficial environment. Key properties of Au that distinguish its geochemical behaviour from most other elements include (Harris, 1982):

- (1) Au occurs most commonly in the native form which is chemically and physically resistant. A high proportion of the metal is dispersed in micron-sized particulate form. Gold's high specific gravity results in heterogeneous distribution, especially in stream sediment and clastic-rich (low LOI) lake sediment environments. Au distribution appears to be more homogeneous in organic-rich fluvial and lake sediment environments.
- (2) Gold typically occurs at low concentrations in the ppb range. Whereas gold concentrations of only a few ppm may represent economic deposits, background levels encountered from stream and centre-lake sediments seldom exceed 10 ppb, and commonly are near the detection limit of 1 ppb.

These factors result in a particle sparsity effect wherein very low concentrations of Au are heterogeneously enriched in the surficial environment. Hence, a major problem facing the geochemist is to obtain a representative sample. In general, the lower the actual concentration of Au the larger the sample size, or the smaller the grain size required to reduce uncertainty over whether subsample analytical values truly represent actual values. Conversely, as actual Au concentrations increase or grain size decreases, the number of Au particles to be shared in random subsamples increases and the variability of results decreases (Clifton *et al.*, 1969; Harris, 1982). The limited amount of material collected during the rapid, reconnaissance-style regional surveys and the need to analyze for a broad spectrum of elements, precludes the use of a significantly large sample weight for the Au analyses. Therefore, to the extent that sample representivity can be increased, sample grain size is reduced by sieving and ball milling of all samples.

The following control methods are currently employed to evaluate and monitor the sampling and analytical variability which are inherent in the analysis of Au in geochemical mediums:

- (1) For each block of twenty samples:
 - (a) random insertion of a standard reference sample to control analytical accuracy and long-term precision;
 - (b) collection of a field duplicate (two samples from one site) to control sampling variance;
 - (c) analysis of a second subsample (blind duplicate) from one sample to control short-term precision.
- (2) For both stream sediments and lake sediments, routine repeat analyses on a second subsample are performed for all samples having values that are statistically above approximately the 90th percentile of total data set.
- (3) For lake sediments only, a routine repeat analysis on a second subsample is performed on those samples with LOI values below 10%, indicating a large clastic component. On-going studies suggest that the Au distribution in these samples is more likely to be variable than in samples with a higher LOI content.

Au data presentation, statistical treatment and the value map format are different than for other elements. Au data listed in the open file may include initial analytical results, values determined from repeat analyses, together with sample weights and corresponding detection limits for all analyzed samples. The gold, statistical parameters and regional symbol-trend plots are determined using only the first analytical value. Au values less than the detection limit (<2 ppb) for 10 g samples are set to 1.0 ppb.

On the value map, repeat analysis values, where determined (not field duplicates), are placed in brackets following the initial value. Sample weights used can be determined from the text. Following are possible variations in data presentation on a value map:

+ *	No data
+ 27	Single analysis
+ 27 (14)	Repeat analysis
+ <2	Single analysis, value less than detection limit (2 ppb)

In summary, geochemical follow-up investigations for Au should be based on a careful consideration of all geological and geochemical information, and especially a careful appraisal of gold geochemical data and its variability. In some instances, prospective follow-up areas may be indirectly identified by pathfinder element associations

in favourable geology, although a complementary Au response due to natural variability may be lacking. Once an anomalous area has been identified, field investigations should be designed to include detailed geochemical follow-up surveys and collection of **large** representative samples. Subsequent repeat subsample analyses will increase the reliability of results and permit a better understanding of natural variability which can then be used to improve sampling methods and interpretation.

Jonasson, I.R., Lynch, J.J. and Trip, L.J. (1973) Field and laboratory methods used by the Geological Survey of Canada in geochemical surveys; No. 12, Mercury in Ores, Rocks, Soils, Sediments and Water, Geological Survey of Canada Paper 73-21.

LAKE SEDIMENT DATA LIST LEGEND

Table 2 lists the field and map information recorded at each sample site and listed in the accompanying data listings.

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Aslin, G.E.M. (1976) The determination of arsenic and antimony in geological materials by flameless atomic absorption spectrophotometer; *Journal of Geochemical Exploration*, Vol. 6, pp. 321-330.

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Harris, J.F. (1982) Sampling and analytical requirements for effective use of geochemistry in exploration for gold; *In* Levinson, A.A., Editor, *Precious Metals in the Northern Cordillera*, proceedings of a symposium sponsored by the Association of Exploration Geochemists and the Cordilleran Section of the Geological Association of Canada, pp. 53-67.

TABLE 2 – Continued

TABLE 2. FIELD DATA DESCRIPTIONS

FIELD RECORD	DEFINITION	TEXT CODE
MAP SHEET	National topographic system (NTS): lettered quadrangle (1:250,000 scale) Part of sample number.	23I,23J or 23O
SAMPLE ID	Remainder of sample number: Year (of collection) Field crew Sample sequence number	78 or 82 1,3,5 or 7 001 - 999
REP STAT	Replicate status; relationship of the sample to others within the analytical block of 20: Routine regional sample First of field duplicate Second of field duplicate	00 10 20
UTM	Universal Transverse Mercator (UTM) Coordinate system; digitized sample location coordinates.	
ZN	Zone 7 to 22	
EASTING	UTM Easting in metres	
NORTHING	UTM Northing in metres	
ROCK TYPE	Major rock type of lake catchment area: Precambrian Proterozoic Hadrynian and/or Neohelikean red conglomerate, arkose, siltstone Paleohelikian granite, quartz monzonite, granodiorite, quartz diorite, syenite adamellite suite: adamellite, monzonite, syenite, granodiorite and hypersthene-bearing equivalents (forsundite, mangerite, opdalite, charnockite) anorthosite suite: anorthosite, anorthositic gabbro, leucotroctolite; minor gabbro, monzonite, granodiorite, ferrosyenite gabbro, norite, anorthositic gabbro, troctolite, diorite, derived basic gneiss and amphibolite Paleohelikean and/or Apebian greywacke, quartzite, arkose, slate, phyllite, basic to intermediate volcanic rocks, derived schists and gneiss Apebian gabbro, metagabbro, glomeroporphyritic gabbro, diorite basaltic flows and pyroclastics, quartzite, greywacke, slate, argillite, conglomerate, minor iron formation grit, arkose, conglomerate, quartzite, greywacke, slate, acidic to basic volcanics, dolomite, limestone, chert breccia ferruginous slate and iron formation Apebian and earlier (?) metasedimentary granitoid gneiss, minor amphibolite, sillimanite gneiss, metaquartzite, marble granulite, pyroxene gneiss, charnockite; minor granitic gneiss, mylonitic gneiss, amphibolite, ultrabasic intrusions granitic gneiss, granodioritic gneiss, migmatite, agmatite, amphibolite amphibolite, pyroxene amphibolite, chlorite schist, garnet- and biotite-rich gneiss Archean massive granite and quartz monzonite massive to poorly foliated, pyroxene-bearing granodiorite and syenodiorite pyroxene granulite, unseparated acidic intrusives	HDHL PH14 PH13 PH11 PH10 PHAW AP6W VAW2 APW1 AW1S AUGP AUWR AUWG AUWB ARC2 ARC1 ARCS

FIELD RECORD	DEFINITION	TEXT CODE
ROCK AGE	Stratigraphic age of dominant rock type in catchment basin: Paleohelikean Apebian Hadrynian and/or Neohelikean (Proterozoic) Paleohelikean and/or Apebian (Proterozoic) Apebian or earlier(?) (Archean-Proterozoic) Archean	06 05 04 04 03 02
TERRAIN RELIEF	Relief of lake catchment basin: Low Medium High	Lo Med Hi
SAMPLE CONT.	Contamination; human or natural None Work Camp Fuel Gossan	- Wo Ca Fu Go
SAMPLE COLOUR	Sediment sample colour; up to two colours may be selected: Tan Yellow Green Grey Brown Black	Tn Yl Gn Gy Br Bk
SUSP MATL	Suspended matter in water: None Heavy Light	- Hvy Lgt
MISC.	Refers to missing data in any field	*