GEOLOGICAL SURVEY OF CANADA
OPEN FILE 7150

Environmental geochemistry of tailings, sediments and surface waters collected from 14 historical gold mining districts in Nova Scotia

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A.L. Sangster, J.E. Vaive and P. Pelchat

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M.B. Parsons[1], K.W.G. LeBlanc[1], G.E.M. Hall[2], A.L. Sangster[2], J.E. Vaive[2] and P. Pelchat[2]

[1]Geological Survey of Canada (Atlantic), PO Box 1006, Dartmouth, NS B2Y 4A2
[2]Geological Survey of Canada, 601 Booth Street, Ottawa, ON K1A OE8

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ABSTRACT

From 1861 to the mid-1940s, stamp milling at orogenic lode gold mines in Nova Scotia generated more than 3,000,000 tonnes of tailings. Most of the mined gold was recovered using mercury (Hg) amalgamation, and an estimated 10–25% of the Hg used was lost to the tailings and to the atmosphere. Arsenic (As) also occurs naturally in the ore, and is present at high concentrations in the mine wastes. Tailings from these operations were generally slurried into local rivers, swamps, lakes and the ocean. Recent land-use changes (e.g. residential development, recreational activities, shellfish harvesting) in some historical mining districts are increasing the likelihood of human exposure to these tailings. This Open File Report presents the results of a multi-disciplinary investigation of the dispersion, speciation and fate of metal(loid)s in terrestrial and shallow marine environments surrounding 14 abandoned gold mines in Nova Scotia. From 2003 to 2006, samples of tailings, sediment, and water were collected at 14 former gold mines. Field studies reveal that most mine sites contain large volumes of unconfined tailings, and in several districts these have been transported significant distances (>2 km) offsite by streams and rivers. Chemical analyses of 482 tailings and sediment samples show high concentrations of As (10 mg/kg to 31 wt.%; median 2550 mg/kg) and Hg (<5 µg/kg to 350 mg/kg; median 1640 µg/kg). Arsenic is hosted in arsenopyrite and a variety of secondary phases including scorodite ($FeAsO_4 \cdot 2H_2O$), amorphous Fe arsenate, and As bound to Fe oxyhydroxides. Mercury is present in elemental form, amalgam (Au_xHg_x), and in secondary phases. Results from this study led to the formation of a Provincial-Federal Historic Gold Mines Advisory Committee in 2005, which has evaluated the ecological and human health risks associated with gold mines throughout Nova Scotia and developed recommendations for management of these tailings sites. This Open File Report provides the most comprehensive summary available of the history, distribution, and geochemistry of tailings at gold mines throughout Nova Scotia. The geographic coordinates provided for each district can be used to quickly explore the tailings deposits via most web-based mapping services. The results can be used to help minimize the environmental impacts associated with past, present, and future gold extraction and to inform land-use decisions.

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INTRODUCTION

Purpose of Study

From 2003–2006, Natural Resources Canada carried out a project entitled "*Metals in the Canadian Surface Environment: Sources, Fate, and Risks*" as part of the Metals in the Environment Program of the Earth Sciences Sector (ESS). The main objective of this project was to characterize the distribution, chemical form, and potential risks associated with metals released into the Canadian surface environment from natural sources and activities related to their exploitation. Multi-disciplinary studies defined areas that pose risks to both ecosystem and human health and led to a better understanding of processes that affect the distribution and fate of metals. This geoscience knowledge has contributed to the assessment and mitigation of risks, and has been used directly by various stakeholders to help develop environmental quality guidelines and risk-management strategies.

As part of this project, ESS staff carried out a multi-disciplinary, multi-partner investigation of the dispersion, transformation, and fate of metals and metalloids in freshwater and marine environments surrounding abandoned gold mines in Nova Scotia. From 1861 to the mid-1940s, gold was produced from 64 mining districts in the southern part of the province (Bates 1987). Most of the gold was recovered using mercury (Hg) amalgamation, and an estimated 10–25% of the Hg used was lost to the tailings and to the atmosphere (EPS 1978; Nriagu and Wong 1997). Arsenopyrite (FeAsS) occurs naturally in the ore and surrounding bedrock in these gold deposits, and was concentrated in the tailings during milling operations. Approximately 3,000,000 tonnes of tailings from these early mines were slurried directly into local rivers, swamps, lakes, and the ocean with little or no consideration of their environmental impact (Wong *et al.* 1999, 2002). Over the last several decades, expanding residential developments and recreational activities have increased the likelihood of human exposure to these mine wastes.

The primary objectives of this study were: (1) to determine the concentrations, distribution, and speciation of metal(loid)s in tailings, soils, till, rocks, sediment, and water near these mine sites; (2) to identify and characterize the chemical and physical processes that control the release of elements from the tailings; and (3) to assess the bioavailability and biological impacts of metal(loid)s, and potential routes for human exposure (Parsons *et al.* 2004). Project partners included ESS, the Nova Scotia Department of Natural Resources, Environment Canada, Fisheries and Oceans Canada, and four universities (Queen's University, University of Ottawa, Dalhousie University, and the Royal Military College). Results from this study have been used by the Province of Nova Scotia and several federal government departments to assess environmental and human health risks associated with the mine wastes and to support better informed land-management decisions for these abandoned mines.

Scope of Report

This report contains geochemical data for samples of mine tailings, stream and lake sediments, and surface waters collected by the authors from 2003–2007 during field studies at 14 historical gold mining districts throughout southern Nova Scotia (Fig. 1). The concentrations of As and Hg are presented in a series of maps and tables for each district (arranged in alphabetical order) and

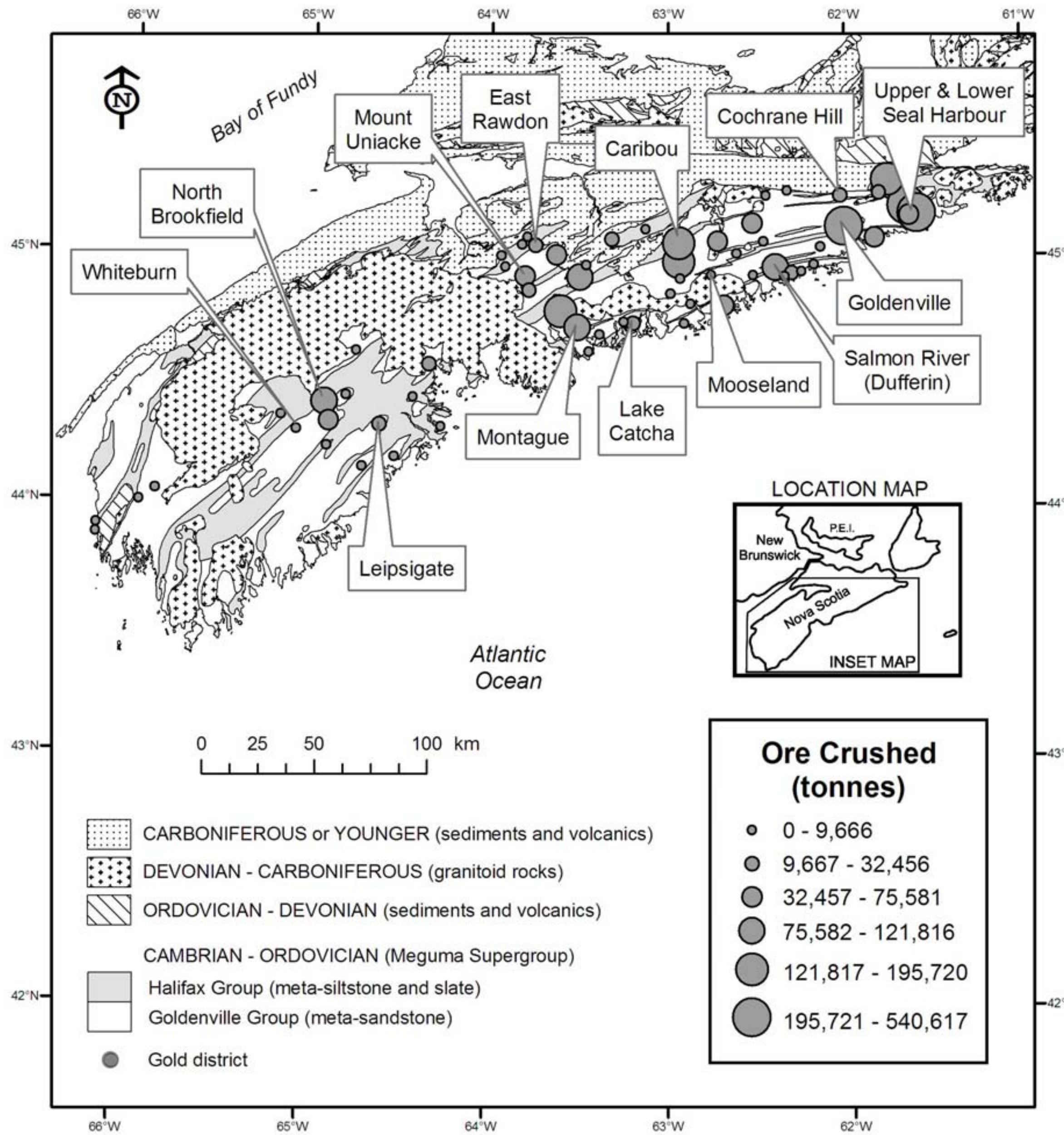

Fig. 1. Generalized geological map of southern Nova Scotia, showing the location of historical gold districts within rocks of the Meguma Supergroup, after Ryan and Smith (1998), with bedrock geology simplified from Keppie (2000). Graduated symbols show the total tonnes of ore crushed in each district from 1862 to 2011 (Nova Scotia Department of Mines (1961), and pers. comm. P.K. Smith (2011)), which is roughly equivalent to the total volume of tailings at each site.

the appendices contain brief descriptions of each sample site and tables of the full geochemical dataset for each sample. The Discussion section provides details on a background survey of sediments and waters carried out in the Seal Harbour Gold Districts in 2003 and 2004, data on the seasonal variability of As and Hg concentrations in waters, as well as sequential extraction data for these elements in tailings and sediments. Detailed investigations of the mineralogy and bioaccessibility of As in tailings from the Montague and Goldenville sites have been carried out in recent years (Laird *et al.* 2007; Walker *et al.* 2009; Meunier *et al.* 2010a, 2010b, 2011; Corriveau *et al.* 2011a, 2011b; DeSisto *et al.* 2011) but are not discussed in this Open File report.

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GOLD MINING IN NOVA SCOTIA

Location and Geological Setting

There are over 300 documented gold occurrences throughout mainland Nova Scotia from Yarmouth to Guysborough County. Most of these occurrences are located within 64 formal gold districts that were defined by the provincial government in the late 1800s and early 1900s for claiming purposes (Fig. 1; Malcolm 1929; Smith and Goodwin 2009). The gold deposits can be divided into three main types: (1) high-grade (~15 g/t Au), narrow gold-bearing quartz veins; (2) low-grade (0.5–4 g/t Au) slate-argillite hosted; and (3) low-grade (0.5–5.5 g/t Au) meta-sandstone hosted. Almost all historical production has come from high-grade quartz veins located within 200 m of the surface (Ryan and Smith, 1998). These veins are primarily hosted by meta-sandstones and slate of the Cambro-Ordovician Meguma Supergroup, which makes up most of the southern mainland of Nova Scotia (Fig. 1). The Meguma Supergroup consists of the meta-sandstone-dominated Goldenville Group and the overlying slate-dominated Halifax Group, with a combined vertical thickness of at least 11 km (White 2010).

Most of the auriferous quartz veins are located within the Goldenville Group, are structurally controlled, and generally occur in proximity to anticlinal fold hinges (Sangster 1990). The most abundant accessory minerals in the quartz veins include: chlorite, biotite, muscovite, and plagioclase. Carbonates (ferroan dolomite to ankerite and calcite) and sulfides are associated with all types of auriferous veins. Arsenopyrite is the predominant sulfide, with variable amounts of pyrrhotite, pyrite, chalcopyrite, galena and rare sphalerite and molybdenite (Kontak and Jackson 1999, Morelli *et al.* 2005). Although there has been much debate regarding the genesis of these auriferous veins (e.g. Graves and Zentilli 1982; Henderson and Henderson 1987; Haynes 1983, 1987; Smith and Kontak 1987; Kontak *et al.* 1990; Sangster 1990; Morelli *et al.* 2005), high-grade, plunging gold ore shoots within bedding-parallel veins generally provide the best economic potential for mining. Further details on the metallogeny of gold deposits in the Meguma Supergroup can be found in Malcolm (1929), Graves and Zentilli (1982), Sangster (1990), Ryan and Smith (1998), and Sangster and Smith (2007).

Mining, Milling, and Metallurgical History

Bedrock gold mineralization in Nova Scotia was first discovered in 1858 in quartz outcrops near Mooseland along the Tangier River (Heatherington 1868). Mining has since been carried out at 64 formal gold districts, resulting in a total production of approximately 1.2 million troy ounces of gold (Table 1). The majority of this production took place between 1862 and the mid-1940s, and there has been only limited mining of gold deposits since that time (Fig. 2; Bates 1987). A resurgence in the price of gold over the last decade [from US$260/oz. (2001) to >US$1900/oz. (2011)] has led to renewed interest in Nova Scotian deposits, and there are now numerous exploration programs underway, and several new gold mines in development.

Since the first Nova Scotian gold rush in the early 1860s, gold mining and milling processes have generated tailings deposits containing As, Hg, cyanide, and other potentially toxic elements (e.g. antimony (Sb), lead (Pb)). At all mines, stamp milling and Hg amalgamation were the primary methods used for gold extraction. This process involved crushing the ore to sand- or silt-sized material, then washing the pulp over Hg-coated copper plates (Fig. 3a). At most stamp mills in the province, amalgamation plates were located both inside and outside the stamp battery itself, and Hg was also added directly below the stamps in the mortar boxes. Some of the free gold would combine with the Hg to form an amalgam, which was periodically scraped off the plates and heated in a retort to recover the gold. As a general “rule of thumb,” one ounce of Hg was used for each ounce of gold in the ore to obtain satisfactory recovery rates (Phillips 1867; Richards and Locke 1940). Hind (1872) recommended adding 1 1/5 oz. of Hg per ounce of gold in the ore, and also noted an abundance of Hg globules in the tailings at some early milling operations in Nova Scotia. The historical literature suggests that up to three times this amount of Hg was added to the mortar boxes at some mines (Moggridge Kuusisto 1978).

At most stamp mills, 10–25% of the Hg used in the process was lost to the environment through flouring (i.e. subdivision of the amalgam into fine particles), sickening of the Hg (i.e. formation of Hg-sulphides), evaporative losses during retorting, and careless handling of Hg by mill personnel (Henderson 1935; EPS 1978). Considering the total reported gold production of approximately 1.2 million ounces (Table 1), 3700 to 9100 kg of Hg may have been lost to the tailings and/or atmosphere as a direct result of gold milling in Nova Scotia (assuming that 1 oz. of Hg was used for each ounce of gold produced). This estimate of Hg loss is likely a minimum, as it is well-known that the gold production at most mines was routinely under-reported to avoid paying royalties to the Province. Records of Hg loss are relatively scarce in the historical literature; however, MacKenzie (1907) reports a loss of 0.07–0.10 oz. of Hg per ton of

Table 1. Production data for Meguma lode gold deposits, 1862-2011 (sorted by tonnes of ore crushed)

Rank	Mining District	Dates of Operation	Amal.[a]	Chlor.[a]	Cyn.[a]	Ore Crushed (tonnes)	Gold Produced (troy ounces)
1	Goldenville	1862-1941	●		●	540,617	210,153
2	Upper Seal Harbour	1893-1958	●		●	400,516	57,846
3	Lower Seal Harbour	1904-1949	●		●	394,905	34,295
4	Moose River	1888-1989 [b]	●			195,720	28,551
5	Caribou	1869-1968	●		●	168,411	91,359
6	Forest Hill	1895-1989 [b]	●			156,502	46,718
7	Waverley	1862-1940	●	●	●	152,496	73,105
8	Montague	1863-1940	●		●	121,816	68,139
9	Salmon River (Dufferin)	1881-2001	●		●	107,084	49,216
10	Oldham	1862-1946	●			107,080	85,295
11	Brookfield	1887-1936	●	●	●	96,756	43,041
12	Wine Harbour	1862-1939	●		●	75,581	42,727
13	Molega	1888-1950	●			63,926	34,876
14	Renfrew	1862-1958	●			60,389	51,986
15	Mount Uniacke	1867-1941	●			54,256	27,740
16	Fifteen Mile Stream	1878-1988 [b]	●			51,052	19,741
17	Isaacs Harbour	1862-1958	●			48,566	39,654
18	Tangier	1862-1999	●			45,584	26,135
19	Beaver Dam	1889-1989 [b]	●			44,345	2,908
20	Leipsigate	1884-1949	●		●	32,456	12,084
21	Lake Catcha	1882-1961	●			29,462	26,118
22	Country Harbour	1871-1951	●			26,301	9,960
23	Gold River	1889-1940	●			26,223	7,751
24	Cochrane Hill	1868-1990	●		●	24,166	2,081
25	Gays River	1870-1968	●			13,729	2,268
26	East Rawdon	1884-1932	●			13,415	13,494
27	Harrigan Cove	1874-1961	●			12,499	8,071
28	South Uniacke	1888-1948	●			11,070	20,762
29	Whiteburn	1887-1955	●			9,666	11,890
30	Mooseland	1861-1934	●			8,217	3,865
31	Blockhouse	1896-1938	●			5,634	3,588
32	Central Rawdon	1888-1939	●			4,840	6,745
33	West Gore	1905-1939	●			4,713	7,149

Table 1. Production data for Meguma lode gold deposits, 1862-2011 (sorted by tonnes of ore crushed) (cont'd)

Rank	Mining District	Dates of Operation	Amal.[a]	Chlor.[a]	Cyn.[a]	Ore Crushed (tonnes)	Gold Produced (troy ounces)
34	Killag	1889-1951	●			3,415	3,585
35	Kemptville	1885-1939	●			3,110	1,852
36	Ecum Secum	1893-1935	●			2,707	1,276
37	Moosehead	1899-1935	●			2,576	471
38	Fifteen Mile Brook	1902-1934	●			2,518	881
39	Mill Village	1901-1951	●			2,071	910
40	Lawrencetown	1862-1912	●			1,534	867
41	Cow Bay	1896-1937	●			1,326	1,243
42	Miller Lake	1902-1951	●			1,164	539
43	Pleasant River Barrens	1890-1913	●			464	112
44	Carleton	1879-1940	●			431	190
45	Ovens	1862-1958	●			320	544
46	Vogler's Cove	1905	●			181	43
47	Cranberry Head	1870-1900	●			175	119
48	Upper Stewiacke	1906-1907	●			164	44
49	Gold Lake	1890-1899	●			91	39
50	Little Liscomb Lake	1893-1935	●			86	52
51	Stanburn	1933-1936	●			78	13
52	Chezzetcook	1883-1944	●			73	11
53	McKay Settlement	1904-1910	●			68	14
54	Ardoise	1890-1904	●			58	6.8
55	Clam Harbour	1904	●			52	54
56	Lake Charlotte	1938-1964	●			42	78
57	Elmsdale	1890	●			9	1.4
58	Lochaber Mines	1883	●			4.5	2.3
59	Lower Caledonia	1934-1956	●			1.0	3.6
60	Quoddy	1906	●			0.9	1.0
61	West Caledonia	1925	●			0.9	1.7
62	Sheet Harbour	1898-1935	●			NA	431.1
63	Ship Harbour	1935-1937	●			NA	7.4
64	Chegoggin	*c.* 1833	●			NA	NA
					Totals:	3,130,714	1,182,702

[a] Amal. = Amalgamation; Chlor. = Chlorination; Cyn. = Cyanidation.

[b] Ore from 1980s mining was milled in Gays River, NS

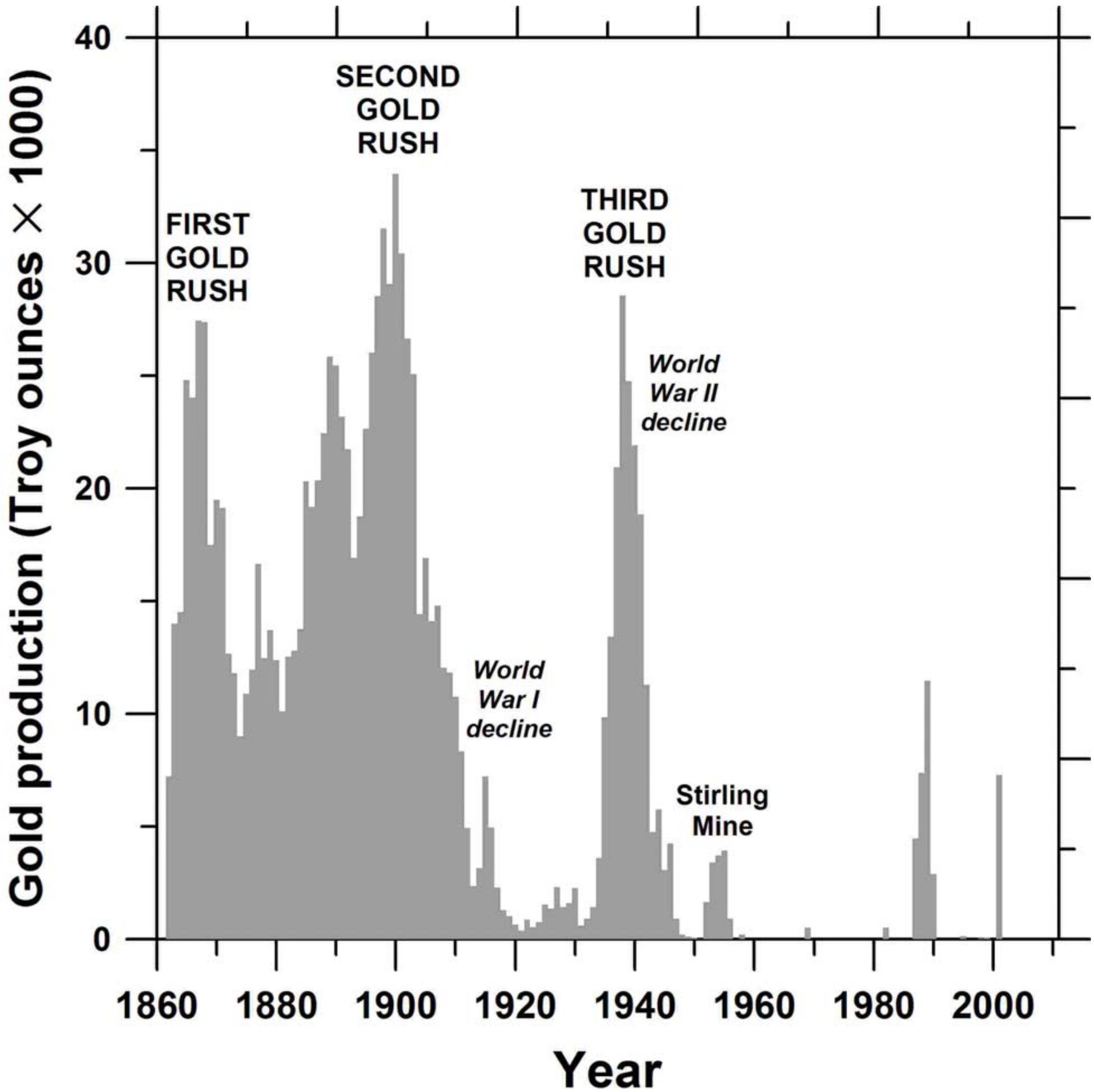
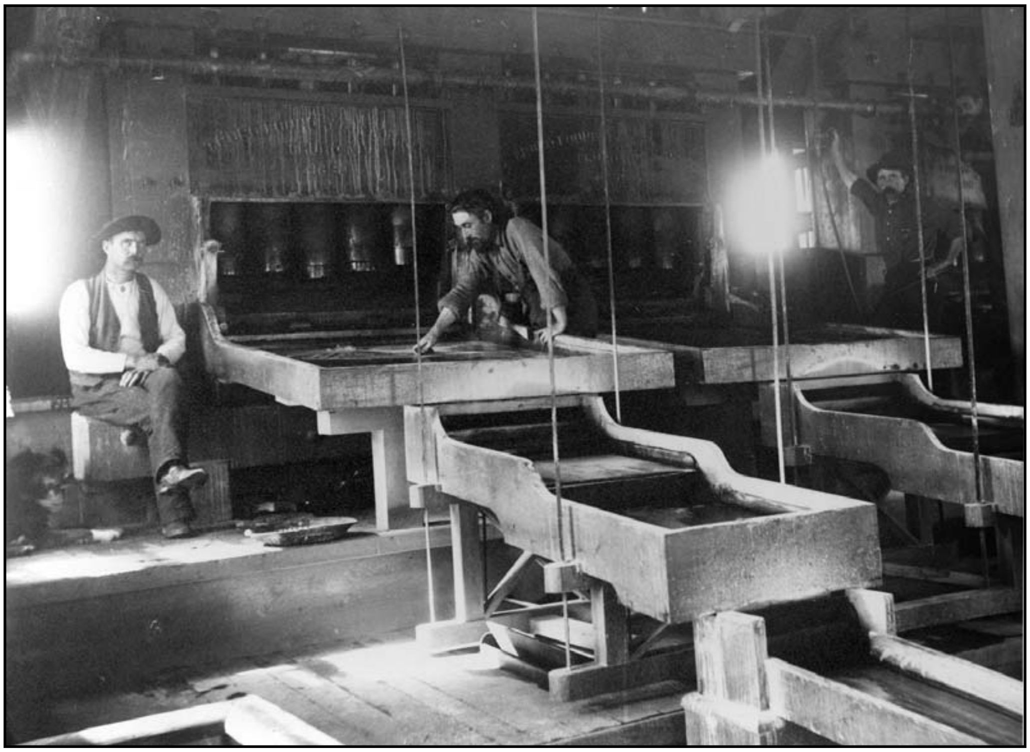


Fig. 2. Production of gold in Nova Scotia from 1862 to 2011 (after Bates (1987), Nova Scotia Department of Mines (1961), and pers. comm. P.K. Smith (2011)).

a)



b)

Fig. 3. (a) Recovery of Hg amalgam from copper-plated amalgam tables in the 20-stamp mill, Dufferin Gold Mine, Salmon River, Nova Scotia, 1893. The suspended shaking tables below the amalgam plates were used to recover sulfide concentrates (predominantly arsenopyrite). Tailings from each table were discharged from the mill via a wooden trough. **(b)** Unconfined tailings disposal into the Tangier River from 10-stamp mill at the Mooseland gold mining district in 1897. Photos taken by E.R. Faribault, Geological Survey of Canada. Reproduced with permission from the Natural Resources Canada Library, Ottawa.

ore crushed in the stamp mill at Lower Seal Harbour, and Henderson (1935) reports an average loss of 0.075–0.177 oz. of Hg per ton of ore crushed at Goldenville. From 1882–1949, a total of approximately 3,130,714 tonnes (3,220,529 short tons) of ore were milled at various gold districts in Nova Scotia (Table 1; Blakeman 1978); therefore, an average Hg loss of 0.1 oz. per ton of ore crushed represents a total loss of about 9100 kg of Hg.

Beginning in the 1890s, gravity separation, roasting, chlorination, and cyanidation were also added to the milling circuit at some mines to recover gold from sulphide minerals and/or amalgamation tailings (Table 1; Forbes, 1904; Malcolm 1912, 1929). Most of the gold in Nova Scotia is "free-milling" (i.e. individual particles can be liberated by crushing), but some also occurs in sulphide minerals such as arsenopyrite and cannot be recovered by amalgamation. A variety of gravity concentration devices (e.g. shaking tables, Frue vanners, Wilfley tables) were used to treat the tailings from the amalgamation plates and separate out the sulphide minerals on the basis of their relatively high specific gravities (Fig. 3a). These concentrates were then leached with sulphuric acid, sodium hypochlorite or sodium cyanide solutions to recover the gold. During cyanidation, other chemicals were also added during the extraction process, including lead nitrate (used to limit the alteration of cyanide to ferrocyanides, sulphocyanates, etc.) and zinc dust (used to precipitate gold from the pregnant cyanide solutions). In general, these leaching procedures met with relatively little success (Parsons 1922) until the construction of a 200-ton-per-day cyanide plant at Lower Seal Harbour in 1936 (Roach 1937, 1940). Prior to the enactment of modern environmental regulations in the 1970s, tailings and process chemicals from all of these gold mills were released directly to the environment (Fig. 3b).

In the early 1920s, there was a sudden increase in the demand for arsenical insecticides in the United States following an announcement in 1919 from the U.S. Bureau of Entomology, stating that calcium arsenate [$Ca(AsO_4)_2$] was the most economical and efficient insecticide yet discovered for fighting the boll weevil infestation in the cotton fields of the southern states (Hurst 1927). This situation prompted the operators of many gold mines in Nova Scotia to improve their recovery of arsenopyrite, and a 1924 survey of As resources in the province revealed approximately 1000 tons of arsenical concentrates (assaying from 15–25% As) stockpiled at various mines (Hurst 1924). The remains of these high-As concentrates, or their weathered equivalents, are exposed near several old mill structures around the province (Fig. 4). At some sites (e.g. Montague) the sulfide concentrates appear to have been disposed on top of the tailings following leaching with cyanide near the end of milling operations (Roach 1940).

Throughout the history of gold mining in Nova Scotia, many companies have investigated the feasibility of extracting gold from the tailings at past-producing mines using improved technology. Reprocessing of historical amalgamation tailings using cyanide was routinely practiced in many districts (Parsons 1922), but amalgamation continued to form part of most mill circuits up until the 1940s (Roach 1940). An increase in the price of gold in the 1970s and 1980s lead to widespread metallurgical testing of tailings deposits around the province, but no large-scale gold-recovery operations from tailings have been carried out since the 1940s for a variety of economic, environmental, and technical reasons (e.g. Glover *et al.* 1983; Jacques Whitford and Associates Ltd. 1984, 1985; Graves 1992; Mills 1997). The recent surge in the price of gold over the last decade has recently led to renewed interest in reprocessing historical mine tailings.

a)

b)

Fig. 4. **(a)** Cemented remains of sulphide concentrate near the former Dufferin 60-stamp mill in the Salmon River Gold District. **(b)** Fine-grained, As-rich residue formed through weathering of sulphide concentrate near a stamp mill foundation at Goldenville. The green colour of the residue at both sites is mainly associated with secondary scorodite ($FeAsO_4 \cdot 2H_2O$).

Previous Environmental Studies

Mine tailings from these early milling operations were generally slurried directly into local rivers, swamps, lakes and the ocean with little or no consideration of their impacts on receiving environments (Fig. 3b). In addition to the Hg added during amalgamation, potentially toxic elements (e.g. As, Cu, Pb, Sb) also occur naturally in the ore, and may be present at relatively high concentrations in the mine wastes. Before the beginning of our research in 2003, there had been only a limited number of environmental studies at gold districts throughout the province (Table 2). The first investigation of human health risks associated with these wastes took place in 1976, when a resident living near a past-producing gold district (Waverley) was diagnosed with chronic arsenic intoxication (Hindmarsh *et al.* 1977). Examination of the patient's dug well established that it was receiving groundwater from both tailings and waste rock deposits, and their tap water contained 5000 μg/L arsenic – 500 times the present-day drinking water guideline of 10 μg/L. A subsequent study of 642 wells in gold districts throughout Nova Scotia revealed that 13% exceeded the 50 μg/L drinking water guideline for As (Grantham and Jones 1977).

The results of these previous studies show that tailings from historical gold mines have high concentrations of both As and Hg, and at some sites (e.g. Caribou, Goldenville, Montague, Oldham), the mine wastes have contaminated downstream environments. Investigations by the Provincial Arsenic Task Force in the late 1970s resulted in a list of recommendations to help protect Nova Scotians from high levels of As in groundwater, and eventually led to the provision of a new public drinking water supply based on treated surface water for residents in the Waverley area. However, as of 2003, the human health and environmental risks associated with tailings in other gold districts remained obscure. Over the last 30 years, ongoing residential development, industrial construction, and recreational activities (e.g. ATV, dirtbike and 4X4 racing) have increased the potential for human exposure to these mine wastes.

In March 2005, NRCan presented a summary of the preliminary results from this project to the Province of Nova Scotia, along with a list of recommendations focusing on reducing potential hazards to human health. Several key issues were highlighted, including the ongoing exposure of recreational users to tailings at several sites, the construction of a cottage in 2004 on mine tailings, and recent results from Environment Canada showing high levels of As in soft shelled clams collected from an intertidal tailings flat in Seal Harbour, NS (Koch *et al.* 2007). The Province quickly established the Historic Gold Mines Advisory Committee (HGMAC) in April 2005, which includes representatives from five provincial and five federal departments. The mandate of the HGMAC is to evaluate the potential ecological and human health risks associated with gold mines throughout Nova Scotia, and to develop recommendations for future management of the tailings sites (http://www.gov.ns.ca/nse/contaminatedsites/goldmines.asp). To date (April 2012), the committee has issued two press releases warning Nova Scotians of potential health hazards at these mines, and advising residents to limit their exposure to tailings. Health warning signs have been posted at the Montague and Goldenville districts, and environmental assessments of both sites were carried out from 2007 to 2008. In May 2005, Fisheries and Oceans Canada issued a precautionary bivalve shellfish closure for Seal and Isaacs harbours, and members of the HGMAC have completed additional studies near other gold mines to determine the extent of As and Hg pollution in the coastal zone. Detailed multi-disciplinary studies from 2004 to 2011 have also helped to clarify the chemistry and mineralogy of the mine

Table 2. Timeline of previous environmental research at Nova Scotia gold mine sites

Date	Event
1976	- Waverley resident diagnosed with chronic As intoxication from drinking well water - Provincial Arsenic Task Force appointed to study As problem in Waverley area, and in other historical gold districts throughout southern Nova Scotia
1977	- Clinical study of As exposure in 92 Waverley residents (Hindmarsh *et al*. 1977) - Grantham and Jones (1977) identify gold mine tailings as main As source - Environment Canada commissions study of Hg at abandoned amalgamation sites
1978	- Mudroch and Sandilands (1978) document elevated As and Hg levels in Waverley area lake sediments—the Hg is attributed to both gold amalgamation and historical production of Hg-fulminate explosives in the Powder Mill Lake area
1981–1982	- Published studies of As in tailings, sediment, water, and biota at Montague Gold Mines (Brooks *et al*. 1981, 1982; Dale and Freedman 1982) - Formation of Federal-Provincial study group to investigate the impact of past gold mining activities on the Shubenacadie Headwater Lakes
1984	- Published studies of As in Nova Scotian groundwater (Meranger *et al*. 1984; Bottomley 1984) document additional contamination near various gold districts
1985–1986	- Environment Canada / N.S. Dept. of the Environment report (Mudroch and Clair 1985, 1986) demonstrates significant contamination of sediment, water, and fish with As and/or Hg in the Waverley and Montague areas - Seabright Resources submits an environmental assessment of their proposed gold tailings recovery project at Oldham, which does not proceed for economic reasons
1988–1989	- Investigation of As and Hg concentrations in tailings, waters, and plants at the Oldham Gold District (Lane *et al.* 1988; 1989)
1998	- Beauchamp *et al.* (2002) report high gaseous Hg fluxes and total gaseous Hg concentrations in air over gold mine tailings at Caribou and Goldenville
1999	- Wong *et al.* (1999) publish results from an Environment Canada study of the dispersion and toxicity of metals derived from mine tailings at Goldenville - Tetford (1999) reports high levels of Hg in white perch near the Caribou gold mine
2002	- Wong *et al.* (2002) publish results from an Environment Canada study of the Caribou Gold District, showing high metal burdens in tailings and lake sediments, high gaseous Hg fluxes, and stream water / sediment toxicity to benthic biota
2003–2012	- Ongoing multi-disciplinary studies by ESS and partners of metal(loid) distribution, transport, speciation, and fate at 14 gold mining districts (Parsons 2007)

tailings (Walker *et al.* 2009; Corriveau *et al.* 2011a, 2011b; DeSisto *et al.* 2011; Jamieson *et al.* (2011); Percival *et al.* (in press)), the bioaccessibility of As (Laird *et al.* 2007; Meunier *et al.* 2010a, 2010b, 2011) and Hg (Welfringer and Zagury 2009), the methylation of Hg in the tailings (Winch *et al.* 2008, 2009), and the biological impacts of As and Hg on terrestrial and marine biota (Koch *et al.* 2007; Moriarty *et al.* 2009; Saunders *et al.* 2009, 2010).

The present report outlines the distribution of tailings at 14 past-producing gold mines (Fig. 1) and the chemical characteristics of mine wastes, stream and lake sediments, and surface waters near these sites. This information can be used to assess the extent of tailings in each gold district and their impact on downstream environments. Data from this study should be useful for assessing ecosystem and human health risks at these sites and for guiding land-use decisions.

STUDY DESIGN

Site selection and field sampling

The first year of this project (2003) focused on identifying gold mines with relatively large volumes of tailings that were likely to contain significant quantities of Hg in the mine wastes based on their processing history (Table 1). Fieldwork included reconnaissance-level sampling of tailings, sediment, and surface water at 13 gold mining districts (Fig. 1): Whiteburn (WB), North Brookfield (NB), Leipsigate (LEI), Mount Uniacke (UNI), East Rawdon (RAW), Montague (MG), Lake Catcha (LC), Mooseland (MSL), Salmon River (renamed Dufferin in 1899) (SR), Goldenville (GD), Cochrane Hill (CH), Upper Seal Harbour (USH), and Lower Seal Harbour (LSH). Samples were collected from areas directly impacted by mining and milling activities, and from background sites to assess regional variations in metal(loid) concentrations.

At most mines, the tailings are overgrown and often difficult to recognize. Therefore, detailed Geological Survey of Canada maps of the Nova Scotia gold districts produced by E.R. Faribault and Hugh Fletcher from 1885 to 1920 proved to be invaluable for locating the mine wastes. These maps are available in digital format from the ESS GEOSCAN bibliographic database (http://geoscan.ess.nrcan.gc.ca/geoscan-index.html) and have also been digitized by the Nova Scotia Department of Natural Resources (http://www.gov.ns.ca/natr/meb/pubs/pubs3gd.asp; Smith and Goodwin 2009). The historical maps were used to help locate the unconfined tailings deposits, which are generally situated in low-lying areas downslope of former stamp mill sites. In the early 1980s, Seabright Resources Inc. mapped and evaluated 28 tailings sites in Nova Scotia for possible recovery of their gold content—these maps were also used to locate sampling sites for the present study (Glover *et al.* 1983; Jacques Whitford and Associates Ltd. 1984, 1985).

In 2004 and 2005, additional tailings and water samples were collected during detailed multi-disciplinary investigations of the Upper and Lower Seal Harbour gold districts. These sites were chosen based on the results of reconnaissance fieldwork in 2003, as they contain large volumes of tailings, are located away from residential areas, and provide an excellent opportunity to study the seasonal variations in surface water chemistry and the biological impacts of elevated As and Hg concentrations on both terrestrial and marine biota.

From 2005 to 2007, field sampling focused on sites where the tailings are being actively reworked by human activities (e.g. off-road vehicle usage) and tailings were collected primarily for research on the mineralogy and bioaccessibility of As. Near-surface tailings samples were collected from the North Brookfield, Montague, Caribou (CAR) and Goldenville districts. Results of mineralogical and bioaccessibility studies have been published elsewhere (Walker *et al.* 2009; Meunier *et al.* 2010a, 2010b, 2011) and are not discussed in the present report.

Field Methods

Sediments and mine waste

In 2003 and 2004, a total of 429 individual tailings samples were collected from 13 gold districts, from Whiteburn in the west to Lower Seal Harbour in the east (Fig. 1). In general, a shovel was used to dig holes for sampling, with typical dimensions of 30-150 cm deep by 40-50 cm wide (Fig. 5a). Sampling locations were chosen based on down-hole variations in the colour and/or texture of the tailings. At most sites, the vertical stratigraphy consisted of a top layer of organic-rich soil, overlying rusty-brown oxidized tailings, transitioning into grey, unoxidized tailings at greater depths. In areas that are relatively unvegetated, weathered tailings are present at surface and the oxic layer extends to depths of 10s of centimetres to >1 m depending on the grain size of the tailings and the degree of weathering (Fig. 5a). Those sites located within wetlands and other water-logged areas consist of dark grey, unoxidized tailings without any oxidized layers. In drier areas, samples were taken from both the oxidized and unoxidized layers to evaluate differences in chemistry and mineralogy. At water-logged sites, one sample from the unoxidized tailings was generally considered sufficient.

On October 31, 2003, nine samples of the top 5-10 cm of surface sediments from Lake Catcha (Fig. 1) were collected using a Ponar grab sampler deployed from a Zodiac inflatable boat. These sediments contained large amounts of organic material and were variably mixed with gold mine tailings from historical milling operations.

In 2005 and 2006, an additional 52 near-surface tailings samples were collected from the Whiteburn, North Brookfield, Montague, Caribou (CAR), and Goldenville gold districts (Fig. 1) for analyses of As mineralogy and bioaccessibility (Walker *et al.* 2009; Meunier *et al.* 2010a, 2010b, 2011). Samples from Caribou were collected along a community walking trail on the tailings and in areas disturbed by all-terrain vehicles, whereas all samples from North Brookfield, Montague and Goldenville were collected in areas frequented by off-road vehicles. All tailings samples except two were visibly oxidized and were selected based on distinct visual characteristics thought to be indicative of different mineralogy. Of the two unoxidized samples, one from Caribou was distinctly arsenopyrite-rich (CAR05-T02) and another from Montague was from saturated tailings immediately beneath a thin layer of wetland vegetation (MG05-T04). At each sampling site, a test pit was excavated to examine the stratigraphy of the tailings, and then 1-2 kg samples were collected at specified depth intervals using a stainless steel hand trowel and plastic sampling containers. In 2007, one additional tailings sample (MG07-S28) was collected from a previously unrecognized and overgrown tailings deposit during background soil sampling at Montague Gold Mines.

a)

b)

Fig. 5. (a) Example of a hand-dug pit in tailings showing oxidized and reduced materials. Base of pit is 75 cm (light brown sandy tailings from 0-45 cm; olive-grey tailings with rusty lenses from 45-58 cm; light grey sandy tailings from 58-75 cm). **(b)** Field filtration of water samples at the Lower Seal Harbour Gold District, August 2004.

All tailings and sediment samples were stored in air-tight, 125 mL high-density polyethylene (HDPE) vials in the field and placed in a cooler at 4°C during transport to the laboratory. Larger samples for bioaccessibility work in 2005 and 2006 were stored in Ziploc® bags before laboratory processing. Appendix A contains brief descriptions and coordinates for all sediment and tailings sample sites, as well the full geochemical dataset for each sample.

Surface water

All waters were collected using field and analytical protocols suitable for low-level (i.e. µg/L, or part-per-billion and ng/L, or part-per-trillion) trace element determinations (Hall 1998; Hall *et al.* 2002). Prior to fieldwork, bottle sets were prepared in the lab by triple-rinsing 60 mL HDPE bottles (Nalgene® 2114-0002) with Milli-Q® water for collection of cation and anion samples, and by triple-rinsing 60 mL polypropylene (PP) bottles (Nalgene® 2110-0002) with Milli-Q® water for collection of Hg samples. Each sampling kit was pre-loaded with five 60 mL bottles: two HDPE bottles for collection of filtered and unfiltered cation samples, one HDPE bottle for collection of samples for anion, dissolved organic carbon (DOC), and alkalinity analyses, and two PP bottles for collection of filtered and unfiltered Hg samples. The sampling kits were also pre-loaded with an all-plastic 50 mL syringe (Norm-Ject® Sterile Luer-Lock Syringe), and several Sterivex™ capsule filters with a 0.45 µm Durapore membrane.

Field sampling was carried out by a two-person team using a “clean-hands / dirty-hands” approach, whereby the “dirty-hands” person collected the surface water sample using a 1 L bottle and made all on-site water quality measurements (e.g. pH, specific conductance, temperature), and the “clean-hands” person carried out the water filtration on-site using non-powdered nitrile gloves and careful handling to prevent contamination of the water samples (Fig. 5b). To condition each bottle, the containers were rinsed on-site with the water that was to be sampled. Duplicate water samples were collected at every tenth sample site (or at least once per day), and travel blanks, acid blanks, and sample blanks were collected each day. Once all samples were processed, they were stored at 4°C in a cooler for transport to the field laboratory.

Within 12 hours of sample collection, 60 mL samples for cation analyses were preserved with 0.5 mL of 8 N ultrapure nitric acid (J.T. Baker® ULTREX II grade), and 60 mL samples for Hg analyses were preserved with 0.5 mL of ultrapure BrCl. Once removed from the field, the samples were stored in the dark at 4°C, and then shipped to the Analytical Method Development Laboratory at GSC Ottawa for analysis within 90 days.

In 2005 and 2006, seasonal water samples were also collected for analysis of inorganic arsenite [As(III)] and arsenate [As(V)] concentrations. Samples were filtered in the field to <0.45 µm and collected in opaque 60 mL HDPE bottles (Nalgene® 2106-0002) to prevent photocatalyzed As(III) oxidation by Fe(III) (Hall *et al.* 1999; McCleskey *et al.* 2004). Within 12 hours of sample collection, the As species in each 60 mL sample were stabilized by adding 3 mL of 0.25 M EDTA, then storing the sample in the dark at 4°C until analysis at GSC Ottawa.

Laboratory Methods

Bulk chemistry of sediments and mine waste

All tailings and sediment samples were homogenized, sub-sampled, and freeze-dried at GSC Atlantic prior to bulk chemical analysis. Analyses of major and trace elements were performed at Acme Analytical Laboratories in North Vancouver, BC. Samples were digested using modified *aqua regia* (0.50 g of sample digested in a solution containing 2.0 ml HCl, 2.0 ml HNO_3 and 2.0 ml H_2O at 95ºC for one hour) and analyzed for 37 to 53 elements following the Acme 1F-MS Ultratrace Inductively Coupled Plasma – Mass Spectrometry (ICP-MS) protocol. Samples with concentrations of As and/or Hg greater than the upper limit of the 1F-MS package were re-analyzed using Acme's 7AR Multi-Element Assay by Inductively Coupled Plasma – Emission Spectrometry (ICP-ES) protocol following *aqua regia* digestion (Appendix A). Certified reference materials STSDs 1-4 (Lynch 1990, 1999) and duplicate samples were used to monitor analytical accuracy and precision, which were generally within ± 5 to 10% of the expected values for most elements (Appendix F). Total carbon content of the tailings and soils was measured in 0.5 g sub-samples at GSC Atlantic using a LECO WR-112 carbon analyser. Organic carbon concentrations were analysed following removal of the inorganic carbon using 1 M HCl. Inorganic carbon concentrations were calculated by difference. Precision and accuracy were approximately ± 0.05 wt.% based on replicate analyses of calibration standards.

Sequential extraction analysis of sediments and mine waste

Sequential extraction analysis (SEA) was used to investigate the mineral hosts for both As and Hg in selected tailings and sediment samples collected from the Upper and Lower Seal harbour districts from 2003-2005. Samples for SEA were placed in air-tight, 125 mL HDPE vials in the field and frozen until analysis. For As, an optimized 7-step sequential extraction procedure was employed (Table 3) and pure samples of arsenopyrite, scorodite and yukonite were used to test the selectivity of the various extraction steps. For Hg, an optimized 7-step sequential extraction procedure was also used (Table 3) and pure samples of cinnabar (HgS) and cinnabar mixed with granite were used to test the reagent selectivity. Further details on the experimental conditions and analytical procedures can be found in Hall *et al.* (2005) and Hall and Pelchat (2005). Results from the SEA on all tailings and sediment samples are tabulated in appendices D and E.

Water analysis

All surface water samples were sent to the Analytical Method Development labs at GSC Ottawa for analyses, which included measurements of cations, anions, Hg and DOC concentrations. Major element concentrations were measured using a PerkinElmer model 3000 DV ICP-ES, and minor and trace elements were measured using a Thermo X7 Series II ICP-MS. Detection of Hg concentrations with values less than 10 ng/L was carried out using a Tekran 2600 Hg analyzer, with a detection limit of 0.5 ng/L. Determinations of anion concentrations were made with a Dionex DX-600 ion chromatograph using an AS-18 column and gradient elution. Dissolved organic carbon was measured on a Shimadzu TOC-5000 analyzer following removal of inorganic carbon using phosphoric acid. Alkalinity measurements of the waters were completed using a PC-Titrate system. Samples for As speciation were analyzed by liquid chromatography-

ICP-MS in a similar manner to that described by Hall *et al.* (1999), but using a Dionex AS7 anion exchange column and gradient elution with 2.5 – 50 mM HNO_3 in 2% methanol as the mobile phase to separate As(III) and As(V). For each type of water analysis, measurements were routinely performed on one or more certified standards of known concentrations. Analytical results for field blanks from each trip were at or below detection limits for all analytes, except for Zn, which ranged from <0.5 – 3.7 µg/L in the laboratory water used to prepare acid and sample blanks in 2003 (this water source was replaced from 2004 onwards). The full geochemical dataset for all waters analyzed during this study is compiled in Appendix B. Results from As speciation analyses on surface waters are tabulated in Appendix C.

Table 3. Sequential extraction schemes used to examine As and Hg partitioning.

As Sequential Extraction Scheme	
Targeted phase	**Reagent**
Adsorbed/exchangeable elements	1.0 M NH_4OAc (2 hr @ pH 7.0) [a]
Carbonates	1.0 M NH_4OAc (2 hr @ pH 5.0)
Amorphous Fe/Al oxides	0.25 M $NH_2OH{\cdot}HCl$ in 0.25 M HCl
Crystalline Fe/Al oxides	1.0 M NH_2OH in 25% HOAc
Scorodite-like	4 M HCl (2 hr)
Arsenopyrite-like	*Aqua regia* (3HCl: 1HNO_3)
Silicates and residuals	HF-$HClO_4$-HNO_3-HCl
Hg Sequential Extraction Scheme	
Targeted phase	**Reagent**
Adsorbed/exchangeable elements	1.0 M NH_4OAc (2 hr @ pH 7.0) [a]
Carbonates	1.0 M NH_4OAc (2 hr @ pH 5.0)
Amorphous Fe/Al oxides	0.25 M $NH_2OH{\cdot}HCl$ in 0.25 M HCl
Crystalline Fe/Al oxides	1.0 M NH_2OH in 25% HOAc
Non-labile organics, elemental Hg	40% (6.4 M) HNO_3
Cinnabar-like	*Aqua regia* (3HCl: 1HNO_3)

[a] OAc = acetate (CH_3COO^-)

RESULTS

Caribou Gold District

The Caribou Gold District is located approximately 10 km south of Upper Musquodobit in the Musquodoboit Valley of Nova Scotia (Fig. 1; 45.056720°, -62.940702°). The geology of this district was mapped by the GSC in 1898 (Faribault 1898a) and a summary of the ore deposit geology and metallogeny can be found in Malcolm (1929) and Smith (1984). The environmental impacts of tailings disposal on lake sediments, biological communities, and air-surface Hg exchange in this district have previously been studied by Tetford (1999) and Wong *et al.* (2002).

Mining and milling history

Gold was first discovered at Caribou in 1867, and milling operations between 1869 and 1968 recovered approximately 91,359 troy oz. of gold from 168,411 tonnes of crushed rock (Table 1). The original milling operations employed small 5- to 15-stamp mills and Hg amalgamation to recover the gold and discharged tailings into Long Lake and into the eastern end of Burkner Lake (Faribault 1898a). In 1902, a 40-stamp mill was erected and a 100-ton cyanide plant was used to treat tailings from some of the former operations (Malcolm 1929). Intermittent mining and milling activities continued at Caribou until 1968 and most of the tailings from these latter operations were deposited in a broad tailings field of approximately 100,000 m^2 that extends into the eastern end of Long Lake (Wong *et al.* 2002). In the late 1980s, several companies conducted surface and underground exploration at Caribou, and the area is still being explored today.

Distribution of As and Hg in mine tailings

On October 28, 2005, tailings were sampled from five sites at Caribou Gold Mines, primarily for research on the mineralogy and bioaccessibility of As (Fig. 6; Walker *et al.* 2009; Meunier *et al.* 2010). Three samples were collected from near-surface (0-8 cm) tailings located along a community walking trail that traverses the tailings and ends in a boardwalk extending into Long Lake (Fig. 7a). Tailings along this trail are generally sand- to silt-sized, well-oxidized near the surface and show evidence of hardpan formation in several areas with obvious scorodite and reddish-brown hydrous ferric oxides (Fig. 7b). One tailings sample (CAR05-T04) was collected in an area where the tailings showed signs of recent off-road vehicle activity, and another (CAR05-T05) was collected in a hardpan area close to a former stamp mill site. At several locations along the community walking trail, dark grey layers of sulfide minerals (primarily arsenopyrite, with minor pyrite) were present on the surface of the tailings, which likely represents sulfide concentrate left over from the milling operations.

As shown in Fig. 8, the bulk concentrations of As in tailings at Caribou are very high, and well in excess of the 12 mg/kg guideline recommended by the Canadian Council of Ministers of the Environment for the protection of environmental and human health (CCME 1997). The As concentration in sample CAR05-T02 (250,400 mg/kg) was the fourth highest of the 482 samples collected throughout this study, reflecting the abundance of arsenopyrite in this sample. Mercury concentrations in these tailings samples were also high (Fig. 9), with two samples along the walking trail exceeding the 6.6 mg/kg guideline for residential and parkland soils (CCME 1999).

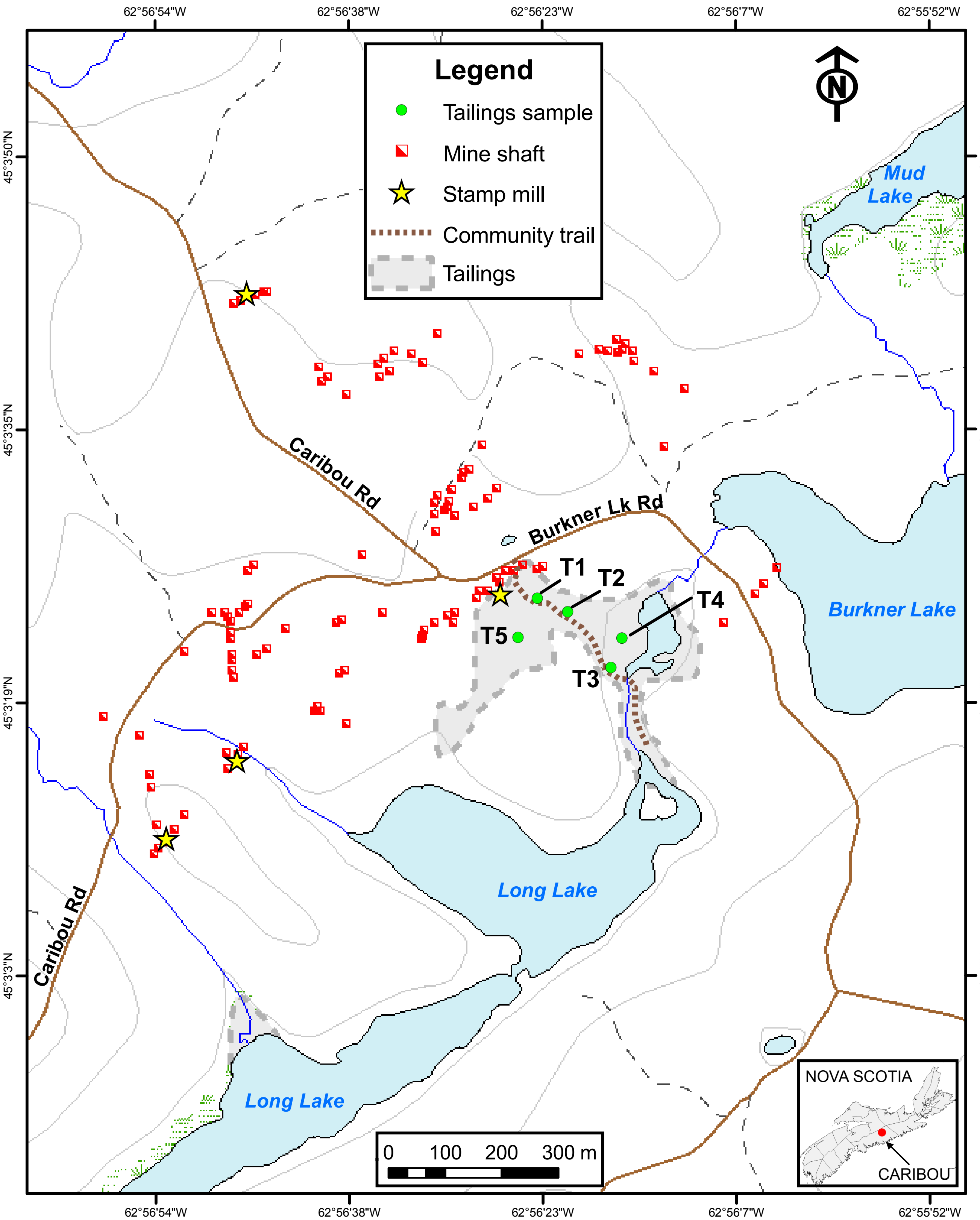


Fig. 6. Location of tailings samples, Caribou Gold District (geographic centre of map (decimal degrees): 45.056720°, -62.940702°)

a)

b)

Fig. 7. (a) Community walking trail over vegetated tailings at Caribou Gold Mines. **(b)** Well-oxidized tailings from middle of walking trail showing reddish-brown hydrous ferric oxides.

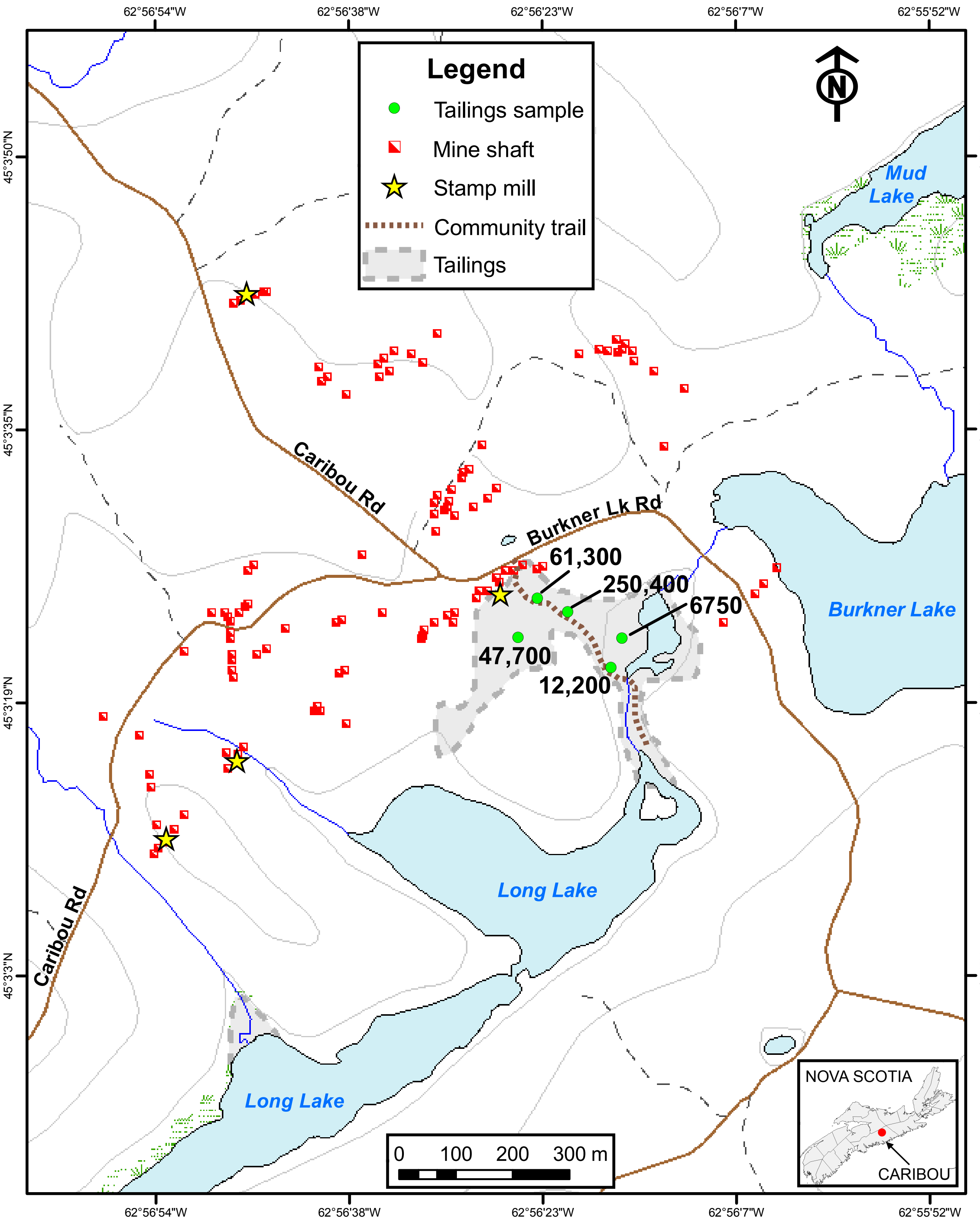


Fig. 8. As concentrations (mg/kg) in Caribou tailings (<2 mm size fraction)

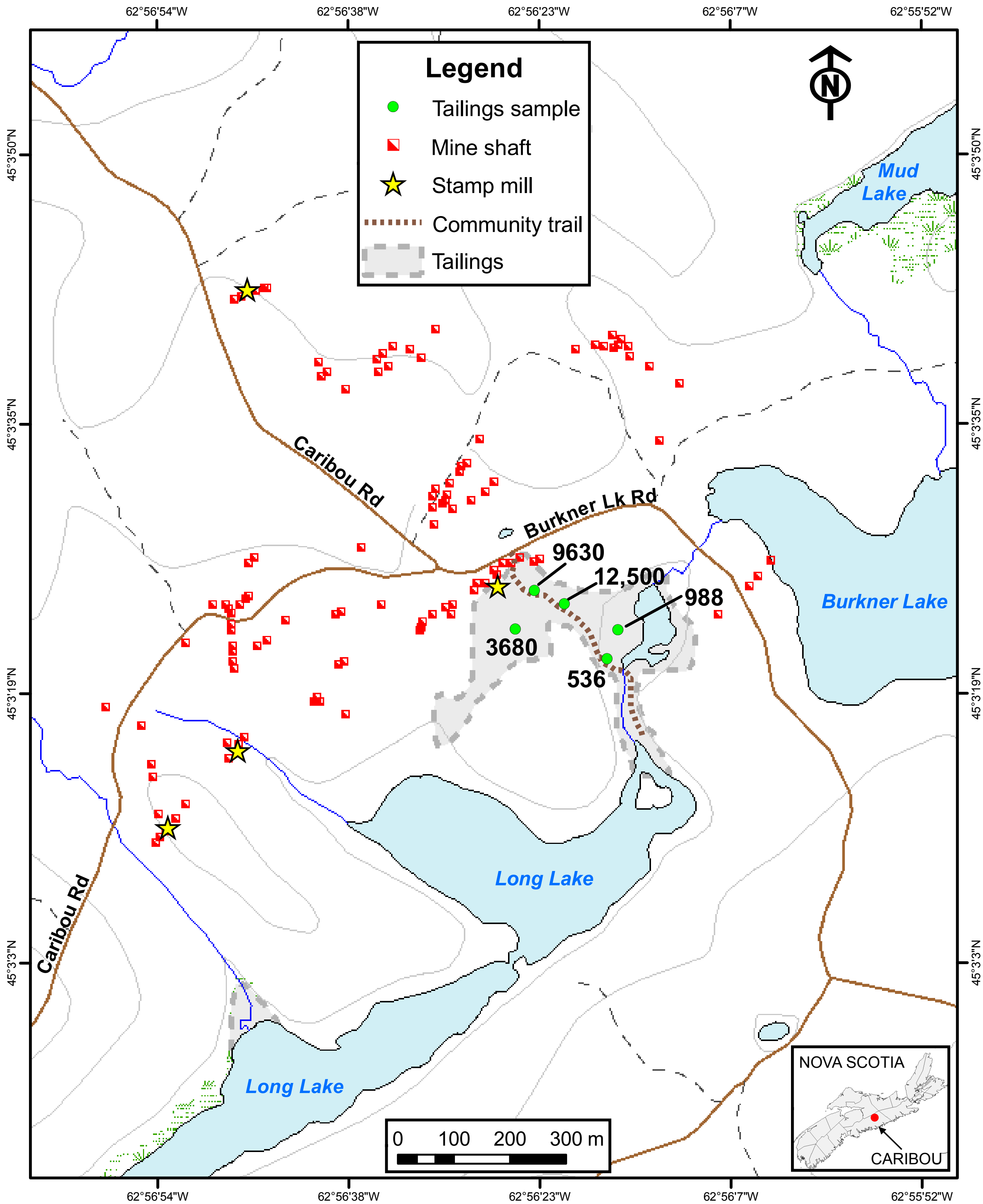


Fig. 9. Hg concentrations (μg/kg) in Caribou tailings (<2 mm size fraction).

Cochrane Hill Gold District

The Cochrane Hill Gold District is located approximately 15 km north of Sherbrooke in Guysborough County on the eastern shore of Nova Scotia (Fig. 1; 45.251142°, -62.017729°). The geology of this district was mapped by the GSC in 1904 (Faribault 1904) and the deposit metallogeny has been described in detail by Smith (1982, 1983). Most of the information in this section is summarized from the results of a collaborative study between NRCan and Dalhousie University on the environmental impacts of tailings disposal at Cochrane Hill (Mosher 2004).

Mining and milling history

Gold was first discovered at Cochrane Hill in 1868, and there have been two main periods of mining operations. The first stage lasted from 1868 to 1928, when various 10- to 20-stamp mills and Hg amalgamation were used to recover the gold. During this period production was episodic and the mine stood idle for years at a time (Malcolm 1929). These early milling operations recovered approximately 1,192 troy oz. of gold from 10,568 tonnes of crushed rock (NSDM 1961) and all tailings were discharged into a small wetland and brook down-slope of the stamp mills. Throughout the second stage of mining, from 1981 to 1990, ball milling and cyanidation were used to extract an additional 889 troy oz. of gold from 13,598 tonnes of crushed rock (Table 1; Coates and Freckelton 1989). Dewatered tailings from these latter operations were deposited in an unlined tailings impoundment behind water retention dams (Fig. 10; Maltby 1982; Mosher 2004) and were subsequently leveled, covered with a layer of topsoil and re-vegetated in fall 2004. Recent diamond drilling results have identified additional gold reserves at Cochrane Hill and the property is now being considered for an open-pit mining operation.

Distribution of As and Hg in mine tailings and surface waters

Tailings were sampled at Cochrane Hill on September 24 and 25, 2003 at 16 sites distributed throughout the old and new tailings (Figs. 10, 11). At most sampling sites, the tailings displayed a well-developed vertical stratigraphy, with reddish-brown oxidized tailings overlying grey unoxidized tailings. In waterlogged areas, the tailings were generally unoxidized and dark grey. In the recent cyanidation tailings, alternating bands of sandy tailings and clay rich tailings were evident in some holes. Arsenic concentrations in the tailings range from 275 to 178,000 mg/kg, and are highest near the stamp mill site (Table 4; Fig. 12). The concentrations of Hg in the tailings reflect the change in ore processing methods over time, ranging from 14-63,200 µg/kg in the amalgamation tailings and <5-25 µg/kg in the 1980s cyanidation tailings (Table 4; Fig. 13).

On November 4 and 5, 2003, water was sampled from nine sites along McKeen Brook, which runs from a pond near the northeast corner of the tailings impoundment, west along the north edge of the impoundment, through the old tailings and then turns northward (Fig. 14, 15a). Water was also collected from standing water on the cyanidation tailings (W8, Fig. 15b) and from pore water in the cyanidation tailings (W12) and the amalgamation tailings (W10). As shown in Figs. 16 and 17, the concentrations of As and Hg, respectively, are locally elevated in standing water near the mine site, but have relatively little impact on the downstream waters of McKeen Brook. The pH of most waters draining these tailings ranged from 5 to 6, although a more acidic pH value (3.5) was measured in standing water on the cyanidation tailings (Appendix B).

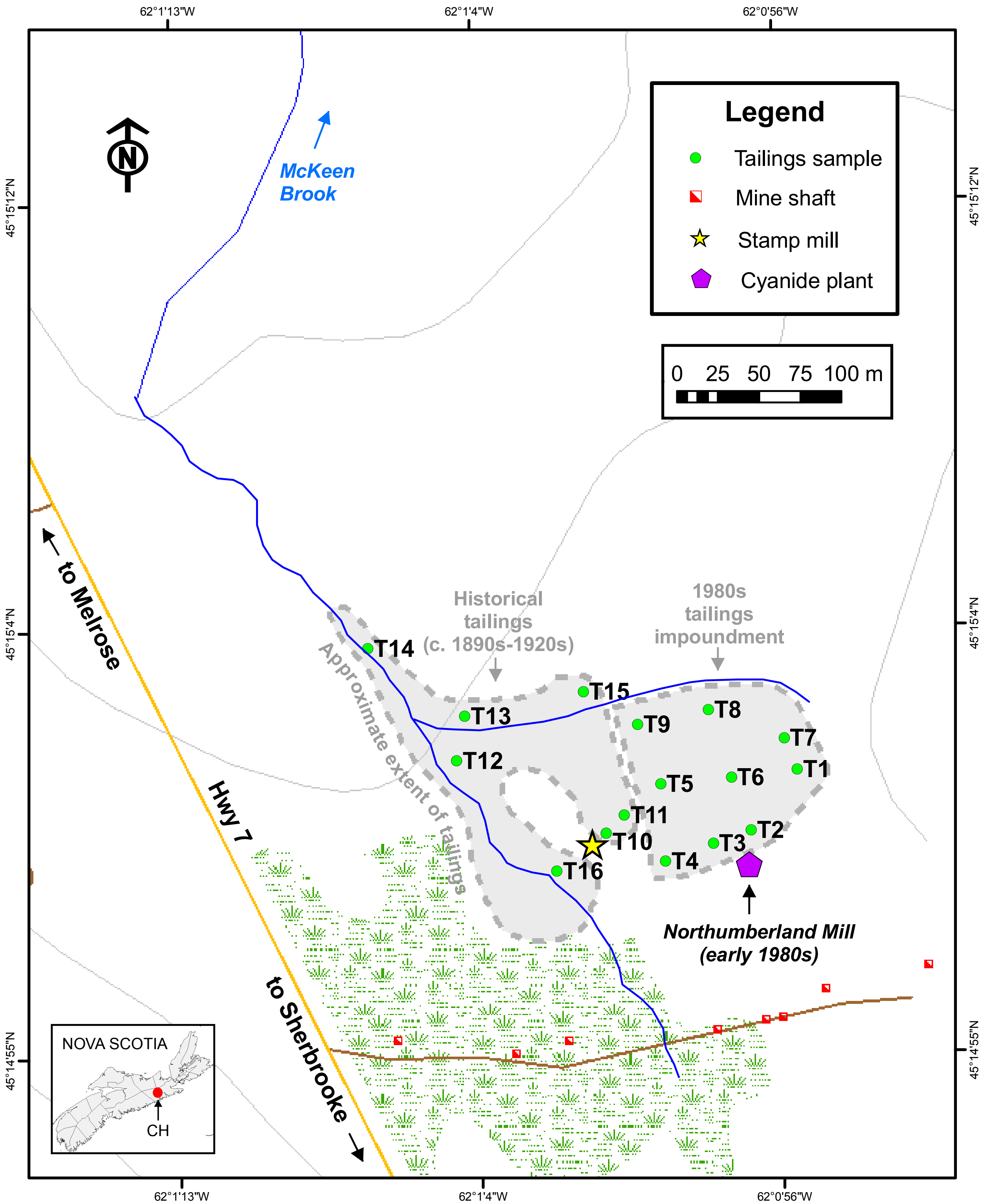


Fig. 10. Location of tailings samples, Cochrane Hill Gold District (geographic centre of map (decimal degrees): 45.251142°, -62.017729°)

a)

b)

Fig. 11. (a) Overview of 1980s cyanidation tailings at Cochrane Hill, prior to their remediation in 2004. The moss-covered area in the foreground is where drums of spent cyanide solution were buried then covered with lime. Blue, efflorescent coatings on the surface of the tailings near these drums are iron-cyanide salts. **(b)** Sampling overgrown amalgamation tailings along McKeen Brook.

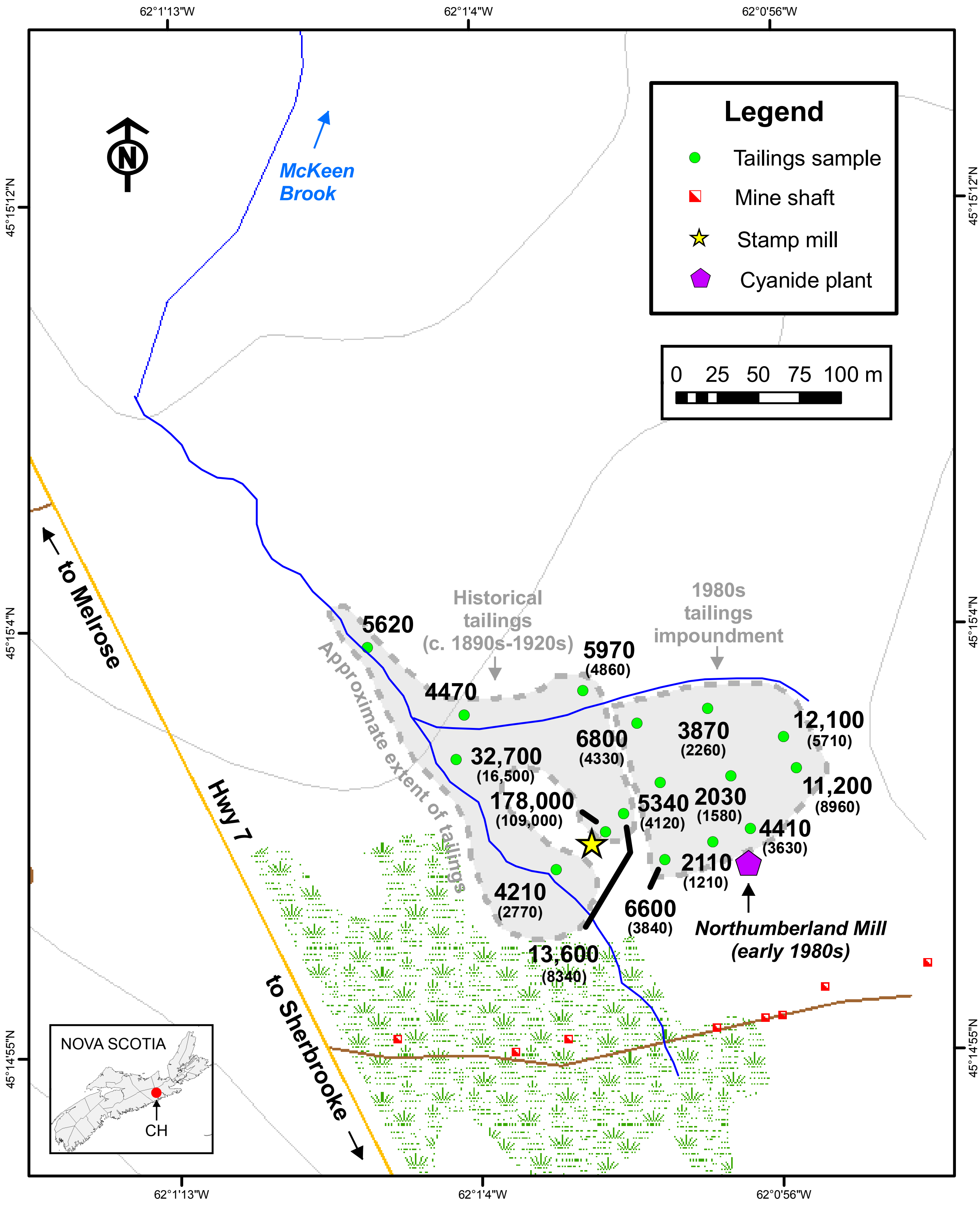


Fig. 12. As concentrations (mg/kg) in Cochrane Hill tailings (maximum and (mean) concentrations; <2 mm size fraction)

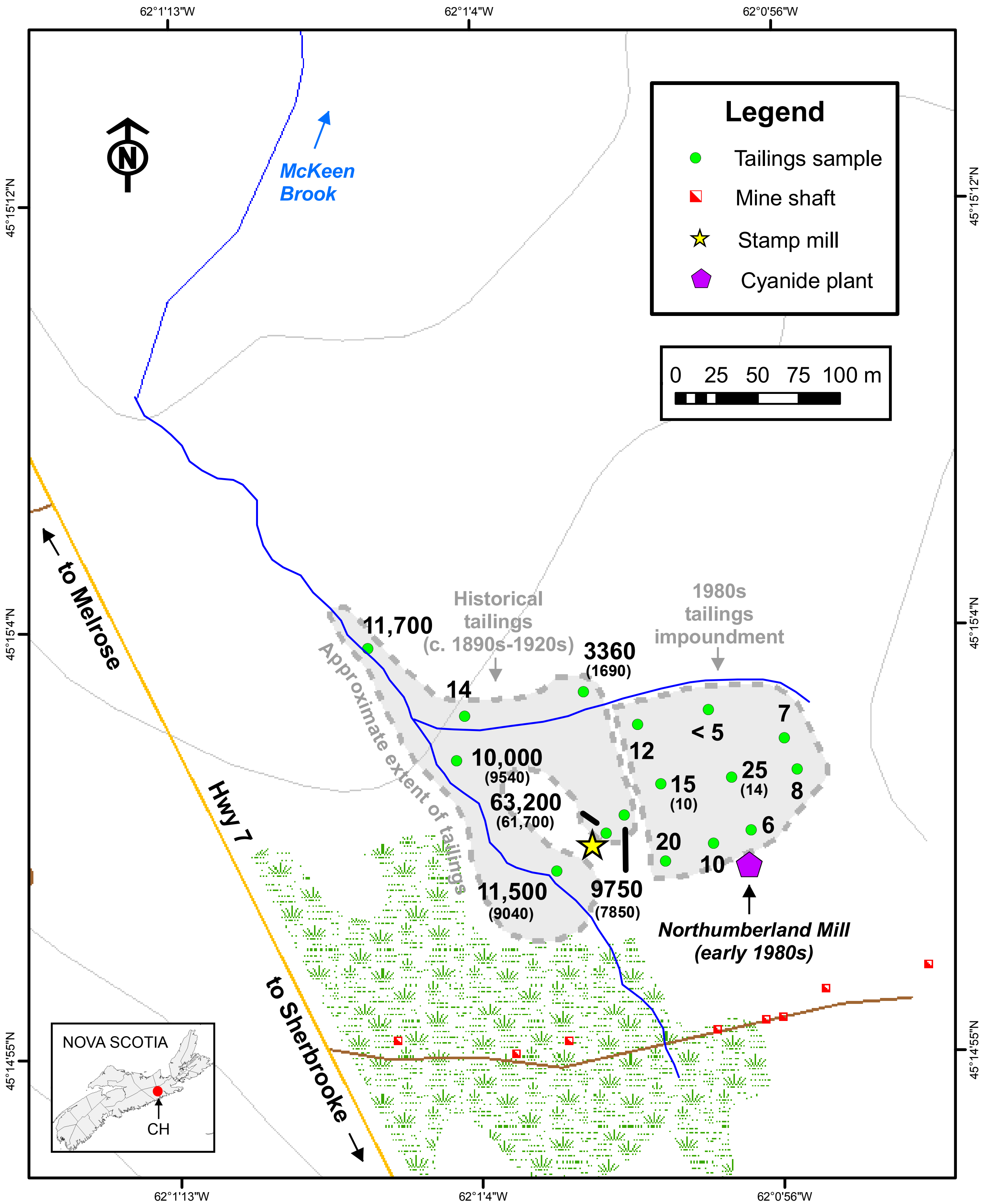


Fig. 13. Hg concentrations (µg/kg) in Cochrane Hill tailings (maximum and (mean) concentrations; <2 mm size fraction)

Table 4. As and Hg concentrations in tailings, Cochrane Hill Gold District

Sample Site	Tailings Depth (cm)	Northing (20T, NAD 83)	Easting (20T, NAD 83)	Date	As (mg/kg)	Hg (µg/kg)
T1	10	5011219	0577264	24-Sep-03	7960	7
T1	27	5011219	0577264	24-Sep-03	11200	< 5
T1	50	5011219	0577264	24-Sep-03	7710	8
T2	15	5011182	0577236	25-Sep-03	4410	5
T2	32	5011182	0577236	25-Sep-03	2370	6
T2	50	5011182	0577236	25-Sep-03	4090	< 5
T3	10	5011174	0577213	25-Sep-03	2110	10
T3	22	5011174	0577213	25-Sep-03	1940	6
T3	36	5011174	0577213	25-Sep-03	844	< 5
T3	50	5011174	0577213	25-Sep-03	392	< 5
T3	70	5011174	0577213	25-Sep-03	781	7
T4	20	5011163	0577184	25-Sep-03	6600	10
T4	35	5011163	0577184	25-Sep-03	1770	< 5
T4	60	5011163	0577184	25-Sep-03	4540	14
T4	80	5011163	0577184	25-Sep-03	2450	20
T5	30	5011210	0577181	25-Sep-03	5340	6
T5	64	5011210	0577181	25-Sep-03	3830	15
T5	85	5011210	0577181	25-Sep-03	3200	10
T6	16	5011214	0577224	25-Sep-03	2030	11
T6	29	5011214	0577224	25-Sep-03	1990	25
T6	46	5011214	0577224	25-Sep-03	1030	11
T6	60	5011214	0577224	25-Sep-03	1280	7
T7	10	5011238	0577256	25-Sep-03	3470	7
T7	24	5011238	0577256	25-Sep-03	2920	6
T7	26	5011238	0577256	25-Sep-03	4350	6
T7	67	5011238	0577256	25-Sep-03	12100	< 5
T8	7	5011255	0577210	25-Sep-03	3870	< 5
T8	54	5011255	0577210	25-Sep-03	1330	< 5
T8	64	5011255	0577210	25-Sep-03	1580	< 5
T9	13	5011246	0577167	25-Sep-03	6800	12
T9	22	5011246	0577167	25-Sep-03	3820	5
T9	55	5011246	0577167	25-Sep-03	2380	< 5
T10	13	5011180	0577148	25-Sep-03	40700	63200
T10	21	5011180	0577148	25-Sep-03	178000	60200
T11	10	5011191	0577159	25-Sep-03	8230	7410
T11	16	5011191	0577159	25-Sep-03	13600	9750
T11	22	5011191	0577159	25-Sep-03	3240	6400
T12	3	5011224	0577057	25-Sep-03	32700	10000
T12	10	5011224	0577057	25-Sep-03	275	9060
T13	8	5011251	0577062	25-Sep-03	4470	14
T14	0	5011292	0577003	25-Sep-03	5620	11700
T15	16	5011266	0577134	25-Sep-03	5970	21
T15	26	5011266	0577134	25-Sep-03	3760	3360
T16	7	5011157	0577118	25-Sep-03	4210	6580
T16	20	5011157	0577118	25-Sep-03	1330	11500

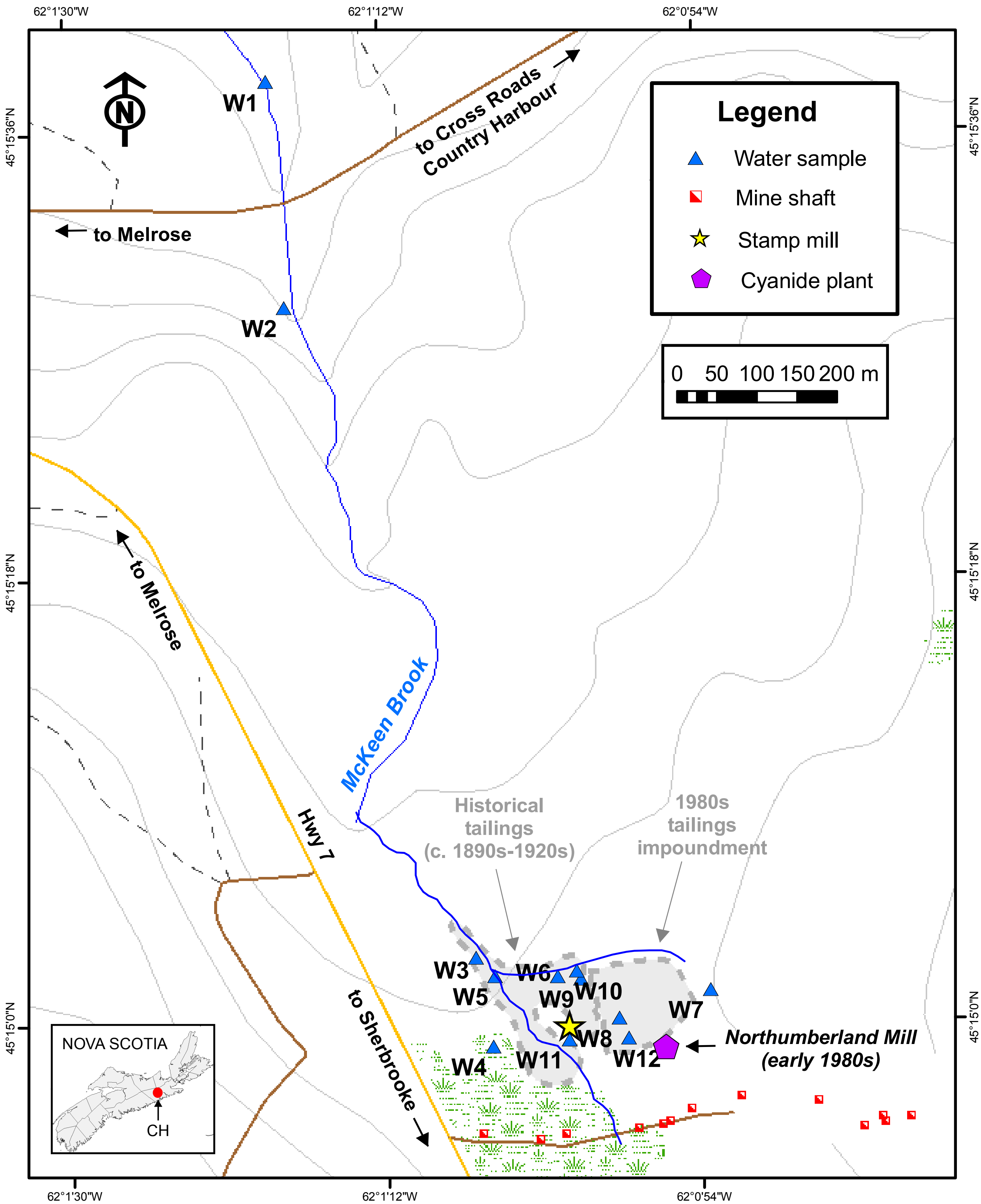


Fig. 14. Location of surface water samples, Cochrane Hill Gold District, November 2003 (geographic centre of map (decimal degrees): 45.254702°, -62.018267°)

a)

b)

Fig. 15. (a) Water sampling in the Cochrane Hill Gold District along McKeen Brook near Site W5. The streambanks in this area consist of amalgamation tailings intermixed with organic-rich sediment. **(b)** Sampling standing water on 1980s cyanidation tailings near site W8.

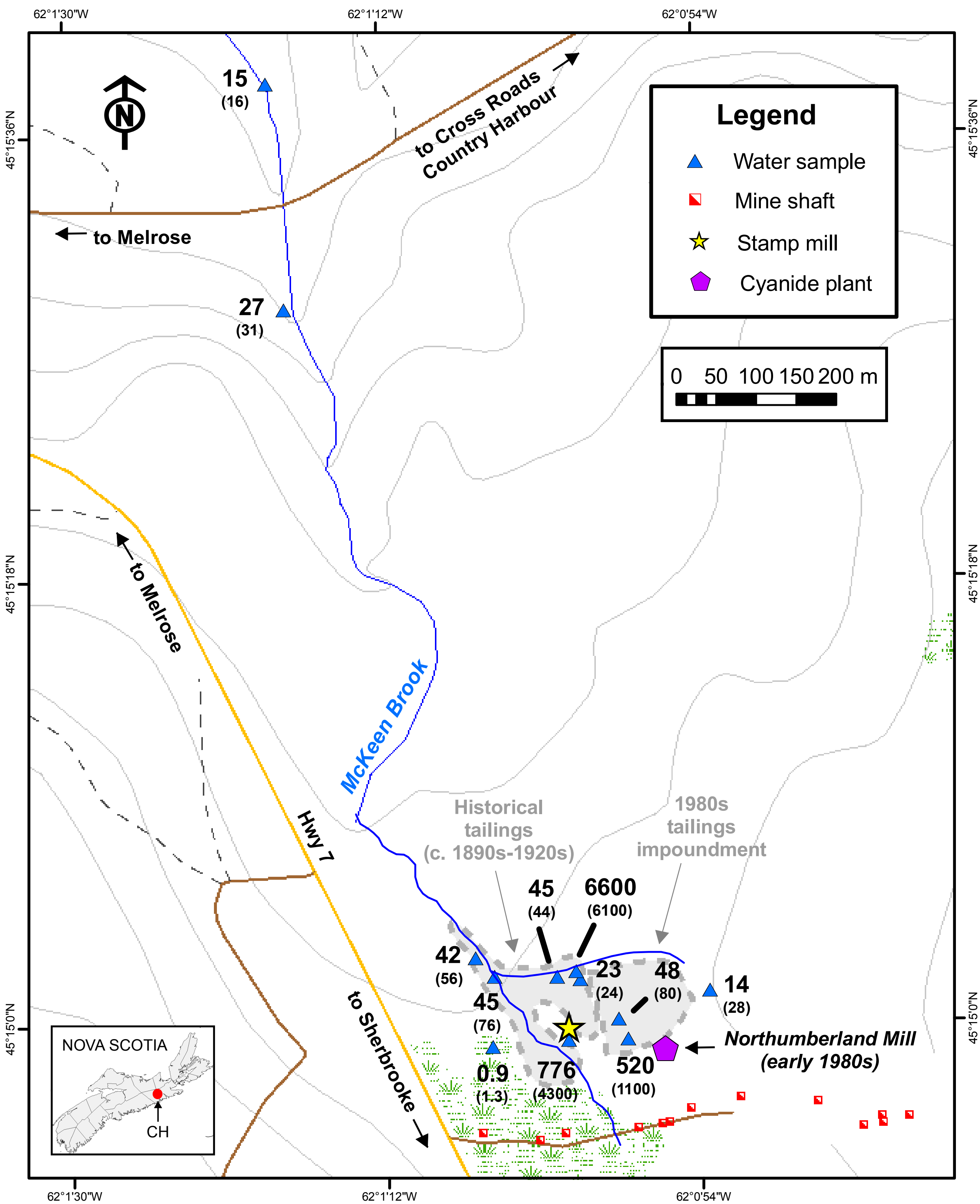


Fig. 16. As concentrations (µg/L) in surface water samples, Cochrane Hill Gold District, November 2003 (dissolved [<0.45 µm] and (total) concentrations)

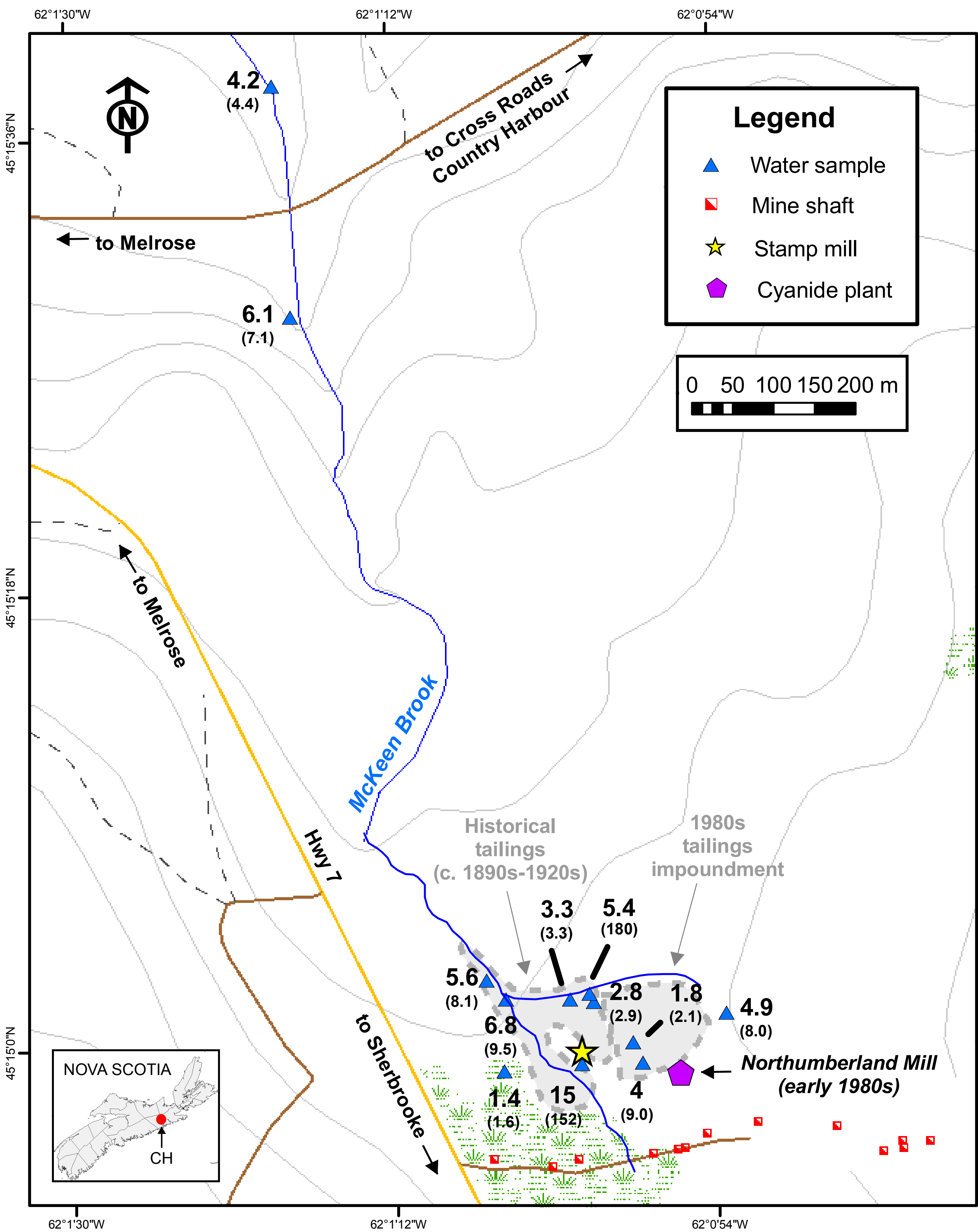


Fig. 17. Hg concentrations (ng/L) in surface water samples, Cochrane Hill Gold District, November 2003 (dissolved [<0.45 µm] and (total) concentrations)

East Rawdon Gold District

The East Rawdon Gold District is located approximately 1.6 km southeast of the community of Rawdon Gold Mines in Hants County, Nova Scotia, and can be accessed via a private road off Highway 14 (Fig. 1; 45.044223°, -63.749137°). The geology of this district is briefly described by Malcolm (1929). The area surrounding the historical mine workings is flat lying, contains numerous waste rock piles, and has recently been forested.

Mining and milling history

As compared to most other gold districts examined during this study, mining and milling activities at East Rawdon were small in scale. Gold was first discovered at East Rawdon in 1884, and mining occurred intermittently until 1932. Approximately 13,494 troy oz. of gold were recovered from 13,415 tonnes of crushed rock (Table 1) and all milling was carried out using 10- to 25-stamp mills and Hg amalgamation. Most of the tailings from these operations were deposited into a wetland immediately south of the main stamp mill site.

Distribution of As and Hg in mine tailings and surface waters

Tailings samples were collected from 12 sites at East Rawdon on May 8 and July 8, 2003 (Fig. 18). The remains of the stamp mill at this district had recently been bulldozed exposing some of the worn shoes (base of the stamps) and dies (wearing surface on which the ore was crushed) from the former milling operations (Fig. 19a). Most of the tailings are located in a flat area that borders a wetland along Gulf Brook (Fig. 19b), but one sample (RAW03-T13) was collected from a smaller, overgrown tailings deposit near the base of a waste rock pile. The tailings at East Rawdon are well-oxidized near the surface and one trench near the edge of the wetland showed evidence of deep weathering with the transition to unoxidized tailings occurring at ~150 cm depth. The range in As (58-10,600 mg/kg) and Hg (2520-21,400 µg/kg) concentrations in these tailings is typical for early amalgamation tailings (Figs. 20, 21), with the highest concentrations occurring in reddish-brown oxidized layers with abundant hydrous ferric oxides (Table 5).

On July 9, 2003, water was sampled from five sites within the wetland along Gulf Brook, which runs northeast to southwest through the tailings deposit (Fig. 22, 23a). As shown in Figs. 24 and 25, the concentrations of As and Hg, respectively, are slightly higher in waters near the main tailings area, but have not had a significant impact on the downstream waters of Gulf Brook. The pH of waters throughout the wetland ranged from 6.2 to 6.5 (Appendix B).

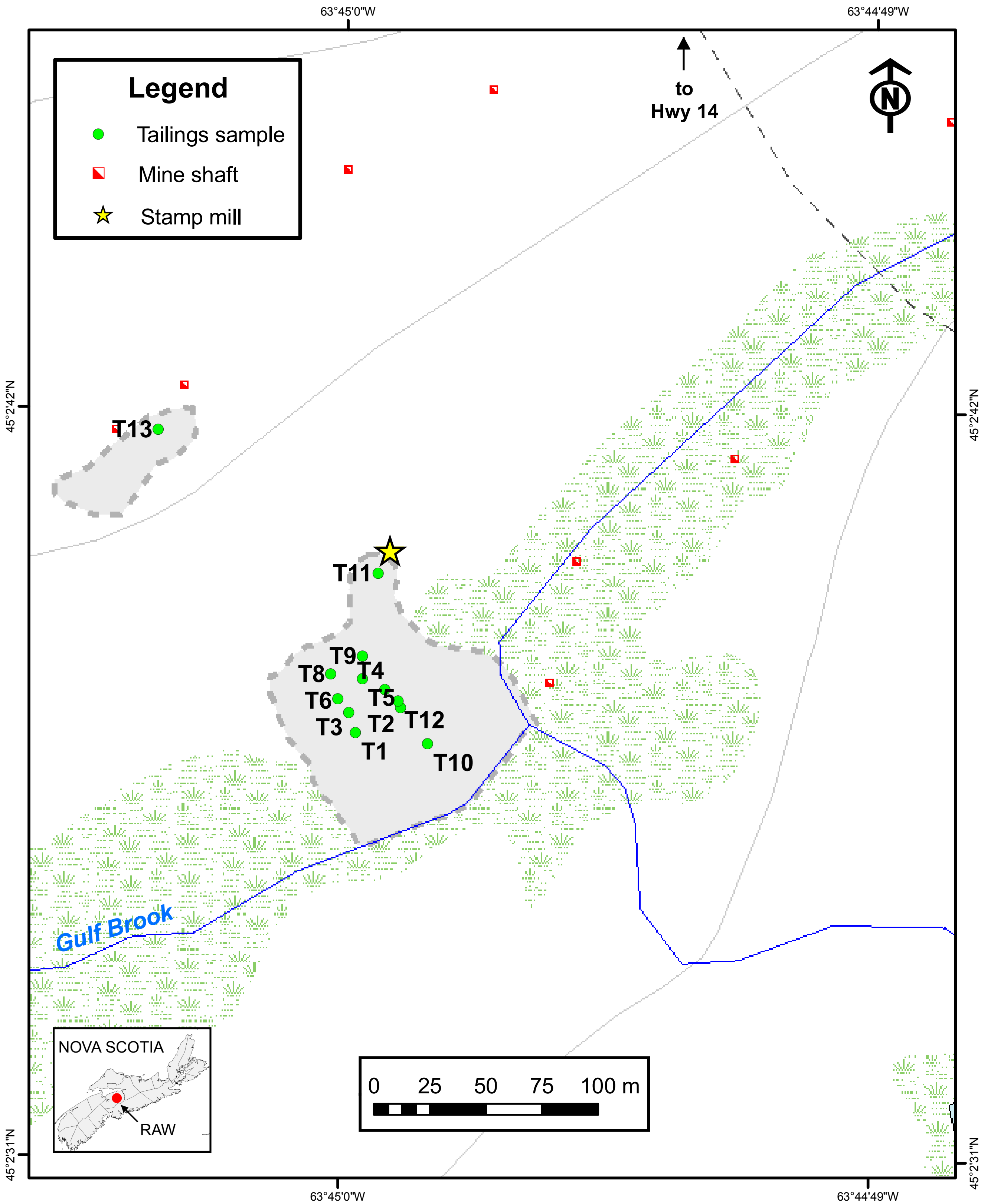


Fig. 18. Location of tailings samples, East Rawdon Gold District (geographic centre of map (decimal degrees): 45.044223°, -63.749137°)

a)

b)

Fig. 19. (a) Worn stamp shoe (centre of image, with vertical stem) and dies (cylindrical crushing surfaces) from former stamp mill at the East Rawdon Gold District. **(b)** Tailings deposit near stamp mill site bordering wetland along Gulf Brook.

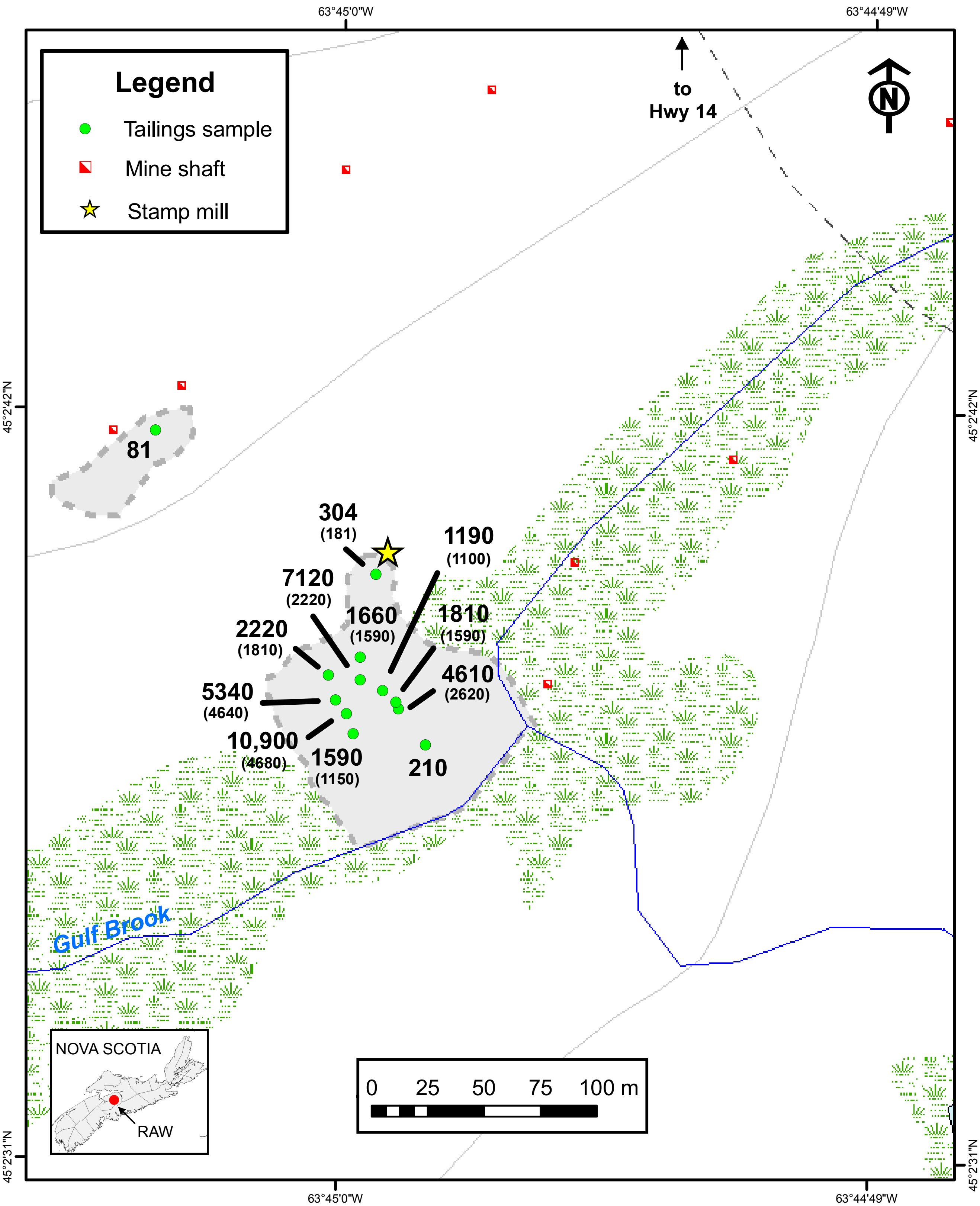


Fig. 20. As concentrations (mg/kg) in East Rawdon tailings (maximum and (mean) concentrations; <2 mm size fraction)

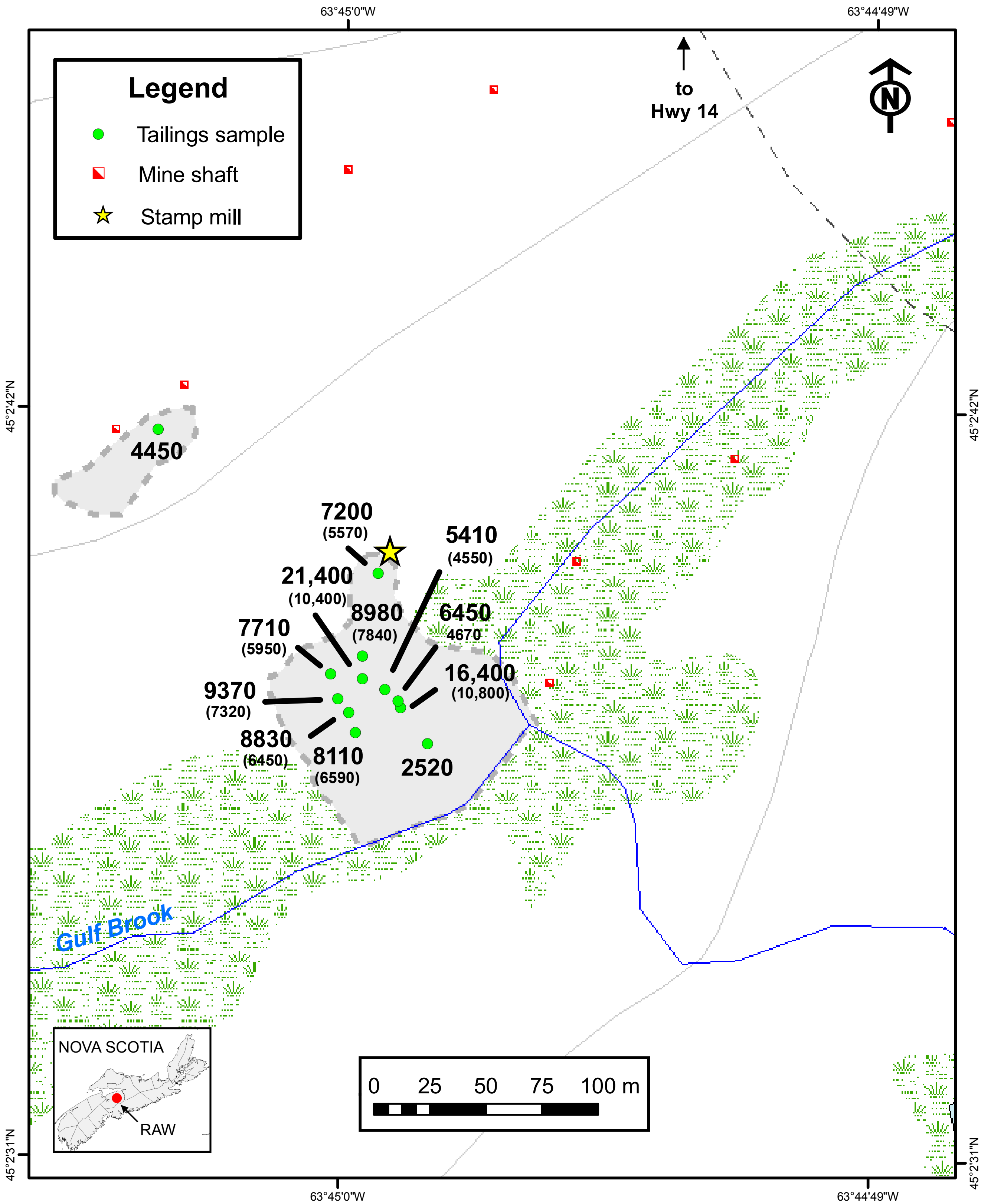


Fig. 21. Hg concentrations (µg/kg) in East Rawdon tailings (maximum and (mean) concentrations; <2 mm size fraction)

Table 5. As and Hg concentrations in tailings, East Rawdon Gold District

Sample Site	Tailings Depth (cm)	Northing (20T, NAD 83)	Easting (20T, NAD 83)	Date	As (mg/kg)	Hg (µg/kg)
T1	15	4988079	0440941	8-Jul-03	1590	8110
T1	40	4988079	0440941	8-Jul-03	706	5080
T2	10	4988090	0440961	8-Jul-03	1810	6450
T2	60	4988090	0440961	8-Jul-03	1360	2880
T3	10	4988088	0440938	8-Jul-03	1280	5500
T3	30	4988088	0440938	8-Jul-03	10900	8830
T3	50	4988088	0440938	8-Jul-03	1900	5010
T4	10	4988098	0440954	8-Jul-03	1020	5410
T4	70	4988098	0440954	8-Jul-03	1190	3690
T5	20	4988103	0440944	8-Jul-03	7120	14900
T5	50	4988103	0440944	8-Jul-03	3640	21400
T5	80	4988103	0440944	8-Jul-03	780	4750
T5	110	4988103	0440944	8-Jul-03	1040	6370
T5	140	4988103	0440944	8-Jul-03	659	3800
T5	170	4988103	0440944	8-Jul-03	67	11000
T6	20	4988094	0440933	8-Jul-03	5340	5260
T6	50	4988094	0440933	8-Jul-03	3940	9380
T8	25	4988105	0440930	8-Jul-03	2220	7710
T8	40	4988105	0440930	8-Jul-03	1400	4200
T9	10	4988113	0440944	8-Jul-03	1660	8980
T9	50	4988113	0440944	8-Jul-03	1520	6700
T10	30	4988074	0440973	8-Jul-03	211	2520
T11	15	4988150	0440951	8-Jul-03	58	7200
T11	40	4988150	0440951	8-Jul-03	304	3950
T12	10	4988093	0440960	8-May-03	4610	5140
T12	40	4988093	0440960	8-May-03	635	16400
T13	10	4988214	0440853	8-May-03	81	4460

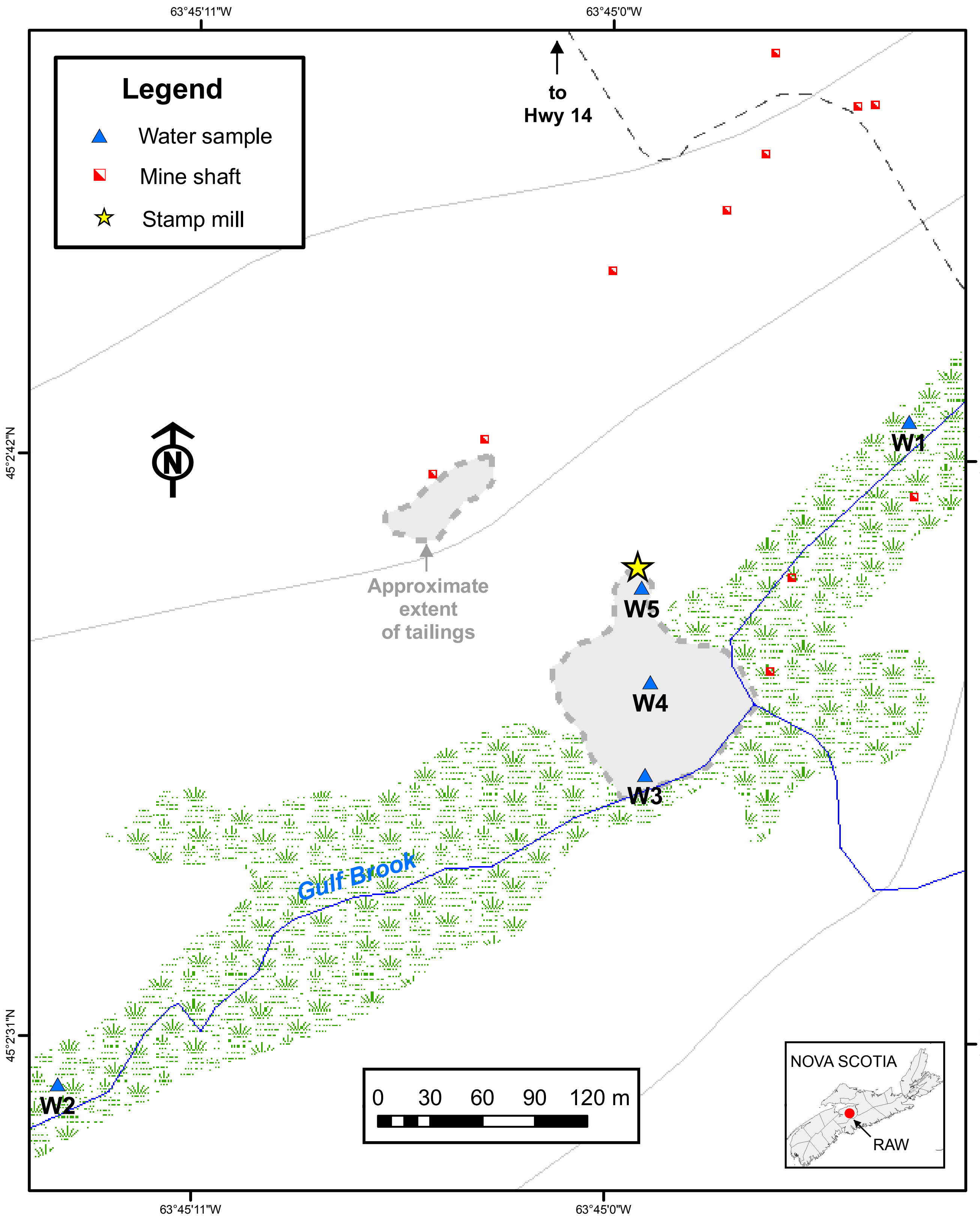


Fig. 22. Location of surface water samples, East Rawdon Gold District, July 2003 (geographic centre of map (decimal degrees): 45.044212°, -63.750787°)

a)

b)

Fig. 23. (a) Water sampling Site W4 in the East Rawdon Gold District. Tailings are present in the foreground of this picture, and extend well into the wetland along Gulf Brook. **(b)** Sampling Site W5 near the water intake pipe (shown in background) for the former stamp mill.

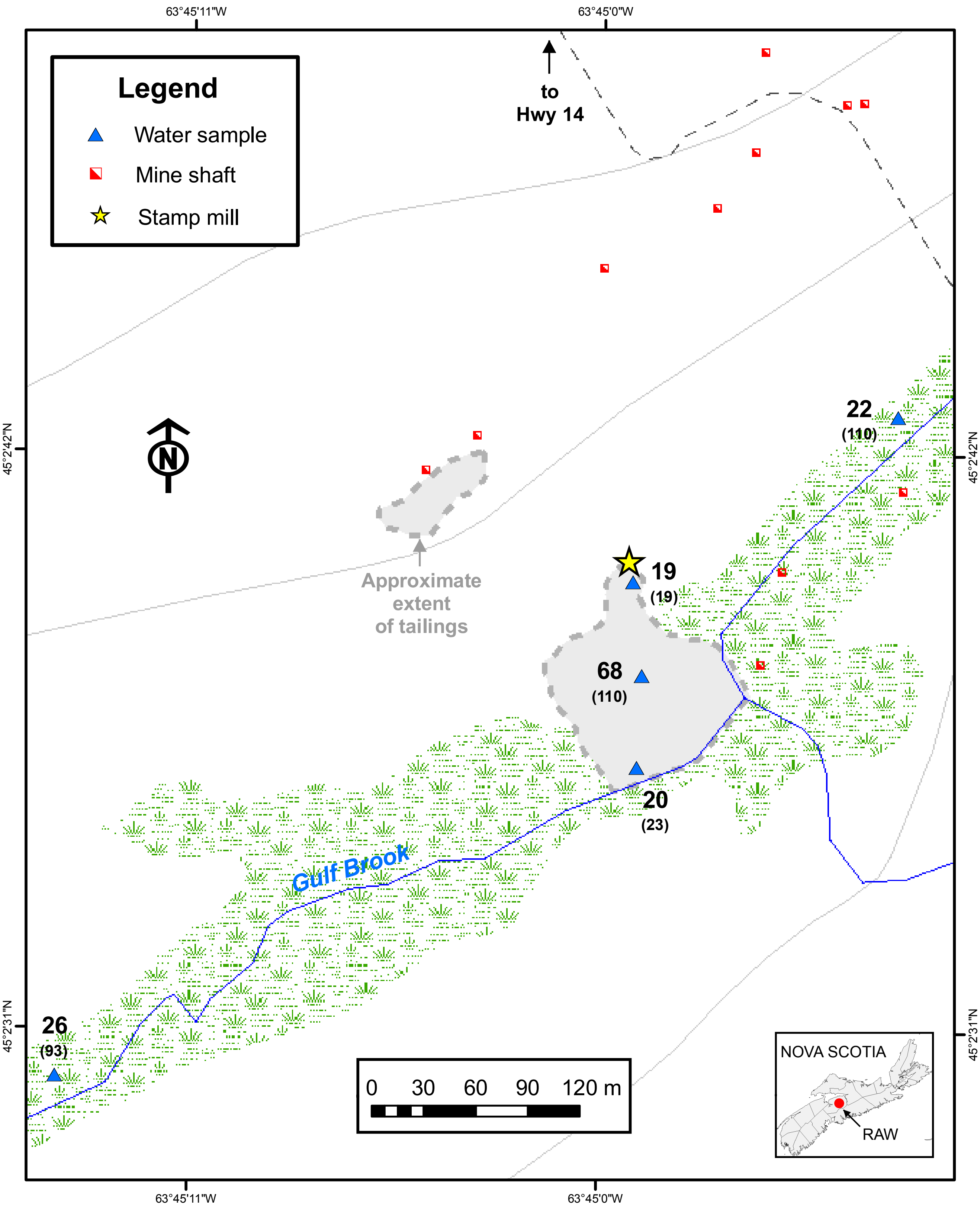


Fig. 24. As concentrations (μg/L) in surface water samples, East Rawdon Gold District, July 2003 (dissolved [<0.45 μm] and (total) concentrations)

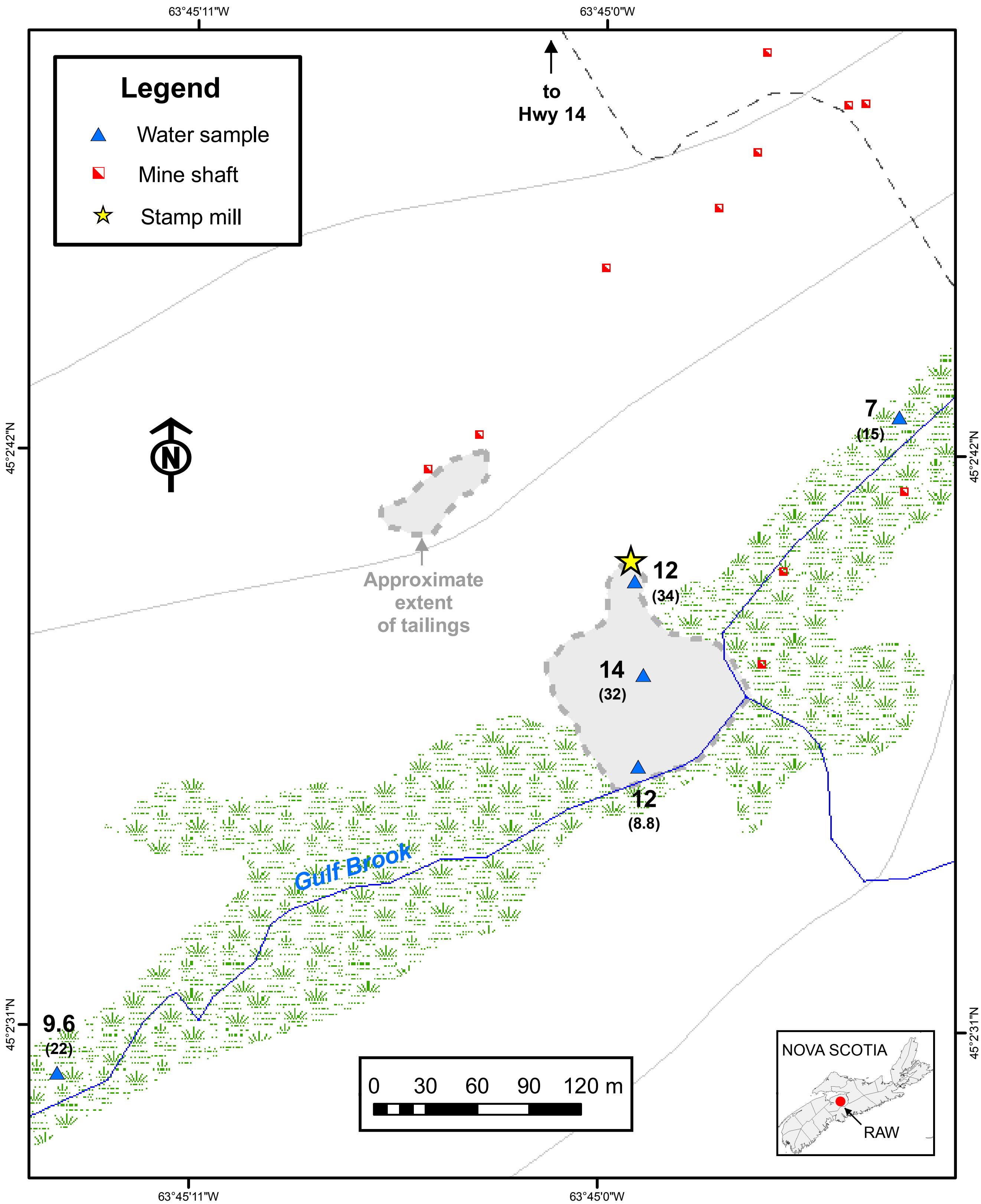


Fig. 25. Hg concentrations (ng/L) in surface water samples, East Rawdon Gold District, July 2003 (dissolved [<0.45 µm] and (total) concentrations)

Goldenville Gold District

Goldenville was the most productive gold district in Nova Scotia and is located approximately 3.5 km southwest of Sherbrooke in Guysborough County on the eastern shore of Nova Scotia (Fig. 1; 45.122014°, -62.018956°). The geology of this district was mapped by the GSC in 1898 (Faribault 1898b) and the deposit geology and metallogeny are described in detail by Brunton (1928) and Malcolm (1929). The extensive mining activity in this area has led to surface subsidence in several locations as a result of progressive collapse in the underground workings (Hill *et al*. 1997). The environmental impacts of tailings disposal on stream waters, sediments, vegetation and benthic invertebrates in this district have previously been studied by Wong *et al.* (1999). Beauchamp *et al.* (2002) reported Hg flux measurements for the tailings deposits.

From 2004 to 2010, NRCan partnered with Queen's University, the Royal Military College, Nova Scotia Environment, and Health Canada to evaluate human health risks associated with the tailings at Goldenville. Of particular concern at this site was the annual Goldenville 4X4 Rally, which was held on the tailings from 1994 to 2005 and attracted hundreds of people from across the Atlantic Provinces each year (Fig. 26). Detailed information on the mineralogy and bioaccessibility of As in these tailings can be found in Walker *et al.* (2009), Meunier *et al.* (2010, 2011) and Corriveau *et al.* (2011a, 2011b). The Goldenville Rally was cancelled in 2006 because of uncertainties associated with exposure to the high-As tailings at this site.

Mining and milling history

Mining activity at Goldenville progressed rapidly following the discovery of gold in 1861. Some of the key historical events are summarized in Table 6—this information has been compiled from Malcolm (1929), Henderson (1935) and Moggridge Kuusisto (1978). During peak periods of production as many as 19 different companies were operating simultaneously in this district. Many stamp mills have been erected over time, crushing a total of 540,617 tonnes of ore (Table 1) and leaving large quantities of tailings on the surface. Most of the gold was recovered using stamp mills and Hg amalgamation and a six-ton cyanide batch treatment plant was erected in 1940 to treat stockpiled sulphide concentrates (Roach 1940). Tailings from these mills are located at several locations around Goldenville, but the majority were deposited in Gegogan Brook and are visible on the floodplain for at least 6 km downstream (Wong *et al.* 1999).

Distribution of As and Hg in mine tailings

Samples of near-surface tailings and weathered sulphide concentrate were collected from 35 sites at Goldenville in June 2003, December 2005, and November 2006, primarily for research on the mineralogy and bioaccessibility of As (Fig. 27). Most of the samples were taken from the area used during the Goldenville 4X4 Rally. Tailings in the racetrack area are well-oxidized and show evidence of hardpan formation in some areas (Fig. 28). As shown in Fig. 29 and Table 7, the concentrations of As in tailings are very high, especially in the scorodite-rich weathered sulphide concentrate adjacent to the former mill site (Fig. 4b). The concentrations of Hg are typical for amalgamation tailings, with the highest levels near the stamp mill (Fig. 30). Field observations show that dusty tailings from the racetrack area are occasionally transported toward the north and northeast on windy days and may impact residential properties along Goldenville Road.

a)

b)

Fig. 26. (a) Off-road vehicle races on mine tailings at the 11th Annual Goldenville 4X4 Rally, September 5, 2004. **(b)** Children playing in gold mine tailings at the Goldenville 4X4 Rally.

Table 6. Highlights of mining and milling history, Goldenville Gold District, 1861-present.

Date	Event
1861	Gold discovered in quartz boulders in a small meadow about a mile and a half west of the St. Mary's River by Nelson Nickerson of Sherbrooke
1862–1867	Vigorous prospecting and production of gold by many different companies; in 1862, the first four stamp mills were installed; in 1867, the district records its highest production of gold—9,463 oz.
1868	Five new crushers erected on-site; many companies working throughout the district; three 15-stamp crushers erected in the eastern part of the district
1869	Nineteen companies operating in the district—most of these are short-lived, and by 1872, production drops substantially
1873–1893	Mining properties worked throughout the district, in many cases by tributers (i.e. individual miners and prospectors, who worked the properties for a rental fee); lack of capital and poor mining practices hamper production at most mines; gold production decreases throughout 1880s to less than 200 oz./yr in early 1890s
1894	Improved mining and milling methods, systematic exploration based on the mapping work of E.R. Faribault (GSC), and increased investment capital generate renewed interest in mining lower-grade ores in the Goldenville district
1895–1906	Active mining by various companies, with a peak in production of 5,201 oz. in 1898; many stamp mills are operated during this period, some of which included concentrators (shaking tables, Frue vanners, or Wilfley tables) to treat the tailings from the amalgamation process. Production drops off significantly after 1906.
1909–1930	Intermittent activity by various companies (peak production of 2,215 oz. in 1915)
1935–1942	Guysborough Mines Ltd. produces 170,239 tonnes of ore at a grade of 7.12 g/t Au. Mining ceased in 1942 because of World War II.
1961–1987	Intermittent exploration (diamond drilling, geochemical & geophysical surveys), including open-pit mining of a 3,500 ton sample in 1984 for gravity concentration and a subsample for cyanidation testing.
1988–present	Surface exploration, shaft rehabilitation, and limited underground exploration.

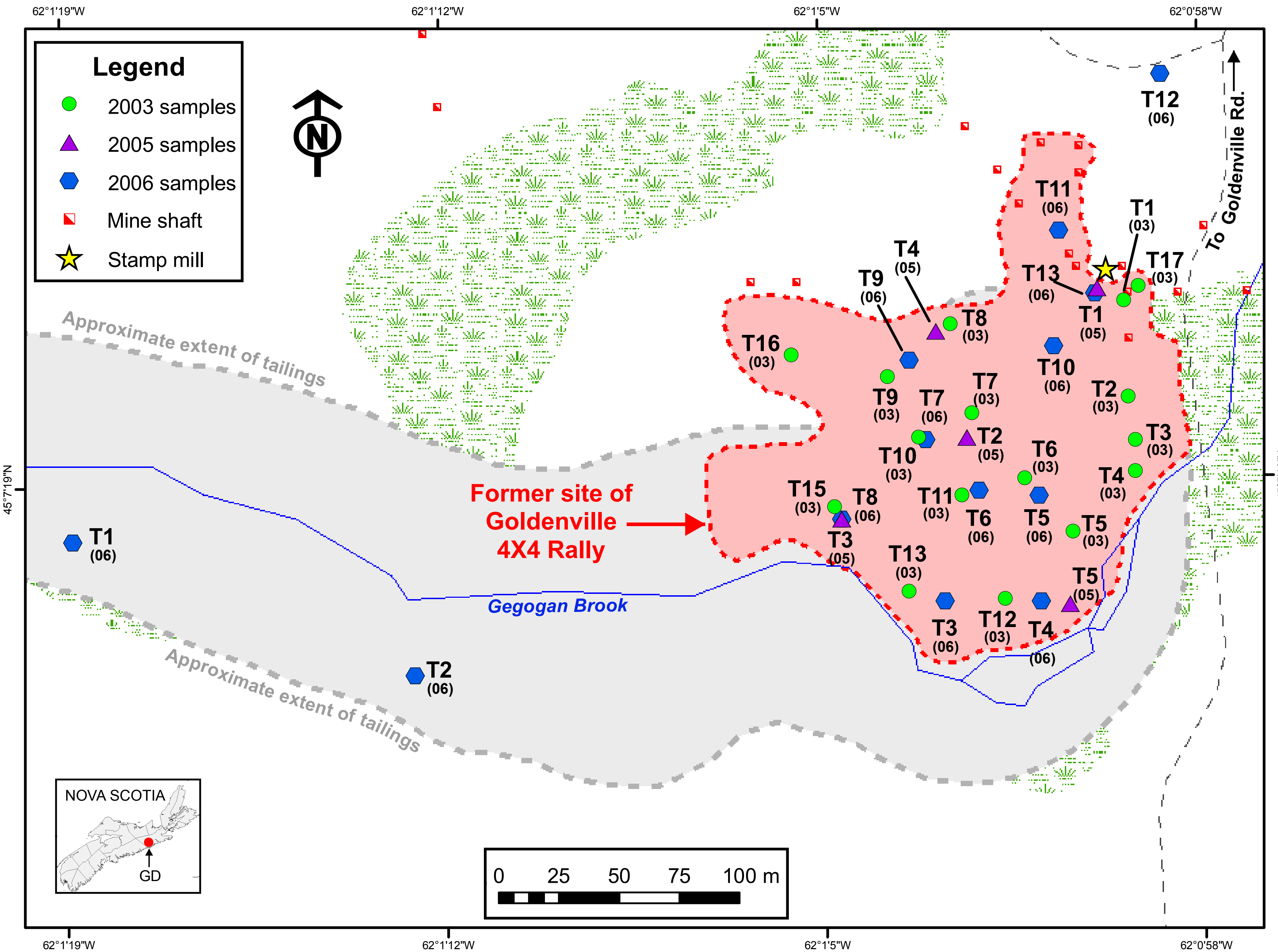


Fig. 27. Location of tailings samples, Goldenville Gold District
(geographic centre of map (decimal degrees): 45.122014°, -62.018956°)

a)

b)

Fig. 28. (a) Aerial photograph of the main mine area at Goldenville showing waste rock piles and mine tailings. Fluvial dispersion by the Gegogan River has transported tailings at least 6 km downstream of the Goldenville mines (photo credit: P.K. Smith). **(b)** Overview of tailings in main racetrack area showing As-rich hardpan underlying tailings in foreground.

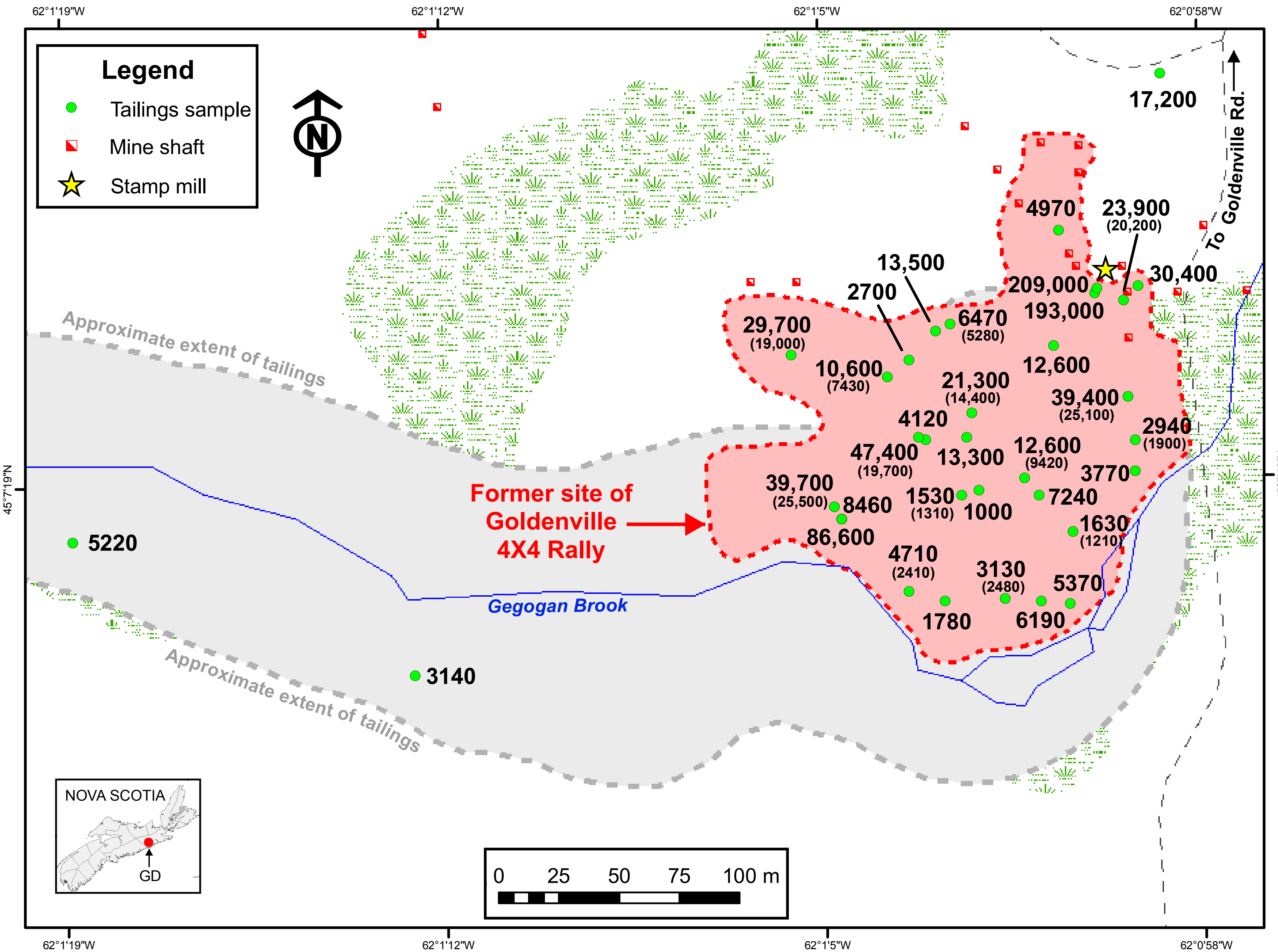


Fig. 29. As concentrations (mg/kg) in Goldenville tailings (maximum and (mean) concentrations; <2 mm size fraction).

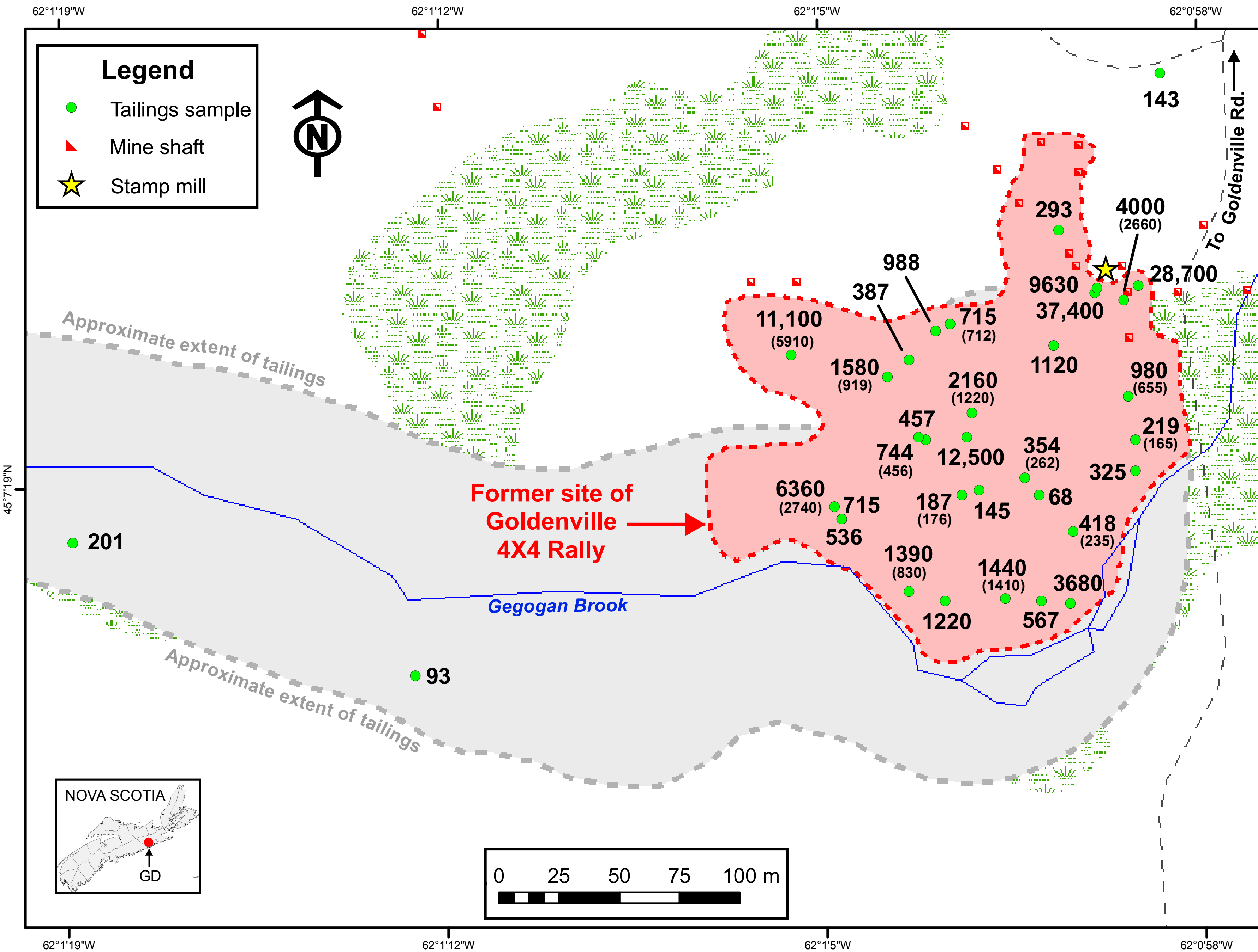


Fig. 30. Hg concentrations (μg/kg) in Goldenville tailings (maximum and (mean) concentrations; <2 mm size fraction).

Table 7. As and Hg concentrations in tailings, Goldenville Gold District [a]

Sample Site	Tailings Depth (cm)	Northing (20T, NAD 83)	Easting (20T, NAD 83)	Date	As (mg/kg)	Hg (µg/kg)
T1	2	4997047	0577356	9-Jun-03	21500	1640
T1	10	4997047	0577356	9-Jun-03	15000	2330
T1	13	4997047	0577356	9-Jun-03	23900	4010
T2	1	4997007	0577358	9-Jun-03	29200	897
T2	3.5	4997007	0577358	9-Jun-03	39400	980
T2	8	4997007	0577358	9-Jun-03	6630	88
T3	1	4996989	0577361	9-Jun-03	2940	111
T3	21	4996989	0577361	9-Jun-03	858	219
T4	1	4996976	0577361	9-Jun-03	3770	325
T5	1	4996951	0577335	9-Jun-03	796	52
T5	8	4996951	0577335	9-Jun-03	1630	418
T6	1	4996973	0577315	9-Jun-03	12600	354
T6	17	4996973	0577315	9-Jun-03	6240	171
T7	1	4997000	0577293	9-Jun-03	21300	2170
T7	14	4997000	0577293	9-Jun-03	7420	271
T8	1	4997037	0577284	9-Jun-03	4090	715
T8	15	4997037	0577284	9-Jun-03	6470	709
T9	1	4997015	0577258	9-Jun-03	10600	259
T9	13	4997015	0577258	9-Jun-03	4300	1580
T10	1	4996990	0577271	9-Jun-03	9220	744
T10	8	4996990	0577271	9-Jun-03	2610	294
T10	20	4996990	0577271	9-Jun-03	47400	330
T11	1	4996966	0577289	9-Jun-03	1090	166
T11	10	4996966	0577289	9-Jun-03	1530	187
T12	1	4996923	0577307	9-Jun-03	2850	1440
T12	5	4996923	0577307	9-Jun-03	3130	1430
T12	19	4996923	0577307	9-Jun-03	1480	1360
T13	1	4996926	0577267	9-Jun-03	1850	168
T13	6	4996926	0577267	9-Jun-03	4710	932
T13	8	4996926	0577267	9-Jun-03	686	1390
T15	1	4996961	0577236	9-Jun-03	39700	1700
T15	5	4996961	0577236	9-Jun-03	3690	165
T15	8	4996961	0577236	9-Jun-03	33300	6360
T16	4	4997024	0577218	9-Jun-03	8260	686
T16	8	4997024	0577218	9-Jun-03	29700	11100
T17	1	4997053	0577362	9-Jun-03	30400	28700

[a] Samples from 2005 and 2006 were taken from a single depth and are not included in this table.

Lake Catcha Gold District

The Lake Catcha Gold District is located approximately 7 km southwest of Musquodobit Harbour between the communities of East Chezzetcook and West Petpeswick on the eastern shore of Nova Scotia (Fig. 1; 44.736957°, -63.195756°). The geology of this district was mapped by the GSC in 1902 (Faribault 1902a) and the character of the gold deposits is briefly described by Malcolm (1929). Gold mineralization occurs in interbedded and discordant quartz veins on the north limb of a steeply dipping anticline in metasandstones and slate of the Goldenville Group. In 2003 and 2004, NRCan collaborated with researchers from the University of Ottawa on a study of the factors controlling methylmercury levels in the tailings and associated porewaters at the Lake Catcha and Lower Seal harbour districts (Winch *et al.* 2008, 2009).

Mining and milling history

Gold mining at Lake Catcha began in the late 1870s, and the first stamp mill was constructed on-site in 1882. Mining was carried out continuously from 1882 to 1916 but there has been only intermittent activity since that time (Malcolm 1929). Approximately 26,118 troy oz. of gold were recovered from 29,462 tonnes of crushed rock (Table 1) and all milling was carried out using Hg amalgamation in a series of 10- to 15-stamp mills located north and west of the lake (Faribault 1902a). Tailings from these mills were deposited at several sites throughout the district including a wetland north of the lake. Tailings were also slurried directly into the western end of Lake Catcha forming a small delta that extends for some distance into the lake (Fig. 31).

Distribution of As and Hg in mine tailings and surface waters

Tailings were sampled at Lake Catcha on September 8, 2003 at 10 sites distributed throughout the wetland and tailings beach on the shore of Lake Catcha (Fig. 32). Tailings in the beach area are well oxidized, contain discontinuous scorodite-bearing hardpan in the top 30 cm, and have been extensively re-worked by local prospectors and the owners of a cottage built directly over some of the tailings deposits. In the wetland north of the lake, tailings are overlain by 10-15 cm of vegetation and are dark grey and relatively unoxidized. Samples of the top 0-5 cm of sediment were also collected at nine sites throughout Lake Catcha on Oct. 31, 2003. The sediments were muddy and organic-rich at the surface and only contained evidence of tailings at sites S1-S4 (Fig. 32). The As and Hg concentrations in all tailings and sediment samples are shown in Figs. 33 and 34, respectively, and are summarized in Table 8. The highest concentrations are located close to the former stamp mill in highly oxidized tailings along the Lake Catcha shoreline. The As and Hg concentrations in the organic-rich lake sediments were surprisingly high and show that discharges from the stamp mills have contaminated sediments throughout the lake.

On September 9, 2003, water was sampled from six sites throughout the Lake Catcha Gold District, including sites upstream and downstream of known tailings deposits (Fig. 35). The pH of all surface waters sampled ranged from 5.3 to 6.5 and was highest in areas underlain by tailings. In general, the concentrations of both As and Hg were relatively low in most waters sampled, with the exception of shallow standing water in the tailings-filled wetland which contained 380 µg/L As in the filtered sample (Appendix B).

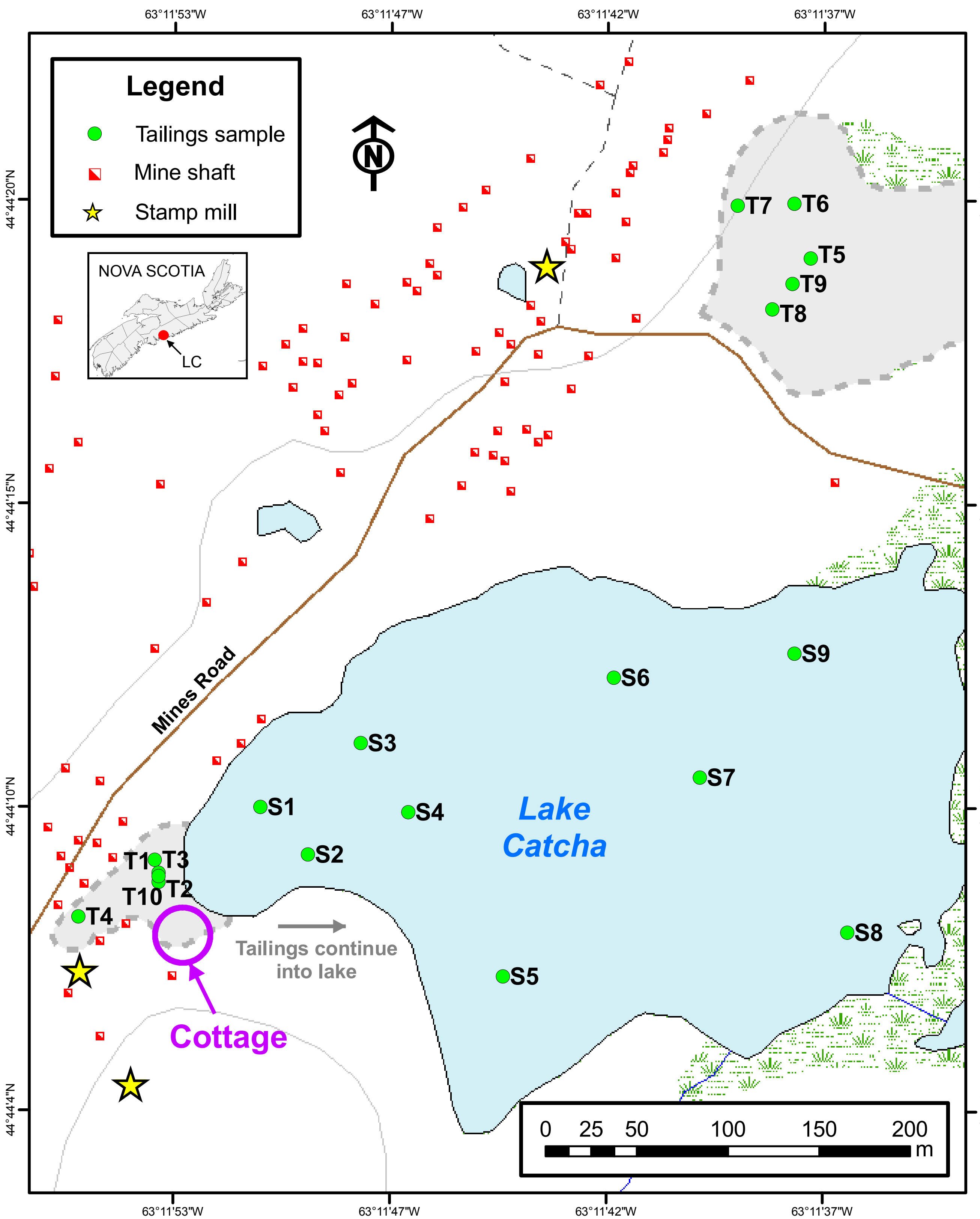


Fig. 31. Location of tailings and lake sediment samples, Lake Catcha Gold District (geographic centre of map (decimal degrees): 44.736957°, -63.195756°)

a)

b)

Fig. 32. (a) Tailings beach along western shore of Lake Catcha. Bulldozer in background is moving tailings into an area that was eventually used to build a cottage in 2003 and 2004. **(b)** Sampling unoxidized, water-saturated tailings in the wetland north of Lake Catcha.

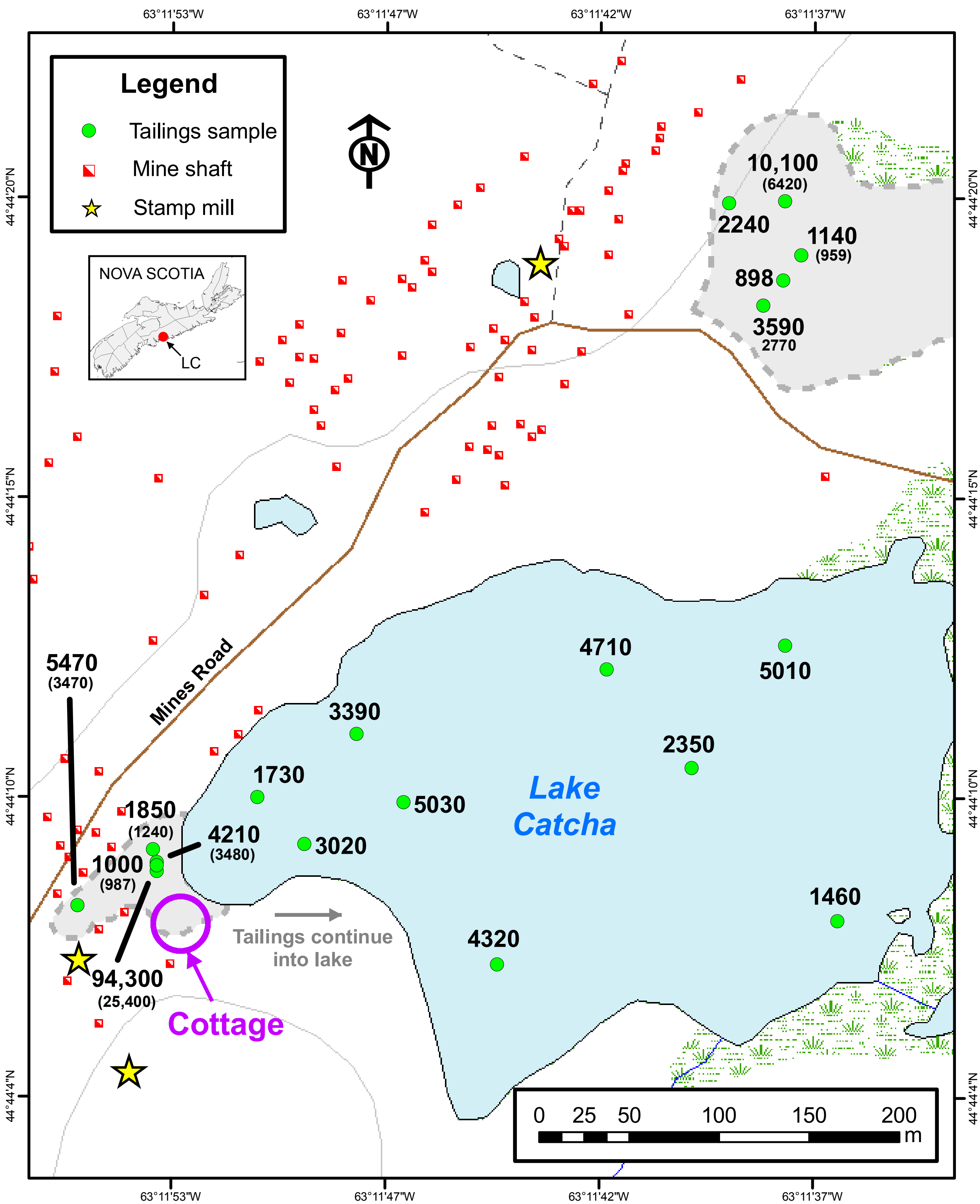


Fig. 33. As concentrations (mg/kg) in Lake Catcha tailings and lake sediments (maximum and (mean) concentrations; <2 mm size fraction)

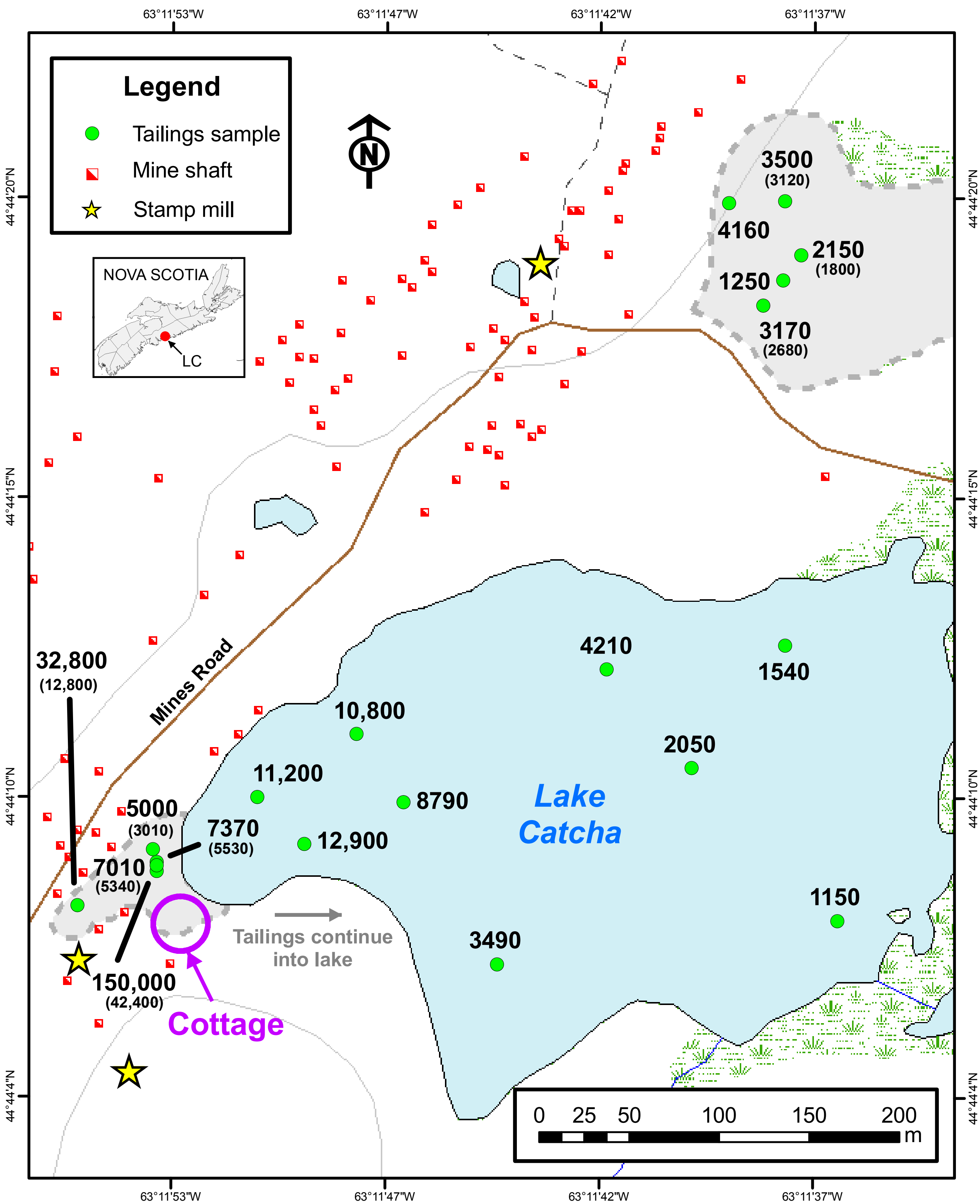


Fig. 34. Hg concentrations (µg/kg) in Lake Catcha tailings and lake sediments (maximum and (mean) concentrations; <2 mm size fraction)

Table 8. As and Hg concentrations in tailings, Lake Catcha Gold District

Sample Site	Tailings Depth (cm)	Northing (20T, NAD 83)	Easting (20T, NAD 83)	Date	As (mg/kg)	Hg (µg/kg)
T1	7.5	4953602	0484315	8-Sep-03	2420	4080
T1	30	4953602	0484315	8-Sep-03	94300	150000
T1	60	4953602	0484315	8-Sep-03	3740	12700
T1	125	4953602	0484315	8-Sep-03	1230	2910
T2	15	4953607	0484315	8-Sep-03	1010	7010
T2	30	4953607	0484315	8-Sep-03	968	3670
T3	5	4953614	0484313	8-Sep-03	1850	1370
T3	17	4953614	0484313	8-Sep-03	1040	4990
T3	27	4953614	0484313	8-Sep-03	1060	3580
T3	35	4953614	0484313	8-Sep-03	1020	2090
T4	10	4953583	0484271	8-Sep-03	4560	8420
T4	30	4953583	0484271	8-Sep-03	1300	3190
T4	50	4953583	0484271	8-Sep-03	5470	32800
T4	70	4953583	0484271	8-Sep-03	2540	6940
T5	12	4953944	0484673	8-Sep-03	1140	2150
T5	30	4953944	0484673	8-Sep-03	775	1460
T6	10	4953974	0484664	8-Sep-03	10100	3500
T6	25	4953974	0484664	8-Sep-03	2700	2740
T7	20	4953973	0484633	8-Sep-03	2240	4160
T8	15	4953916	0484652	8-Sep-03	3590	2190
T8	30	4953916	0484652	8-Sep-03	1950	3170
T9	20	4953930	0484663	9-May-03	898	1260
T10	20	4953605	0484315	24-Nov-02	4220	7370
T10	75	4953605	0484315	24-Nov-02	2740	3690
S1	5	4953643	0484371	31-Oct-03	1730	11200
S2	5	4953617	0484397	31-Oct-03	3020	12900
S3	5	4953678	0484426	31-Oct-03	3390	10800
S4	5	4953640	0484452	31-Oct-03	5030	8790
S5	5	4953550	0484504	31-Oct-03	4320	3490
S6	5	4953714	0484565	31-Oct-03	4710	4210
S7	5	4953659	0484612	31-Oct-03	2350	2050
S8	5	4953574	0484693	31-Oct-03	1460	1150
S9	5	4953727	0484664	31-Oct-03	5010	1550

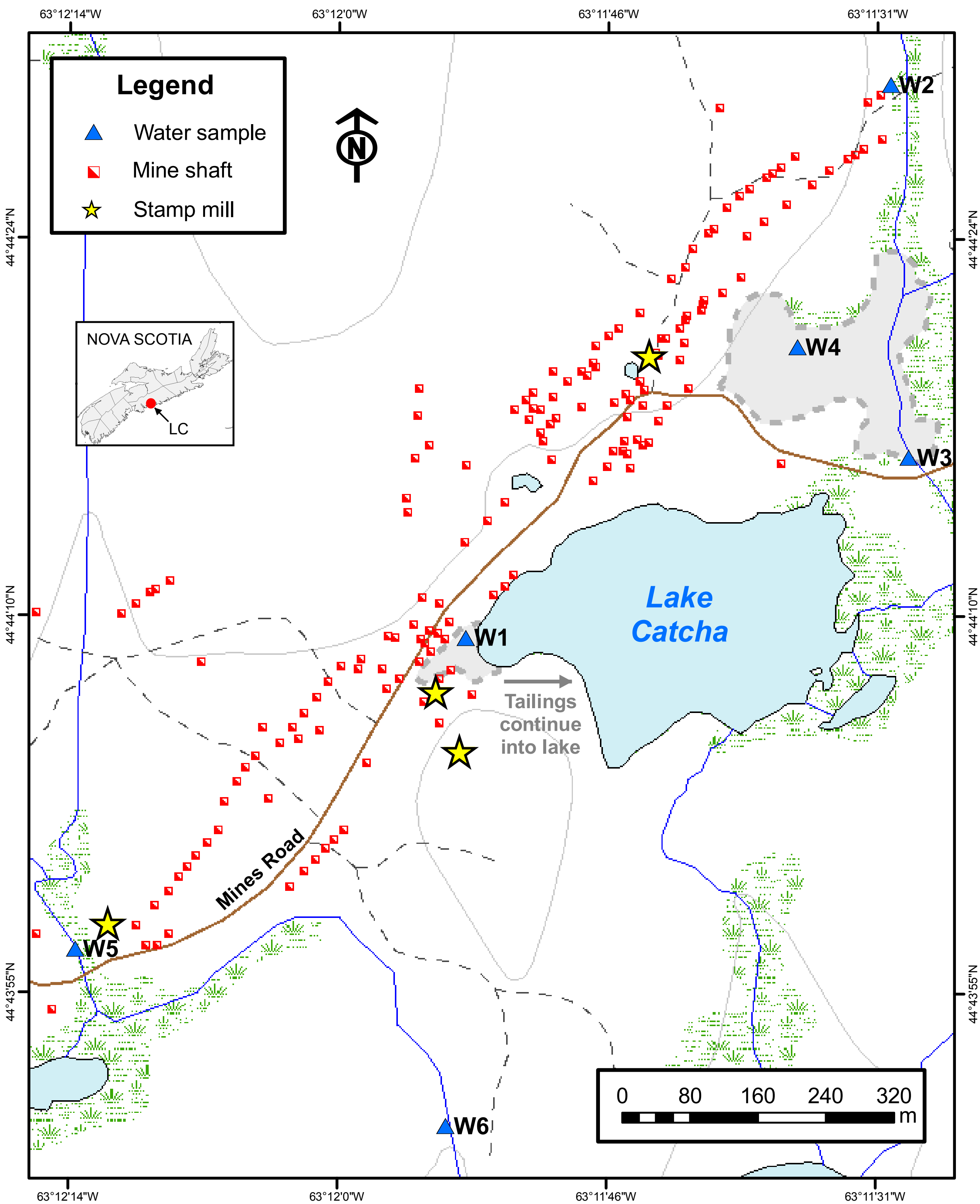


Fig. 35. Location of surface water samples, Lake Catcha Gold District, September 2003 (geographic centre of map (decimal degrees): 44.736108°, -63.197723°)

a)

b)

Fig. 36. (a) Tailings beach and delta along western shore of Lake Catcha, showing well-oxidized tailings in foreground. At Site W1, shallow lake water was sampled directly overlying the tailings. **(b)** Measuring water quality parameters in a small stream near a former stamp mill (Site W5).

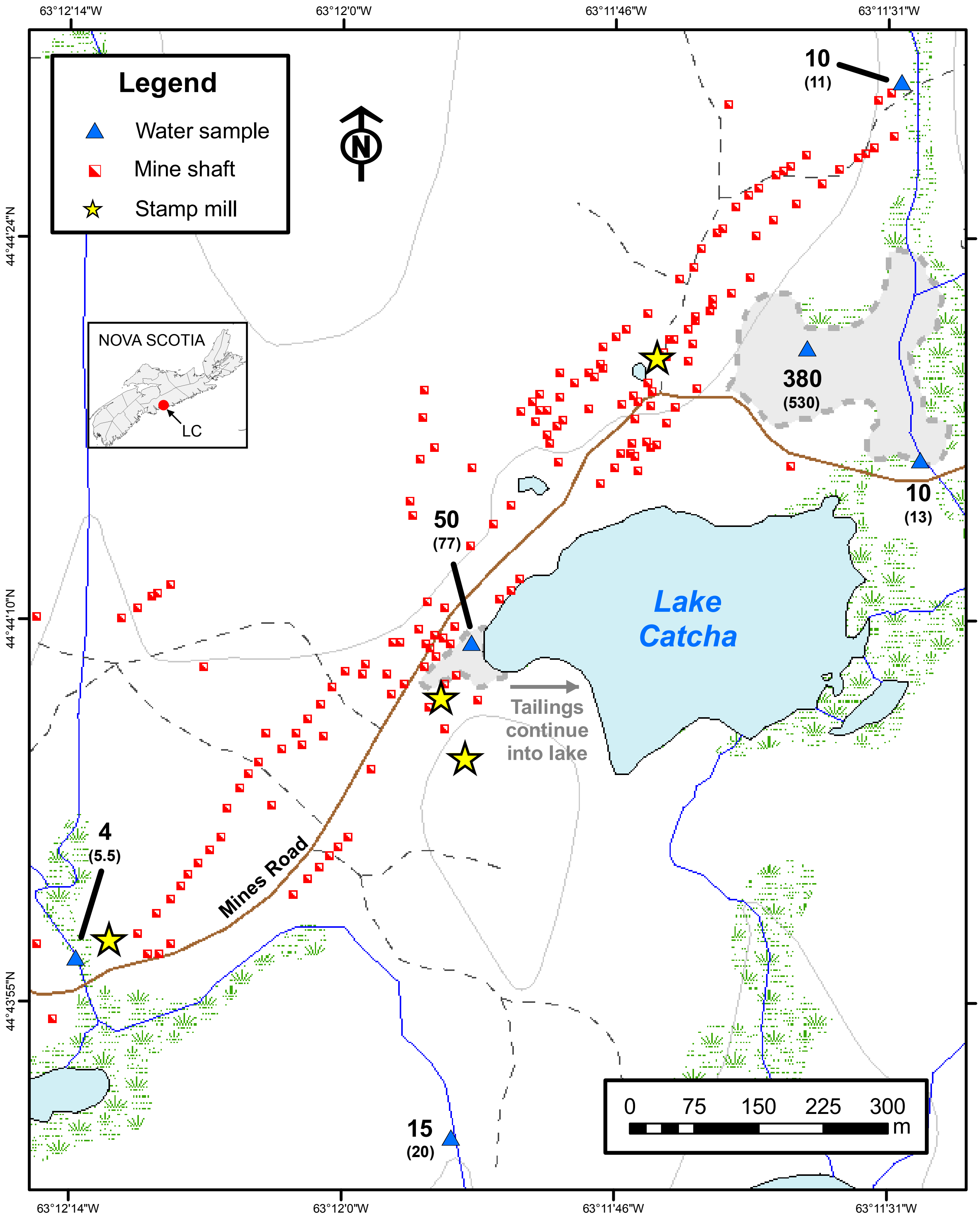


Fig. 37. As concentrations (μg/L) in surface water samples, Lake Catcha Gold District, September 2003 (dissolved [<0.45 μm] and (total) concentrations)

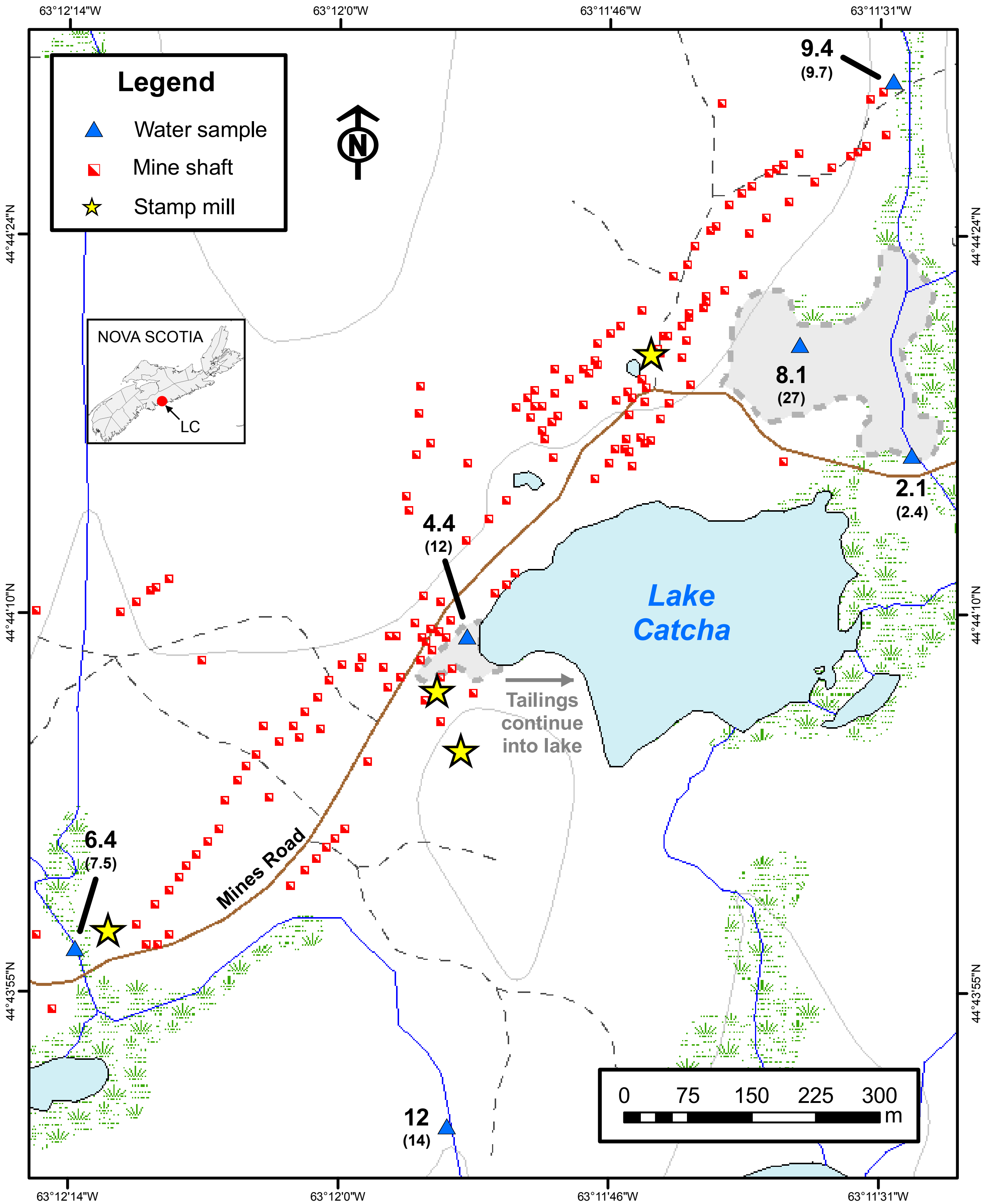


Fig. 38. Hg concentrations (ng/L) in surface water samples, Lake Catcha Gold District, September 2003 (dissolved [<0.45 µm] and (total) concentrations)

Leipsigate Gold District

The Leipsigate Gold District is located approximately 8.5 km southwest of Bridgewater in Lunenburg County, Nova Scotia (Fig. 1; 44.323866°, -64.596913°). The geology of this district was mapped by the GSC in 1906 (Faribault 1906) and is well described by Malcolm (1929). Historical mine workings, stamp mill foundations and tailings are located in two distinct areas in this district: the former Micmac Mining Company property near the eastern shore of Milipsigate Lake, and the Scotia Mining Company property near South Mud Lake (Faribault 1906).

Mining and milling history

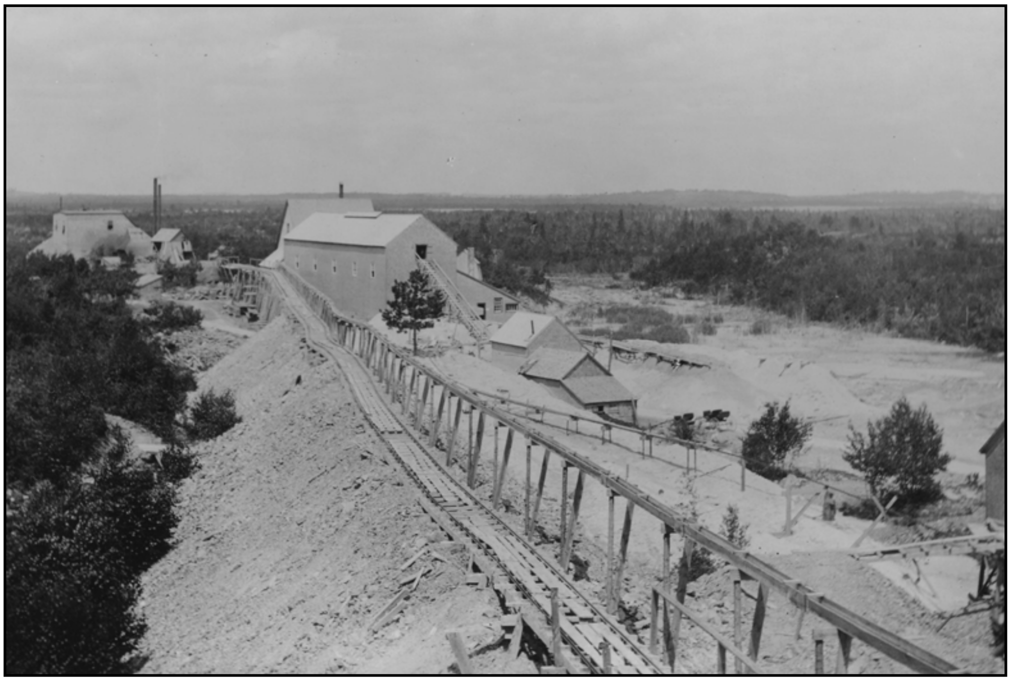
Gold was discovered near Milipsigate Lake around 1883 and mining was carried out by many different companies between 1884 and 1908. From 1884 to 1902, all of the gold was recovered using stamp milling and Hg amalgamation. In 1903, a 50-ton per day cyanide plant was constructed and treated the old tailings beds and sulphide concentrates from an adjacent 15-stamp mill for at least two years (Fig. 39; Malcolm 1929). After 1908, only intermittent prospecting and exploration activity took place until the mid-1940s. In 1946, Queen’s Mines Ltd. sank a new three-compartment shaft near the Gilmour Shaft on South Mud Lake and operated a 50-ton per day mill until 1949. Extensive surface and underground exploration work was carried out in the 1980s (Whitelaw 1985) and the district is currently (2011) being explored once again.

Distribution of As and Hg in mine tailings

Tailings samples were collected from 15 sites at Leipsigate on May 14 and August 18, 2003 (Fig. 40). No running surface water was observed near any of the tailings deposits, although the tailings do extend into several wetlands in the area. Near the former Micmac cyanide plant, the tailings are covered with a thin layer of moss and grass, and there are several obvious borrow pits where tailings have recently been transported off-site (Fig. 41a). One distinctive characteristic of the tailings in this district as compared to other gold mines throughout Nova Scotia is the absence of well-developed oxidized layers near the surface (Fig. 41b). In general, the tailings are light grey near the surface grading into darker grey at depth and lack obvious staining by Fe-oxides, suggesting that the sulphide content of the tailings is relatively low. Near the former Scotia Mining Co. property, the tailings are overgrown and run directly into South Mud Lake.

As shown in Figure 42, the As content of the tailings throughout the Leipsigate Gold District is unusually low (11-189 mg/kg), whereas the Hg concentrations (98-5950 µg/kg) are more typical for stamp mill tailings (Fig. 43). The low As content reflects the efficiency of the cyanide plant at removing arsenopyrite from the ore and there is no evidence that the leached concentrates were eventually disposed with the tailings. The mean Hg content of the tailings at Leipsigate (2070 µg/kg) indicates that Hg amalgamation continued to play an important role in the milling circuits at Leipisgate throughout the lifespan of the mine (Table 9).

a)



b)

Fig. 39. (a) Overview of Micmac Gold Mine in 1904 showing a tramway from the main shaft in foreground, the 15-stamp Micmac mill and cyanide plant (near centre of image), and the Jackpot 5-stamp mill (left side of image in background). **(b)** Unconfined tailings disposal from the Micmac cyanide plant in 1904 (tailings flowing downhill toward right side of photo). Photos taken by E.R. Faribault, Geological Survey of Canada. Reproduced with permission from the Natural Resources Canada Library, Ottawa.

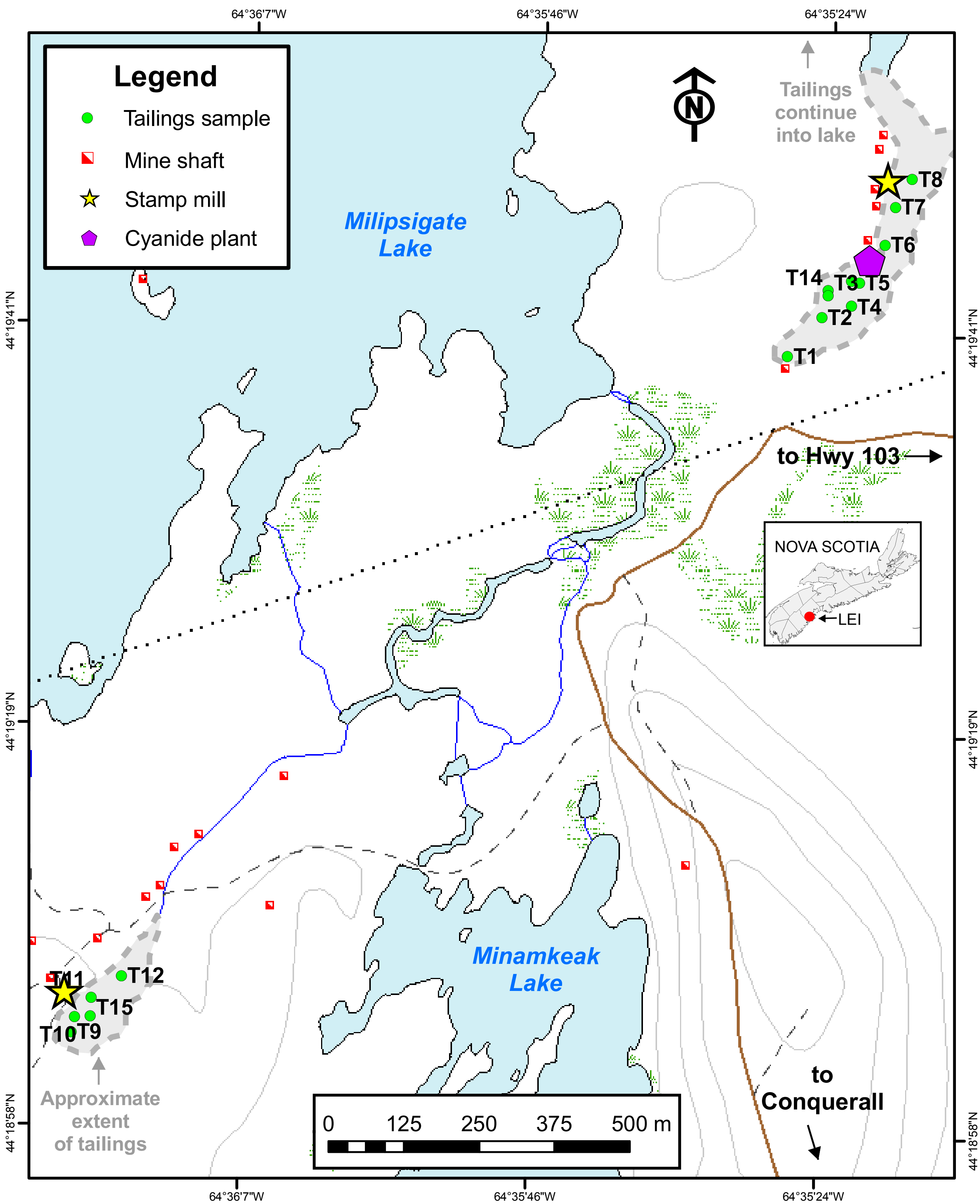


Fig. 40. Location of tailings samples, Leipsigate Gold District (geographic centre of map (decimal degrees): 44.323866°, -64.596913°)

a)

b)

Fig. 41. (a) Overgrown tailings downslope of former Micmac cyanide plant in the Leipsigate Gold District. A small borrow pit is visible near the right side of this photograph where tailings seem to have been removed in recent years. **(b)** Sandy, light grey tailings near former Jackpot stamp mill.

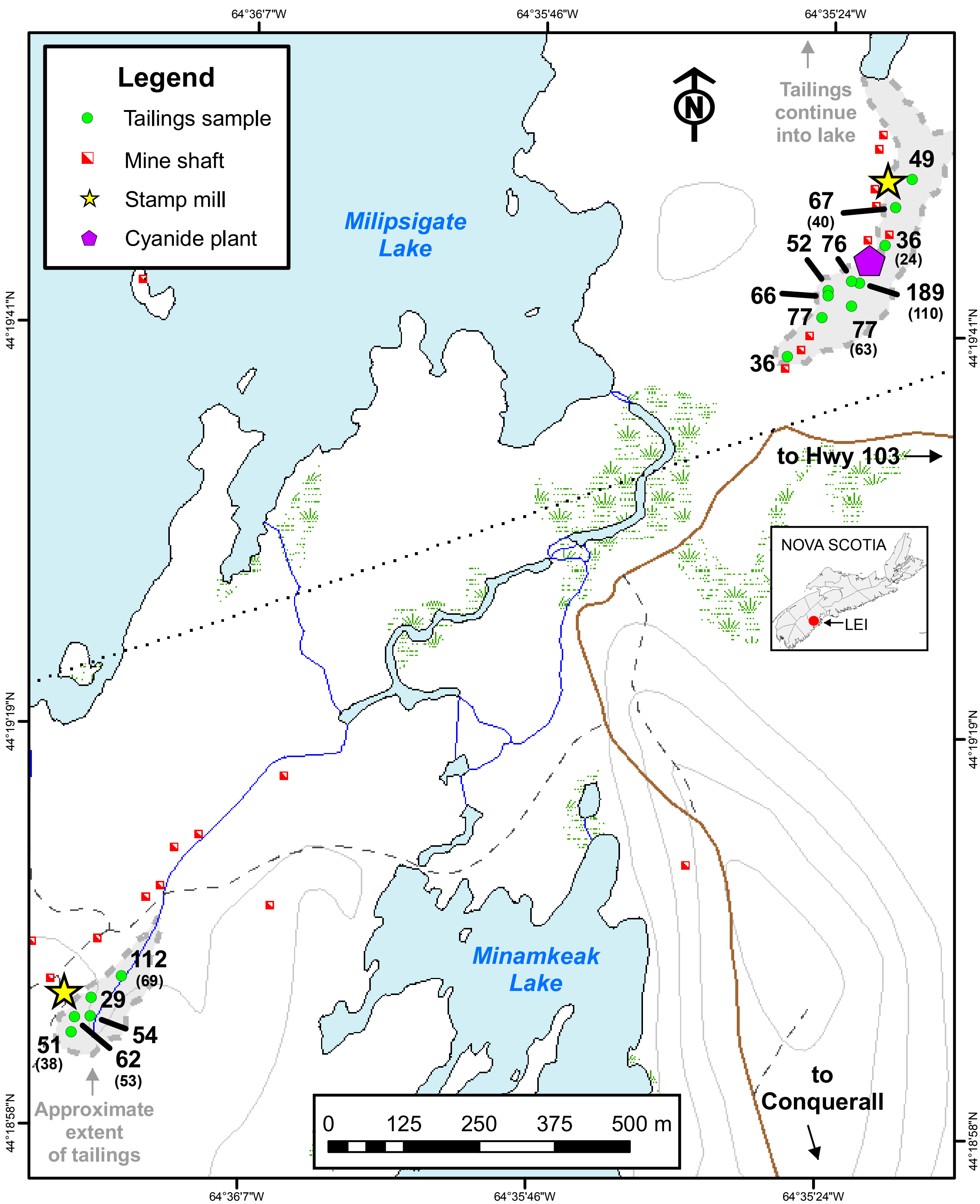


Fig. 42. As concentrations (mg/kg) in Leipsigate tailings (maximum and (mean) concentrations; <2 mm size fraction)

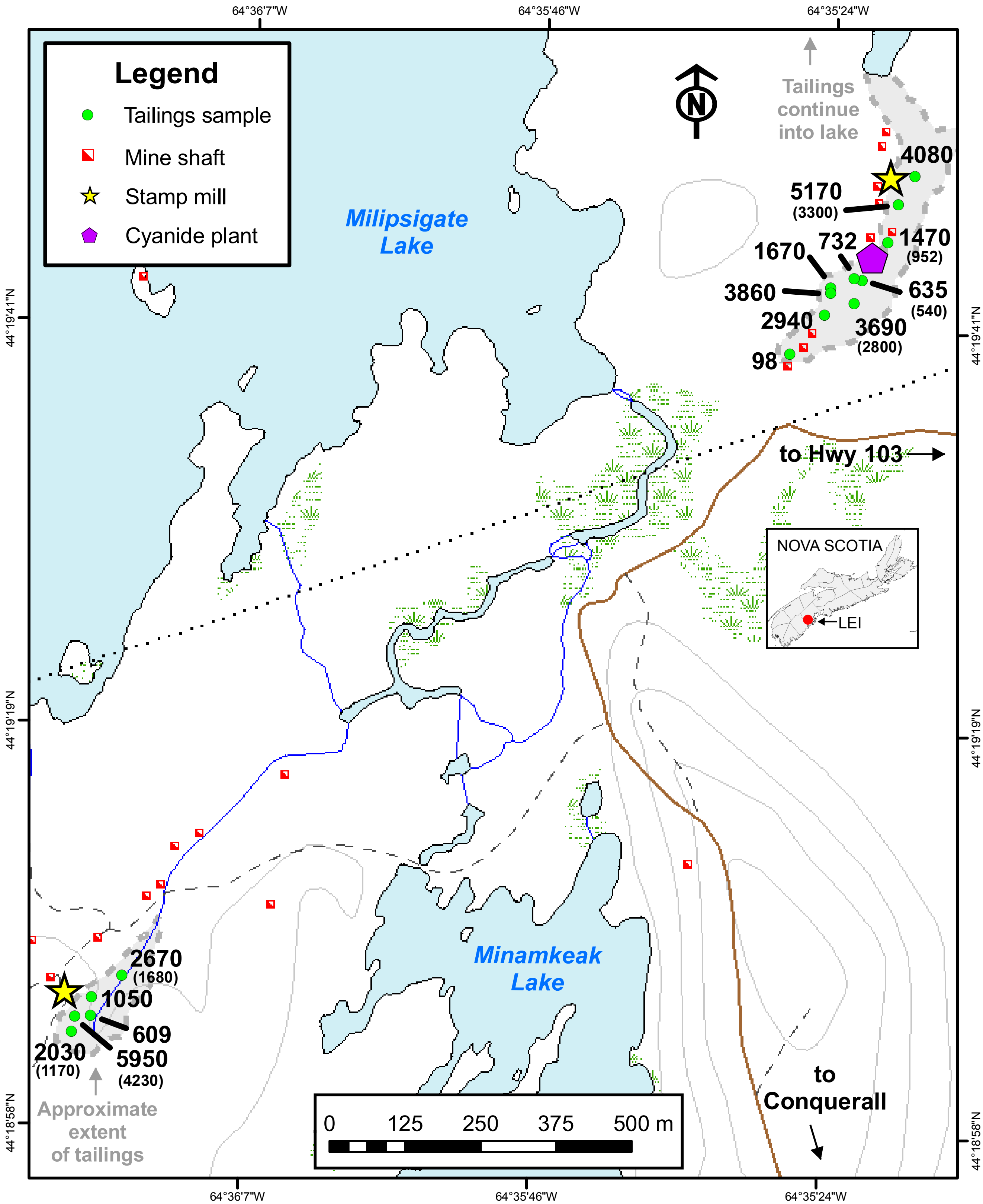


Fig. 43. Hg concentrations (µg/kg) in Leipsigate tailings (maximum and (mean) concentrations; <2 mm size fraction)

Table 9. As and Hg concentrations in tailings, Leipsigate Gold District

Sample Site	Tailings Depth (cm)	Northing (20T, NAD 83)	Easting (20T, NAD 83)	Date	As (mg/kg)	Hg (µg/kg)
T1	0	4909499	0373158	18-Aug-03	36	98
T2	10	4909564	0373215	18-Aug-03	77	2940
T3	50	4909609	0373225	18-Aug-03	52	1670
T4	20	4909583	0373264	18-Aug-03	77	3690
T4	50	4909583	0373264	18-Aug-03	47	1920
T5	20	4909621	0373277	18-Aug-03	189	635
T5	60	4909621	0373277	18-Aug-03	30	445
T6	20	4909684	0373320	18-Aug-03	36	1470
T6	35	4909684	0373320	18-Aug-03	11	436
T7	15	4909747	0373337	18-Aug-03	67	5170
T7	30	4909747	0373337	18-Aug-03	29	802
T7	50	4909747	0373337	18-Aug-03	25	3940
T8	10	4909793	0373365	18-Aug-03	49	4090
T9	20	4908378	0371969	18-Aug-03	25	307
T9	40	4908378	0371969	18-Aug-03	51	2030
T10	20	4908403	0371975	18-Aug-03	62	5950
T10	40	4908403	0371975	18-Aug-03	44	2520
T11	20	4908435	0372002	18-Aug-03	29	1050
T12	20	4908471	0372053	18-Aug-03	26	685
T12	35	4908471	0372053	18-Aug-03	112	2670
T13	40	4909624	0373264	14-May-03	76	732
T14	25	4909600	0373225	14-May-03	66	3860
T15	10	4908405	0372001	14-May-03	54	609

Lower Seal Harbour Gold District

The Lower Seal Harbour Gold District is located approximately 4.5 km southeast of the community of Goldboro on the eastern shore of Nova Scotia (Fig. 1; 45.165326°, -61.591189°). The historical mine workings and tailings deposits can be accessed via Sable Road off of Highway 316 by following a small woods road that runs behind the Goldboro Gas Plant parallel to the south shore of Seal Harbour Lake. The bedrock geology and character of the gold deposits are described by MacKenzie (1907), Malcolm (1929) and Goodwin (1935). In 2004 and 2005, NRCan collaborated with several universities and other government departments on detailed multi-disciplinary studies of the sources, transport and fate of As and Hg throughout the Lower Seal Harbour District. Recent publications have documented methylmercury levels in the tailings (Winch *et al*. 2008), the uptake of As in shellfish (Koch *et al.* 2007), terrestrial invertebrates (Moriarty *et al.* 2009) and small mammals (Saunders *et al.* 2009), and the mineralogy and spectral reflectance of the tailings (Corriveau *et al.* 2011a, 2011b, Percival *et al.*, in press).

Mining and milling history

Significant gold mineralization was not discovered in the Lower Seal Harbour district until 1904, when Percy White opened three small leads exposed by previous prospectors and found them to be part of an auriferous belt. Between 1905 and 1915, the Beaver Hat Gold Mining Company, Ltd. and the Seal Harbour Mining Company carried out underground mining on adjacent properties (Malcolm 1929). Both of these companies employed small stamp mills and Hg amalgamation, and sulphide concentrates were sent to the Richardson Mill at Upper Seal Harbour for treatment in a bromo-cyanide plant. Production ceased in 1915 and resumed briefly from 1926 to 1928 using similar technology. In 1934, Seal Harbour Gold Mines Ltd. reactivated the property and carried on larger-scale mining operations until about 1941. The most significant aspect of these latter operations was the construction of a 200-ton-per-day cyanide plant in 1936, which treated the ore using a combination of cyanide methods and barrel amalgamation (Roach 1937, 1940). From 1904 to 1949, approximately 34,300 troy oz. of gold were recovered in this district from 395,000 tonnes of ore (Table 1). Tailings from the stamp mills and cyanide plant were discharged into a small tributary to West Brook, and are now visible on the floodplain from the mine site to the ocean at Seal Harbour (Fig. 44).

Distribution of As and Hg in mine tailings and surface waters

Historical milling operations in the Lower Seal Harbour Gold District left behind a very large volume of mine tailings, which have been, and continue to be, eroded by local streams and transported more than 2 km to the ocean (Figs. 45, 46). Tailings were sampled from 36 sites throughout the district on several different occasions in 2003 and 2004. Five samples of marine sediments (MS1 to MS5) were also collected from the intertidal zone of Seal Harbour to evaluate the dispersion of tailings along the shoreline (Fig. 44).

Tailings from the pre-1936 stamp milling operations (T13, T30, T31, T32) are primarily located in a small wetland area near the former mill site and are covered by horsetails and other wetland vegetation. These tailings are brown and well oxidized near the surface, contain scorodite-bearing hardpan in some areas, and are underlain by grey, relatively unoxidized tailings below about 20 cm depth. The concentrations of As (421-20,000 mg/kg; mean = 3290 mg/kg) and Hg (106-23,100 µg/kg; mean = 3810 µg/kg) in these stamp mill tailings are considerably higher than concentrations in later tailings from the cyanide plant (Figs. 47, 48, Table 10). This likely reflects the more efficient removal of arsenopyrite in the cyanide plant milling circuit and the cyanide-enhanced leaching over time of Hg and other elements from the more recent tailings.

Tailings from the cyanide plant are sandy and relatively unvegetated within 0.5 km of the former mill foundation (Fig. 45a) and are partially covered in wetland vegetation along the floodplain of West Brook (Fig. 5b; Fig. 45b). Most of the cyanidation tailings are deeply weathered, with light brown oxidized tailings grading into olive-green to grey tailings at depth (Fig. 5a). As compared to the stamp mill tailings, the concentrations of As (124-11,600 mg/kg; mean = 2010 mg/kg) and Hg (12-7210 µg/kg; mean = 556 µg/kg) are generally lower in the cyanidation tailings (Table 10). The As and Hg contents of nearshore marine sediments in Seal Harbour show that tailings have been widely dispersed throughout this harbour (Figs. 47, 48).

The highest concentrations of As and Hg are found close to the cyanide plant foundation, where sulphide concentrates were dumped adjacent to the mill. Layers of sulphide minerals are shallowly buried in this area and the As concentration in one sample at 30 cm depth was the highest of all samples collected throughout the gold mines in Nova Scotia (As = 31.2 wt.%; Fig. 47). Weathering and oxidation of these concentrate layers generates acidic drainage (pH = 3.6) which enters the small tributary running through the tailings near site T14 (Fig. 44).

Water sampling at Lower Seal Harbour was carried out in August 2003, May 2004, August 2004, November 2004 and August 2005 to evaluate seasonal variations in the chemistry of waters draining the tailings deposits. Detailed results from this seasonal water sampling are presented in the Discussion section of this report. Water was collected from 12 sites (Fig. 49) including two background locations unaffected by the tailings (W1 and W22) and an upstream location on West Brook that is not affected by drainage from Lower Seal Harbour but which is strongly influenced by tailings runoff from the Upper Seal Harbour Gold District (W4). All other sites were located in areas where surface waters were in direct contact with the tailings (Fig. 50).

As shown in Fig. 51, dissolved concentrations of As are very elevated in surface waters draining this district, and enter Seal Harbour more than 2 km from the mine site carrying between 100 and 470 µg/L As, depending on the time of year. The concentrations of As at the upstream site on West Brook are also very high (430 µg/L in Aug. 2005), indicating that tailings from the Upper Seal Harbour district are strongly influencing the chemistry of this brook. The concentrations of Hg are also somewhat elevated (Fig. 52), but to a much smaller degree than for As.

The variation in surface water pH throughout the Lower Seal Harbour district in August 2005 is shown in Fig. 54. Surface water pH is generally lowest (5.1-5.7) at background sites above the tailings deposits, and increases to values between 6.2 and 7.4 within the tailings. This pattern of increasing surface water pH in tailings areas is typical of many gold mine sites throughout Nova Scotia and may result from dissolution of carbonate minerals in the tailings deposits.

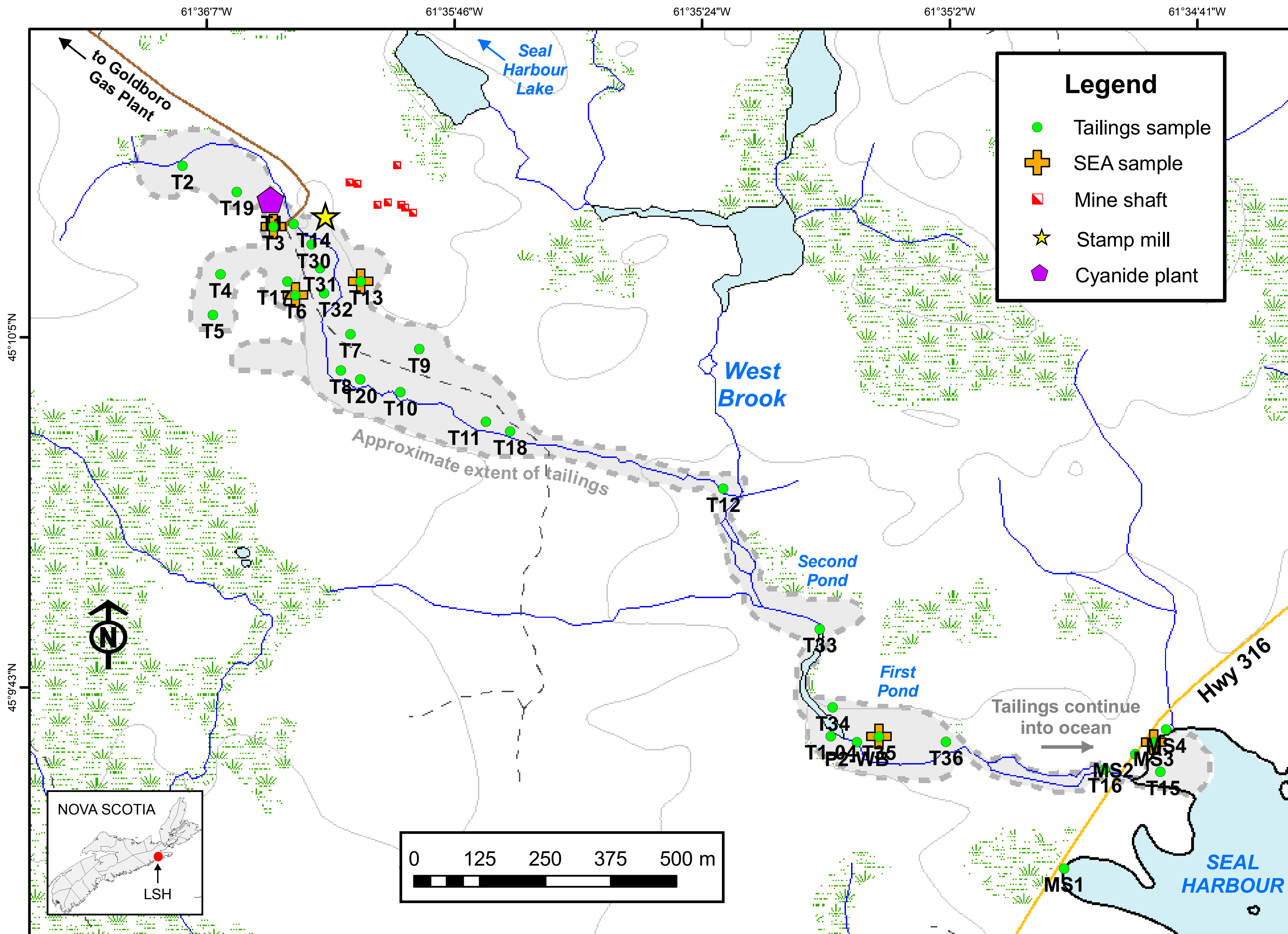


Fig. 44. Location of tailings samples, Lower Seal Harbour Gold District. Orange crosses show the location of samples collected in 2003-2005 for sequential extraction analyses (SEA). (geographic centre of map (decimal degrees): 45.165326°, -61.591189°)

a)

b)

Fig. 45. (a) Sandy tailings in the Lower Seal Harbour Gold District. A tributary to West Brook runs along the edge of the tailings from right to left in the background of this photo, eventually transporting the tailings to Seal Harbour more than 2 km downstream. **(b)** Tailings along the floodplain of a small tributary to West Brook showing active erosional scarps (near site T18, Fig. 44).

a)

b)

Fig. 46. **(a)** Tailings in First Pond, an infilled waterbody along West Brook approximately 1.8 km downstream of the former milling operations at Lower Seal Harbour (Fig. 44). **(b)** Intertidal tailings flat in Seal Harbour, approximately 2.3 km downstream of the Lower Seal Harbour mills. In May 2005, Seal Harbour was closed to shellfish harvesting following the documentation of extremely high As concentrations in soft-shelled clams from this site (Koch *et al.* 2007).

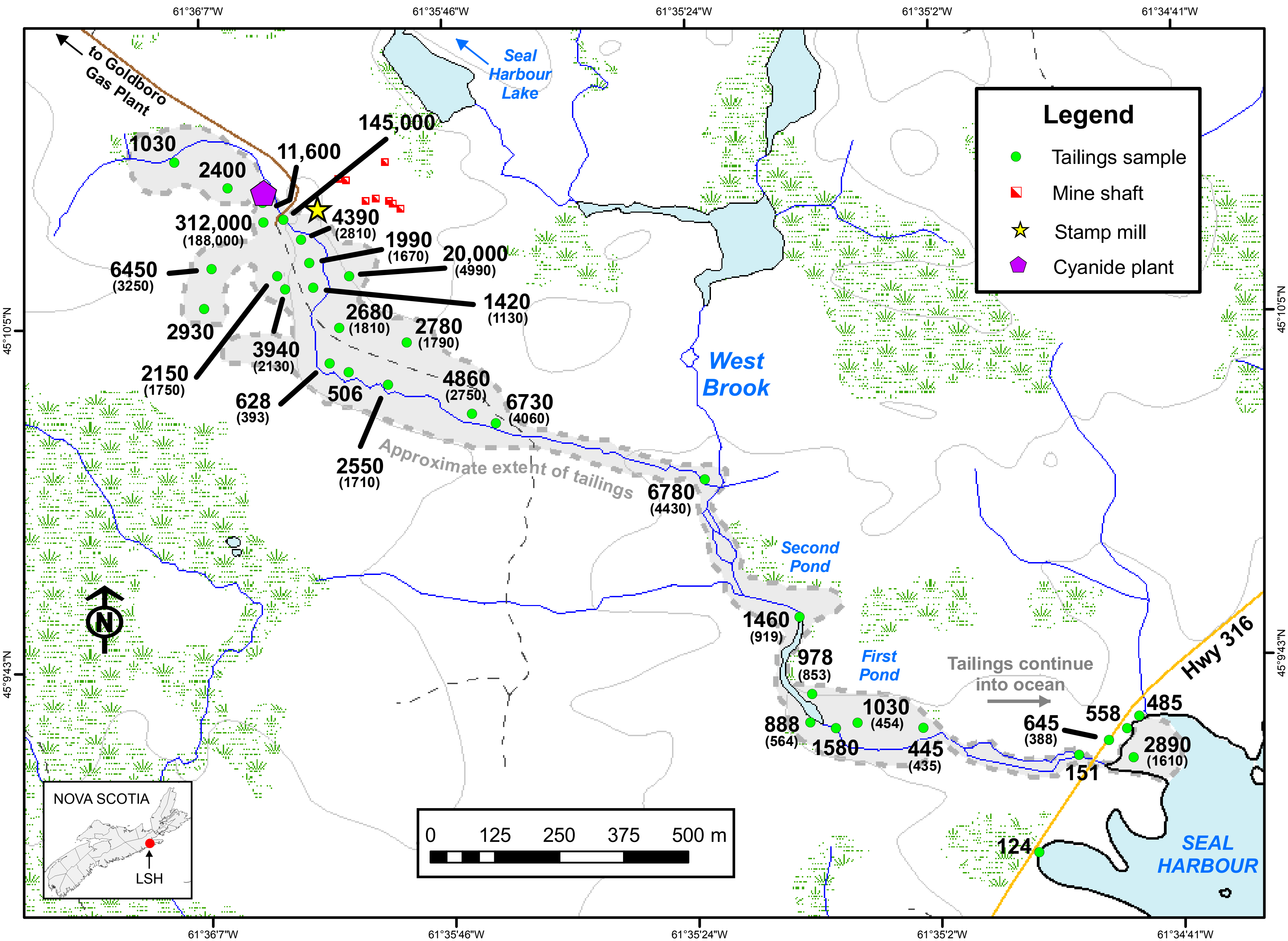


Fig. 47. As concentrations (mg/kg) in Lower Seal Harbour tailings (maximum and (mean) concentrations; <2 mm size fraction)

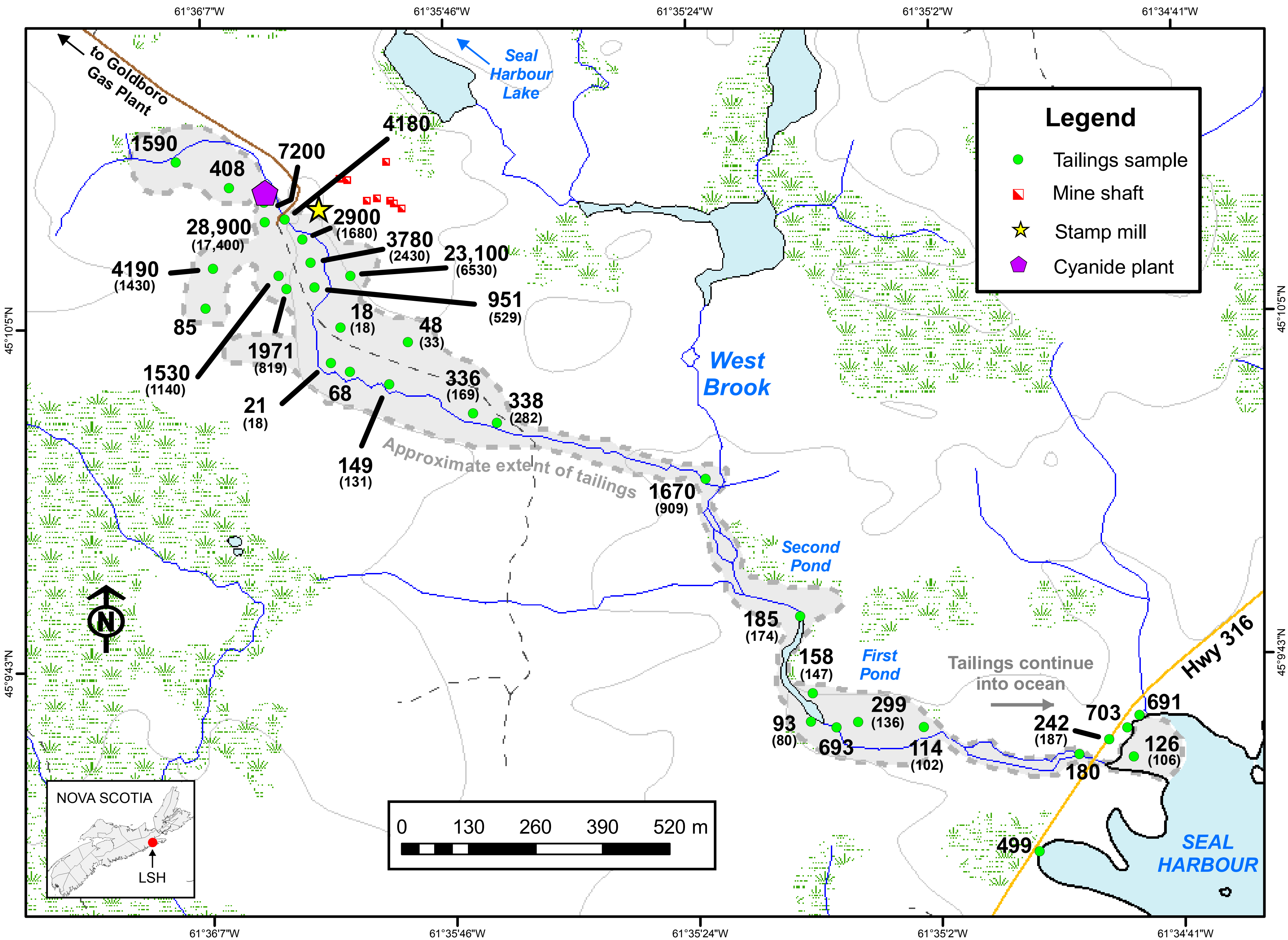


Fig. 48. Hg concentrations (µg/kg) in Lower Seal Harbour tailings (maximum and (mean) concentrations; <2 mm size fraction)

Table 10. As and Hg concentrations in tailings, Lower Seal Harbour Gold District

Sample Site	Tailings Depth (cm)	Northing (20T, NAD 83)	Easting (20T, NAD 83)	Date	As (mg/kg)	Hg (µg/kg)
T1	5	5002807	0609976	12-Aug-03	11600	7210
T2	5	5002885	0609804	12-Aug-03	1030	1590
T3	0	5002769	0609977	12-Aug-03	161000	24700
T3	20	5002769	0609977	12-Aug-03	293000	22900
T3	35	5002769	0609977	12-Aug-03	312000	28900
T3	45	5002769	0609977	12-Aug-03	174000	9650
T3	60	5002769	0609977	12-Aug-03	2640	926
T4	25	5002678	0609877	12-Aug-03	1760	37
T4	55	5002678	0609877	12-Aug-03	1530	60
T4	90	5002678	0609877	12-Aug-03	6450	4190
T5	30	5002601	0609862	12-Aug-03	2930	85
T6	0	5002639	0610019	12-Aug-03	916	49
T6	40	5002639	0610019	12-Aug-03	3940	1970
T6	45	5002639	0610019	12-Aug-03	971	365
T6	50	5002639	0610019	12-Aug-03	2680	890
T7	30	5002564	0610124	12-Aug-03	2680	18
T7	120	5002564	0610124	12-Aug-03	944	18
T8	30	5002495	0610106	12-Aug-03	157	21
T8	70	5002495	0610106	12-Aug-03	628	15
T9	0	5002536	0610255	12-Aug-03	1790	12
T9	50	5002536	0610255	12-Aug-03	2780	48
T9	55	5002536	0610255	12-Aug-03	790	39
T10	10	5002454	0610219	12-Aug-03	2550	149
T10	40	5002454	0610219	12-Aug-03	879	113
T11	10	5002398	0610382	12-Aug-03	1560	54
T11	60	5002398	0610382	12-Aug-03	1820	118
T11	120	5002398	0610382	12-Aug-03	4860	336
T12	5	5002270	0610834	12-Aug-03	2080	145
T12	30	5002270	0610834	12-Aug-03	6780	1670
T13	15	5002665	0610144	12-Aug-03	20000	23100
T13	30	5002665	0610144	12-Aug-03	3410	2470
T13	50	5002665	0610144	12-Aug-03	495	1640
T13	80	5002665	0610144	12-Aug-03	421	1770
T13	100	5002665	0610144	12-Aug-03	666	3680
T14	0	5002774	0610016	13-Aug-03	145000	4180
T14	0	5002774	0610016	13-Aug-03	221000	500
T15	10	5001731	0611666	13-Aug-03	2890	86
T15	20	5001731	0611666	13-Aug-03	333	126

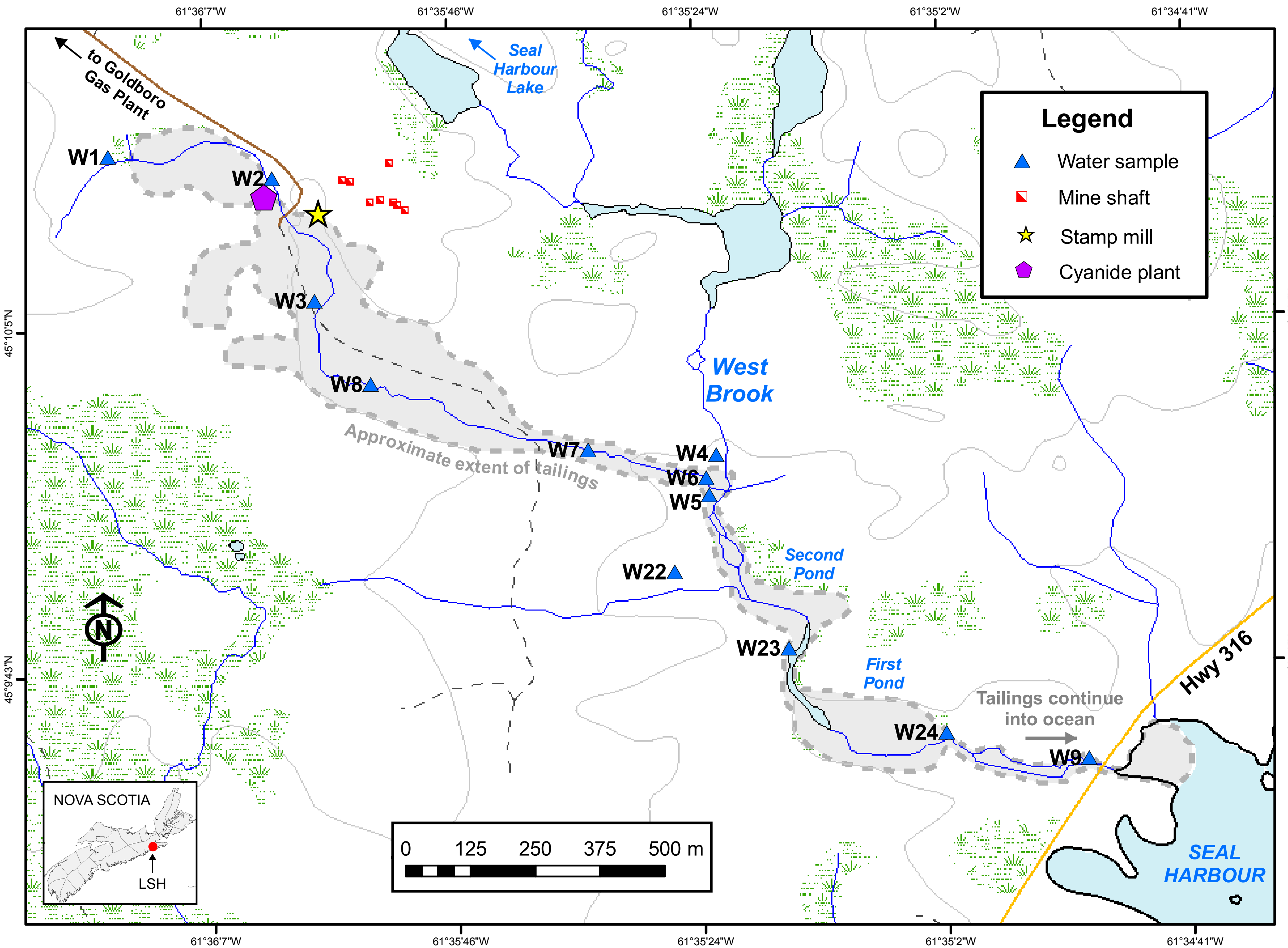


Fig. 49. Location of surface water samples, Lower Seal Harbour Gold District, August 2005 (geographic centre of map (decimal degrees): 45.165326°, -61.591189°)

a)

b)

Fig. 50. (a) Tributary to West Brook near water sampling site W7 (Fig. 49) showing actively eroding tailings from the Lower Seal Harbour milling operations. **(b)** Measuring water quality parameters in West Brook where it enters the Atlantic Ocean at Seal Harbour. Intertidal mud flats in the background are composed primarily of gold mine tailings.

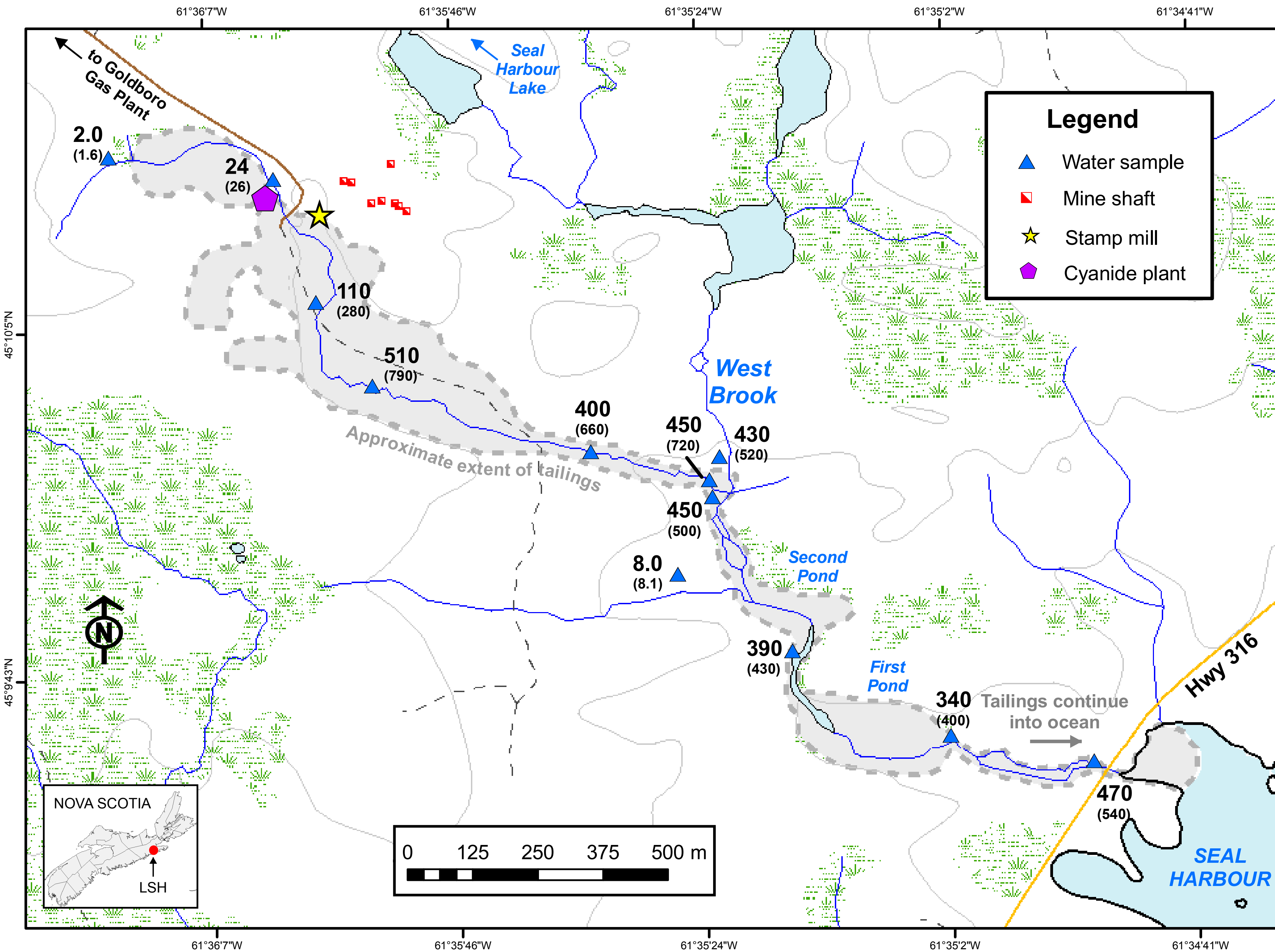


Fig. 51. As concentrations (µg/L) in surface water samples, Lower Seal Harbour Gold District August 2005 (dissolved [<0.45 µm] and (total) concentrations)

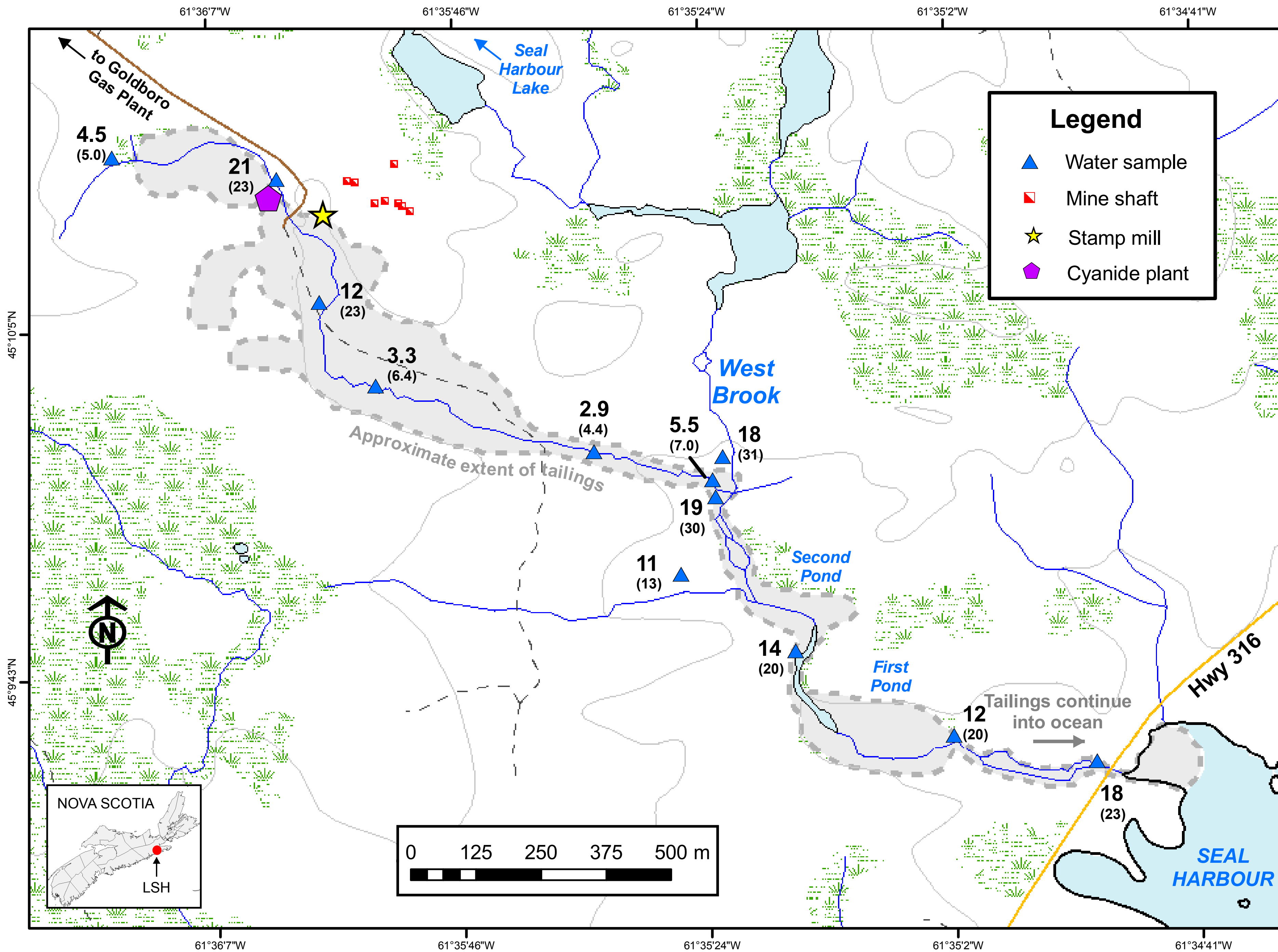


Fig. 52. Hg concentrations (ng/L) in surface water samples, Lower Seal Harbour Gold District, August 2005 (dissolved [<0.45 µm] and (total) concentrations)

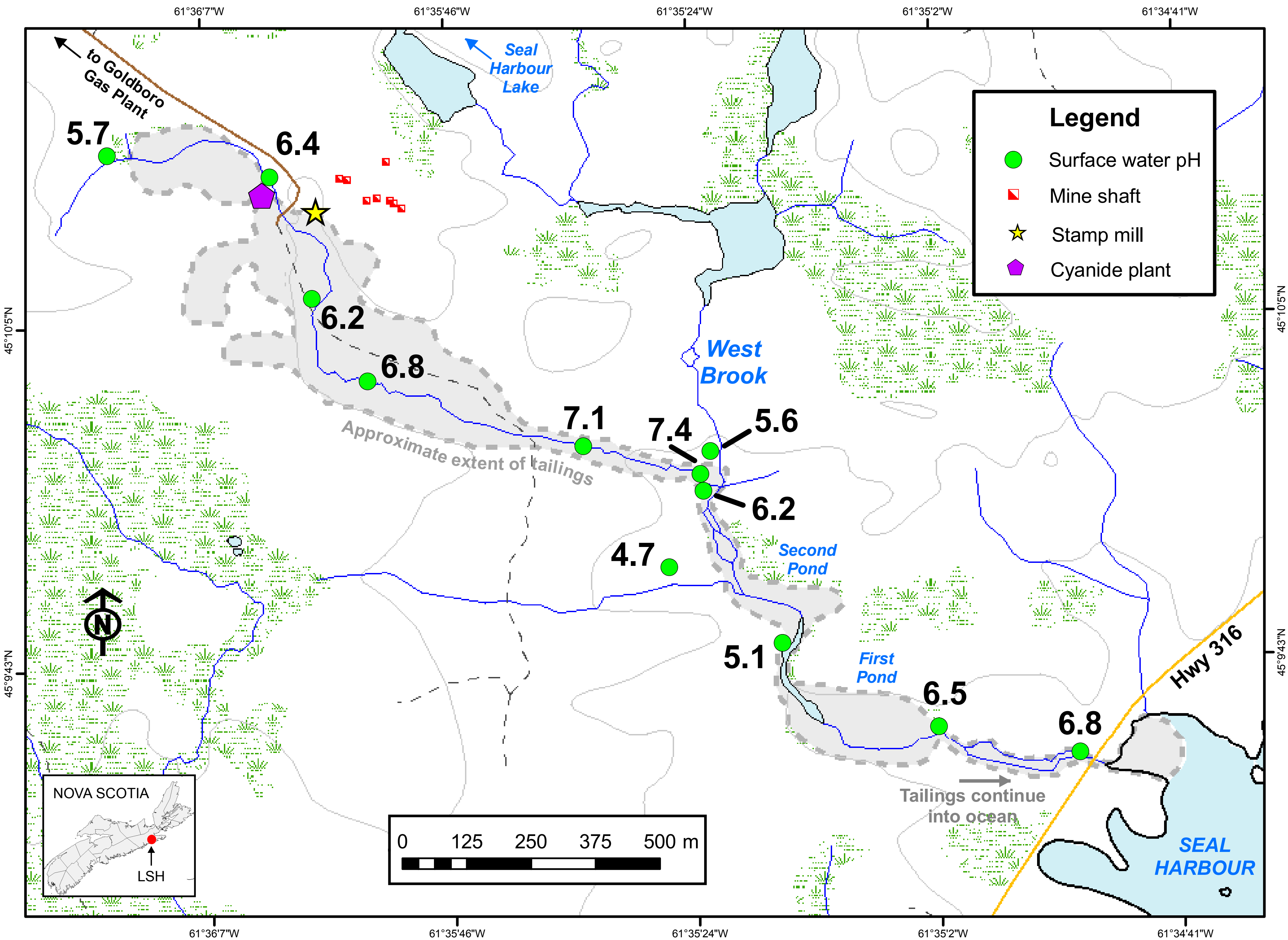


Fig. 53. pH in surface water samples, Lower Seal Harbour Gold District, August 2005

Montague Gold District

The Montague gold district is located in the community of Montague Gold Mines near the urban core of Halifax Regional Municipality (Fig. 1; 44.714949°, -63.521709°). The geology of this district was mapped by the GSC in 1902 (Faribault 1902b) and the character of the gold deposits is described in detail by Malcolm (1929). The environmental impacts of tailings disposal on stream waters, sediments, vegetation, fish and aquatic organisms in this district have previously been studied by EPS (1978), Brooks *et al.* (1981, 1982), and Dale and Freedman (1982).

From 2004 to 2010, NRCan partnered with Queen's University, the Royal Military College, Nova Scotia Environment, and Health Canada to evaluate human health risks associated with the tailings at Montague. The tailings at this site are located very close to residential properties and are frequently used for racing off-road vehicles (Fig. 54). Details on the mineralogy and bioaccessibility of As in these tailings can be found in Walker *et al.* (2009), Meunier *et al.* (2010, 2011), Corriveau *et al.* (2011a, 2011b), and DeSisto *et al.* (2011). Other studies have examined the bioaccumulation of As in terrestrial invertebrates (Moriarty *et al.* 2009) and small mammals (Saunders *et al.* 2010, 2011) living near the tailings at Montague. An Environmental Site Assessment was carried out at Montague in 2007-2008 to assess human health risks associated with the tailings and long-term management options are presently under investigation.

Mining and milling history

Gold was discovered at Montague in 1862 and the first on-site stamp mill was constructed in 1865. Mining was carried out continuously from 1865 to 1928, then intermittently until 1940, and ore was milled on-site using a variety of 5- to 15-stamp mills and Hg amalgamation (Malcolm 1929). In 1938, a six-ton batch treatment cyanide plant was installed at Montague for the treatment of concentrates from the active stamp mills, as well as stockpiled concentrate (Roach 1940). Most of the tailings from these mills were discharged directly into Mitchell Brook, which originates in Lake Loon and drains into Lake Charles (Fig. 55). Previous studies have shown that tailings are present in the various wetland areas along Mitchell Brook, and a layer of fine tailings was found in a sediment core from Lake Charles, approximately 2.5 km downstream of the Montague stamp mills (EPS 1978; Mudroch and Clair 1985). Tailings were also deposited in a wetland along Birch Cove Brook, which drains eastward toward Lake Major (Faribault 1902). Since the 1980s, several companies have investigated the feasibility of extracting gold from the tailings (Jacques Whitford and Associates, Ltd. 1984; Mills 1997).

Distribution of As and Hg in mine tailings

Samples of near-surface tailings and broken-up hardpan material were collected from 31 sites at Montague between 2003 and 2007 (Fig. 55). Tailings in the racetrack area are well-oxidized near the surface and are partially overlain by hardpan (Fig. 56). As shown in Fig. 57 and Table 11, the concentrations of As in the tailings are very high (up to 4.1 wt.%), especially in the broken-up scorodite-rich hardpan in the racetrack area (DeSisto *et al.* 2011). The concentrations of Hg are also high reflecting the long history of Hg amalgamation in this district (Fig. 58). Field observations show that dusty tailings from this site are occasionally transported toward the east and southeast on windy days and may impact residential properties along Montague Mines Road.

a)

b)

Fig. 54. (a) Off-road vehicle jumps constructed from mine tailings in the Montague Gold District.
(b) Children racing dirt bikes on dusty tailings near a high-volume particulate sampler at Montague Gold Mines, September 2004 (photo by Madeleine Corriveau, Queen's University).

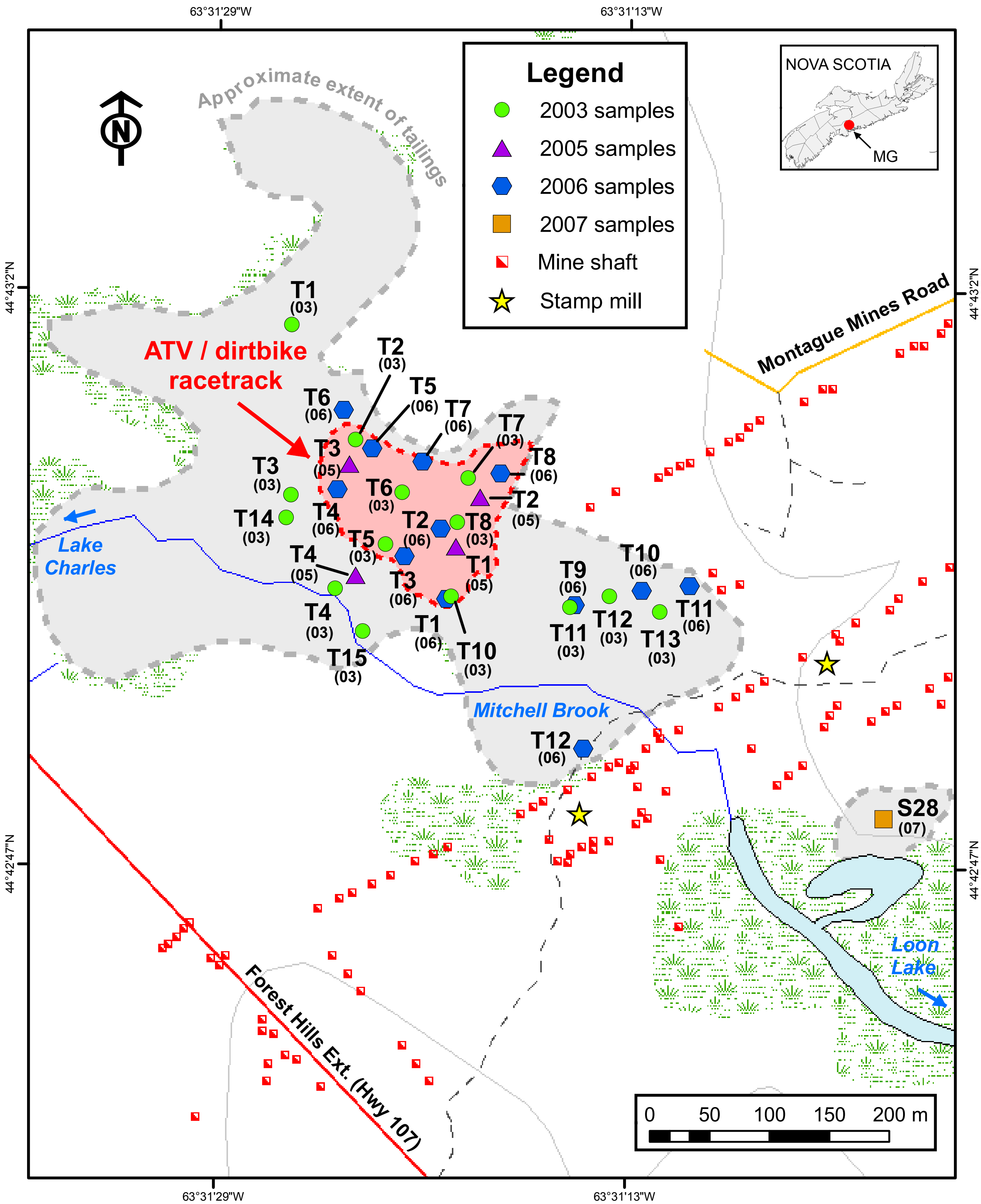


Fig. 55. Location of tailings samples, Montague Gold District (geographic centre of map (decimal degrees): 44.714949°, -63.521709°)

a)

b)

Fig. 56. (a) Tailings in racetrack area at Montague showing As-rich hardpan underlying tailings in foreground. Layers of arsenopyrite are present in contact with this hardpan, suggesting that it formed from oxidation of sulphide concentrates that were dumped on top of the tailings. **(b)** Cross-section through the tailings showing layers of hydrous ferric oxide near the surface.

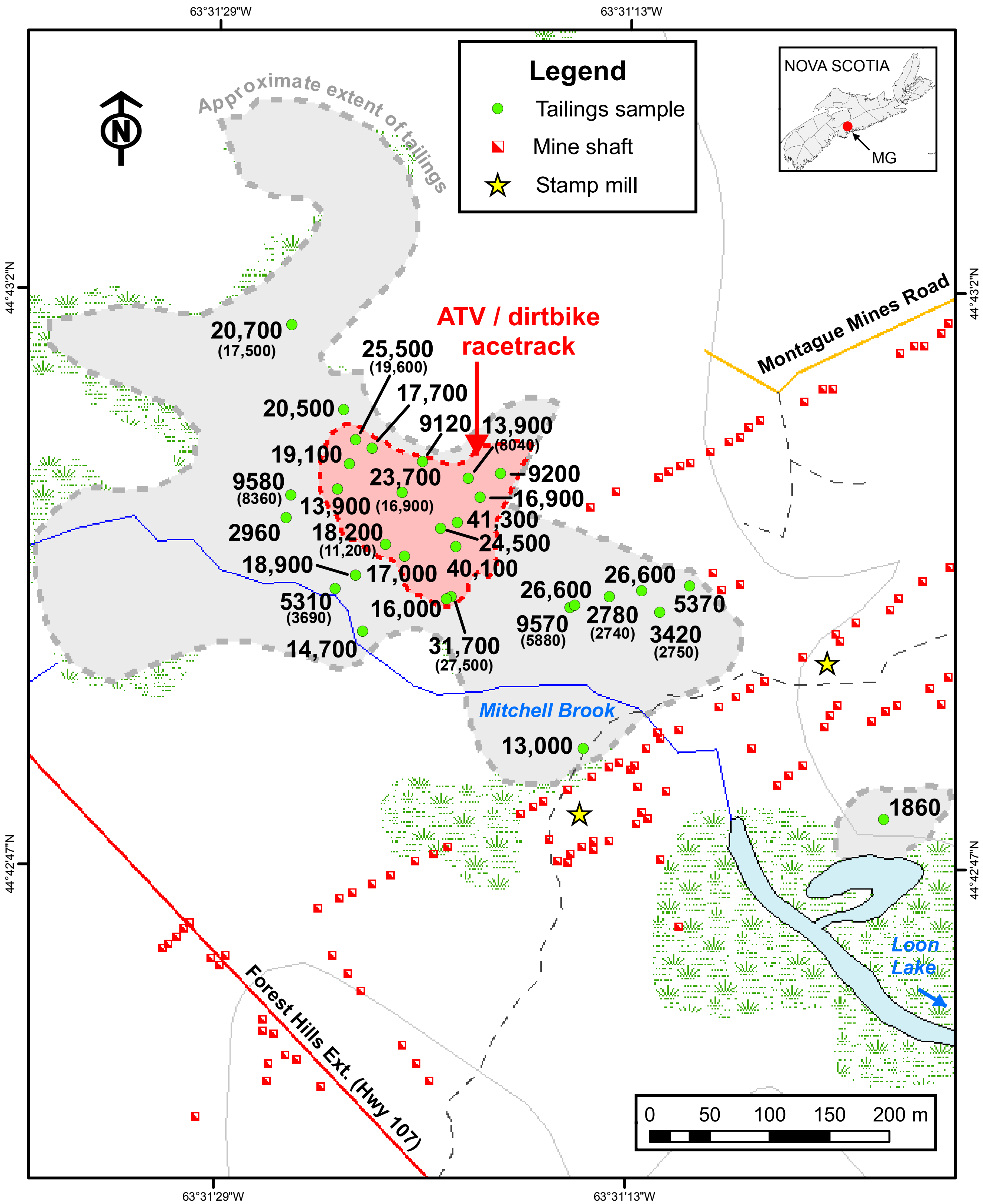


Fig. 57. As concentrations (mg/kg) in Montague tailings
(maximum and (mean) concentrations; <2 mm size fraction)

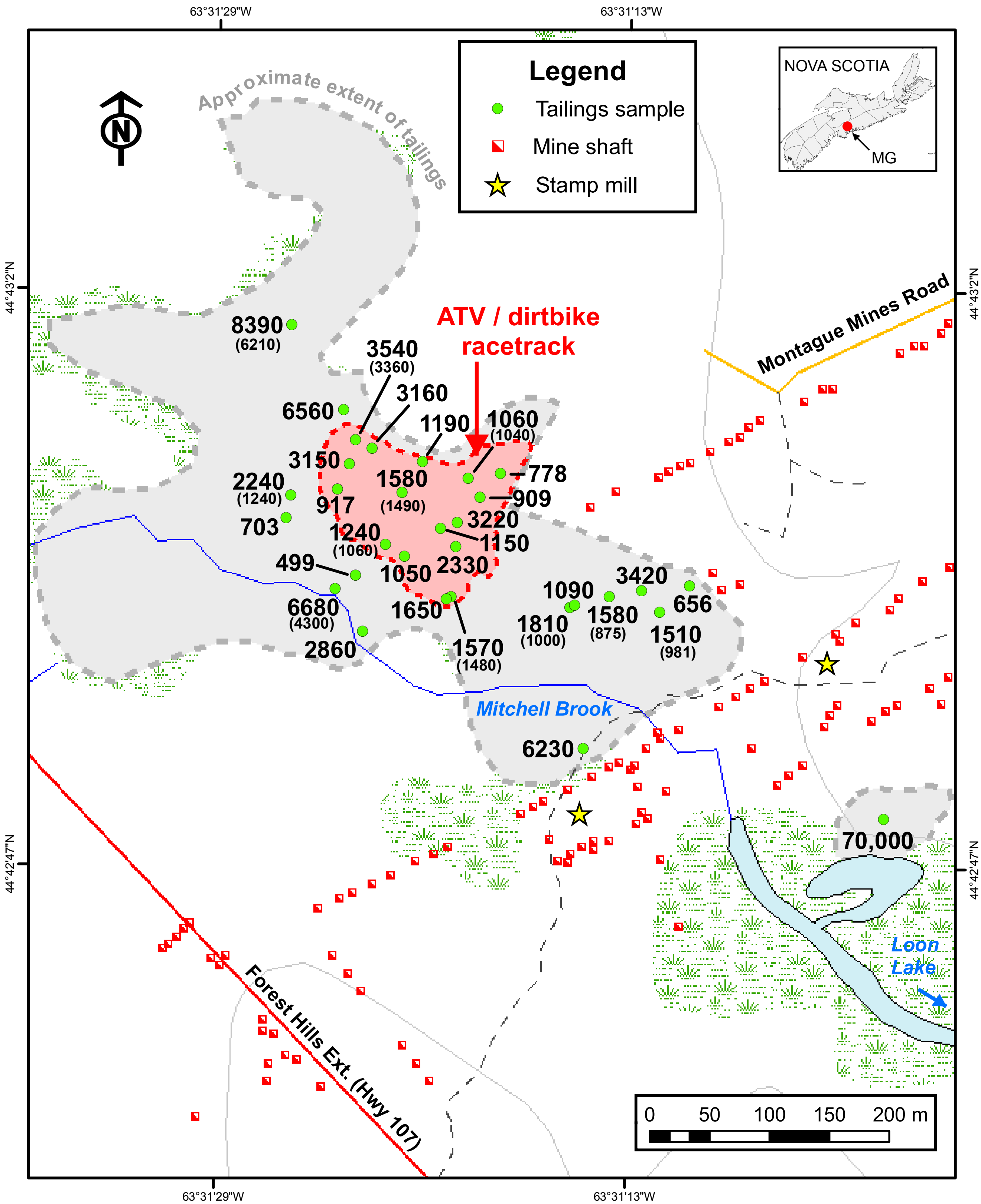


Fig. 58. Hg concentrations (µg/kg) in Montague tailings (maximum and (mean) concentrations; <2 mm size fraction)

Table 11. As and Hg concentrations in tailings, Montague Gold District [a]

Sample Site	Tailings Depth (cm)	Northing (20T, NAD 83)	Easting (20T, NAD 83)	Date	As (mg/kg)	Hg (μg/kg)
T1	2.5	4951651	0458511	11-Jun-03	20700	4030
T1	10	4951651	0458511	11-Jun-03	14300	8390
T2	1	4951555	0458564	11-Jun-03	25500	3540
T2	5	4951555	0458564	11-Jun-03	13700	3180
T3	0	4951509	0458510	11-Jun-03	7130	245
T3	25	4951509	0458510	11-Jun-03	9580	2240
T4	7.5	4951431	0458547	11-Jun-03	5310	6680
T4	20	4951431	0458547	11-Jun-03	2060	1920
T5	1	4951468	0458589	11-Jun-03	18200	1240
T5	6	4951468	0458589	11-Jun-03	4280	873
T6	0	4951511	0458603	11-Jun-03	20700	1390
T6	4	4951511	0458603	11-Jun-03	23700	1590
T6	10	4951511	0458603	11-Jun-03	6230	1500
T7	5	4951523	0458658	11-Jun-03	13900	1060
T7	15	4951523	0458658	11-Jun-03	2140	1030
T8	2.5	4951486	0458649	11-Jun-03	41300	3220
T10	5	4951424	0458644	11-Jun-03	31700	1390
T10	15	4951424	0458644	11-Jun-03	23200	1570
T11	6	4951415	0458743	11-Jun-03	9570	454
T11	15	4951415	0458743	11-Jun-03	2370	746
T11	25	4951415	0458743	11-Jun-03	5700	1810
T12	2.5	4951424	0458776	11-Jun-03	2690	166
T12	25	4951424	0458776	11-Jun-03	2780	1580
T13	0	4951411	0458818	11-Jun-03	1720	450
T13	15	4951411	0458818	11-Jun-03	3420	1510
T14	10	4951490	0458506	8-May-03	2960	703
T15	5	4951395	0458570	8-May-03	14700	2860

[a] Samples from 2005-2007 were taken from a single depth and are not included in this table.

Mooseland Gold District

The Mooseland Gold District is located along Mooseland Road approximately 24 km north of Tangier on the eastern shore of Nova Scotia (Fig. 1; 44.934766°, -62.772181°). The geology of this district was mapped by the GSC in 1899 (Faribault 1899a) and a summary of the ore deposit geology and metallogeny is provided by Malcolm (1929) and Horne *et al.* (2004). Most of the historical mine workings are located between Mooseland Road and the Tangier River.

Mining and milling history

The first confirmed discovery of gold in bedrock in Nova Scotia occurred in Mooseland in 1858, when Captain C. L'Estrange noticed the yellow metal in quartz outcrops while hunting near the Tangier River. Two years later, follow-up prospecting by John Gerrish Pulsiver and others revealed additional gold showings near Mooseland and Tangier, leading to Canada's first gold rush in 1861 (Heatherington 1868; Bates 1987). Mining and milling activities were carried out intermittently at Mooseland between 1861 and 1934, recovering approximately 3865 troy oz. of gold from 8217 tonnes of crushed rock (Table 1). In the first year or two, ore at Mooseland was crushed using an arrastra and a rudimentary stamp mill consisting of four wooden stamps (Malcolm 1929). Eventually, these mills were replaced by more efficient 5- to 10-stamp mills and all tailings were discharged into Sluice Brook, or directly into the Tangier River (Fig. 3b; Faribault 1899a). Surface and underground exploration in the Mooseland district has continued to the present day, including the sinking of a 400-foot shaft in the late 1980s (Horne *et al.* 2004).

Distribution of As and Hg in mine tailings

Tailings were sampled from seven sites (Fig. 59) along the west bank of the Tangier River in May and October 2003 near the former Mooseland Gold Mining Company Property shown in Fig. 3b. Most of the tailings near the former stamp mill are covered by a thin layer of moss and grasses and are well-oxidized to at least 40 cm depth (Fig. 60). Immediately adjacent to the mill site the tailings contain layers of scorodite-bearing hardpan. Closer to the river, the tailings are covered by thick grasses, wetland plants, and are waterlogged and relatively unoxidized. Tailings near the mouth of Sluice Brook are overgrown with alders and difficult to recognize (Fig. 59).

As shown in Figs. 61 and 62, the bulk concentrations of As (2580-256,000 mg/kg; mean = 23,300 mg/kg) and Hg (762-30,000 µg/kg; mean = 7040 µg/kg), respectively, are very high in the tailings at Mooseland (Table 12). The highest As and Hg concentrations are found in hardpan material, which may represent the oxidized remains of sulphide concentrate. The relatively high As and Hg concentrations in these tailings reflects the inefficiency of these early stamp mills.

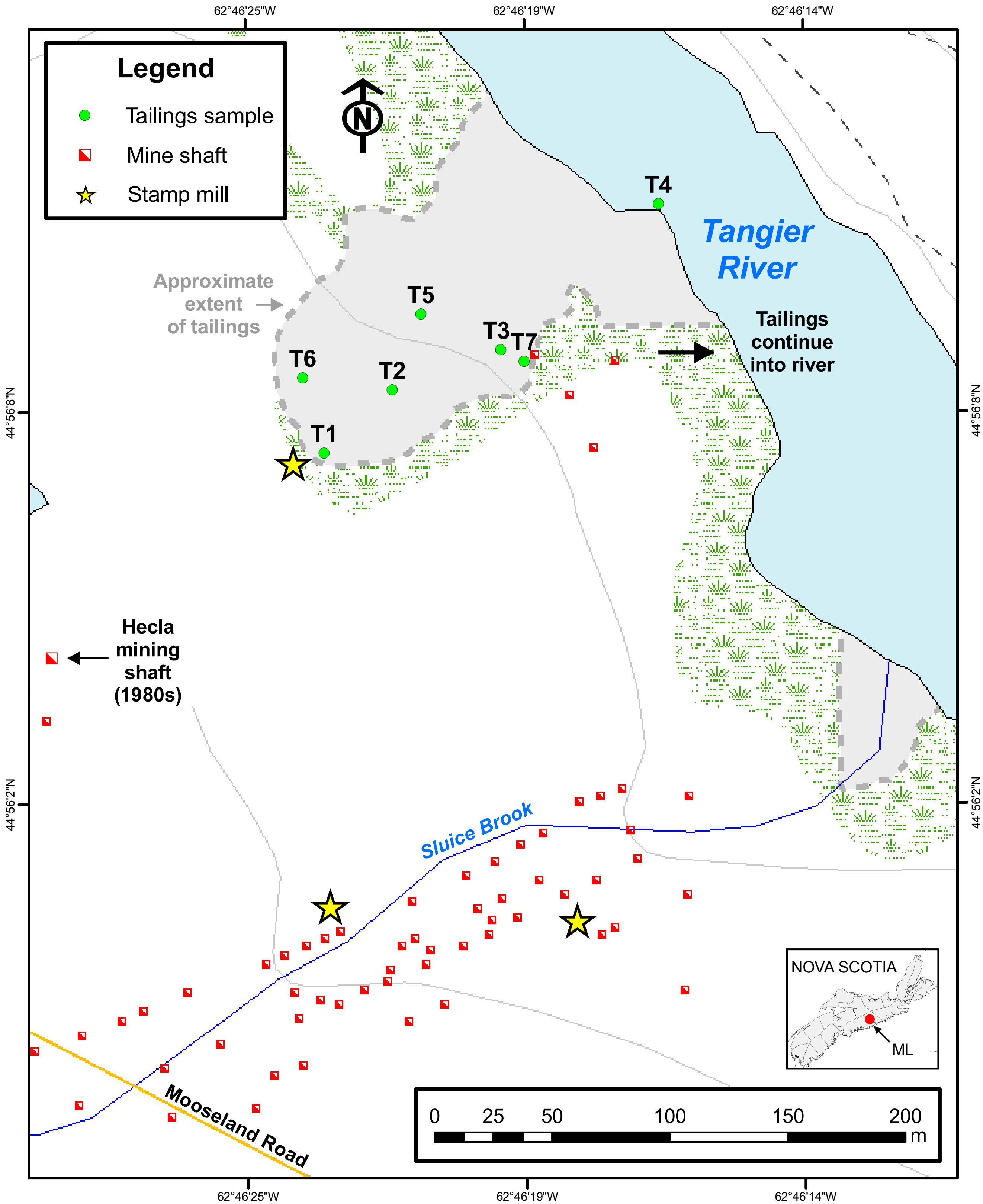


Fig. 59. Location of tailings samples, Mooseland Gold District
(geographic centre of map (decimal degrees): 44.934766°, -62.772181°)

a)

b)

Fig. 60. (a) Sparsely vegetated tailings deposit along the western bank of the Tangier River (in background), Mooseland Gold District (see Fig. 3b for an overview of these tailings in 1897). **(b)** Well-oxidized sandy tailings near former stamp mill site at Mooseland.

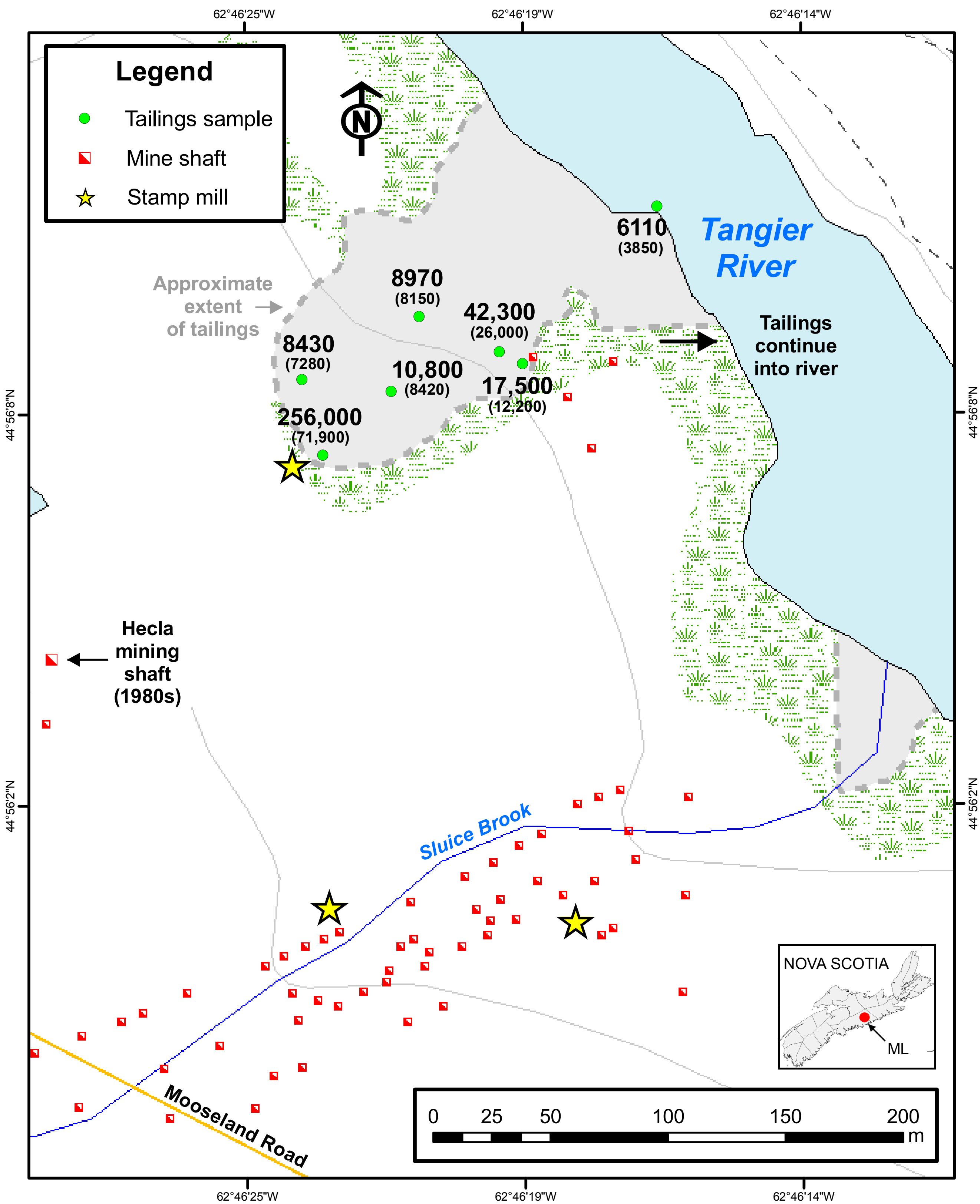


Fig. 61. As concentrations (mg/kg) in Mooseland tailings (maximum and (mean) concentrations; <2 mm size fraction)

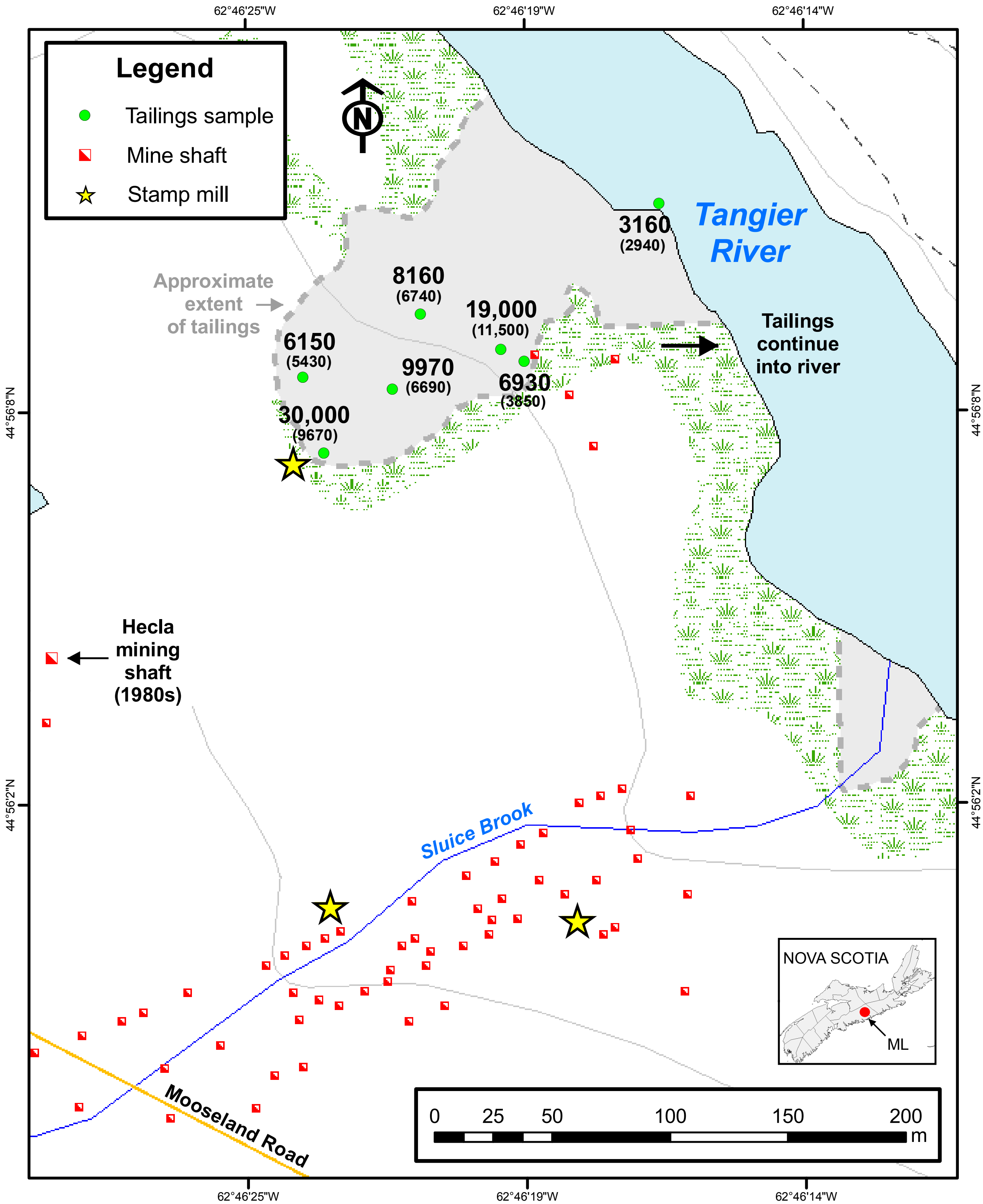


Fig. 62. Hg concentrations (µg/kg) in Mooseland tailings (maximum and (mean) concentrations; <2 mm size fraction)

Table 12. As and Hg concentrations in tailings, Mooseland Gold District

Sample Site	Tailings Depth (cm)	Northing (20T, NAD 83)	Easting (20T, NAD 83)	Date	As (mg/kg)	Hg (µg/kg)
T1	4	4975793	0517904	14-Oct-03	256000	30000
T1	12	4975793	0517904	14-Oct-03	20800	3990
T1	34	4975793	0517904	14-Oct-03	3260	1830
T1	45	4975793	0517904	14-Oct-03	7490	2860
T2	7	4975820	0517933	14-Oct-03	7180	1060
T2	20	4975820	0517933	14-Oct-03	10800	9970
T2	30	4975820	0517933	14-Oct-03	7330	9050
T3	3	4975837	0517979	14-Oct-03	42300	19000
T3	15	4975837	0517979	14-Oct-03	27300	7370
T3	25	4975837	0517979	14-Oct-03	8270	8020
T4	4	4975899	0518046	14-Oct-03	2870	2790
T4	15	4975899	0518046	14-Oct-03	2580	2880
T4	27	4975899	0518046	14-Oct-03	6110	3160
T5	5	4975852	0517945	14-Oct-03	8370	5790
T5	15	4975852	0517945	14-Oct-03	8970	8160
T5	23	4975852	0517945	14-Oct-03	7110	6280
T6	5	4975825	0517895	14-Oct-03	8430	6150
T6	16	4975825	0517895	14-Oct-03	6120	4720
T7	20	4975832	0517989	9-May-03	17500	762
T7	80	4975832	0517989	9-May-03	6840	6930

Mount Uniacke Gold District

The Mount Uniacke Gold District is located approximately 4 km north-northeast of the village of Mount Uniacke in Hants County, Nova Scotia (Fig. 1; 44.928097°, -63.804802°). The historical mine workings can be accessed from Highway 1 by travelling 4.0 km along Uniacke Mines Road, with the last 2.0 km being suitable for four-wheel drive vehicles only. The geology of this district was mapped by the GSC in 1901 (Faribault 1901) and the metallogeny of the gold deposits is well described by Malcolm (1929). The environmental impacts of historical amalgamation activities on Hg levels in water, sediment, soil, vegetation, and fauna (amphibians, mice) in the Mount Uniacke district have previously been studied by EPS (1978).

Mining and milling history

Gold was discovered at Mount Uniacke in 1865, leading to a rapid increase in prospecting and mining in this district. By the end of 1867, three stamp mills had been constructed and over two hundred new residents had moved into the area (Malcolm 1929). The peak annual production of the district (3247 troy oz. of Au) was reached in 1868, but mining and milling activities carried on almost continuously until 1941. From 1867 to 1941, approximately 27,740 troy oz. of gold were recovered from 54,256 tonnes of crushed rock (Table 1) and all milling was carried out using Hg amalgamation in a variety of stamp mills ranging in size from 5 to 30 stamps (Faribault 1901; Malcolm 1929). Mill foundations can be found throughout this district, accompanied by nearby tailings deposits (Fig. 63). The largest volumes of tailings were discharged into a wetland downslope of the former P.C.F. Gold Mining Crusher (Fig. 64a) and another wetland downslope of Foster's Crusher along Mill Pond (Fig. 64b; Faribault 1901). The concentrations of Hg in stream sediments collected below Mill Pond in 1977 show that tailings are present on the floodplain all the way to Mud Lake, 1.75 km downstream of Mill Pond (EPS 1978).

Distribution of As and Hg in mine tailings and surface waters

Tailings were sampled at Mount Uniacke in May and July 2003 at 20 sites including the main tailings deposits downslope of Mill Pond and the former P.C.F. Gold Mining Crusher, as well as three smaller tailings deposits near other mill foundations (Fig. 63). Tailings in the various wetland areas are generally dark grey, water-saturated, and covered with 10-20 cm of organic-rich soil and dense vegetation. Tailings in sloping, well-drained areas are deeply weathered, with abundant rust-brown hydrous ferric oxides that persist for depths of up to 80 cm. The As and Hg concentrations in all tailings and sediment samples are shown in Figs. 65 and 66, respectively, and are summarized in Table 13. The highest concentrations occur near mill foundations, and in cemented layers near the transition between oxidized (unsaturated) and reduced (saturated) zones reflecting sorption and co-precipitation of As and Hg during secondary mineral formation.

On July 17, 2003, water was sampled from a shallow hole dug in the water-saturated tailings in the wetland near the former P.C.F. Gold Mining Crusher (W1), and from four sites downstream of Mill Pond (W2-W5; Fig. 67). The pH of these waters ranged from 6.2 to 6.9. The dissolved concentrations of As and Hg were relatively low in the surface waters draining through the tailings below Mill Pond (Figs. 69, 70), but As concentrations were approximately an order of magnitude higher in the tailings pore water samples at sites W1 and W3 (Appendix B).

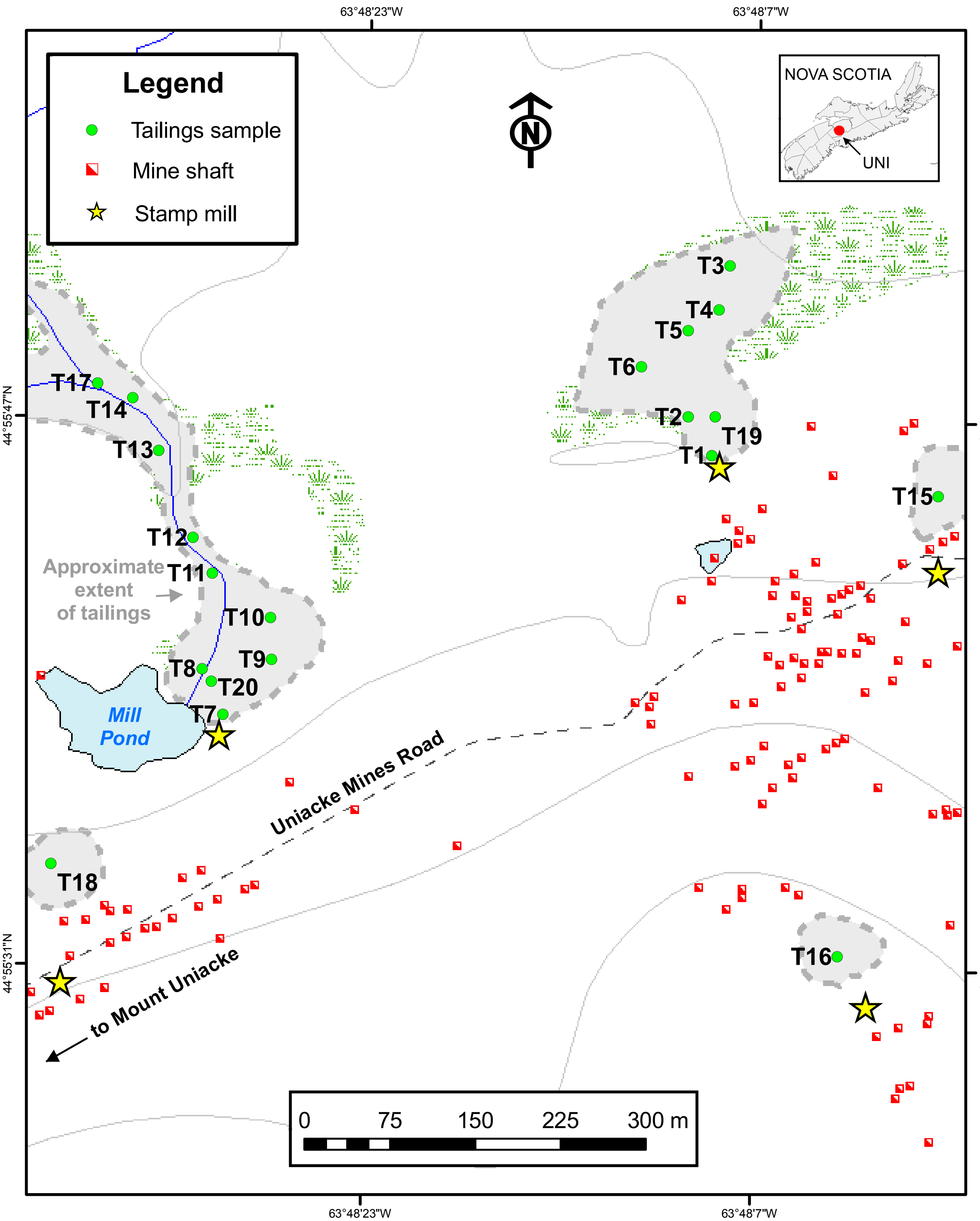


Fig. 63. Location of tailings samples, Mount Uniacke Gold District (geographic centre of map (decimal degrees): 44.928097°, -63.804802°)

a)

b)

Fig. 64. (a) Tailings overgrown with horsetails (*Equisetum*) and other vegetation in wetland downslope of former P.C.F. Gold Mining Crusher at the Mount Uniacke Gold District. **(b)** Sampling pit in tailings near Mill Pond (Site T20) showing oxidation of sulfides near surface and at depth.

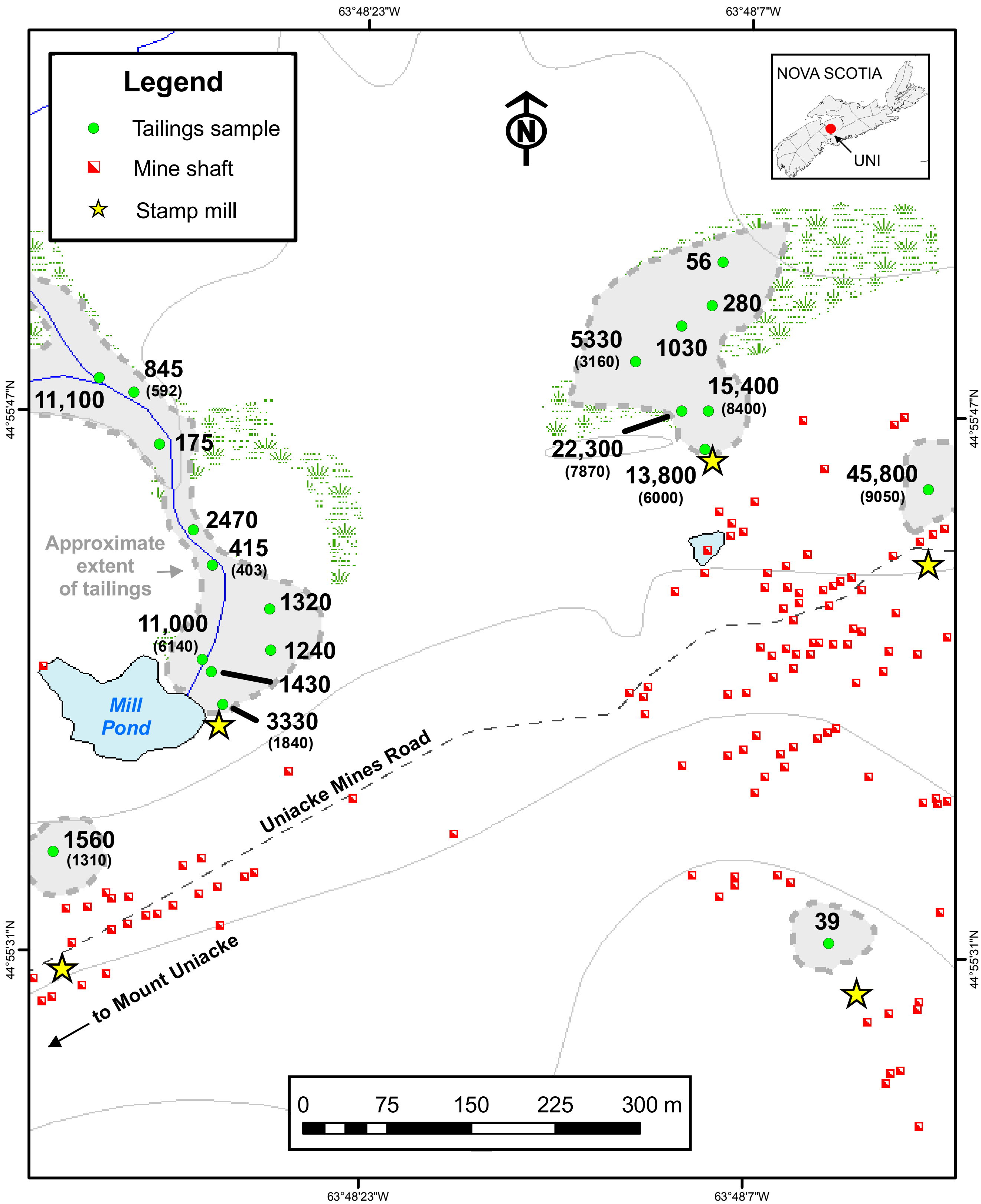


Fig. 65. As concentrations (mg/kg) in Mount Uniacke tailings (maximum and (mean) concentrations; <2 mm size fraction).

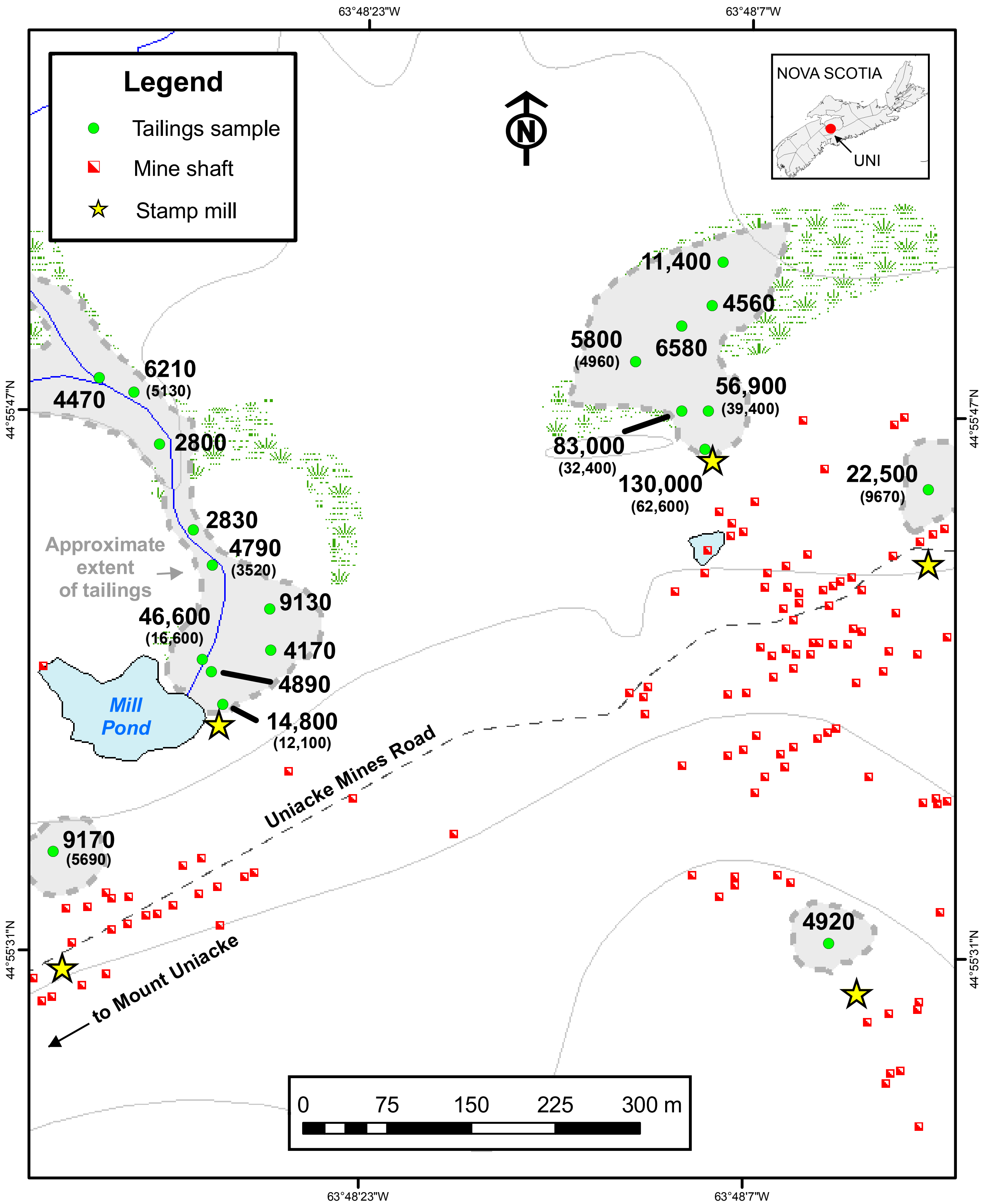


Fig. 66. Hg concentrations (µg/kg) in Mount Uniacke tailings (maximum and (mean) concentrations; <2 mm size fraction).

Table 13. As and Hg concentrations in tailings, Mount Uniacke Gold District

Sample Site	Tailings Depth (cm)	Northing (20T, NAD 83)	Easting (20T, NAD 83)	Date	As (mg/kg)	Hg (µg/kg)
T1	5	4975416	0436680	16-Jul-03	2090	25700
T1	10	4975416	0436680	16-Jul-03	13800	130000
T1	20	4975416	0436680	16-Jul-03	2100	31900
T2	20	4975450	0436659	16-Jul-03	22300	7030
T2	25	4975450	0436659	16-Jul-03	465	83000
T2	70	4975450	0436659	16-Jul-03	847	7100
T3	15	4975583	0436696	16-Jul-03	56	11400
T4	30	4975544	0436686	16-Jul-03	277	4560
T5	25	4975526	0436659	16-Jul-03	1030	6580
T6	20	4975494	0436618	16-Jul-03	5330	5800
T6	40	4975494	0436618	16-Jul-03	981	4120
T7	10	4975189	0436250	16-Jul-03	3330	14800
T7	25	4975189	0436250	16-Jul-03	360	9410
T8	2.5	4975229	0436232	16-Jul-03	8450	46600
T8	10	4975229	0436232	16-Jul-03	4120	7300
T8	40	4975229	0436232	16-Jul-03	11000	9460
T8	80	4975229	0436232	16-Jul-03	976	3070
T9	15	4975237	0436293	16-Jul-03	1240	4170
T10	10	4975274	0436292	16-Jul-03	1320	9130
T11	20	4975313	0436241	16-Jul-03	391	2250
T11	40	4975313	0436241	16-Jul-03	415	4790
T12	10	4975344	0436224	16-Jul-03	2470	2830
T13	5	4975421	0436194	16-Jul-03	175	2800
T14	15	4975467	0436171	16-Jul-03	339	6220
T14	40	4975467	0436171	16-Jul-03	845	4050
T15	2	4975380	0436879	16-Jul-03	2950	1970
T15	10	4975380	0436879	16-Jul-03	408	1100
T15	40	4975380	0436879	16-Jul-03	4000	12700
T15	70	4975380	0436879	16-Jul-03	45800	22500
T15	90	4975380	0436879	16-Jul-03	494	18600
T15	100	4975380	0436879	16-Jul-03	612	1130
T16	25	4974976	0436790	16-Jul-03	39	4920
T17	0	4975480	0436140	16-Jul-03	11100	4470
T18	5	4975058	0436099	16-Jul-03	1560	2890
T18	15	4975058	0436099	16-Jul-03	1200	5000
T18	30	4975058	0436099	16-Jul-03	1170	9170
T19	5	4975450	0436683	8-May-03	15400	56900
T19	20	4975450	0436683	8-May-03	1400	21900
T20	20	4975218	0436240	8-May-03	1430	4890

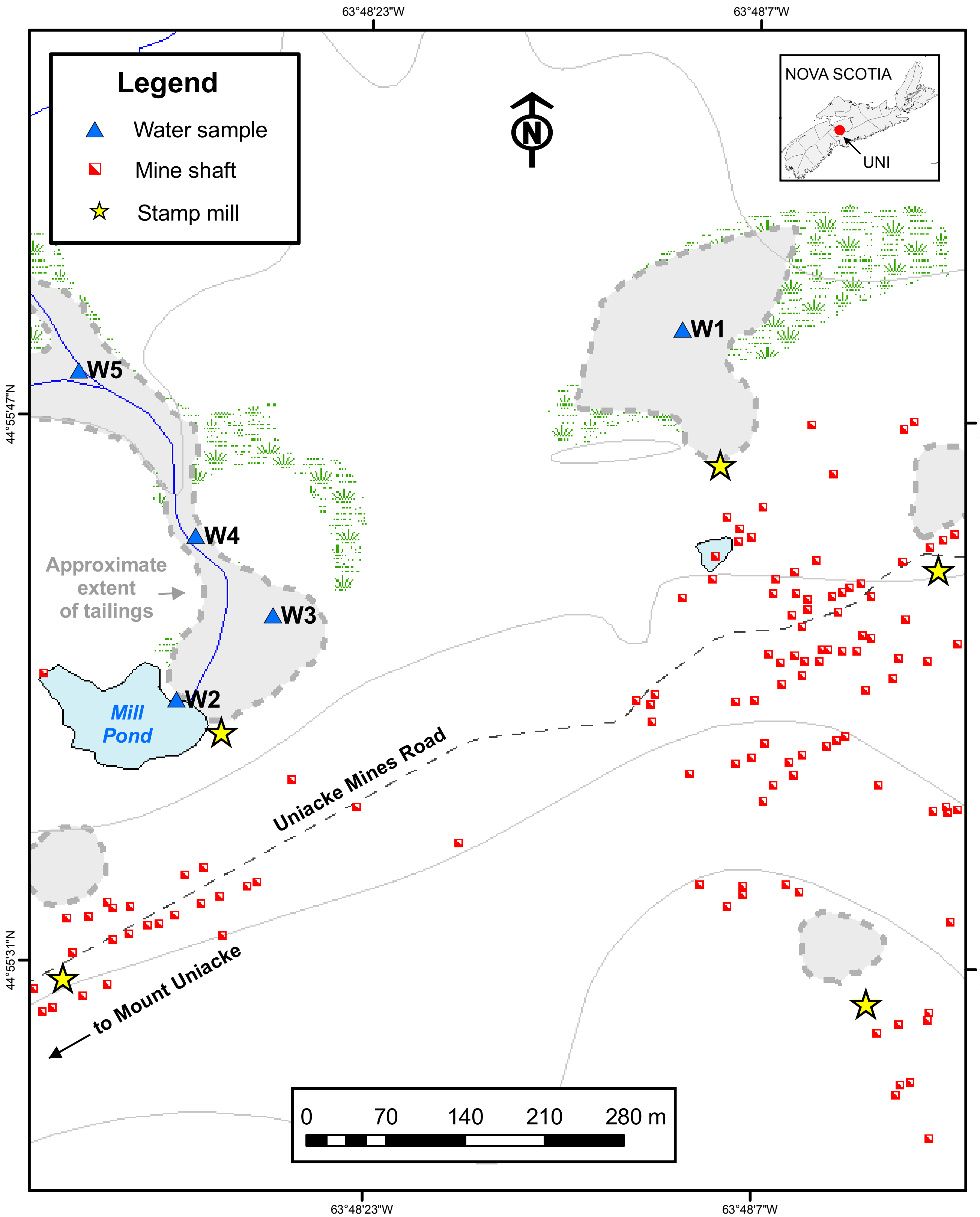


Fig. 67. Location of water samples, Mount Uniacke Gold District, July 2003 (geographic centre of map (decimal degrees): 44.928097°, -63.804802°)

a)

b)

Fig. 68. (a) Tailings-filled wetland approximately 300 m downstream of Mill Pond (near Site W5). Tailings in this area are unoxidized and overlain by 10-30 cm of dark brown, organic-rich sediment. **(b)** Close-up of bacteriogenic iron oxides (composed primarily of ferrihydrite) overlying tailings and floating on stagnant stream waters in wetland downstream of Mill Pond.

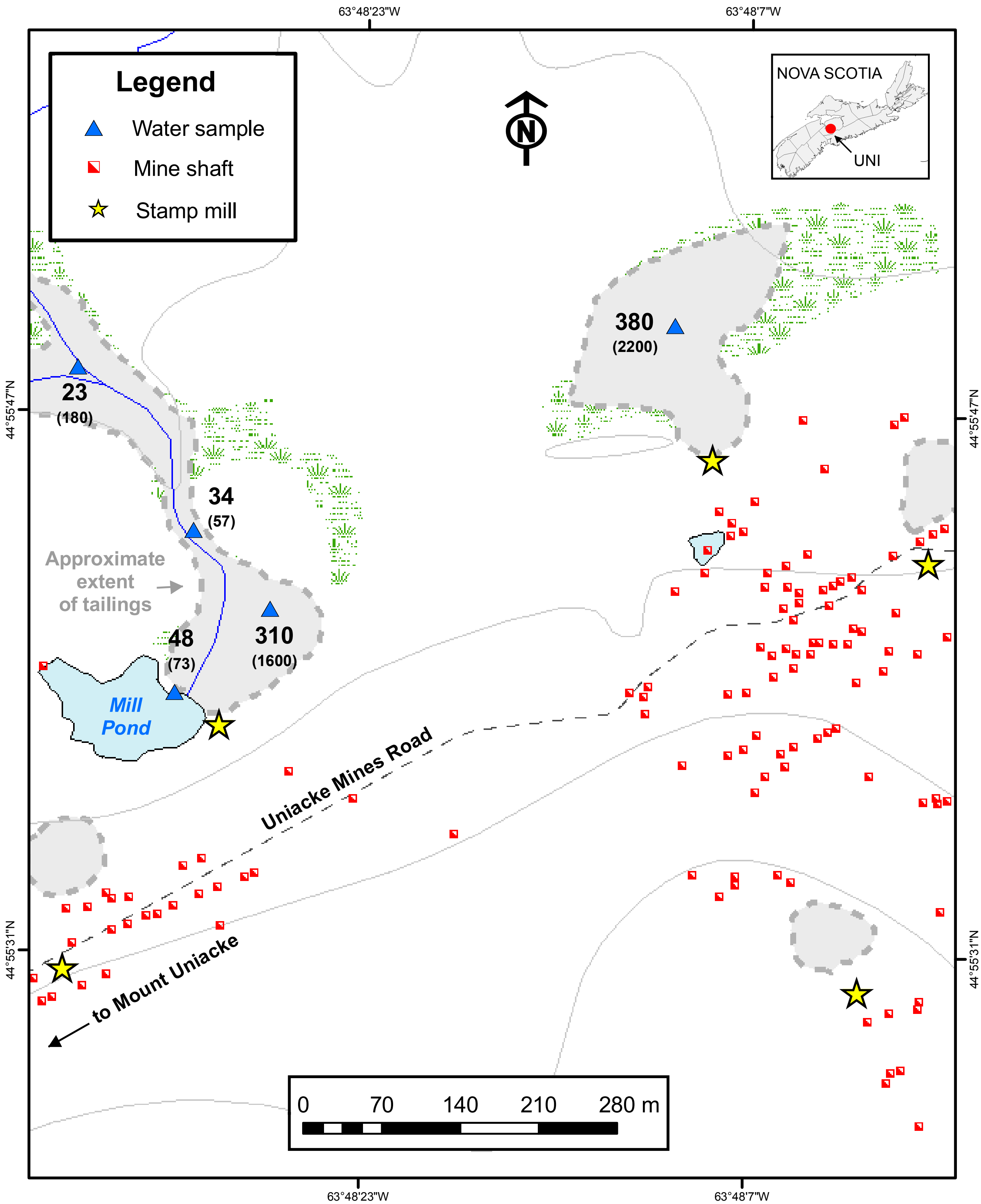


Fig. 69. As concentrations (µg/L) in surface water samples, Mount Uniacke Gold District, July 2003 (dissolved [<0.45 µm] and (total) concentrations)

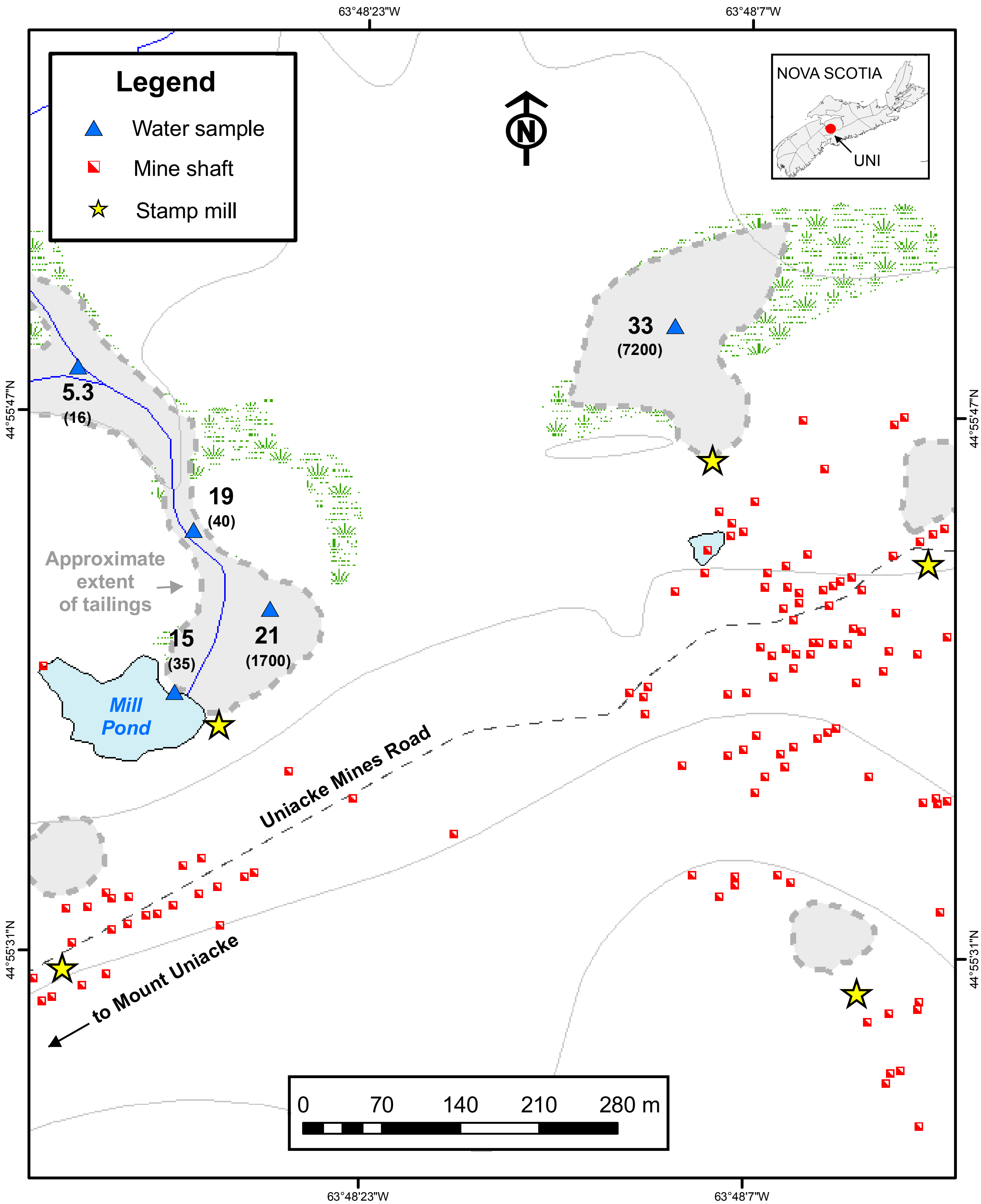


Fig. 70. Hg concentrations (ng/L) in surface water samples, Mount Uniacke Gold District, July 2003 (dissolved [<0.45 µm] and (total) concentrations)

North Brookfield Gold District

The North Brookfield Gold District is located 10 km northeast of the village of Caledonia in Queens County, Nova Scotia (Fig. 1; 44.412731°, -64.919626°). The historical mine workings can be accessed from Highway 208 in the community of North Brookfield by travelling 1.2 km along Brookfield Mines Road, turning right onto the abandoned CN rail line, then travelling along this for another 300 m. The GSC mapped the geology of this district in 1904 (Faribault 1908) and the metallogeny of the gold deposits is described by Malcolm (1929) and Ryan and Smith (1998). The environmental impacts of historical ore roasting on the concentrations and speciation of As in soils around North Brookfield have recently been studied by Wrye (2008).

Mining and milling history

Gold was discovered at North Brookfield in 1885 and the original milling operations employed several different stamp mills and Hg amalgamation to recover the gold. In 1896, the Brookfield Mining Company, Ltd. erected a 20-stamp mill and an adjacent chlorination plant to improve recovery of gold from the sulphide concentrates (Malcolm 1929). In this plant, the concentrates (mainly arsenopyrite) were roasted in three reverberatory furnaces to oxidize the sulphides, then subjected to barrel chlorination to liberate the gold as dissolved $AuCl_3$. After filtering, the gold was recovered from solution by precipitation using ferrous sulphate, then mixed with sodium bicarbonate and borax glass and smelted to purify the gold (Ritchie 1901; Forbes 1904). In 1904, the chlorination plant was replaced by a bromo-cyanide plant to further enhance gold recovery from the mill concentrates and old tailings dumps (Malcom 1929), but this was shut down at the end of 1905. Tailings from these operations were disposed in low-lying areas south and east of the mill buildings and are now frequently used by off-road vehicles (Figs. 71, 72). Intermittent exploration activities have continued at North Brookfield to the present day.

Distribution of As and Hg in mine tailings and surface waters

Tailings samples were collected from 22 sites at North Brookfield in 2003, primarily from the open, unvegetated area used by off-road vehicles (Fig. 72a) and from an overgrown wetland area east of the former cyanide plant (Sites T17, T22, Fig. 71). Tailings were also collected from another eight sites in 2005 for research on the mineralogy and bioaccessibility of As (Fig. 71; Meunier *et al.* 2010). The tailings at North Brookfield are generally grey-brown and sandy near the surface and are underlain by light grey, clay-rich tailings at depth. A very distinctive feature of the North Brookfield tailings is the presence of brick-red hematite grains, formed by the historical roasting of sulphide concentrate (Fig. 72b). In general, the concentrations of As, Hg and S in these tailings are lower than most other gold mine tailings in Nova Scotia, reflecting the efficient removal of sulphide minerals in the concentrators and the loss of gaseous As_2O_3, Hg^0 and SO_2 during the roasting process (Figs. 73, 74; Table 14; Forbes, 1904).

On November 10, 2003, water was sampled from five sites throughout the tailings at North Brookfield (Fig. 75). The pH of these waters increased from 5.4 upstream of the tailings to 7.3 in the tailings (W5). The dissolved concentrations of As increased rapidly within the tailings deposits (from 1.3 upstream (W1) to 440 µg/L in the tailings (W5); Fig. 77), whereas the dissolved Hg concentrations remained relatively low (Fig. 78; Appendix B).

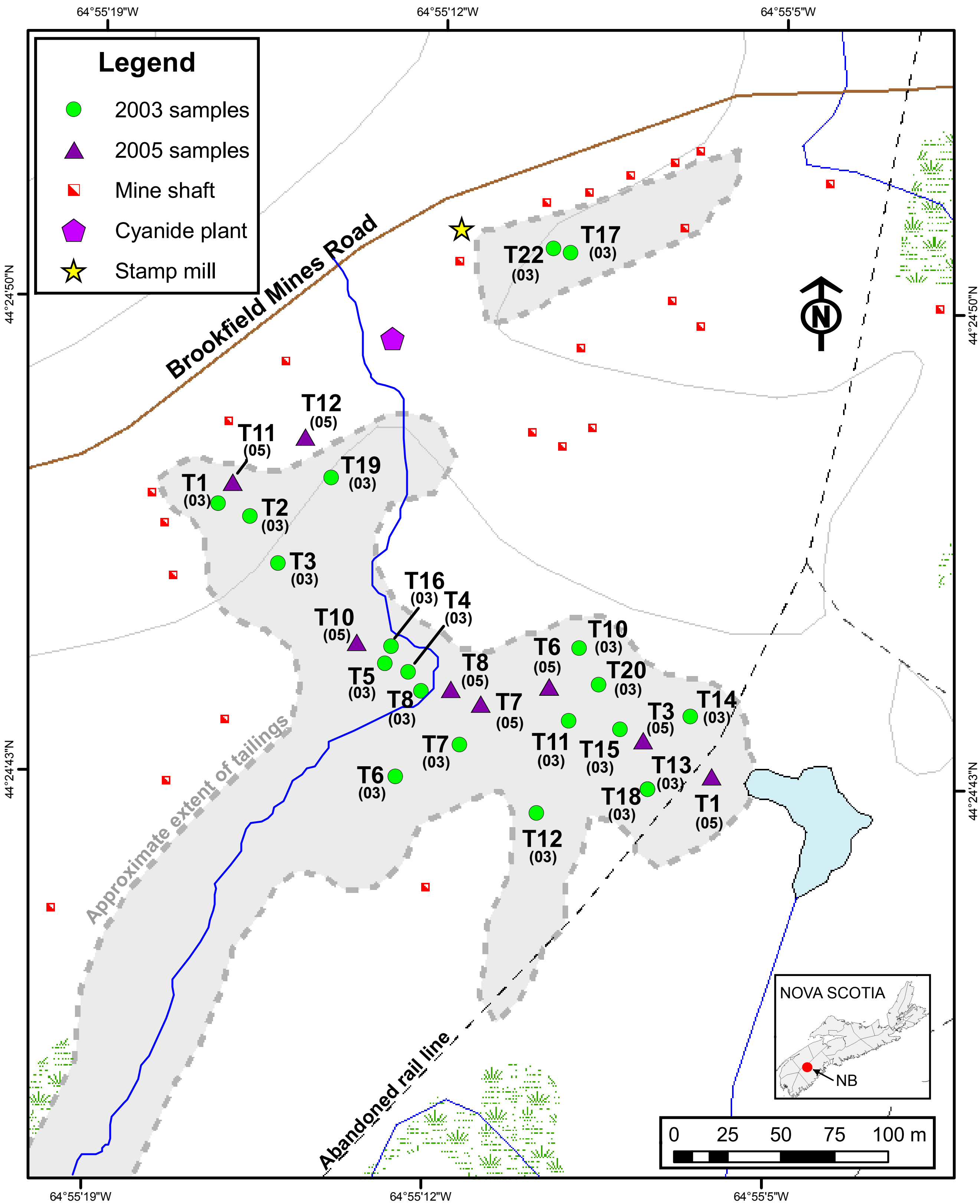


Fig. 71. Location of tailings samples, North Brookfield Gold District (geographic centre of map (decimal degrees): 44.412731°, -64.919626°)

a)

b)

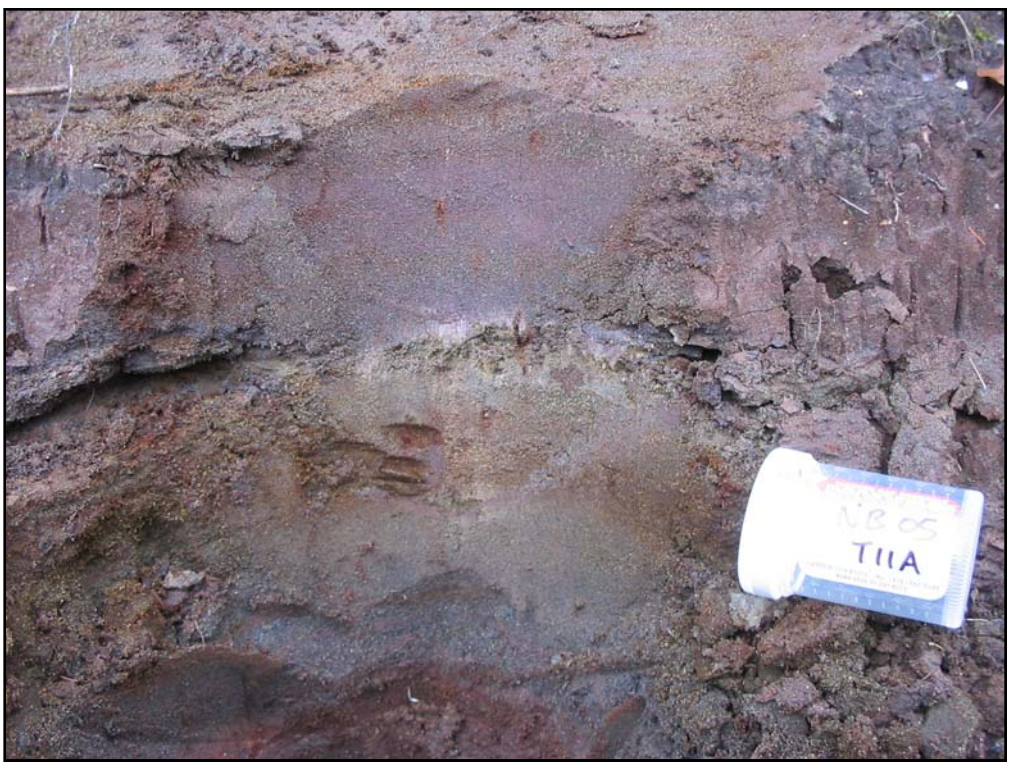


Fig. 72. (a) Overview of tailings at the North Brookfield Mine showing tracks and jumps created by off-road vehicles. **(b)** Close-up of gold mine tailings at Site T11-05 (Fig. 71) showing brick-red, As-bearing hematite (Fe_2O_3) grains formed by roasting of sulphide concentrates.

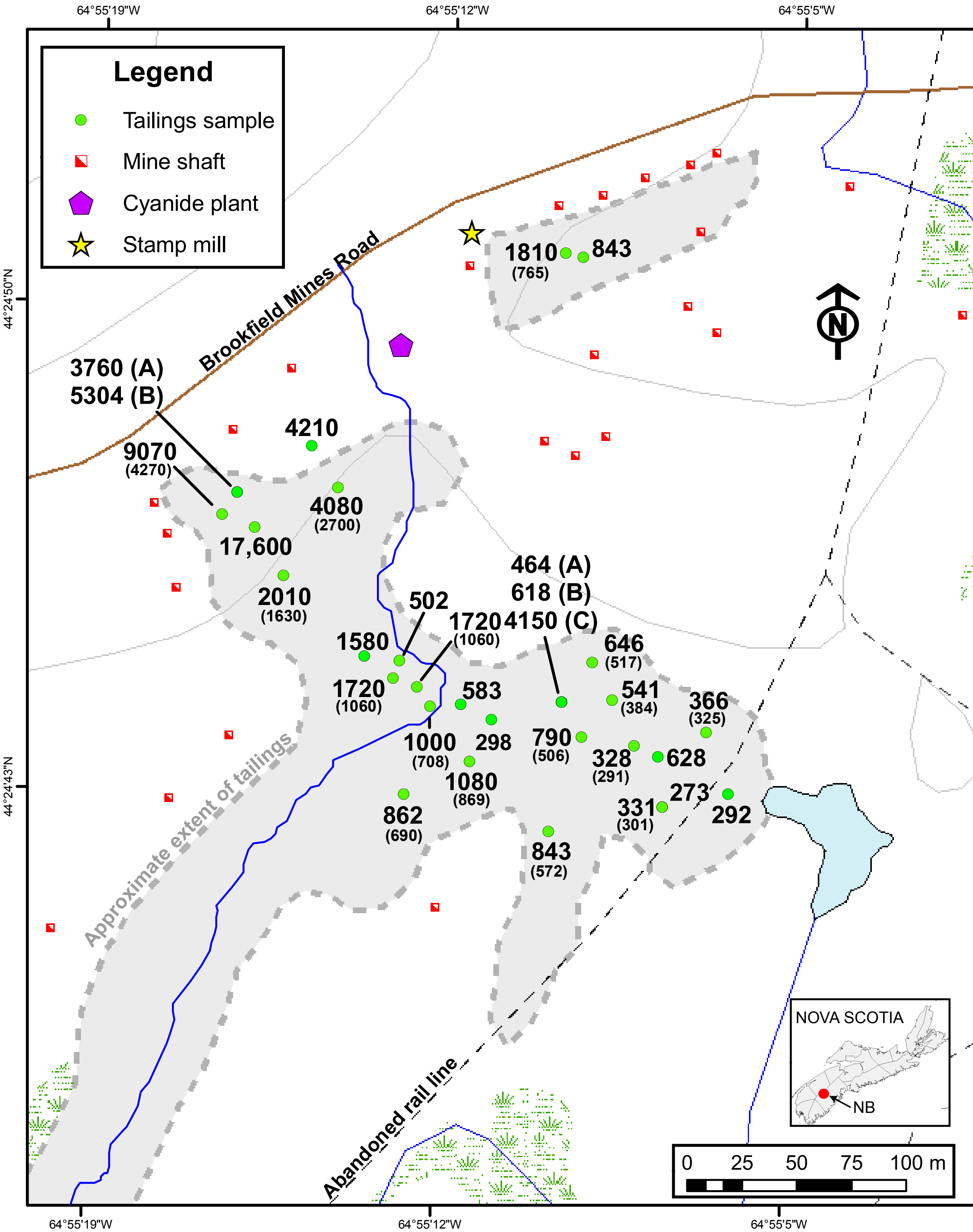


Fig. 73. As concentrations (mg/kg) in North Brookfield tailings (maximum and (mean) concentrations; <2 mm size fraction)

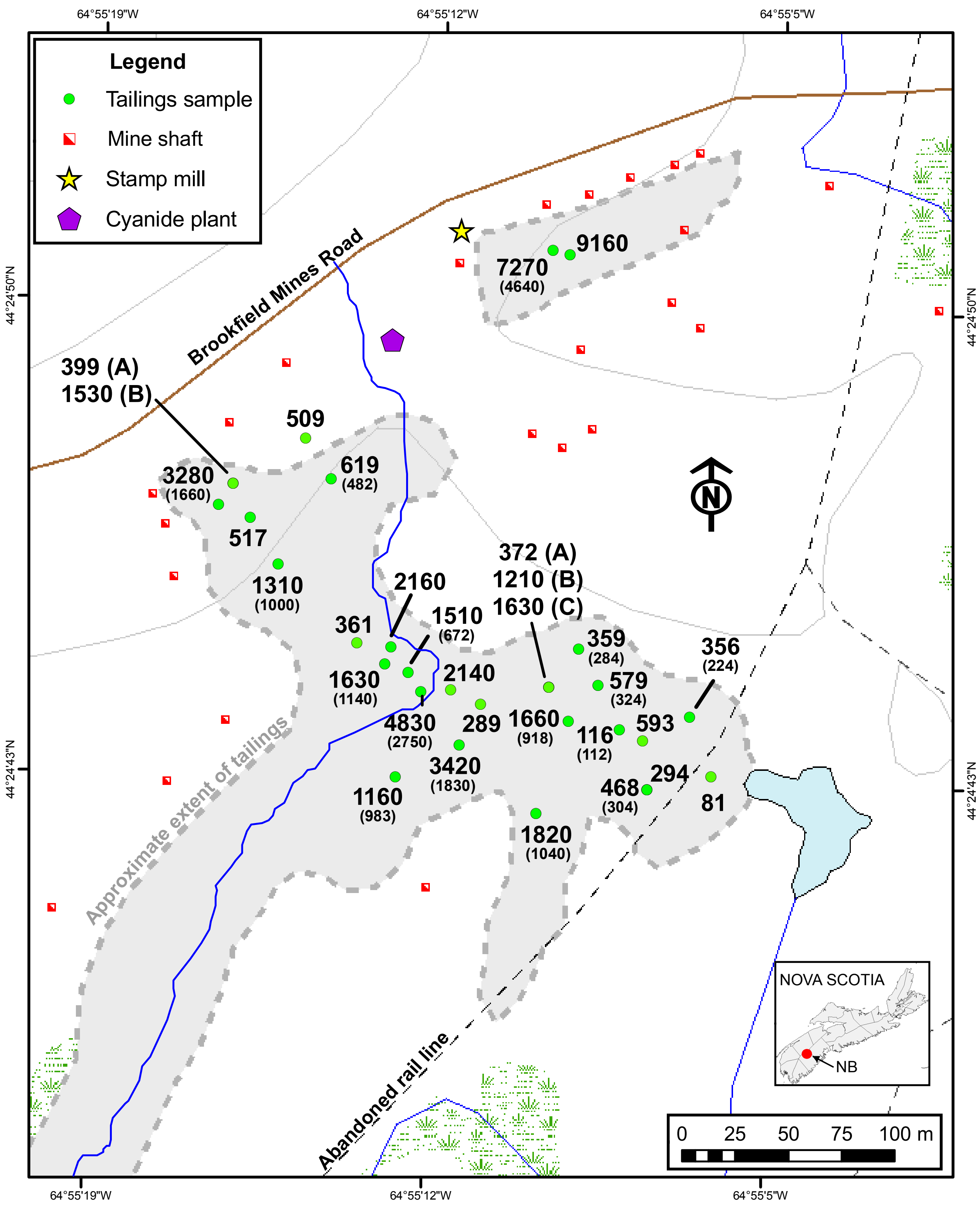


Fig. 74. Hg concentrations (µg/kg) in North Brookfield tailings (maximum and (mean) concentrations; <2 mm size fraction)

Table 14. As and Hg concentrations in tailings, North Brookfield Gold District [a]

Sample Site	Tailings Depth (cm)	Northing (20T, NAD 83)	Easting (20T, NAD 83)	Date	As (mg/kg)	Hg (µg/kg)
T1	5	4919556	0347038	12-Jun-03	9070	405
T1	33	4919556	0347038	12-Jun-03	925	1310
T1	38	4919556	0347038	12-Jun-03	2820	3280
T2	0	4919550	0347053	12-Jun-03	17600	517
T3	5	4919528	0347066	12-Jun-03	1250	691
T3	25	4919528	0347066	12-Jun-03	2010	1310
T4	6	4919477	0347127	12-Jun-03	836	225
T4	12	4919477	0347127	12-Jun-03	629	277
T4	20	4919477	0347127	12-Jun-03	1720	1510
T5	5	4919481	0347116	12-Jun-03	70	1630
T5	15	4919481	0347116	12-Jun-03	1660	651
T6	2	4919428	0347121	12-Jun-03	862	1160
T6	10	4919428	0347121	12-Jun-03	519	803
T7	7	4919443	0347151	12-Jun-03	1070	1650
T7	15	4919443	0347151	12-Jun-03	1080	3420
T7	19	4919443	0347151	12-Jun-03	451	412
T8	2.5	4919468	0347133	12-Jun-03	1000	4830
T8	10	4919468	0347133	12-Jun-03	412	678
T10	5	4919488	0347207	12-Jun-03	388	208
T10	50	4919488	0347207	12-Jun-03	646	359
T11	5	4919454	0347202	12-Jun-03	222	172
T11	20	4919454	0347202	12-Jun-03	790	1660
T12	6	4919411	0347187	12-Jun-03	676	469
T12	25	4919411	0347187	12-Jun-03	196	1820
T12	50	4919411	0347187	12-Jun-03	843	824
T13	5	4919422	0347239	12-Jun-03	331	140
T13	25	4919422	0347239	12-Jun-03	272	468
T14	5	4919456	0347259	12-Jun-03	284	92
T14	20	4919456	0347259	12-Jun-03	366	356
T15	5	4919450	0347226	12-Jun-03	254	116
T15	20	4919450	0347226	12-Jun-03	328	109
T16	0	4919489	0347119	14-May-03	502	2160
T17	10	4919673	0347203	14-May-03	843	9160
T18	10	4919422	0347239	14-May-03	273	294
T19	35	4919568	0347091	24-Jul-03	4080	582
T19	55	4919568	0347091	24-Jul-03	1770	619
T19	67	4919568	0347091	24-Jul-03	2250	246
T20	25	4919471	0347216	24-Jul-03	343	110
T20	50	4919471	0347216	24-Jul-03	268	282
T20	75	4919471	0347216	24-Jul-03	541	579
T21	1	4918587	0347330	24-Jul-03	2440	671
T21	15	4918587	0347330	24-Jul-03	4170	302
T21	40	4918587	0347330	24-Jul-03	36800	380
T22	25	4919675	0347195	24-Jul-03	1810	7270
T22	52	4919675	0347195	24-Jul-03	472	6650
T22	75	4919675	0347195	24-Jul-03	9	17

[a] Samples from 2005 are not included in this table.

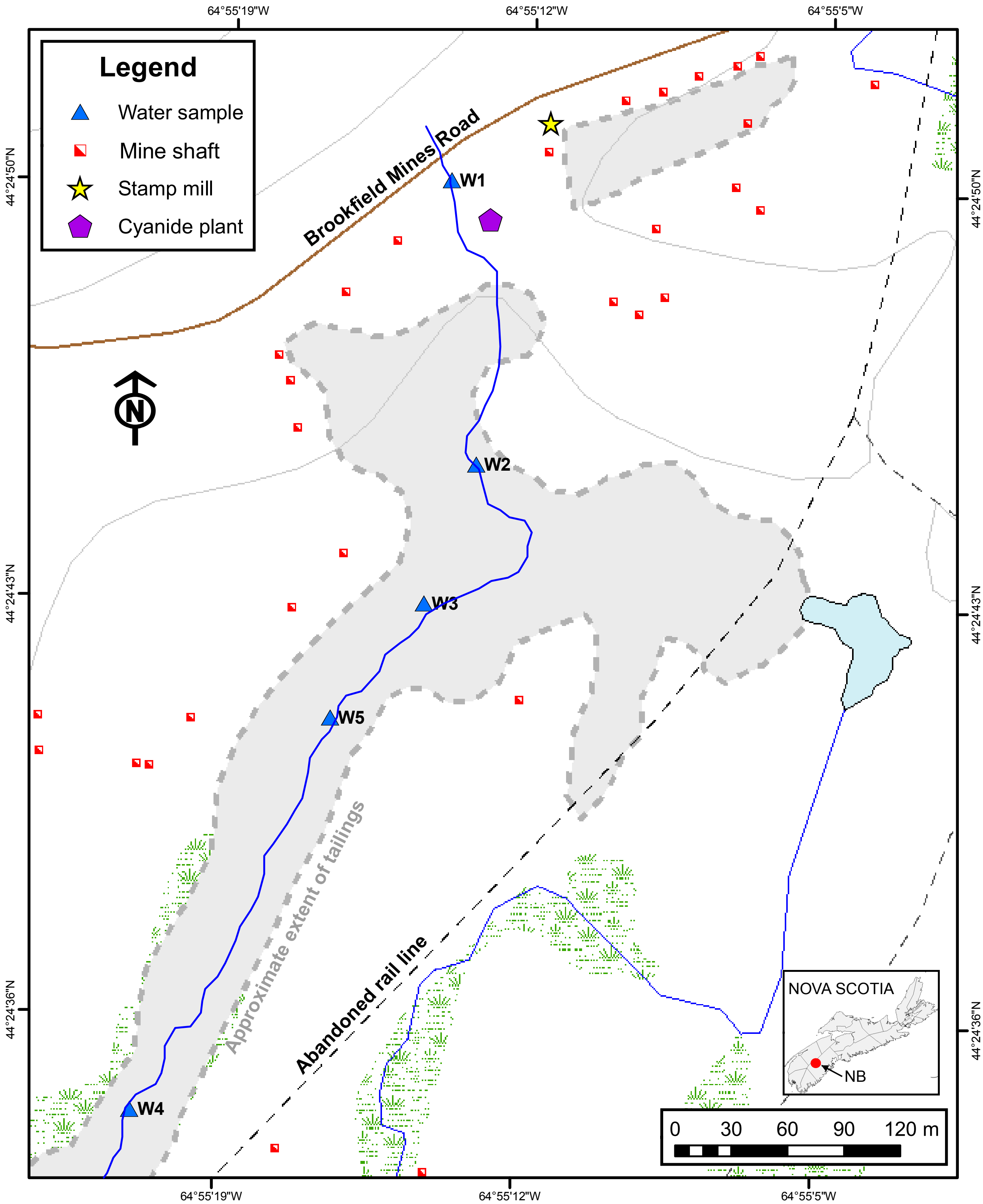


Fig. 75. Location of surface water samples, North Brookfield Gold District, November 2003 (geographic centre of map (decimal degrees): 44.411992°, -64.920167°)

a)

b)

Fig. 76. (a) Filtering waters at sampling site W5 at the North Brookfield Mine on Nov. 10, 2003. This small creek originates north of Brookfield Mines Road, runs through the tailings, and eventually drains into a wetland 1.2 km downstream of the mine site (Fig. 75); **(b)** Close-up of bacteriogenic iron oxides (composed primarily of ferrihydrite) overlying tailings at North Brookfield.

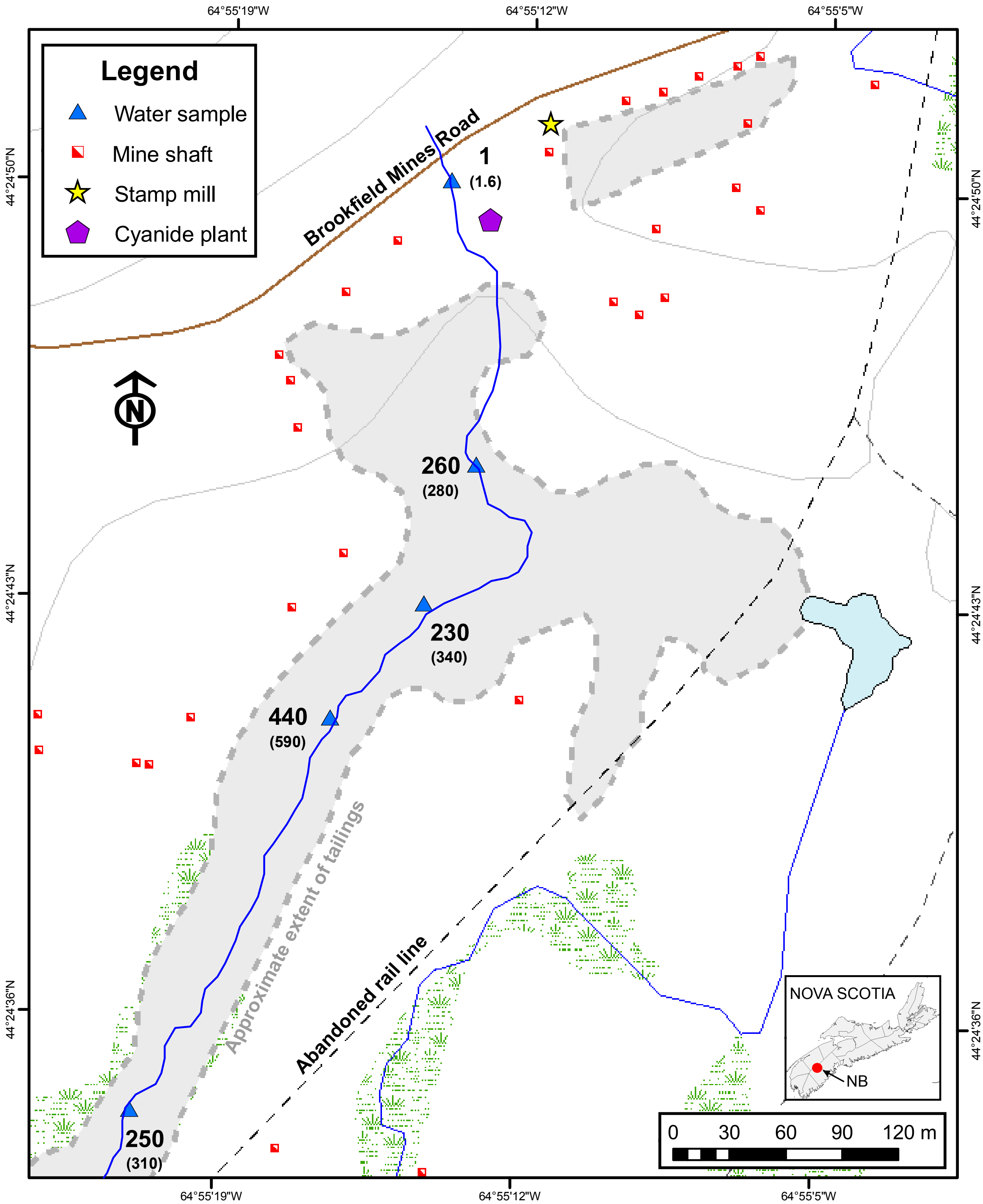


Fig. 77. As concentrations (µg/L) in surface water samples, North Brookfield Gold District, November 2003 (dissolved [<0.45 µm] and (total) concentrations)

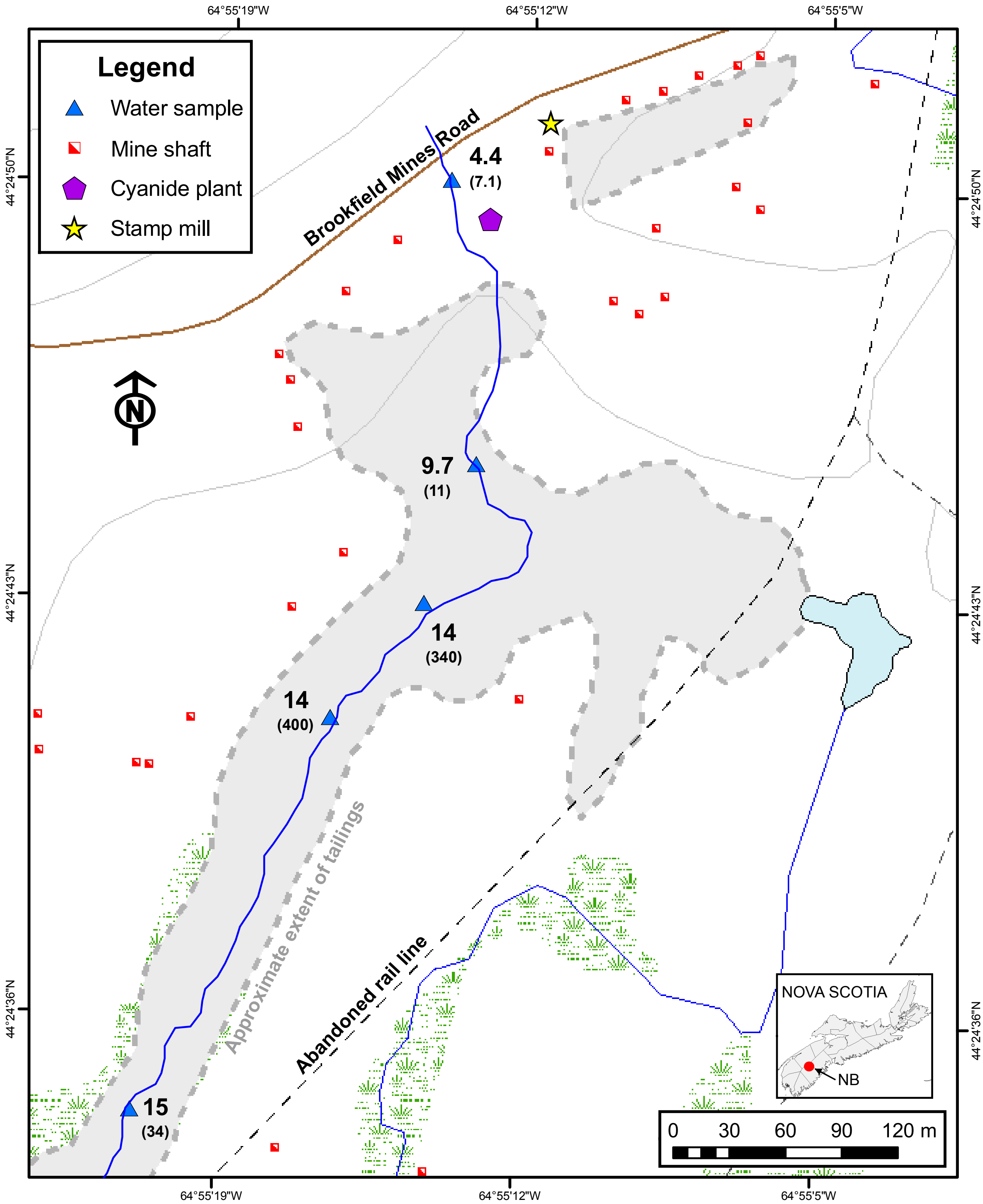


Fig. 78. Hg concentrations (ng/L) in surface water samples, North Brookfield Gold District, November 2003 (dissolved [<0.45 µm] and (total) concentrations)

Salmon River (Dufferin) Gold District

The Salmon River Gold District (more recently known as the Dufferin gold deposit) is located approximately 8 km north of Port Dufferin on the eastern shore of the Halifax Regional Municipality, Nova Scotia (Fig. 1; 44.958734°, -62.397237°). The geology of this district was mapped by the GSC in 1898 (Faribault 1898c) and the character of the gold deposits is well described by Malcolm (1929) and Horne and Jodrey (2002). The Salmon River district provides the best example of classic ‘saddle-reef’ auriferous quartz vein mineralization in Nova Scotia, where relatively thin (<30 cm) stratabound veins thicken considerably (>6 m) in the hinge of an anticline and are stacked vertically in a style similar to the saddle reefs of the Bendigo region in Central Victoria, Australia (Ryan and Smith 1998).

Mining and milling history

Gold was first reported near Salmon River in 1868, but mining of lode quartz veins did not begin until 1880. Highlights of the mining and milling history of this district are shown in Table 15. Most of this information has been summarized from Malcolm (1929) and from assessment reports written in the late 1980s (Graham 1987; Mitchell 1988). Throughout the history of this district, mining and milling of ore has occurred at four main locations, although there have been quartz veins worked to various degrees in other parts of the district. The earliest operations were located directly adjacent to the Salmon River itself, where a 20-stamp water-powered mill was erected in 1881. In 1882, a 4-inch lead was discovered on the western shore of Eagle Lake (Fig. 79) and a small 8-stamp mill was transported from Issacs Harbour to process this ore. From 1883 to 1887, there was extensive mining at the Dufferin mine, and the ore was transported to the original stamp mill on the river via a half-mile long tramway (shown on Fig. 79). Gold recovery was completed by amalgamation with Hg (Fig. 3a). In 1890, a new 20-stamp mill was constructed adjacent to the Salmon River (Fig. 79) and in 1898, a new 30-stamp mill was erected near the Dufferin mine (expanded to 60 stamps in 1899). Both mills constructed in the 1890s contained concentrating devices to remove sulphide minerals from the tailings (MacDonald 1899). Tailings from these early mills were deposited along the banks of the Salmon River, into a wetland near Eagle Lake, and directly into Eagle Lake itself (Fig. 80). In 1903, and again in the 1930s, attempts were made to recover gold from the concentrates and tailings using cyanidation. The earlier operations extracted roughly 75% of the gold from stockpiled sulphide concentrates, but later operations on tailings from the riverbed met with limited success (Roach 1940).

From the 1930s to the early 1980s, there was only minor exploration activity in the Dufferin area. Discovery of saddle-reef quartz veins in the hinge area of the Crown Reserve Anticline in the late 1980s led to the development of a 200-ton-per-day conventional gravity mill in the Crown Reserve area in 1990. Between 1990 and 2002, approximately 50,000 tons of gravity tailings were deposited in a tailings impoundment immediately north of the mill. These tailings were reprocessed using flotation cells from 2005-2008. The present owner, Ressources Appalaches, is actively exploring for additional mineralized zones throughout this district.

Between 1881 and 2001, approximately 49,216 troy oz. of gold were recovered from 107,084 tonnes of crushed rock at the various mills throughout this district (Table 1).

Table 15. Highlights of mining and milling history, Salmon River (Dufferin) Gold District.

Date	Event
1868	First reported discovery of gold at Salmon River
1880	Discovery of lode quartz vein 30-40 inches wide; 100 tons of quartz mined and milled in Harrigan Cove; first identification of saddle-reef quartz veins
1881	20-stamp, water-powered mill erected along Salmon River
1882	Original mill increased to 30 stamps; 8-stamp mill transported from Dung Cove (Isaacs Harbour gold district) and used to process ore near Eagle Lake
1883–1887	Extensive mining at Dufferin Mine – ore was transported to the mill (38-stamps by 1887) via a half-mile-long tramway; power for pumping and hoisting was transmitted from the Salmon River 3/4 of a mile by a system of pulleys and ropes
1890–1894	Dufferin Gold Mining Company constructs new 20-stamp mill in the vicinity of the original mill along the Salmon River
1898	Montreal-London Gold and Silver Development Co., Ltd. erects a 30-stamp, steam-powered mill adjacent to the Dufferin Mine, with 3 sets of hydrometric sizers and 15 Frue vanners to extract sulphide concentrates from the tailings
1899	Stamp mill expanded to 60 stamps, 8 additional Frue vanners installed
1903	Bromo-cyanide plant used to treat old sulphide concentrates from the Dufferin mill; treatment of 44 tons yielded a gold extraction efficiency of ~75%
1934–1935	Salmon River Gold Syndicate extracts tailings from the bed of the Salmon River for re-treatment using amalgamation; in 1934, the results are unsatisfactory, and large losses of Hg are reported; in 1935, the tailings are treated using a ball mill, concentrating tables, and blankets, and concentrates are stored for shipment
1985–1989	Extensive surface and diamond-drill exploration on the old Dufferin mine and its faulted extension, the Crown Reserve, leads to the discovery of saddle-reef veins in the hinge area of the Crown Reserve Anticline
1990–2003	Underground drilling identifies 13 saddles extending to a depth of 400 m; 200-ton-per-day conventional gravity mill constructed; partial mining of three saddles
2003–2008	Mining of previously developed zones; reprocessing of tailings first using a gravity circuit, then later using flotation cells
2008–present	Continued surface and underground exploration by Ressources Appalaches reveals at least 15 saddles in total extending to a depth of 400 m

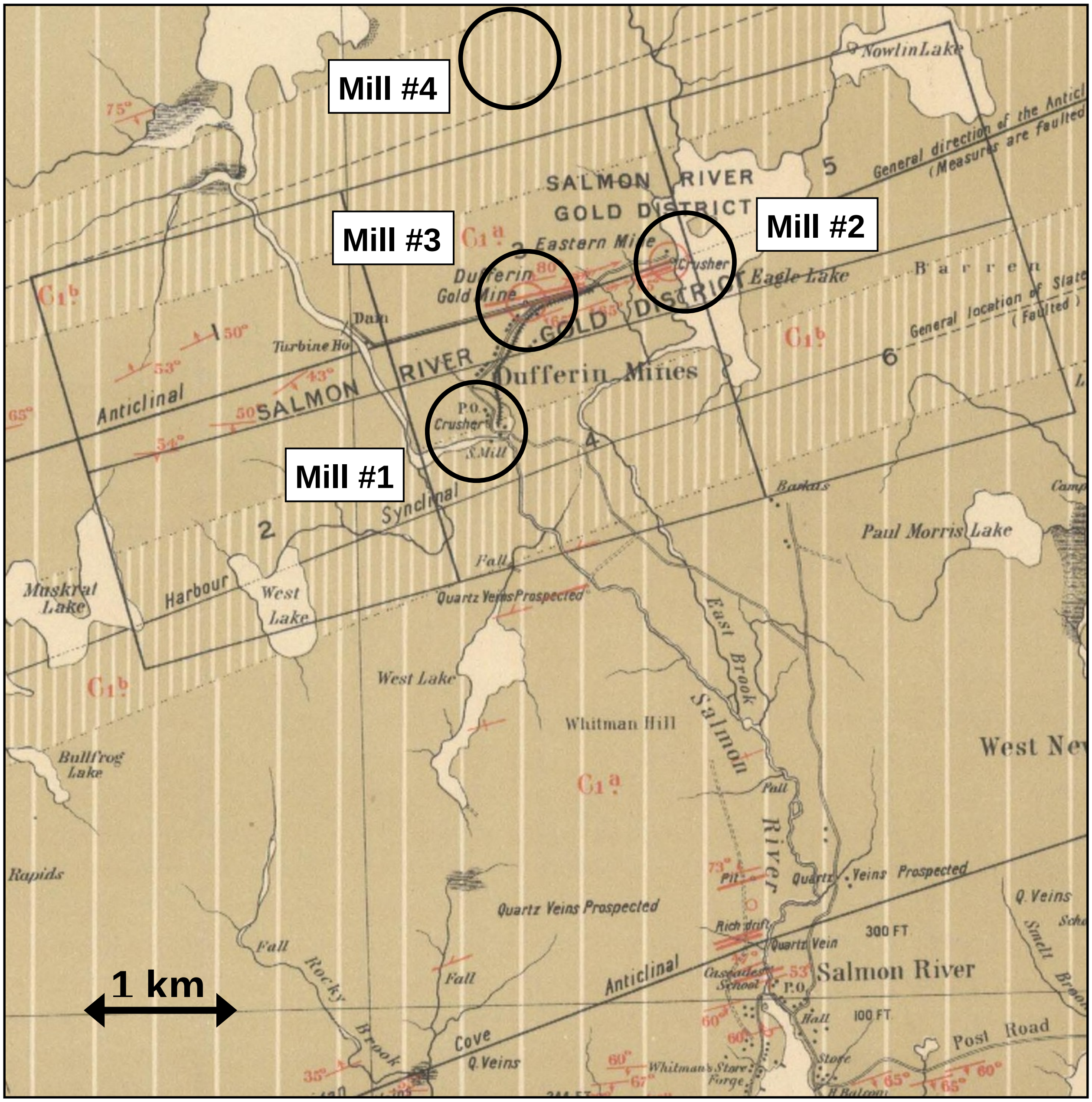


Fig. 79. Overview map of the Salmon River Gold District in 1897. The location of four stamp mill sites are circled: (1) 20/30-stamp mills along Salmon River (originally constructed in 1881); (2) 8-stamp mill on Eagle Lake (erected in 1882); (3) 60-stamp mill adjacent to the Dufferin Mine (built in 1898–99); and (4) gravity mill at the Crown Reserve Mine (constructed in 1990). Tailings are present near each of these mill sites, and on the bed and banks of the Salmon River for a distance of at least 1 km downstream of Mill #1 (basemap from Faribault, 1897; additional detail is given in Faribault, 1898).

Distribution of As and Hg in mine tailings and surface waters

Tailings and surface water samples were collected during reconnaissance-scale fieldwork from August 26–27, 2003. Sampling was carried out in the vicinity of the original 1880s/1890s-era stamp mills along the Salmon River (Mill #1, Fig. 79), and in a small wetland southeast of the main Dufferin mine where a 30/60-stamp mill operated from 1898–1904 (Mill #3, Fig. 79). At both locations, the tailings are very overgrown, generally saturated with water (Fig. 81a), and their full spatial extent is difficult to determine. Sampling pits excavated in the tailings at both locations revealed well-oxidized horizons up to 50 cm thick overlying grey, unoxidized tailings (Fig. 81b). Both mill sites also contain piles of bright green scorodite-bearing waste which appears to have formed *in situ* from weathering of arsenopyrite-rich concentrate (Fig. 4a). Riverbank samples collected nearly 1 km south of Mill site #1 confirmed the presence of tailings on the banks of the Salmon River (Fig. 80).

The concentrations of As and Hg in tailings throughout the Salmon River Gold District are shown in Figures 82 and 83, respectively, and in Table 16. The highest concentrations occur closest to the mill sites and in areas where weathering has led to the precipitation of secondary minerals and hardpans in the tailings (e.g. Fig. 81b). The As concentration in the recent 1990s tailings (7420 mg/kg) is similar to the historical tailings, but the Hg content of the 1990s gravity tailings (10 µg/kg) is much lower than tailings from the stamp mills and typical of local Hg concentrations in bedrock. The ranges in total As near Mill #1 and Mill #3 are 140–17,000 mg/kg (mean = 3900 mg/kg; n= 9) and 1800–150,000 mg/kg (mean = 19,000 mg/kg; n= 12), respectively. The ranges in total Hg near Mill #1 and Mill #3 (Fig. 80) are 630–13,400 µg/kg (mean = 3300 µg/kg; n= 9) and 1700–49,000 µg/kg (mean = 9600 µg/kg; n= 12), respectively.

Waters draining both of the historical tailings sites are mildly acidic, with pH values ranging from 4.8–6.8 (mean = 6.4, n=9). Figure 86 and 87 show the spatial distribution of As and Hg concentrations in surface waters upstream of the tailings, in standing water on the tailings, and in waters draining from the tailings. In general, the dissolved (<0.45 µm) concentrations of Hg in most water samples are quite low (i.e. < 20 ng/L), suggesting that Hg is present in a relatively insoluble form in the tailings. The highest dissolved Hg concentration (61 ng/L) was measured in water flowing from a drill pipe through the tailings from the former 60-stamp mill near the Dufferin Mine (Figs. 85a, 87). In contrast, dissolved As levels at both sites are very high in surface waters on, and immediately downstream of the tailings (100s to 1000s of µg/L) as compared to upstream sites which generally have < 20 µg/L dissolved As.

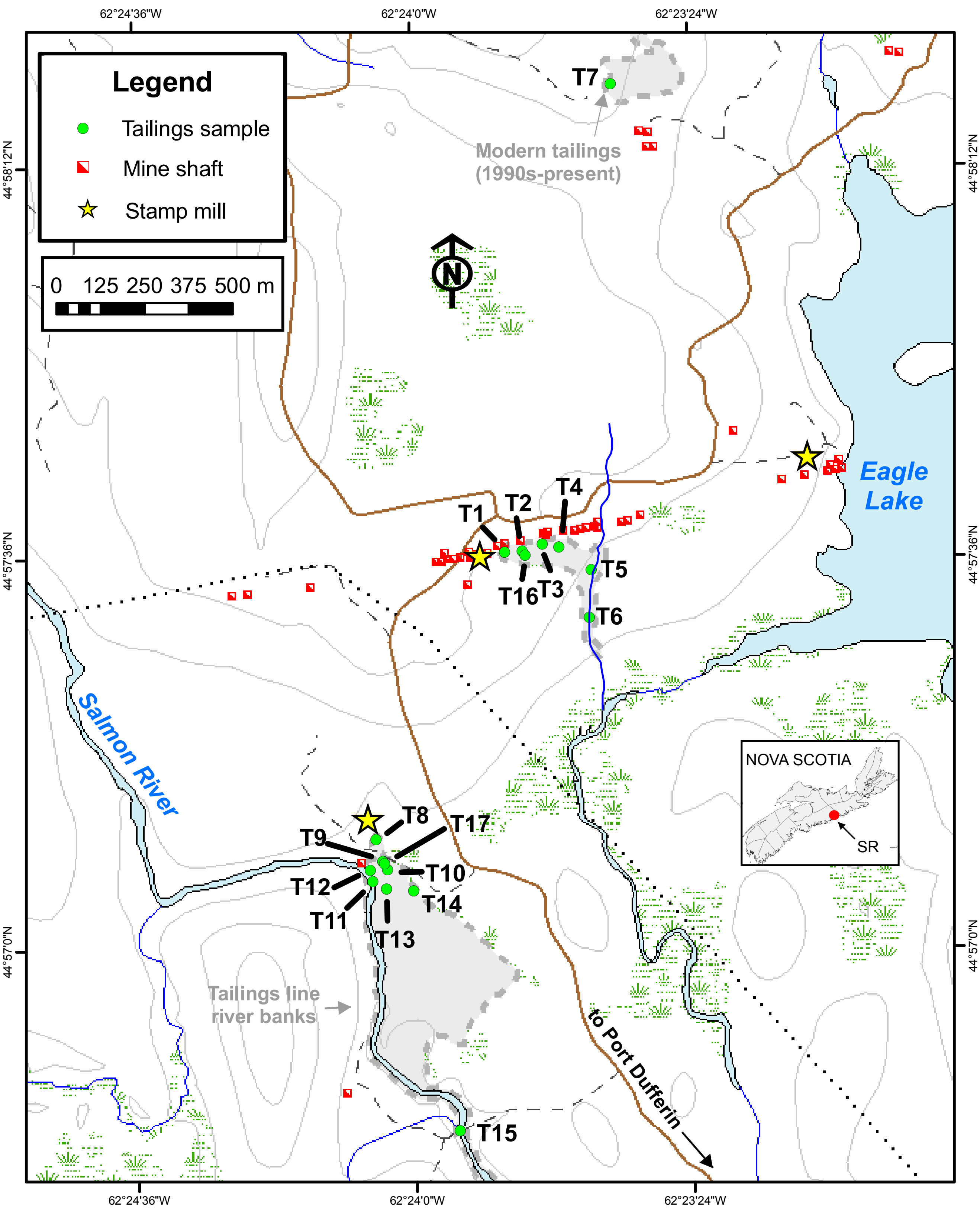


Fig. 80. Location of tailings samples, Salmon River (Dufferin) Gold District (geographic centre of map (decimal degrees): 44.958734°, -62.397237°)

a)

b)

Fig. 81. (a) Wetland filled with gold mine tailings from the Dufferin 60-stamp mill, showing abundant rust-brown bacteriogenic iron oxides in the overlying surface waters (near Site T3, Fig. 80). **(b)** Well oxidized, moss-covered tailings with abundant Fe-oxides in top 45 cm overlying a thin hardpan layer and relatively unoxidized tailings below 50 cm depth (Site T14, Fig. 80).

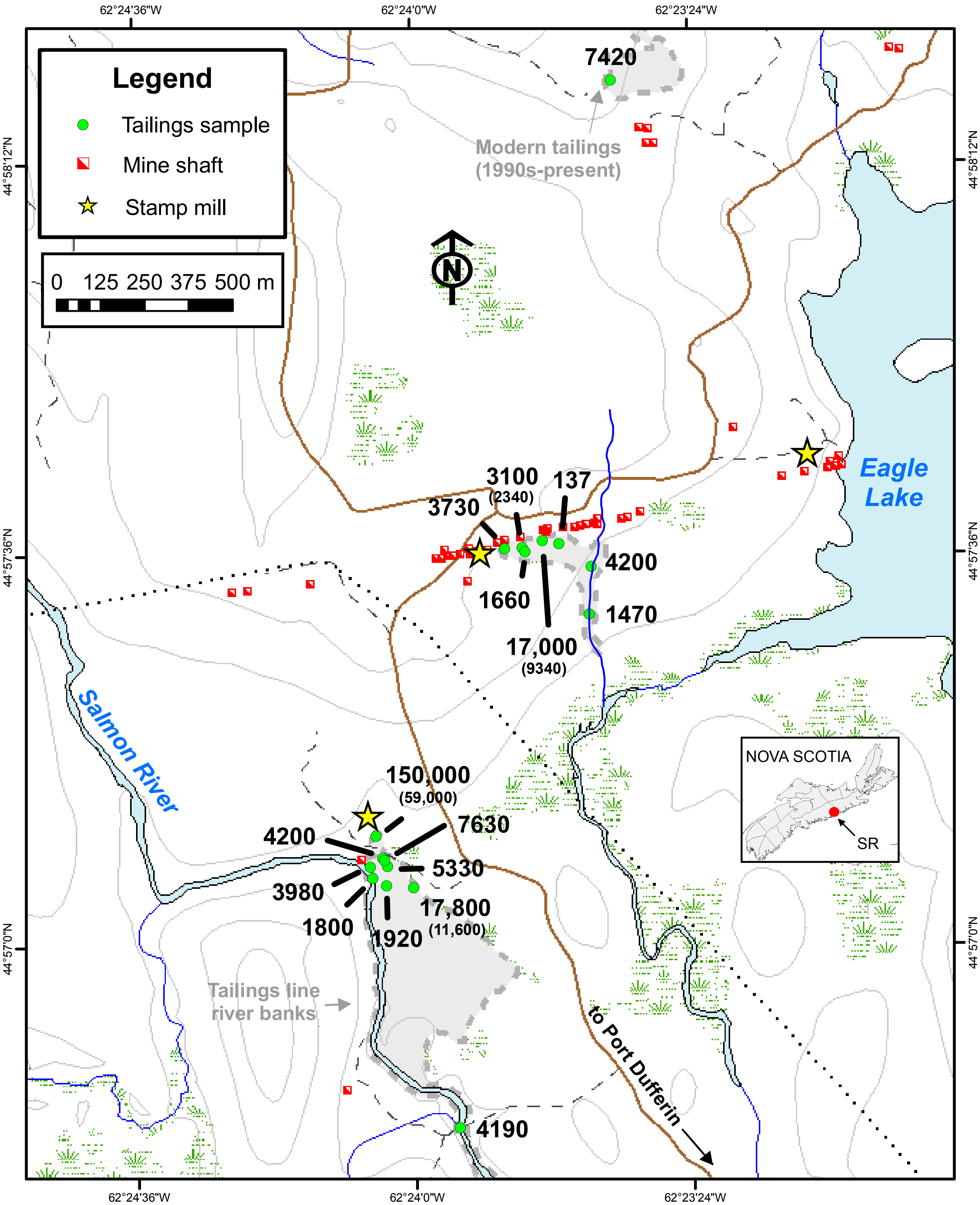


Fig. 82. As concentrations (mg/kg) in Salmon River (Dufferin) tailings (maximum and (mean) concentrations; <2 mm size fraction)

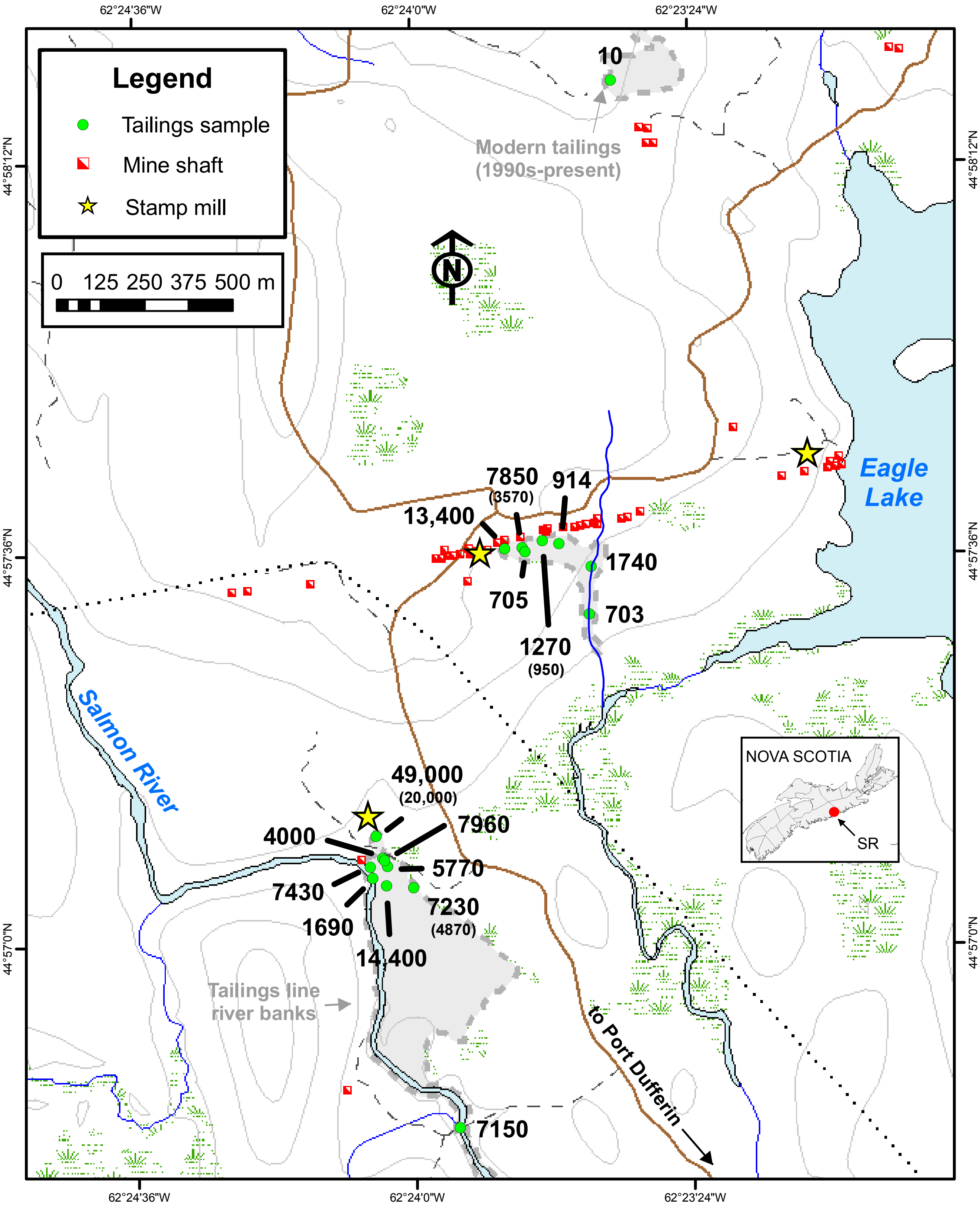


Fig. 83. Hg concentrations (µg/kg) in Salmon River (Dufferin) tailings (maximum and (mean) concentrations; <2 mm size fraction)

Table 16. As and Hg concentrations in tailings, Salmon River (Dufferin) Gold District

Sample Site	Tailings Depth (cm)	Northing (20T, NAD 83)	Easting (20T, NAD 83)	Date	As (mg/kg)	Hg (µg/kg)
T1	25	4978700	0547581	26-Aug-03	3730	13400
T2	20	4978702	0547631	26-Aug-03	1980	994
T2	35	4978702	0547631	26-Aug-03	1930	1860
T2	60	4978702	0547631	26-Aug-03	3100	7850
T3	5	4978723	0547688	26-Aug-03	17000	630
T3	15	4978723	0547688	26-Aug-03	1630	1270
T4	15	4978714	0547735	26-Aug-03	137	914
T5	40	4978650	0547827	26-Aug-03	4200	1740
T6	5	4978515	0547822	26-Aug-03	1470	703
T7	30	4980030	0547881	26-Aug-03	7420	12
T8	5	4977883	0547217	26-Aug-03	150000	49000
T8	20	4977883	0547217	26-Aug-03	11900	6560
T8	80	4977883	0547217	26-Aug-03	15200	4560
T9	30	4977822	0547235	26-Aug-03	4200	4000
T10	10	4977798	0547249	26-Aug-03	5330	5780
T11	5	4977764	0547207	26-Aug-03	1800	1690
T12	5	4977796	0547201	26-Aug-03	3980	7430
T13	15	4977743	0547247	26-Aug-03	1920	14400
T14	10	4977737	0547323	26-Aug-03	14200	4440
T14	48	4977737	0547323	26-Aug-03	17800	2930
T14	60	4977737	0547323	26-Aug-03	2650	7240
T15	5	4977056	0547456	26-Aug-03	4190	7150
T16	10	4978692	0547639	9-May-03	1660	705
T17	10	4977815	0547241	9-May-03	7630	7960

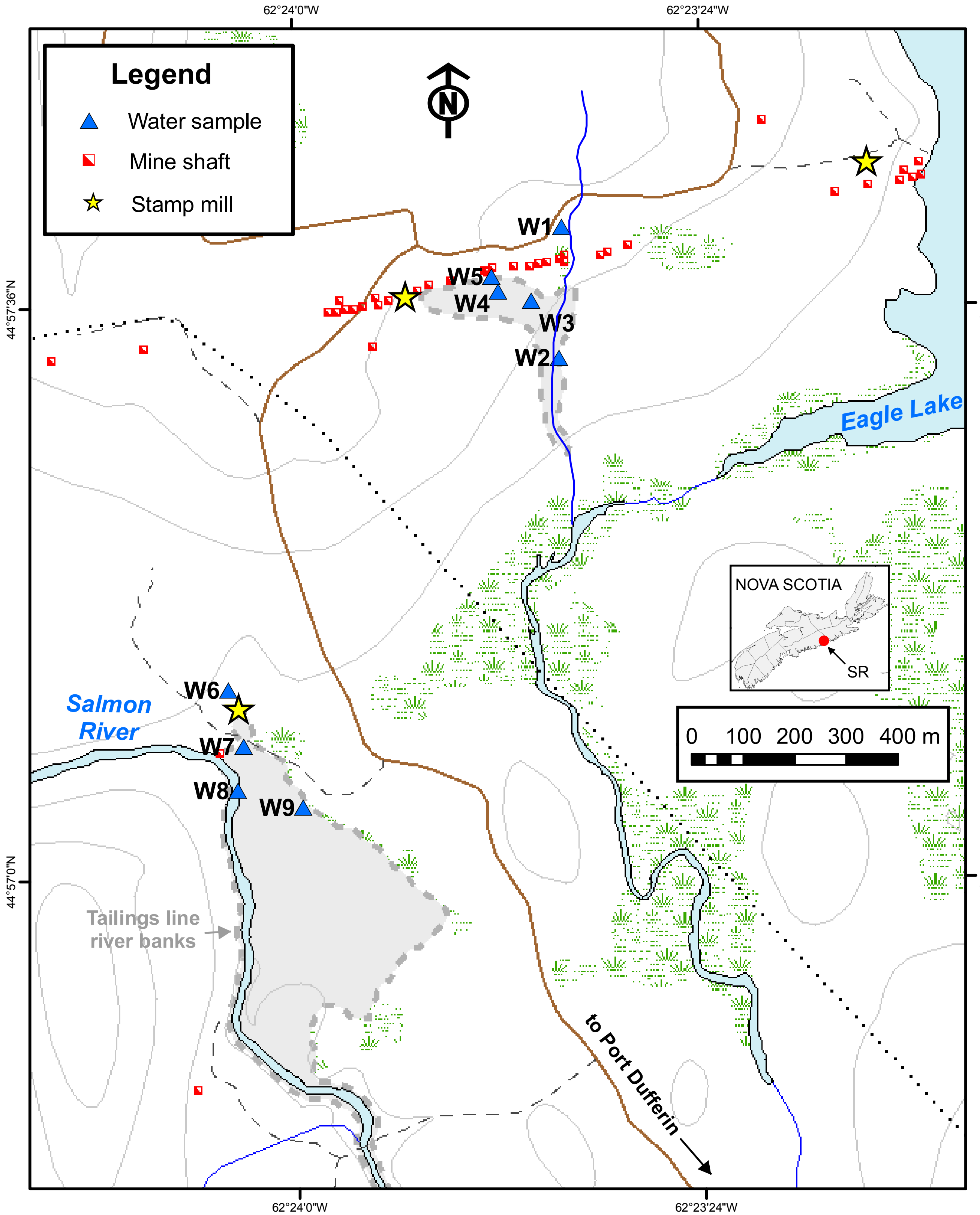


Fig. 84. Location of surface water samples, Salmon River (Dufferin) Gold District, August 2003 (geographic centre of map (decimal degrees): 44.954717°, -62.395048°)

a)

b)

Fig. 85. (a) Water flowing from twin drill pipes in a tailings-filled wetland at the Salmon River Gold District (Site W5, Fig. 84). This water contained anomalously high dissolved Hg (61 ng/L) as compared to surface waters on the tailings (Fig. 87). **(b)** Tailings runoff with abundant bacteriogenic iron oxides discharging into the Salmon River at Site W8 (Fig. 84).

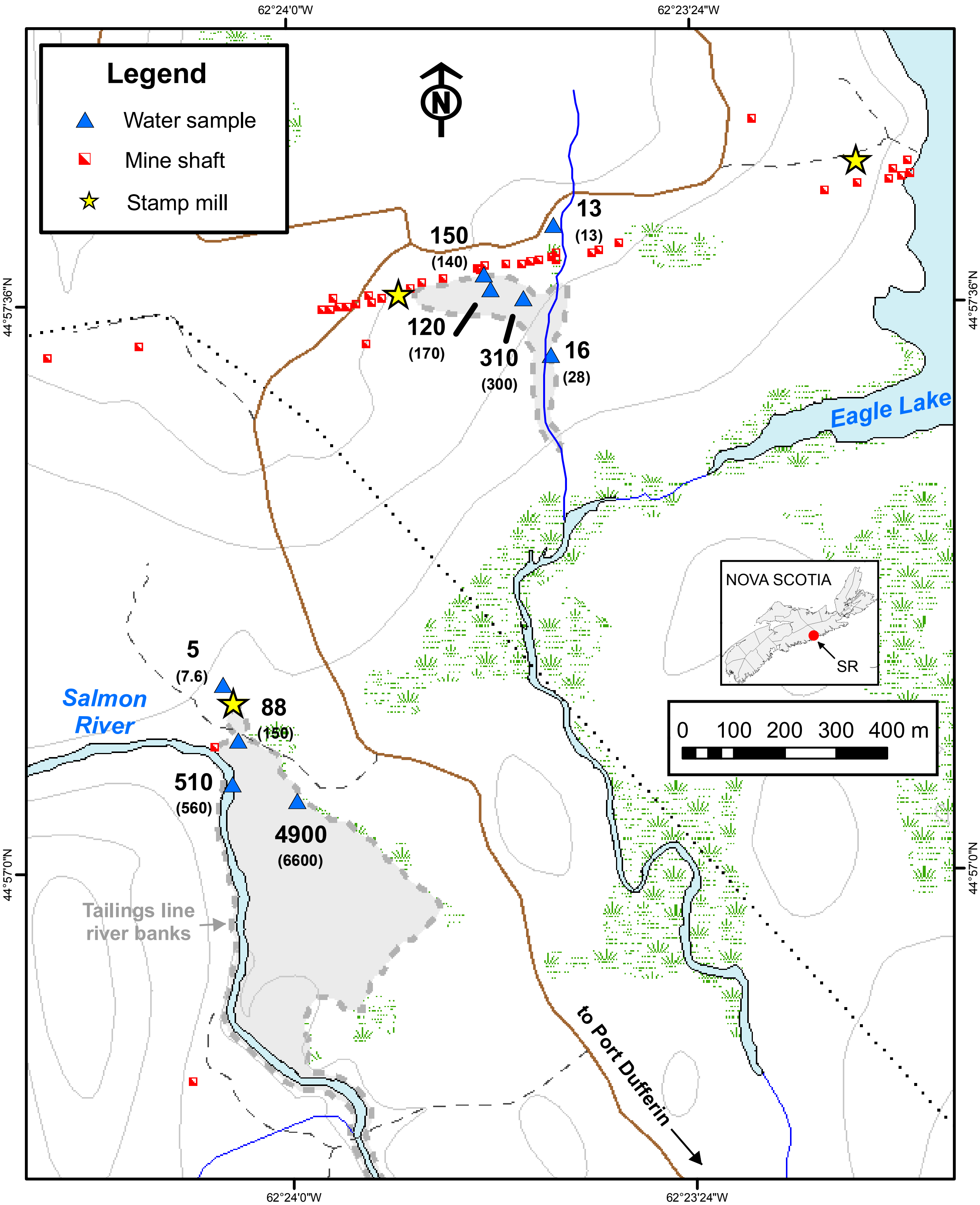


Fig. 86. As concentrations (µg/L) in surface water samples, Salmon River (Dufferin) Gold District, August 2003 (dissolved [<0.45 µm] and (total) concentrations)

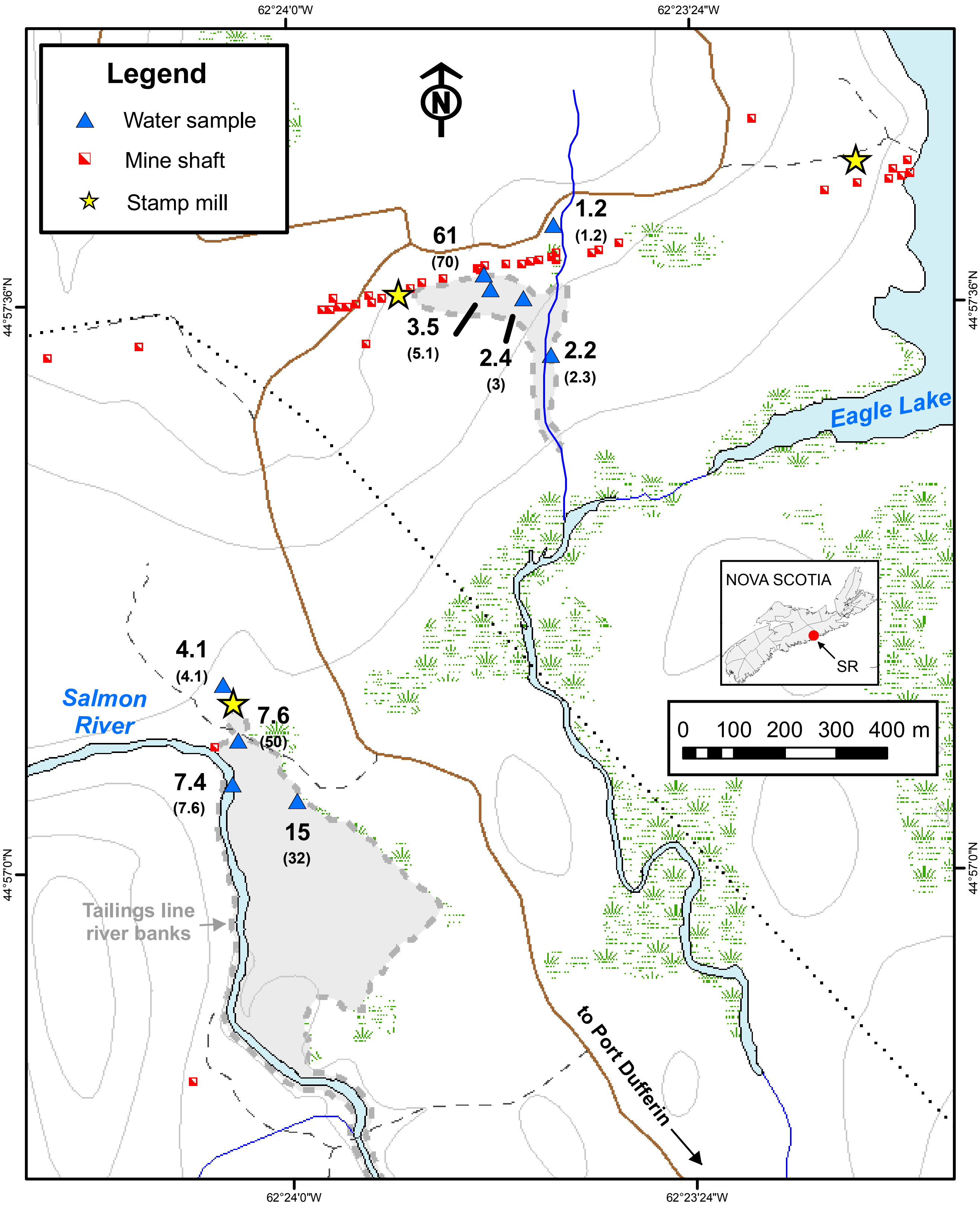


Fig. 87. Hg concentrations (ng/L) in surface water samples, Salmon River (Dufferin) Gold District, August 2003 (dissolved [<0.45 µm] and (total) concentrations)

Upper Seal Harbour Gold District

The Upper Seal Harbour Gold District is located approximately 3 km northeast of Goldboro on the eastern shore of Nova Scotia (Fig. 1; 45.192404°, -61.625989°). The historical mine workings and tailings can be accessed via Goldbrook Road off of Highway 316. The geology of this district was mapped by the GSC in 1899 (Faribault 1899b) and the character of the gold deposits is described by Malcolm (1929), Parent and Ethier (1989), and Ryan and Smith (1998). In 2004 and 2005, NRCan collaborated with several universities and other government departments on detailed multi-disciplinary studies of the sources, transport, and fate of As and Hg throughout the Upper Seal Harbour District. Recent publications have described methylmercury levels in the tailings (Winch *et al*. 2008), As speciation and bioaccumulation in terrestrial invertebrates (Moriarty *et al.* 2009) and small mammals (Saunders *et al.* 2009), and the mineralogy and spectral reflectance of the tailings (Percival *et al.*, in press).

Mining and milling history

Gold mining in the Upper Seal Harbour area began in 1892, when Howard Richardson, following an anticline trace from a Geological Survey of Canada map, discovered a large body of low-grade ore that later became known as the Richardson belt. Between 1893 and 1958, approximately 57,846 oz. of gold were produced from 400,516 tonnes of crushed ore, generating the second-largest volume of tailings of all the gold districts in Nova Scotia (Table 1). Table 17 summarizes some of the key events in the mining and milling history of this area, and was compiled mainly from information in Brown (1908) and Malcolm (1929). The 60-stamp Richardson Mill was one of the largest mills in Nova Scotia (Fig. 88a), and remnants of the stamps and supports for the amalgamating tables are clearly visible on the west side of Gold Brook Lake today (Fig. 88b). Across Gold Brook, another property known as the East Goldboro mine also operated in the late 1800s / early 1900s, and the foundation of a smaller stamp mill and associated tailings are clearly visible immediately south of Goldbrook Road.

Distribution of As and Hg in mine tailings and surface waters

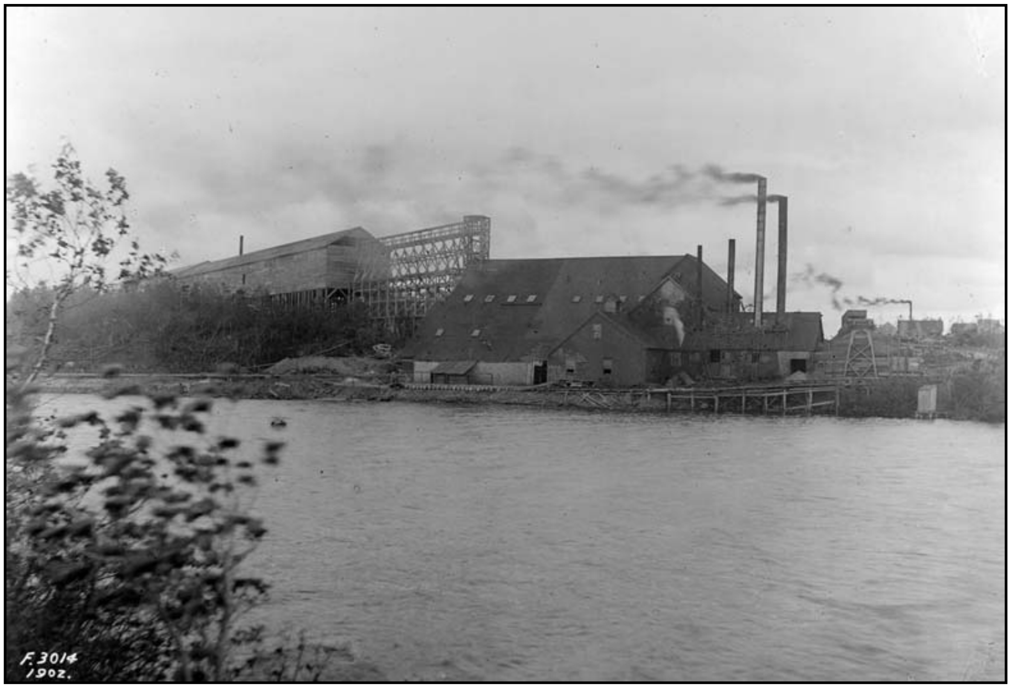
Between 1893 and the 1950s, voluminous quantities of mine tailings were slurried directly into Gold Brook. Today, these tailings are clearly visible on the floodplain for at least 4 km downstream of the Richardson Mill site (Figs. 89, 90). Samples of tailings were collected from 20 sites along Gold Brook in 2003 and 2004 up to 4 km downstream of the former mill site. The highest concentrations of As (up to 72,000 mg/kg, or 7.2 wt.%) and Hg (up to 120,000 µg/kg) were measured directly within the foundation of the Richardson Mill (Figs. 91, 92). However, high concentrations of both As and Hg are present in the sediments all along Gold Brook and are most likely present in the bottom sediments of Seal Harbour Lake as well.

Water sampling at Upper Seal Harbour was carried out at 21 sites in August 2003, May 2004, August 2004, November 2004 and August 2005 to evaluate seasonal variations in the chemistry of waters draining the tailings (Fig. 93, 94). The dissolved (<0.45 µm) concentrations of As are very high (up to 6200 µg/kg in standing water on the tailings) as seen in other districts (Fig. 95). In contrast, the dissolved concentrations of Hg in surface waters of Gold Brook are not significantly elevated above background Hg levels in Gold Brook Lake water (Fig. 96).

Table 17. Highlights of mining and milling history, Upper Seal Harbour Gold District.

Date	Event
1892	Howard Richardson, prospecting along an anticline trace from GSC maps, discovers a large body of low-grade ore, later known as the Richardson belt
1892–1893	The Richardson Gold Mining Company erects a 15-stamp mill
1893–1896	Active mining on the Richardson belt; the ore was carried by a trestle 1200 feet long from the shaft to a mill (40 stamps by 1896) on the edge of Gold Brook Lake
1898–1899	Wilfley concentrators used to treat tailings from the mill; in 1899, 150 tons of arsenopyrite concentrate were saved from the tailings
1901	20 additional stamps added to the Richardson mill, bringing the total number to 60, and four Wilfley tables in use for recovering sulphide concentrates
1902–1905	Tailings treated without concentration in an extensive cyanide plant that had been transported from the Caribou district in Fall 1901. Initial operations were unsatisfactory, and tests were made using the bromo-cyanide process.
1905–1912	Active mining by various companies at the Richardson Mine and the East Goldboro property; tailings continued to be treated successfully in a bromo-cyanide plant containing Wilfley tables for concentration; in 1909, 83% of the gold was being recovered by amalgamation, and 17 percent by bromo-cyanide extraction of concentrate; during this period, large tonnages of arsenical concentrate were shipped first to Germany, and later to Wales for smelting
1912–1927	Intermittent activity by various companies, including treatment of tailings
1988–present	Surface exploration, shaft rehabilitation, surface and underground diamond drilling and limited underground exploration.

a)



b)

Fig. 88. (a) Ore trestle and 60-stamp mill at the Richardson Gold Mine, Upper Seal Harbour Gold District, 1902. Gold Brook Lake is in the foreground (Fig. 89). Tailings were discharged from the mill via a wooden sluice visible on the left side of the photo, and were slurried directly into the upper reaches of Gold Brook. Photo taken by E.R. Faribault, GSC. Reproduced with permission from the Natural Resources Canada Library, Ottawa. **(b)** Deteriorating cement foundations and rotted timbers are all that remain of the massive Richardson Mill building complex located on the southwestern shore of Gold Brook Lake. The Boston Richardson head frame (rebuilt in the 1980s) can be seen in the upper left.

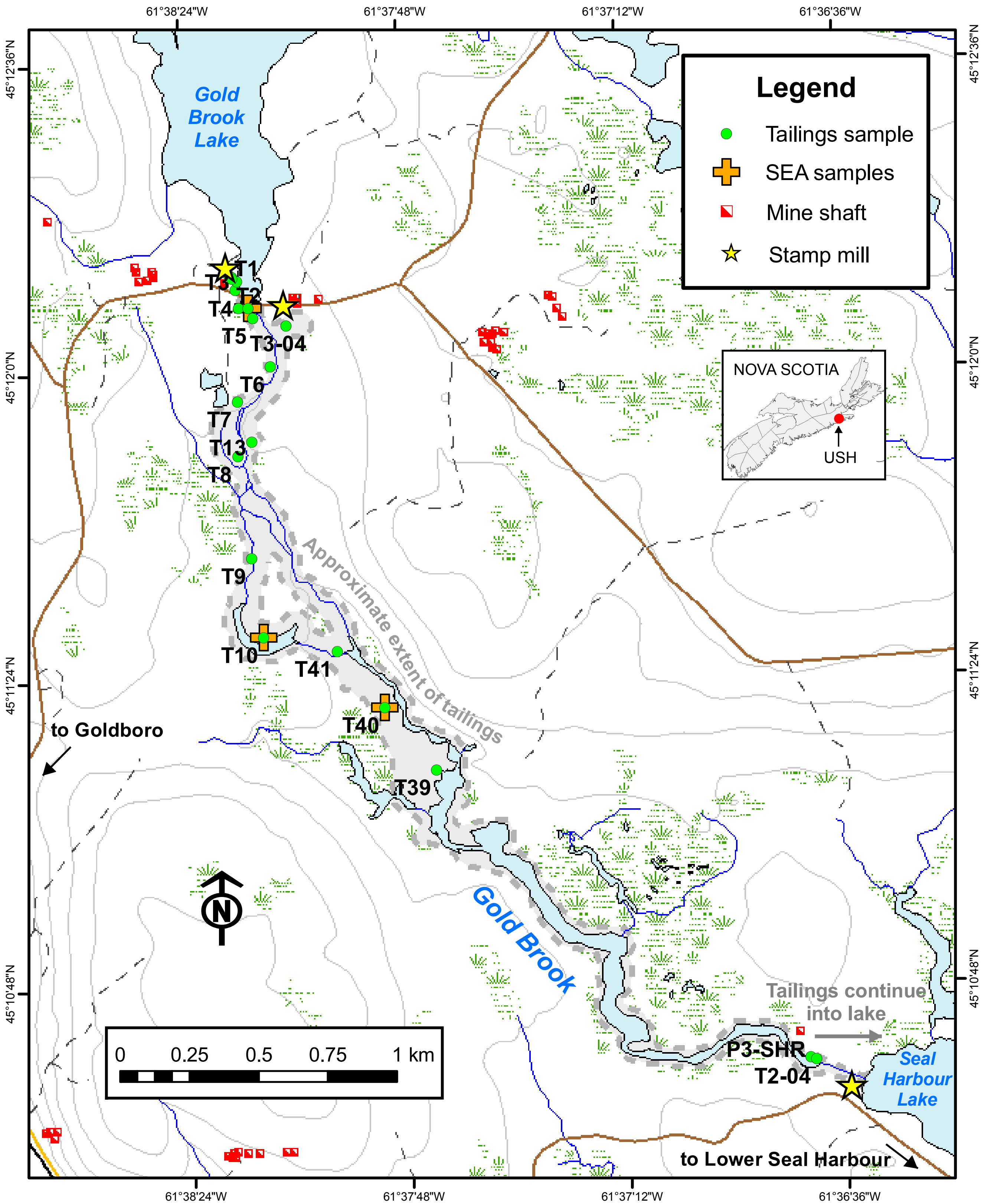


Fig. 89. Location of tailings samples, Upper Seal Harbour Gold District. Orange crosses show the location of samples collected in 2005 for sequential extraction analyses (SEA). (geographic centre of map (decimal degrees): 45.192404°, -61.625989°)

a)

b)

Fig. 90. (a) Tailings on the banks of Gold Brook, immediately south of Gold Brook Lake (Site T4, Fig. 89). The sluice shown in Fig. 88a deposited tailings into the headwaters of Gold Brook, where they were then carried more than 4 km by the brook before being reaching Seal Harbour Lake. **(b)** Typical profile of near-surface tailings along the banks of Gold Brook showing a thin oxidized layer overlying relatively unoxidized tailings at approximately 10 cm depth.

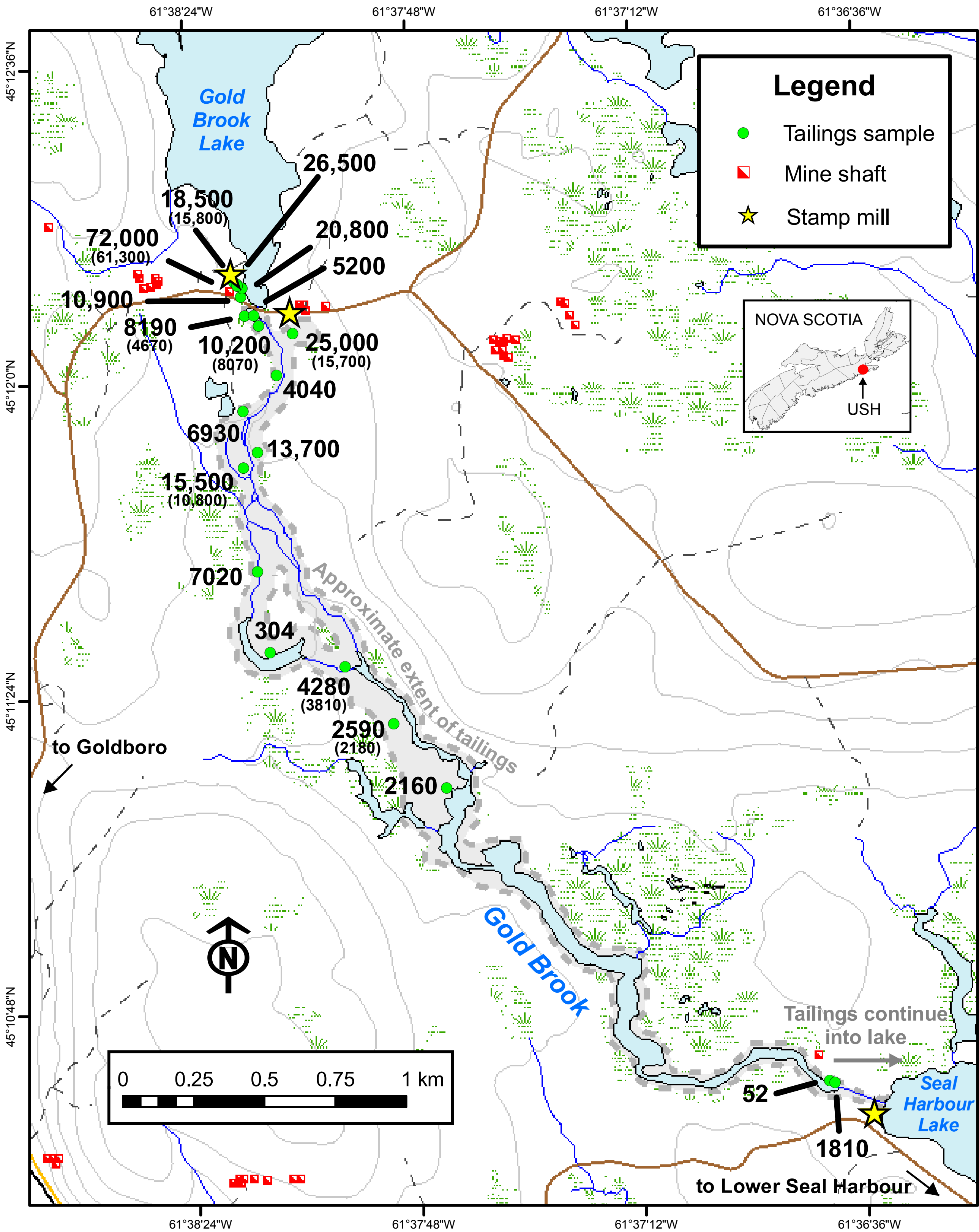


Fig. 91. As concentrations (mg/kg) in Upper Seal Harbour tailings (maximum and (mean) concentrations; <2 mm size fraction)

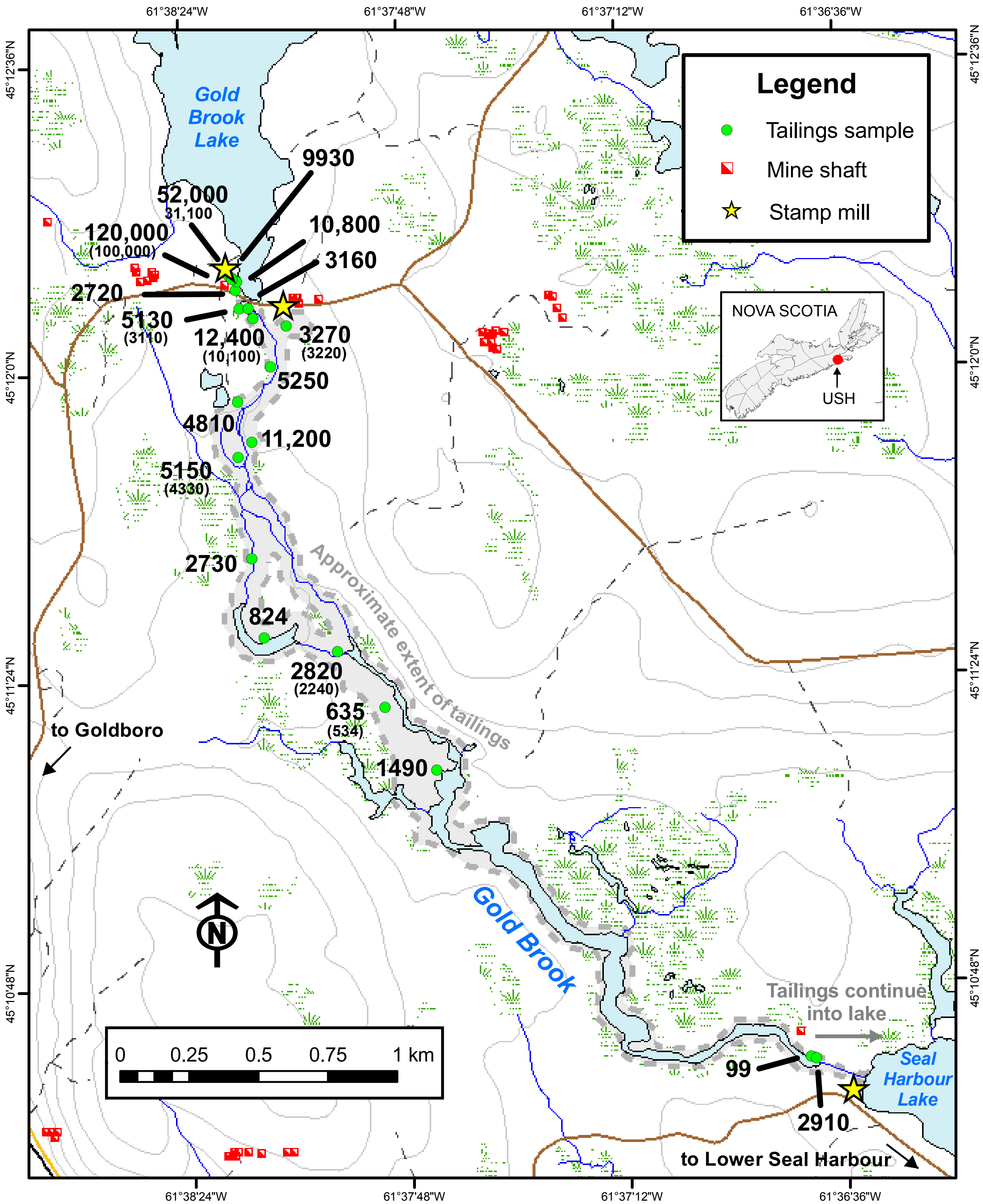


Fig. 92. Hg concentrations (µg/kg) in Upper Seal Harbour tailings (maximum and (mean) concentrations; <2 mm size fraction)

Table 18. As and Hg concentrations in tailings, Upper Seal Harbour Gold District

Sample Site	Tailings Depth (cm)	Northing (20T, NAD 83)	Easting (20T, NAD 83)	Date	As (mg/kg)	Hg (µg/kg)
T1	5	5006428	0606979	14-Sep-03	13000	10100
T1	15	5006428	0606979	14-Sep-03	18500	52000
T2	5	5006419	0606991	14-Sep-03	72000	80000
T2	15	5006419	0606991	14-Sep-03	50700	120000
T3	5	5006374	0607003	14-Sep-03	10900	2730
T4	5	5006308	0607016	14-Sep-03	8190	5130
T4	20	5006308	0607016	14-Sep-03	1140	1100
T5	15	5006273	0607066	14-Sep-03	10200	12400
T5	20	5006273	0607066	14-Sep-03	5990	7790
T6	5	5006098	0607130	14-Sep-03	4040	5250
T7	5	5005971	0607012	14-Sep-03	6930	4810
T8	10	5005773	0607013	14-Sep-03	15500	5160
T8	35	5005773	0607013	14-Sep-03	6000	3500
T9	20	5005406	0607063	14-Sep-03	7020	2730
T10	5	5005121	0607107	14-Sep-03	304	824
T11	5	5006405	0607008	21-May-03	20800	10800
T12	5	5006414	0606991	21-May-03	26500	9930
T13	5	5005827	0607063	21-May-03	13700	11200
P3-SHR	5	5003612	0609080	13-May-04	52	99
T2-04	10	5003605	0609100	13-May-04	1810	2910
P4-GB	5	5006309	0607049	13-May-04	5200	3160
T3-04	14	5006245	0607187	13-May-04	25000	3270
T3-04	25	5006245	0607187	13-May-04	6310	3170
T39	5	5004645	0607729	13-Aug-04	2160	1490
T40	0	5004870	0607543	13-Aug-04	2590	635
T40	15	5004870	0607543	13-Aug-04	1770	432
T41	0	5005071	0607371	13-Aug-04	3330	1670
T41	20	5005071	0607371	13-Aug-04	4280	2820

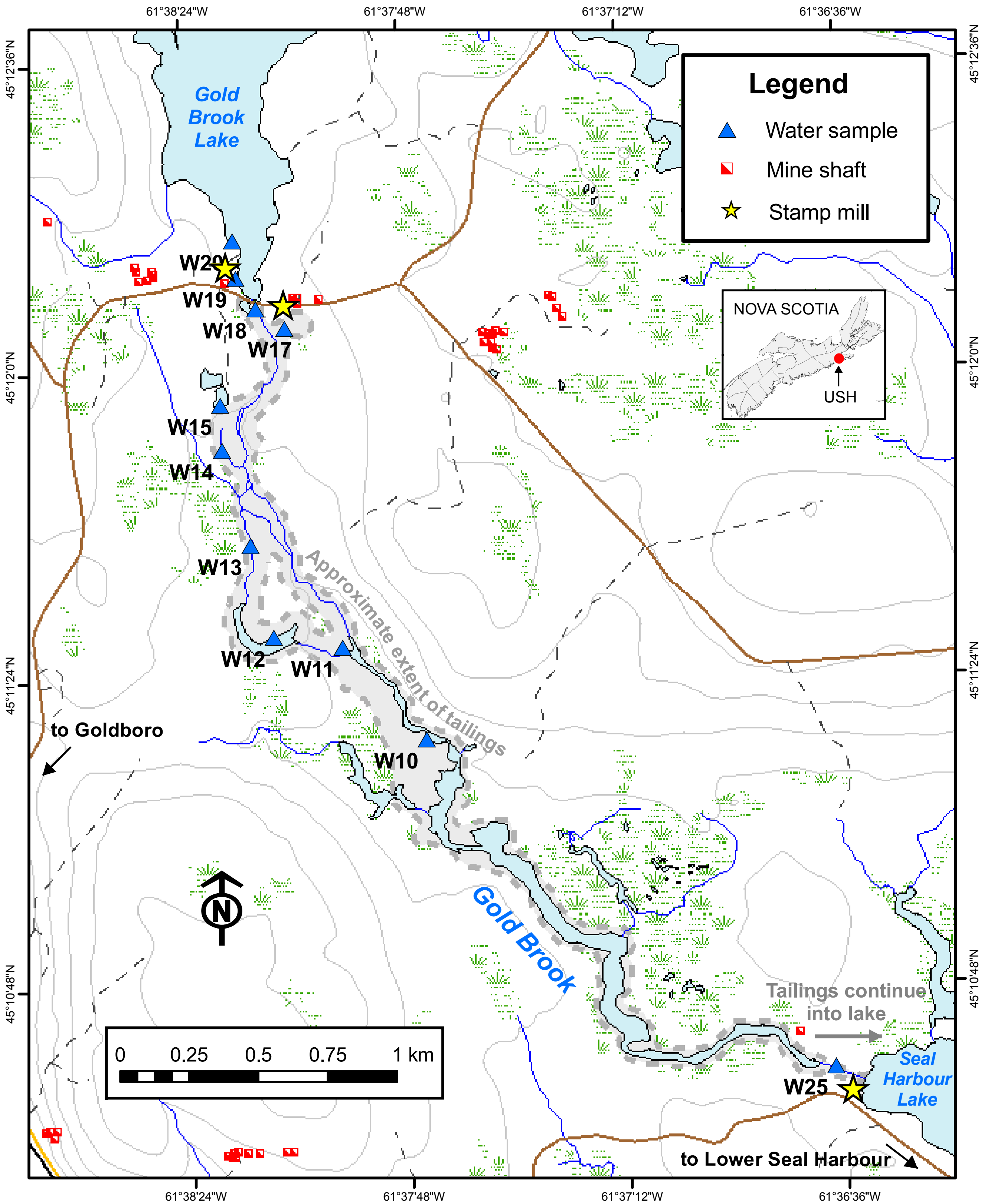


Fig. 93. Location of surface water samples, Upper Seal Harbour Gold District, August 2005 (geographic centre of map (decimal degrees): 45.192404°, -61.625989°)

a)

b)

Fig. 94. (a) Tailings-covered floodplain along Gold Brook near water sampling site W13 (Fig. 93). The Boston Richardson head frame can be seen in the distance, approximately 1 km north of this site. **(b)** Tailings-filled wetland near site W10, 2 km downstream of the former 60-stamp mill at the Richardson Gold Mine. This area is the main depocentre for tailings from this mill.

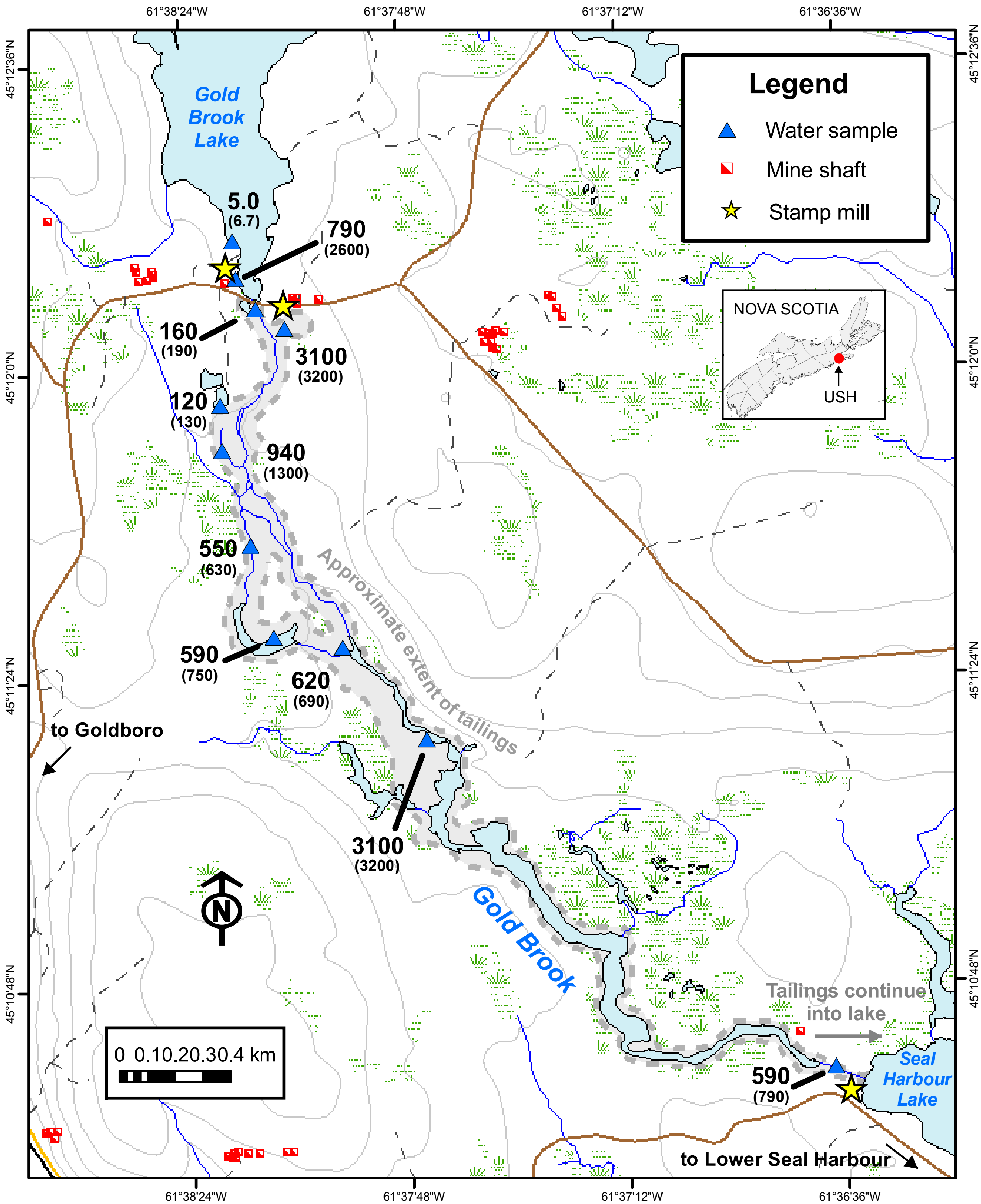


Fig. 95. As concentrations (μg/L) in surface water samples, Upper Seal Harbour Gold District, August 2005 (dissolved [<0.45 μm] and (total) concentrations)

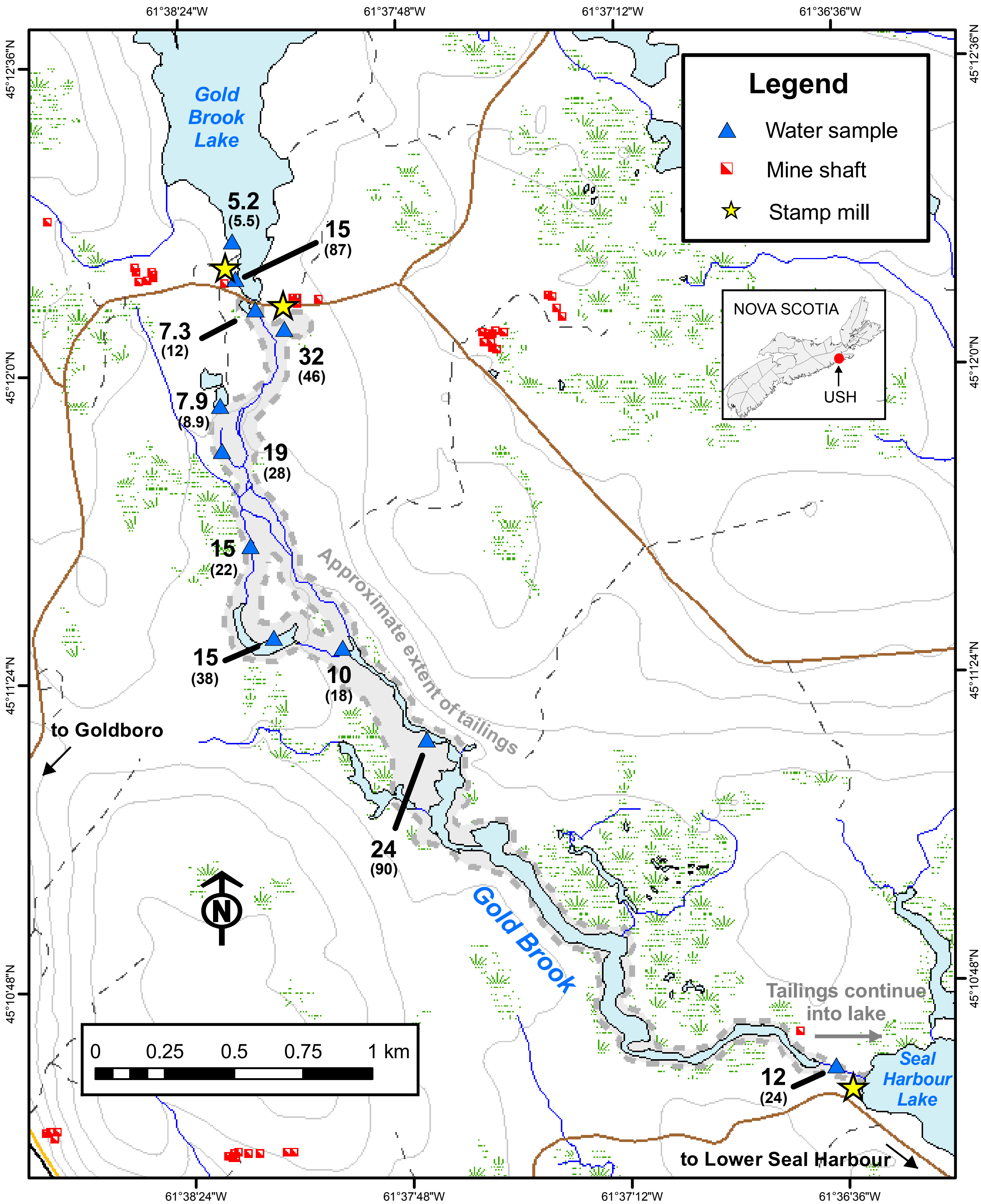


Fig. 96. Hg concentrations (ng/L) in surface water samples, Upper Seal Harbour Gold District, August 2005 (dissolved [<0.45 µm] and (total) concentrations)

Whiteburn Gold District

The Whiteburn Gold District is located approximately 8 km south-southwest of the village of Caledonia in Queens County, Nova Scotia (Fig. 1; 44.308280°, -65.075296°). The historical mine workings can be accessed from West Caledonia Road by travelling 6.1 km south along Whiteburn Road, then 0.75 km west along an unmarked dirt road to reach Mill Pond. The geology of this district was mapped by the GSC in 1916 (Faribault 1917) and the metallogeny of the gold deposits is described by Malcolm (1929). To our knowledge, there have been no previous studies of the environmental impacts of historical gold mining in this district.

Mining and milling history

Gold was discovered at Whiteburn in 1884 and intermittent mining activity took place from 1887 to 1906. In total, approximately 9,666 troy oz. of gold were recovered from 11,890 tonnes of crushed rock (Table 1) and all milling was carried out using Hg amalgamation in a variety of 5- to 10-stamp mills (Malcolm 1929). Tailings from these mills were discharged into two small brooks throughout the district (Fig. 97) and are now very overgrown and difficult to recognize (Fig. 98). The largest volumes of tailings were discharged into McBride Brook downslope of the former Parker Douglas Mill (Sites T6-T12, Fig. 97) and into Butler Brook downslope of the Crocker Mill (Site T5, Fig. 97; Faribault 1917). Intermittent surface and underground exploration has taken place at Whiteburn since the 1970s and the district is still being explored today.

Distribution of As and Hg in mine tailings and surface waters

Tailings were sampled at Whiteburn in May and July 2003 at nine sites along Butler and McBride brooks (Fig. 97). Grey, clay-rich sediments were also sampled with an auger from a small wetland south of Butler Brook (Sites T1-T3, Fig. 97) to check for the presence of tailings, but the low As and Hg concentrations indicate that these are natural wetland sediments uncontaminated by milling activities (Figs. 99, 100; Table 19). The tailings throughout this district are very overgrown with alders and wetland vegetation and range in colour from dark grey to light brown (Fig. 98). The As and Hg concentrations are especially high near the former Parker Douglas Mill on Mill Pond; the near-surface Hg concentration at Site T6 (350 mg/kg) was the highest of all tailings sampled throughout this study (Figs. 99, 100; Table 19). Tailings at Site T7 contain abundant arsenopyrite and high As concentrations (14.6 wt.%) and may represent the remains of sulphide concentrates from the Parker Douglas Mill.

On July 23, 2003, water was sampled from six sites throughout the Whiteburn Gold District (Fig. 101). The pH of these surface waters was lowest upstream of Mill Pond (pH = 4.7; Site W1) and increased with distance along Butler Brook to 6.7 at Site W5 as the waters reacted with the tailings. Dissolved As concentrations were highest in a shallow pit dug in the tailings at Site W3 (2500 µg/L), but were generally relatively low in surface waters as compared to other gold mine districts throughout Nova Scotia (Fig. 103). In contrast, the dissolved concentrations of Hg in tailings-impacted areas ranged from 24-55 ng/L, which is anomalously high as compared to Hg concentrations in tailings-impacted streams at most other gold districts (Fig. 104).

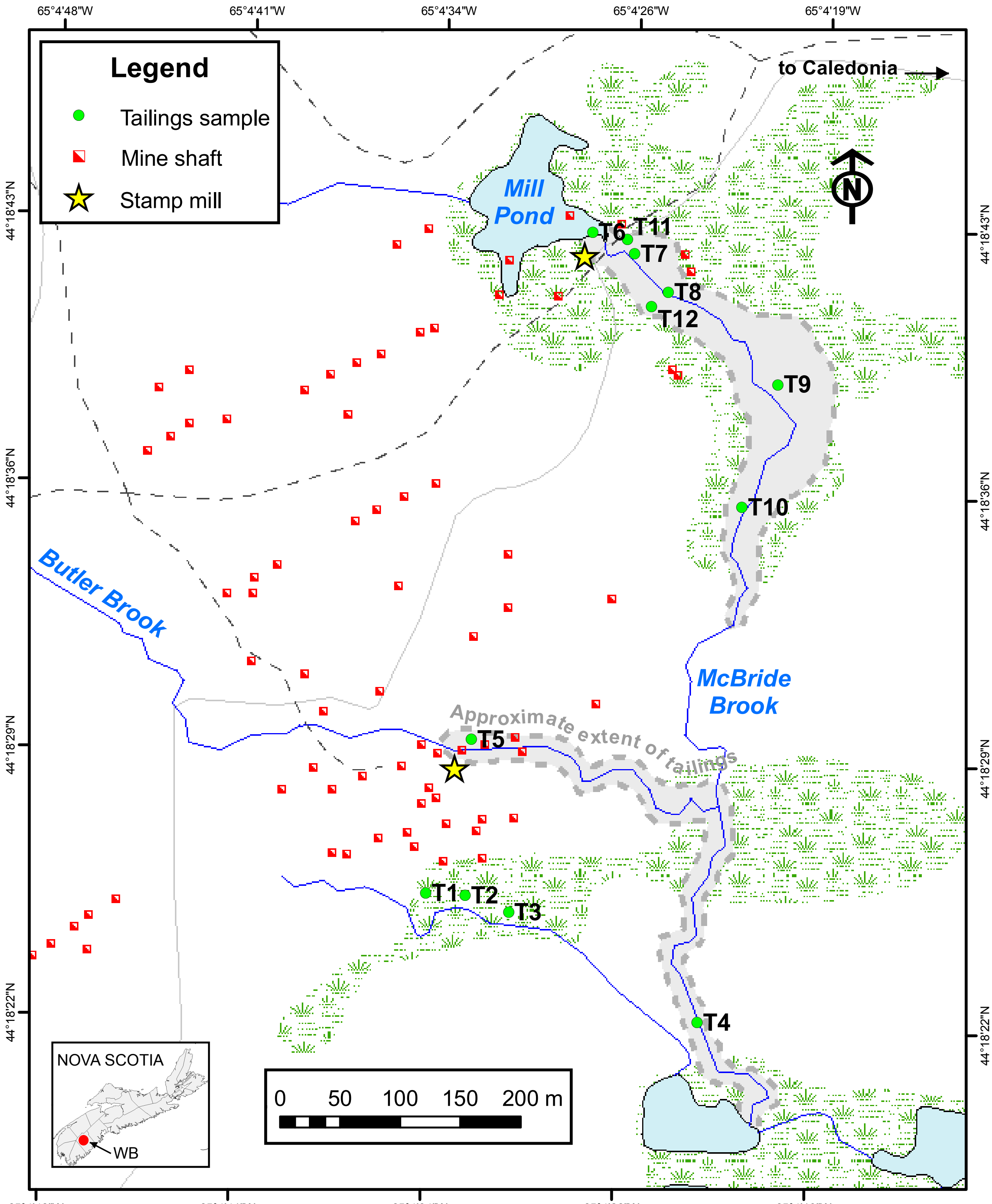


Fig. 97. Location of tailings samples, Whiteburn Gold District
(geographic centre of map (decimal degrees): 44.308280°, -65.075296°)

a)

b)

Fig. 98. (a) Overgrown tailings in small wetland on McBride Brook immediately southeast of the former Parker Douglas Mill at the Whiteburn Gold District. **(b)** Sampling pit in overgrown tailings near Mill Pond (Site T11, Fig. 97) showing a mixture of oxidized and unoxidized tailings.

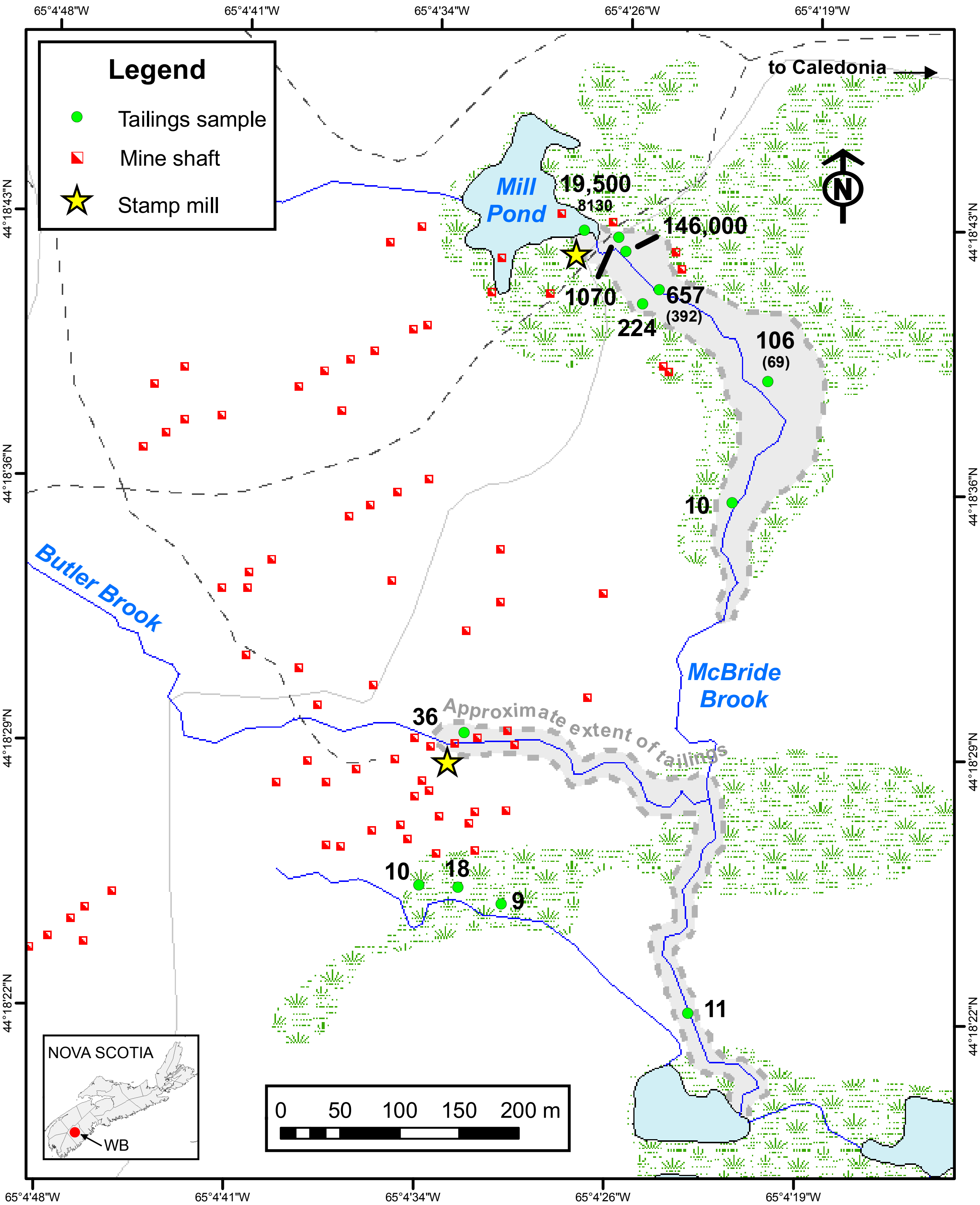


Fig. 99. As concentrations (mg/kg) in Whiteburn tailings (maximum and (mean) concentrations; <2 mm size fraction)

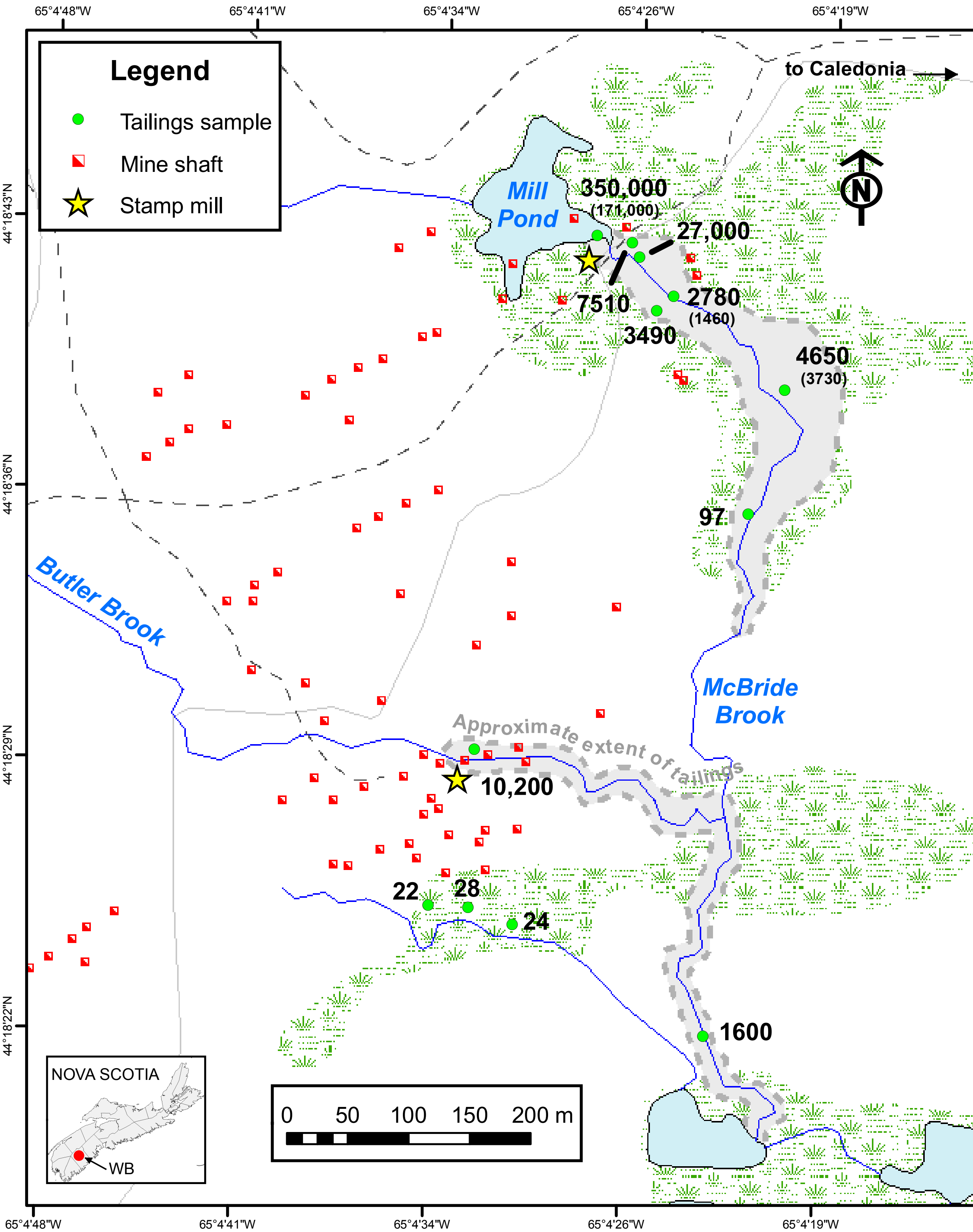


Fig. 100. Hg concentrations (μg/kg) in Whiteburn tailings (maximum and (mean) concentrations; <2 mm size fraction)

Table 19. As and Hg concentrations in tailings, Whiteburn Gold District

Sample Site	Tailings Depth (cm)	Northing (20T, NAD 83)	Easting (20T, NAD 83)	Date	As (mg/kg)	Hg (µg/kg)
T1	90	4908064	0334418	22-Jul-03	10	22
T2	100	4908062	0334451	22-Jul-03	18	28
T3	70	4908048	0334487	22-Jul-03	9	24
T4	0	4907956	0334644	22-Jul-03	11	1600
T5	0	4908192	0334456	22-Jul-03	36	10200
T6	7	4908614	0334557	22-Jul-03	19500	350000
T6	50	4908614	0334557	22-Jul-03	382	3490
T6	110	4908614	0334557	22-Jul-03	4540	160000
T7	10	4908596	0334592	22-Jul-03	146000	27000
T8	5	4908564	0334620	22-Jul-03	657	2780
T8	10	4908564	0334620	22-Jul-03	126	137
T9	20	4908487	0334711	22-Jul-03	31	2810
T9	45	4908487	0334711	22-Jul-03	106	4650
T10	65	4908385	0334681	22-Jul-03	10	97
T11	10	4908608	0334586	14-May-03	1080	7510
T12	10	4908552	0334606	14-May-03	224	3490

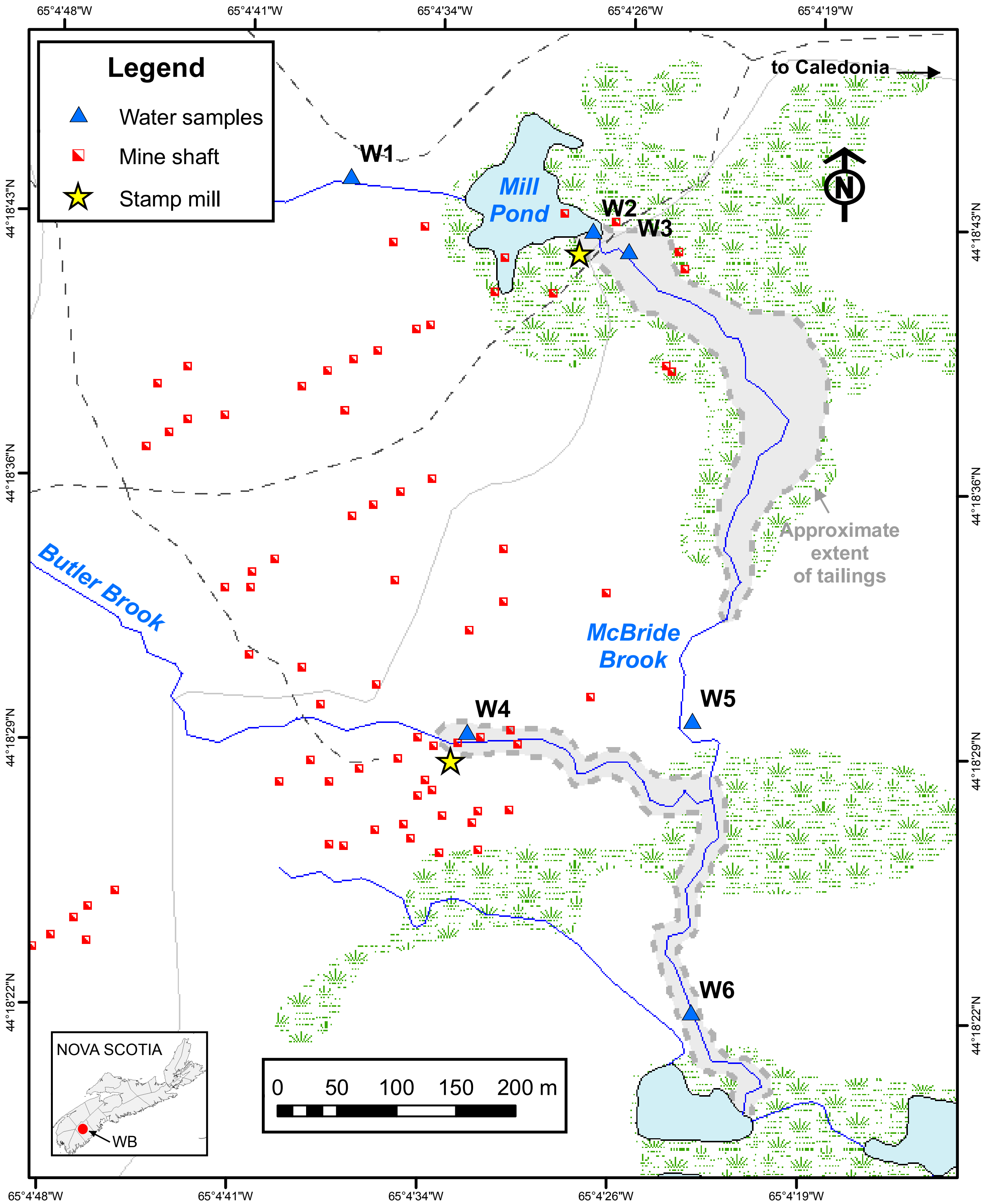


Fig. 101. Location of surface water samples, Whiteburn Gold District, July 2003 (geographic centre of map (decimal degrees): 44.308280°, -65.075296°)

a)

b)

Fig. 102. (a) Water sampling site W2 (Fig. 101) on Mill Pond. The Parker Douglas Mill foundation is located on the hill in the background and the shoreline of the pond is covered by tailings in this area. **(b)** Water sampling Site W6 on McBride Brook showing dark brown, organic-rich waters. The streambanks at this location consist mainly of mine tailings.

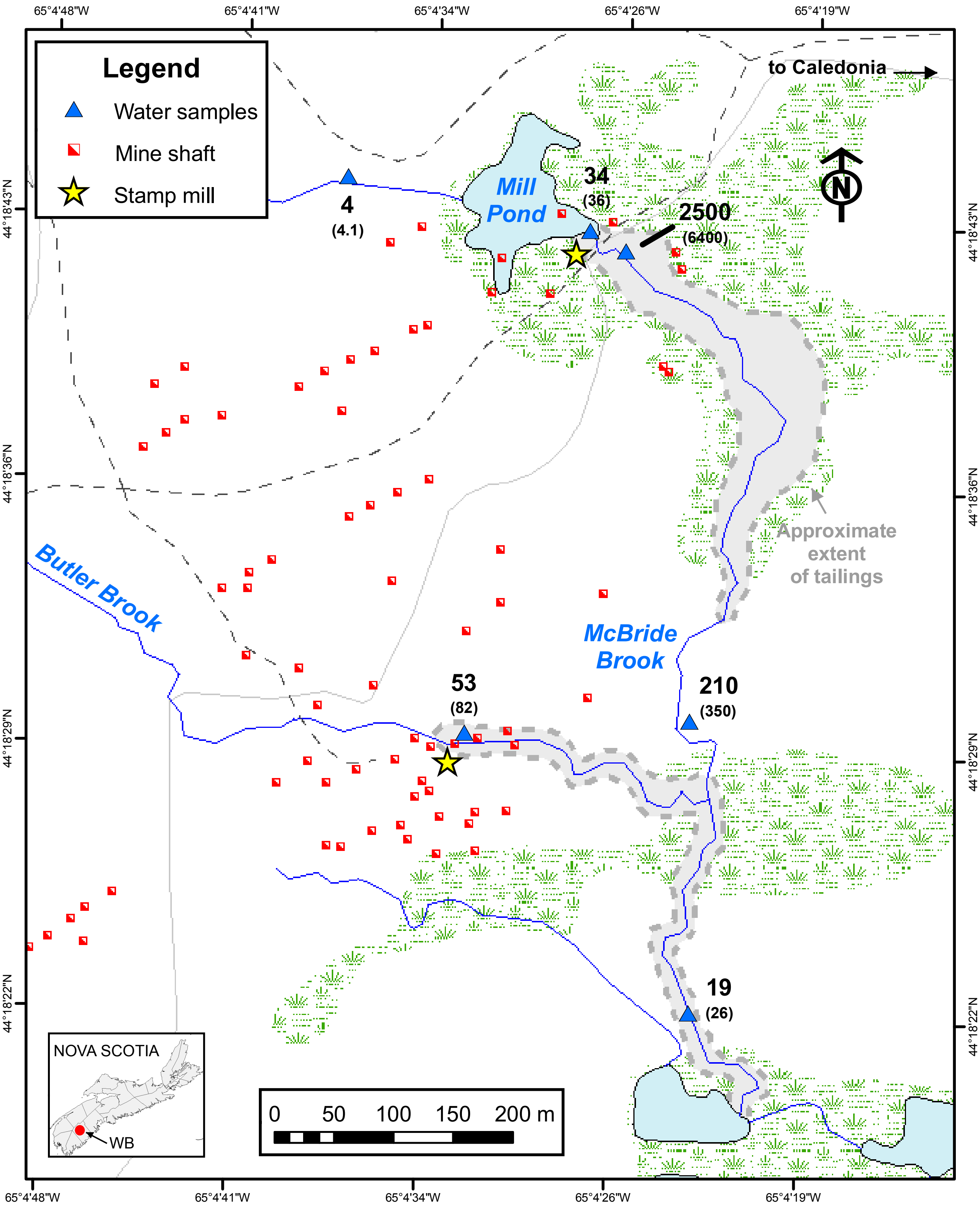


Fig. 103. As concentrations (µg/L) in surface water samples, Whiteburn Gold District, July 2003 (dissolved [<0.45 µm] and (total) concentrations)

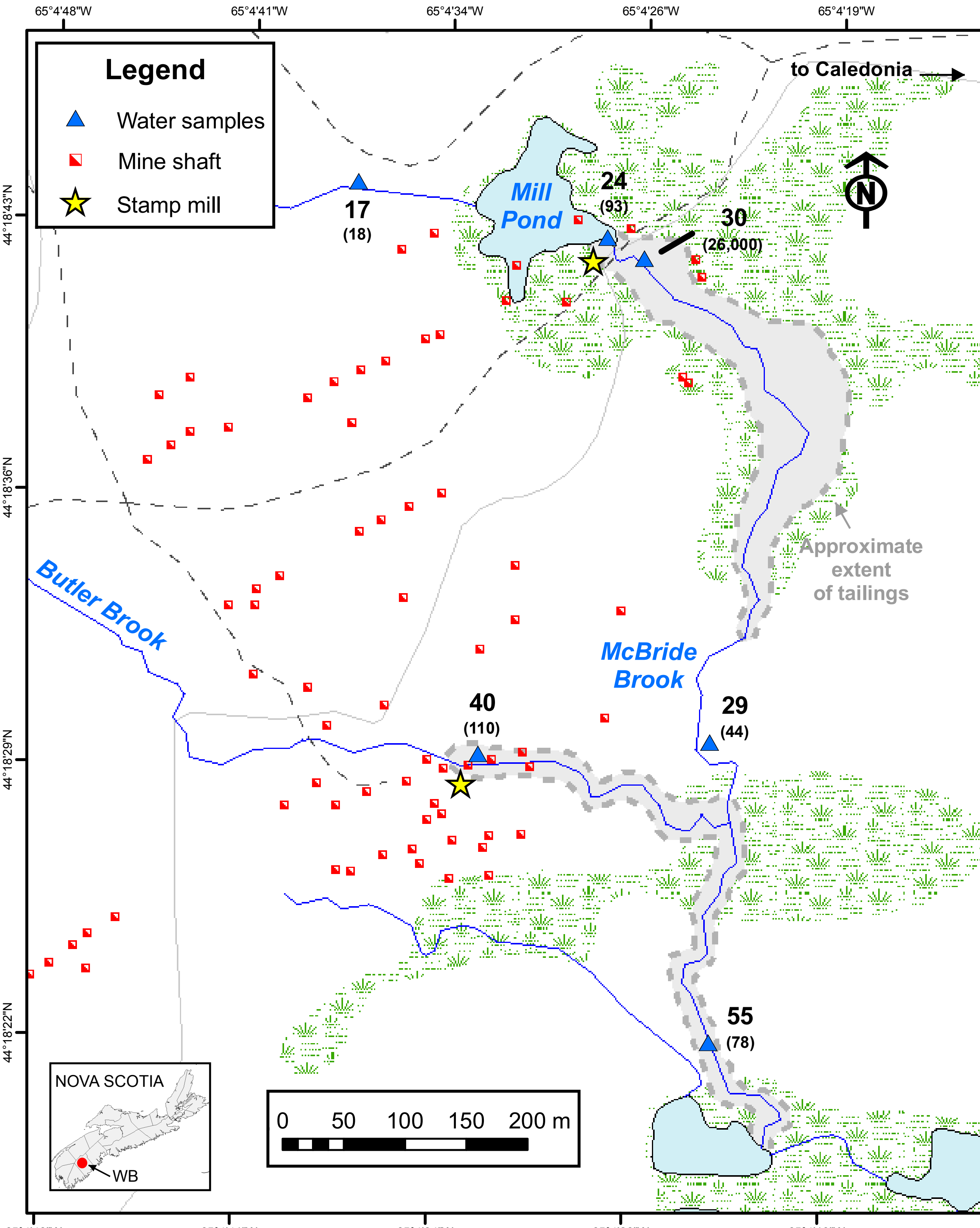


Fig. 104. Hg concentrations (ng/L) in surface water samples, Whiteburn Gold District, July 2003 (dissolved [<0.45 μm] and (total) concentrations)

DISCUSSION

Summary plots of As, Au, Cu, Hg, Ni, Pb, Sb, and Zn concentrations in tailings and waters

The bulk concentrations of As, Au, Cu, Hg, Ni, Pb, Sb, and Zn in tailings from 14 historical gold districts in Nova Scotia are shown in a series of box-and-whisker plots in figures 105-112, respectively. In these plots, maximum and minimum values are shown by the whisker extents, upper and lower quartiles define the boxes, median values are given by the horizontal line within each box, and outliers are shown as diamonds. The districts are arranged from west to east on these plots as follows: Whiteburn (WB), North Brookfield (NB), Leipsigate (LEI), Mount Uniacke (UNI), East Rawdon (RAW), Montague (MG), Lake Catcha (LC), Caribou (CAR), Mooseland (MSL), Salmon River (SR), Goldenville (GD), Cochrane Hill (CH), Upper Seal Harbour (USH), and Lower Seal Harbour (LSH). The tailings at Cochrane Hill are subdivided into two groups: amalgamation tailings from historical stamp milling between 1868 and 1921 (CH1) and cyanidation tailings from more recent (1981-1990) gold mining operations (CH2) (Figs. 10-11). Where applicable, Canadian environmental guidelines are also shown on these plots for both soils and sediments to help place the data in context. The soil quality guidelines are the upper limits recommended for the protection of environmental and human health during residential and/or parkland use. These apply to mine sites where the tailings are located close to residential properties, or where the tailings are used for recreational purposes (e.g. Montague, Goldenville). The sediment quality guidelines shown on these plots are Probable Effects Levels (PELs), above which adverse biological effects on freshwater aquatic biota are expected to occur frequently. These apply to sites where the tailings are present in wetlands, streams, and/or lakes that contain organisms living in or having direct contact with sediments (CCME 2012).

The median As concentrations in most districts range from about 0.1 to 1.0 wt.% (Fig. 105). The relatively low As concentrations at Leipsigate reflect the extensive re-processing of tailings in a cyanide plant from 1903-1905, whereas the abnormally high range for the Caribou tailings is skewed by a single sample of sulphide concentrate containing 25 wt.% As. More than 99% of all samples exceed both the soil and sediment quality guidelines for As. The median Au grade in the tailings is 0.37 g/t, with the lowest concentrations occurring at the two sites where cyanide plants operated most recently (CH and LSH; Fig. 106). Copper concentrations in the tailings show a distinct geographic trend, with higher concentrations west of the Mooseland Gold District and lower concentrations in the more easterly regions of the Meguma Supergroup (Fig. 107). Mercury concentrations in the tailings are shown in Fig. 108. The low Hg levels in the recent cyanidation tailings from Cochrane Hill (<5 to 25 μg/kg; median 6 μg/kg) are representative of natural Hg levels in various bedrock lithologies of the Meguma Terrane. The comparatively lower median Hg concentrations at NB, LEI, MG, GD, and LSH most likely reflect the reprocessing of amalgamation tailings using cyanide in the latter stages of mining at these sites. Approximately 20% of the tailings samples exceed the soil quality guideline for Hg and 71% exceed the sediment guideline. The concentrations of Ni in the tailings show a similar geographic pattern to Cu (Fig. 109). Lead, Sb, and Zn are comparatively low in the tailings relative to environmental quality guidelines and do not show the same regional patterns observed for Cu and Ni (Figs. 110-112). The relatively high Zn concentrations in the tailings at Cochrane Hill may reflect both the presence of sphalerite in this deposit (Smith 1983) as well as the use of Zn plates to precipitate gold in the cyanide plant during the 1980s (Mosher 2004).

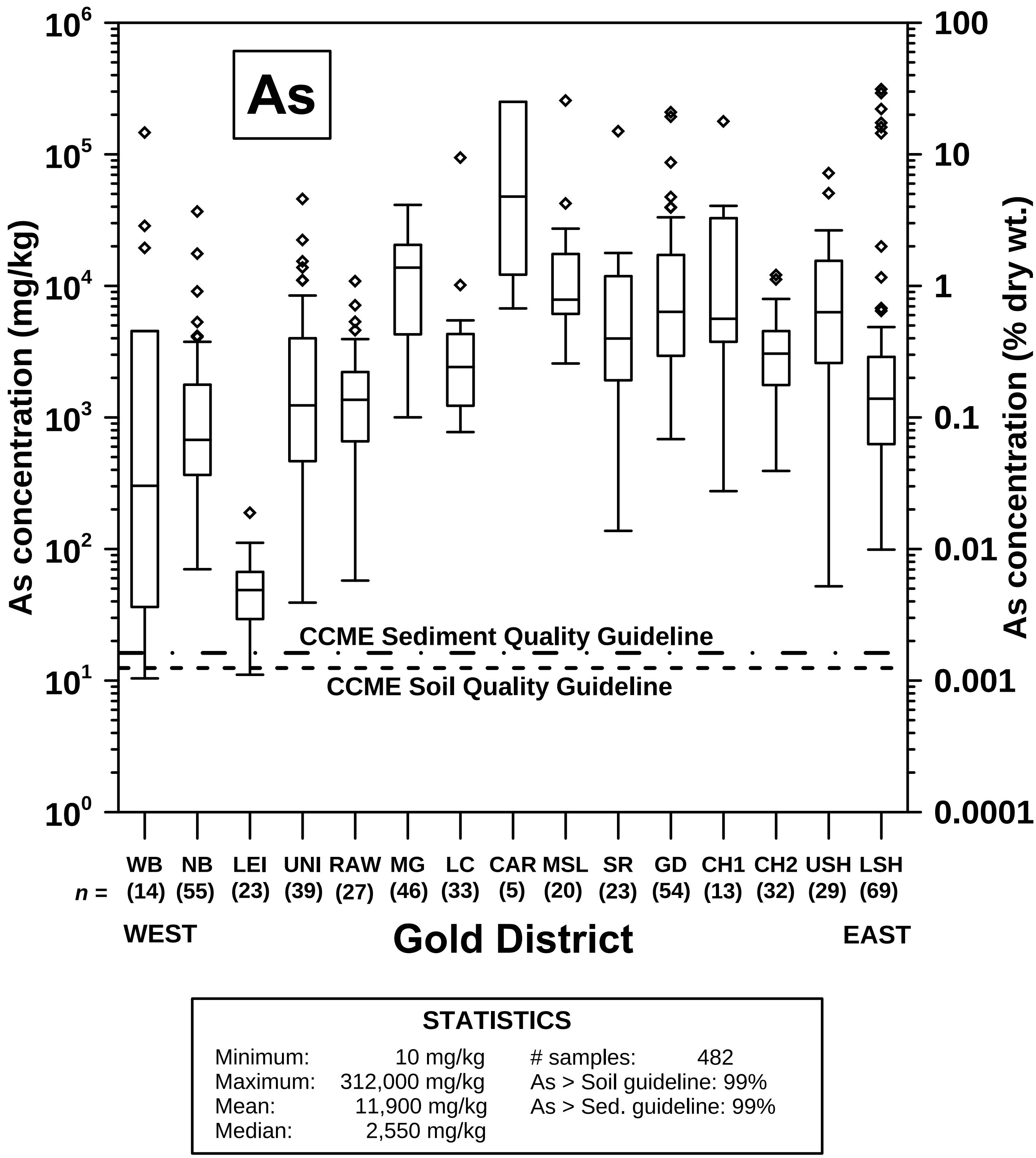
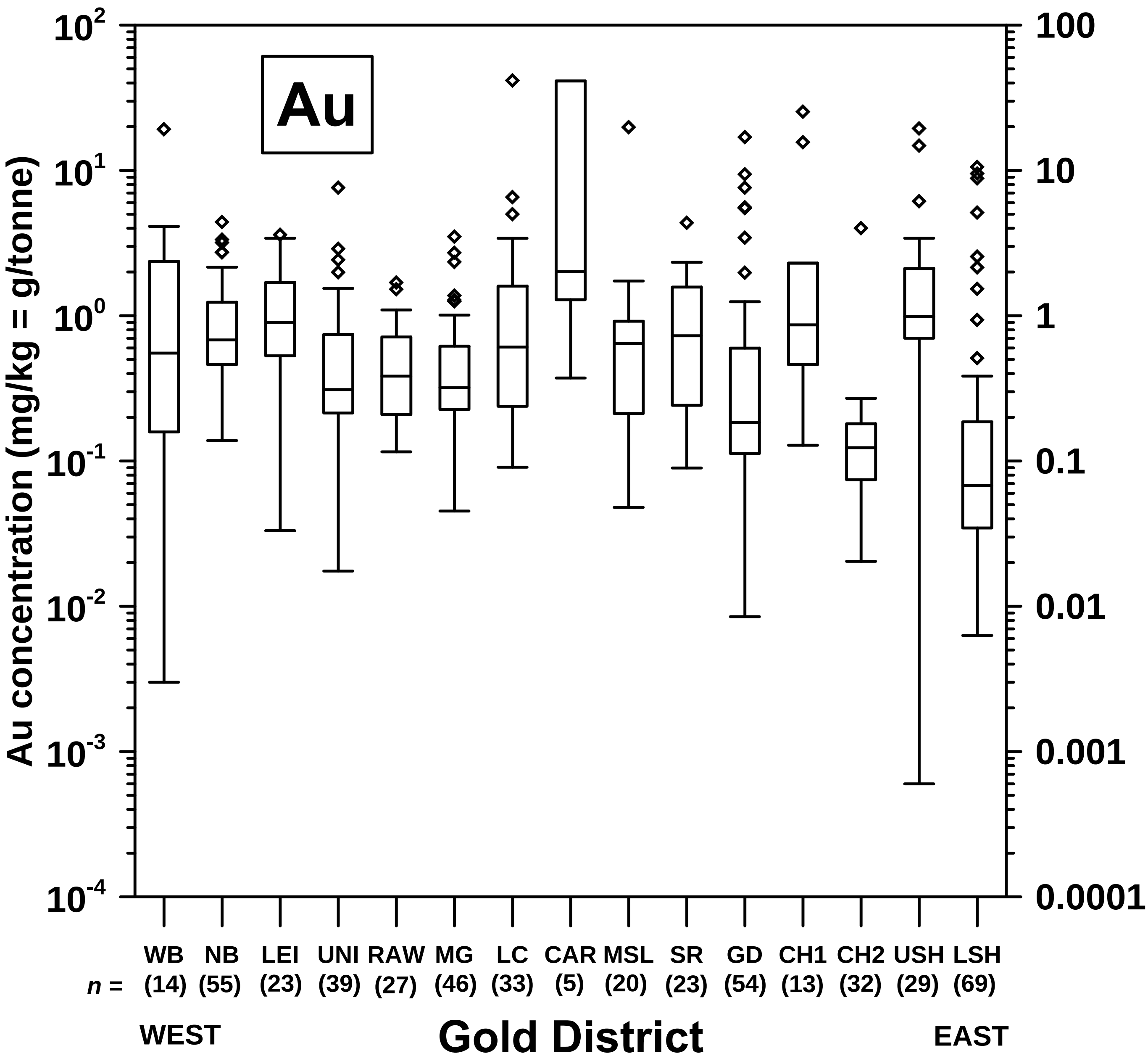


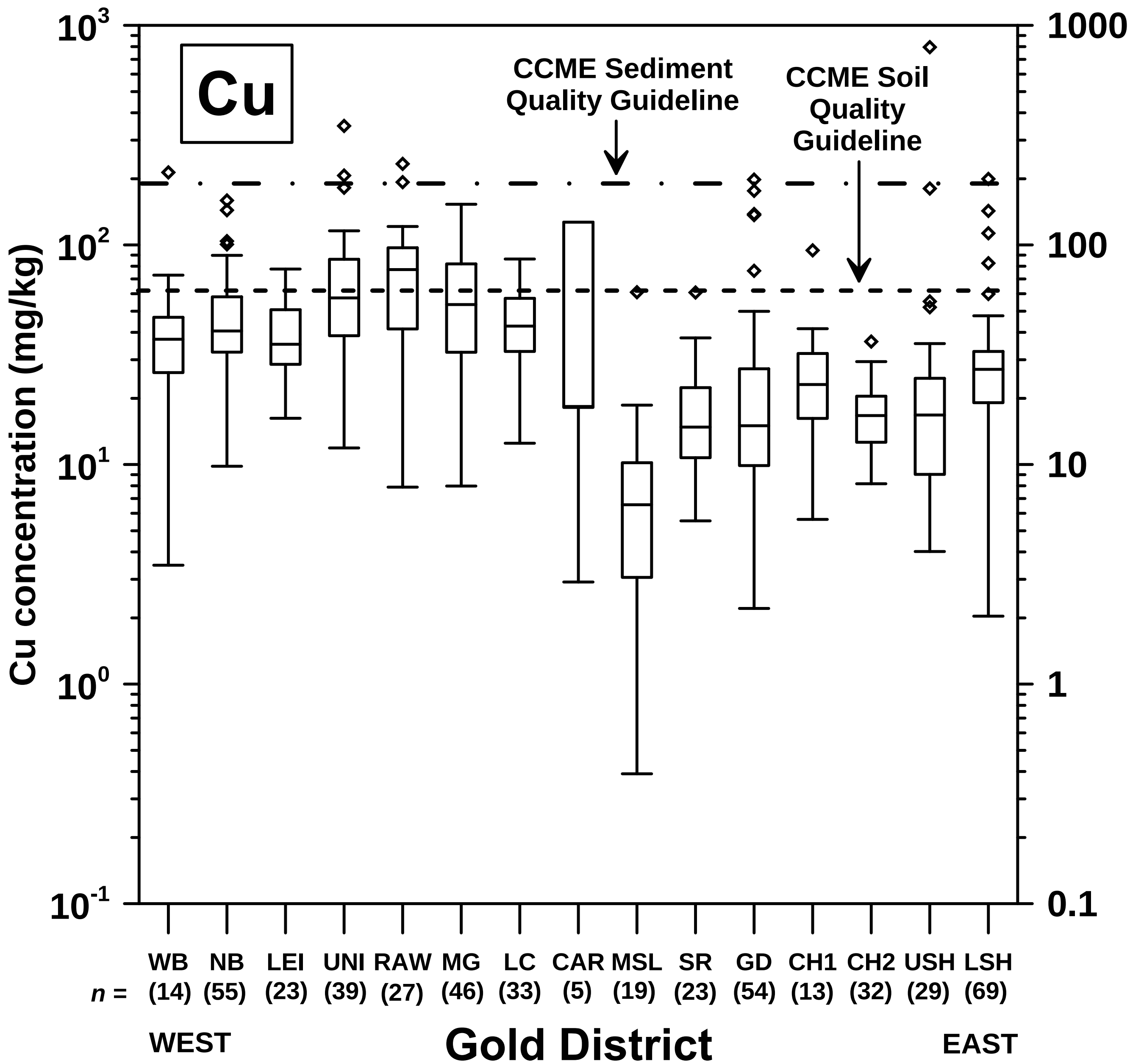
Fig. 105. Box-and-whisker plot showing the concentration of As (mg/kg) in tailings from 14 historical gold districts in Nova Scotia. District abbreviations are provided in the text.



STATISTICS

Minimum:	0.001 g/t	Median:	0.37 g/t
Maximum:	41 g/t	# samples:	482
Mean:	1.26 g/t		

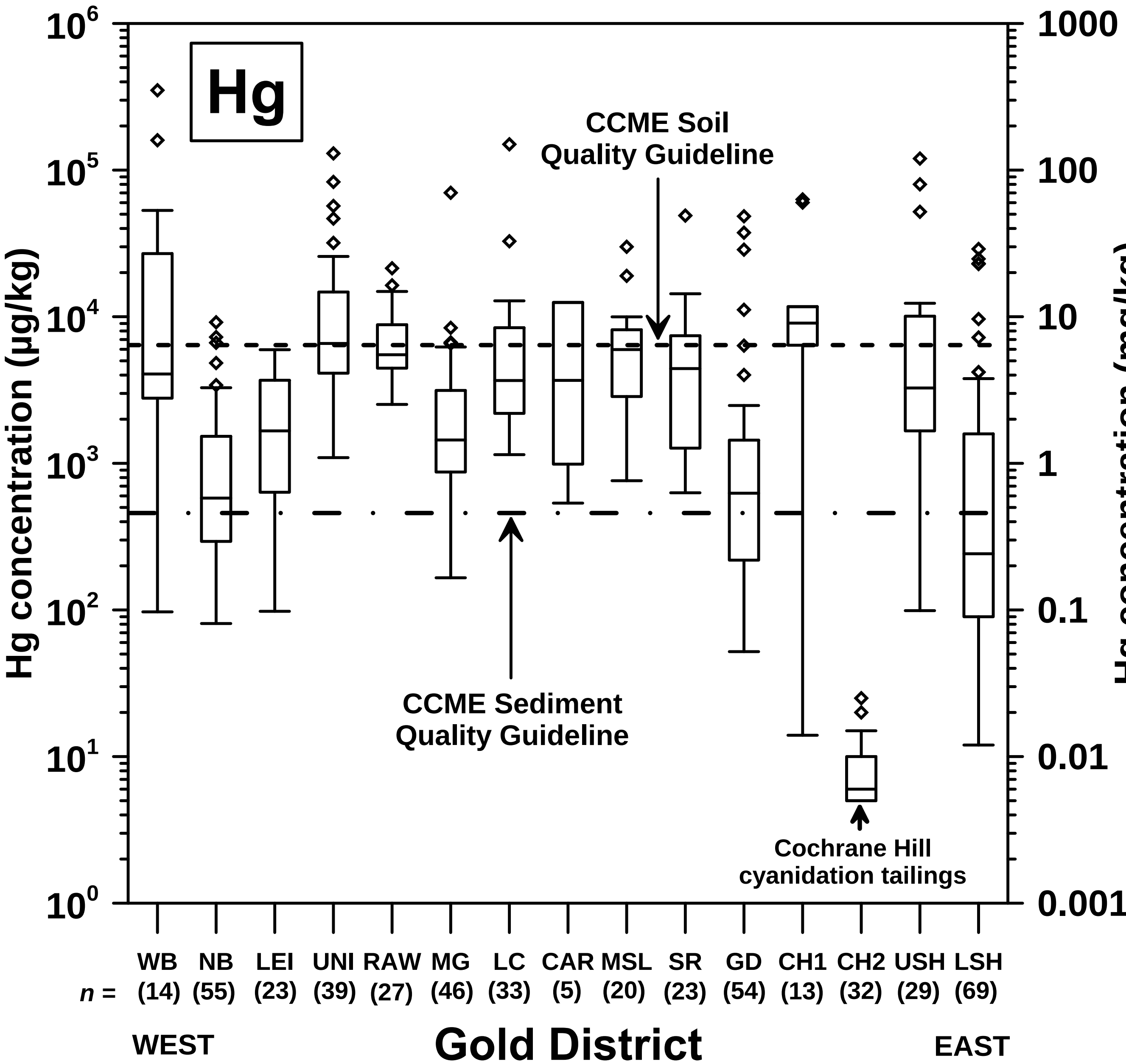
Fig. 106. Box-and-whisker plot showing the concentration of Au (g/tonne) in tailings from 14 historical gold districts in Nova Scotia. District abbreviations are provided in the text.



STATISTICS

Minimum:	0.4 mg/kg	# samples:	481
Maximum:	796 mg/kg	Cu > Soil guideline:	18%
Mean:	42 mg/kg	Cu > Sed. guideline:	1%
Median:	31 mg/kg		

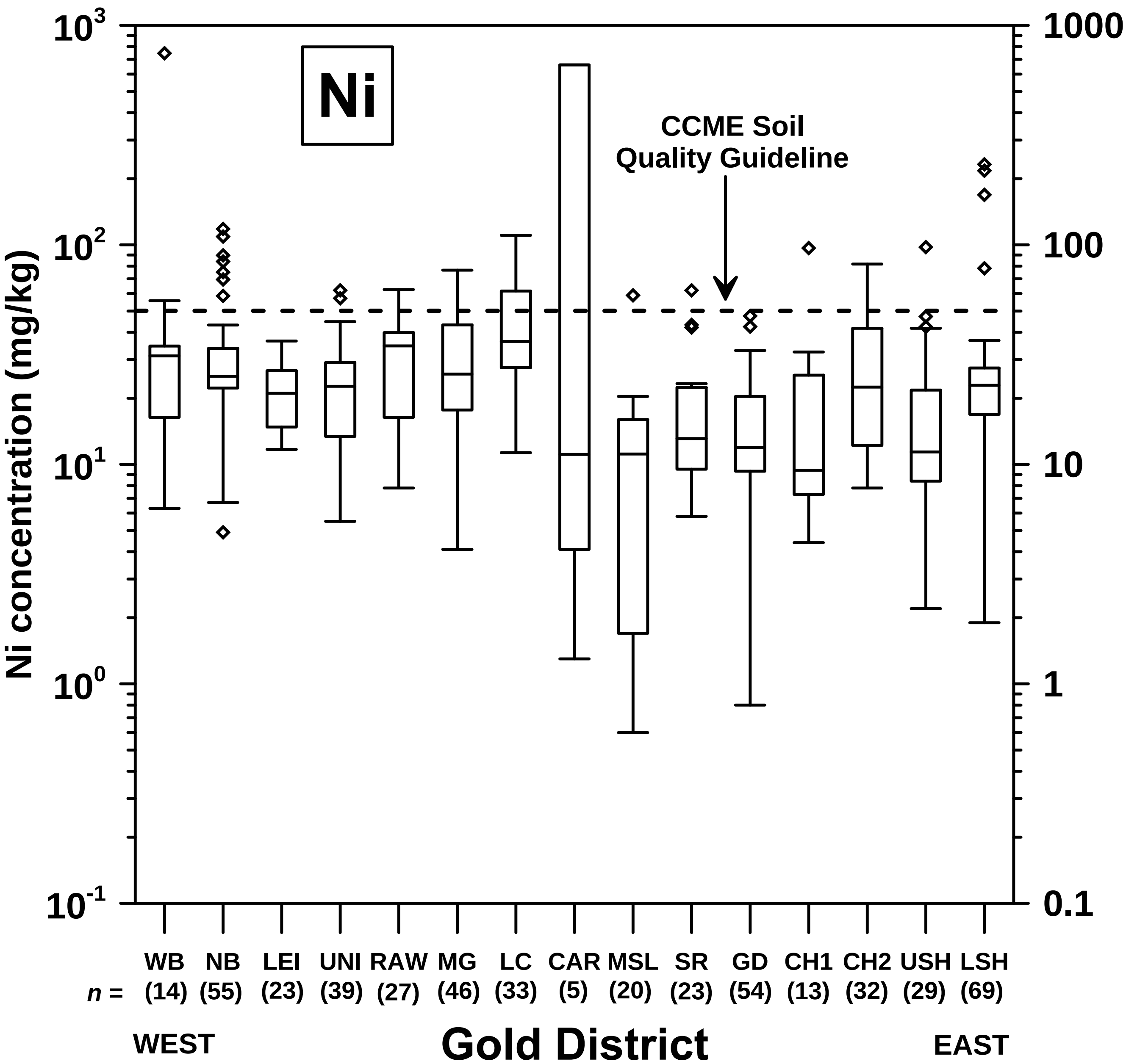
Fig. 107. Box-and-whisker plot showing the concentration of Cu (mg/kg) in tailings from 14 historical gold districts in Nova Scotia. District abbreviations are provided in the text.



STATISTICS

Minimum:	5 µg/kg	# samples:	482
Maximum:	350,000 µg/kg	Hg > Soil guideline:	20%
Mean:	6770 µg/kg	Hg > Sed. guideline:	71%
Median:	1640 µg/kg		

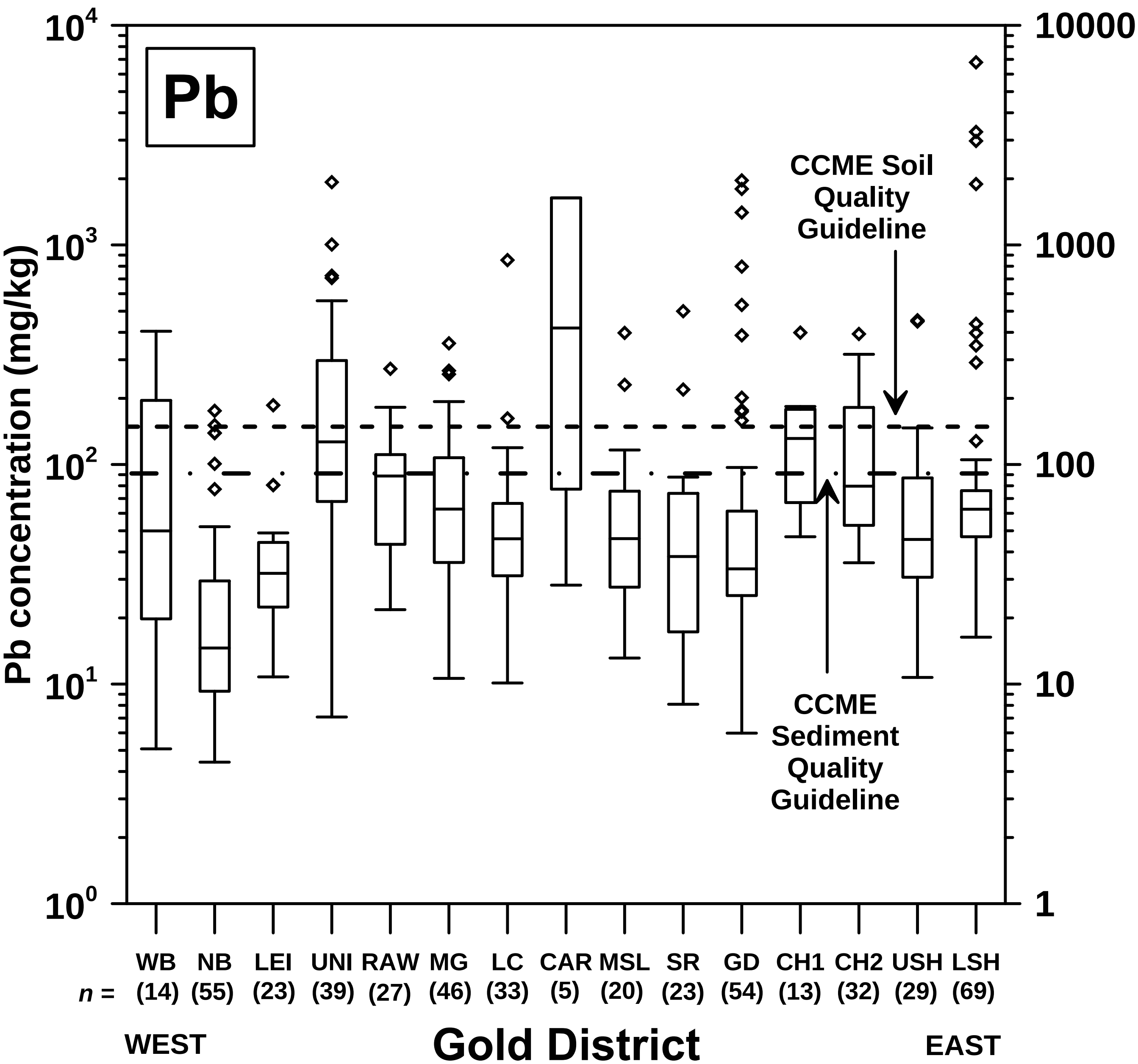
Fig. 108. Box-and-whisker plot showing the concentration of Hg (µg/kg) in tailings from 14 historical gold districts in Nova Scotia. District abbreviations are provided in the text.



STATISTICS

Minimum:	0.6 mg/kg	Median:	22 mg/kg
Maximum:	746 mg/kg	# samples:	482
Mean:	29 mg/kg	Ni > Soil guideline:	10%

Fig. 109. Box-and-whisker plot showing the concentration of Ni (mg/kg) in tailings from 14 historical gold districts in Nova Scotia. District abbreviations are provided in the text.



STATISTICS

Minimum:	4.4 mg/kg	# samples:	482
Maximum:	6780 mg/kg	Pb > Soil guideline:	17%
Mean:	137 mg/kg	Pb > Sed. guideline:	26%
Median:	53 mg/kg		

Fig. 110. Box-and-whisker plot showing the concentration of Pb (mg/kg) in tailings from 14 historical gold districts in Nova Scotia. District abbreviations are provided in the text.

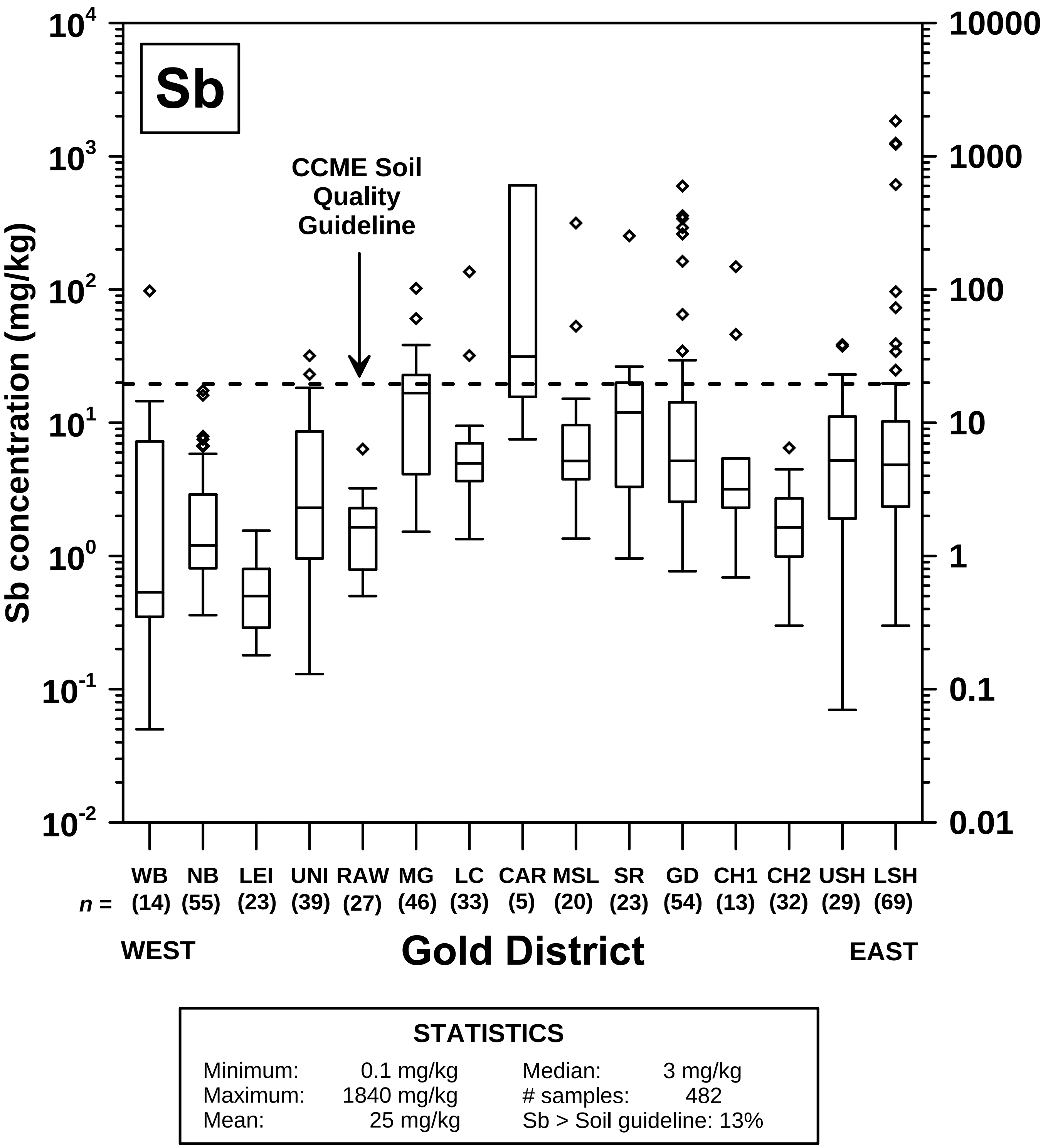
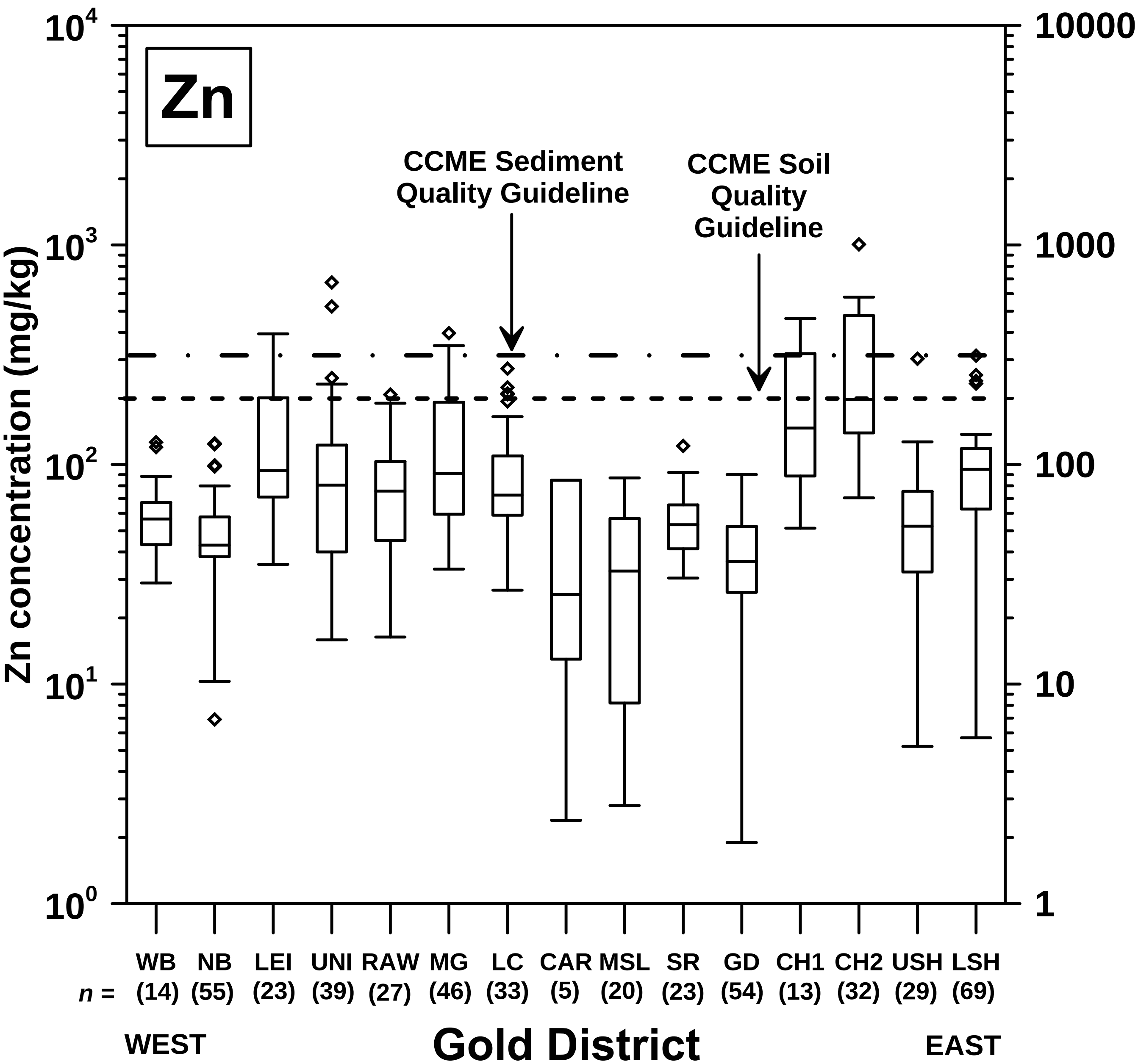


Fig. 111. Box-and-whisker plot showing the concentration of Sb (mg/kg) in tailings from 14 historical gold districts in Nova Scotia. District abbreviations are provided in the text.



STATISTICS

Minimum:	1.9 mg/kg	# samples:	482
Maximum:	1000 mg/kg	Zn > Soil guideline:	11%
Mean:	97 mg/kg	Zn > Sed. guideline:	4%
Median:	66 mg/kg		

Fig. 112. Box-and-whisker plot showing the concentration of Zn (mg/kg) in tailings from 14 historical gold districts in Nova Scotia. District abbreviations are provided in the text.

From 2003 to 2005, water was collected from approximately 180 sampling sites in nine gold districts throughout Nova Scotia to document the impact of tailings on surface waters. Most sites were sampled from July to November 2003, but additional sampling was carried out at Upper and Lower Seal Harbour in May 2004, August 2004, November 2004, and August 2005 (these seasonal samples from the Seal Harbour districts are designated “SH-S” on the following plots). In general, the waters draining most of these tailings deposits are circumneutral to mildly acidic, with pH values averaging 5.5. With few exceptions, reaction with the tailings tends to increase the pH of local surface waters, reflecting dissolution of carbonate phases (ankerite, calcite, dolomite) in the mine wastes (e.g. Fig. 53). The only locations where pH values less than 3.5 have been measured are in the pore waters of tailings at Montague and Goldenville, where weathering of sulphide concentrates has led to the development of hardpan layers cemented by secondary As minerals (e.g. scorodite, $FeAsO_4 \cdot 2H_2O$; DeSisto *et al.* 2011)

Water chemistry data indicate that the dissolved levels of As are very high in waters impacted by mine tailings (range: 0.2–6580 µg/L; median 117 µg/L; n = 181), as compared to background values of generally <25 µg/L (Fig. 113). The total concentration of As at some background sites is less than the CCME guideline for the protection of aquatic life (5.0 µg/L; CCME 2012), but there are many other sites with naturally occurring As concentrations between 5 and 100 µg/L depending on the degree of exposure to mineralized bedrock in these gold districts. Dissolved As concentrations >800 µg/L are generally restricted to sites where shallow groundwater was sampled from a hole dug in the tailings, or where water was pooled on the tailings surface. This range in As concentrations is consistent with that observed in tailings drainage from similar low-sulfide, gold-quartz vein deposits in Alaska and California (Ashley 2002). Comparison of the filtered and unfiltered concentrations of As in the surface water samples shows that >70% of the total As is “dissolved” (<0.45 µm) at most sites. Samples with <50% “dissolved” As represent shallow groundwaters in the tailings, or standing waters with abundant suspended sediment (e.g. particulate organic matter, bacteriogenic iron oxides, etc.) (Fig. 113).

Dissolved Hg concentrations in tailings-impacted surface waters range from 1.8 to 61 ng/L, and from 1.2 to 17 ng/L at background sites (Fig. 114). In general, the dissolved Hg concentrations in surface waters are relatively low (<25 ng/L) even in close proximity to tailings with high (i.e. >1 mg/kg) levels of Hg, suggesting that Hg in the tailings is present in relatively insoluble forms. Most of the total Hg concentrations exceeding CCME’s guideline for the protection of aquatic life (26 ng/L) occur directly within the tailings and do not persist for significant distances downstream. Unfiltered Hg concentrations >100 ng/L were all measured within tailings pore waters and stamp mill drainages. As compared to As, a greater percentage of Hg in these surface waters was bound to particulate matter, especially in waters with >30 ng/L Hg and abundant organic material (Fig. 113). Dissolved organic carbon (DOC) also seems to play a significant role in mobilizing Hg from the tailings in some districts (Fig. 115), and is especially important in determining the concentration of dissolved Hg at background sites (Fig. 116).

Figure 117 shows the sum of dissolved As, Cu, Hg, Ni, Pb, Sb, and Zn plotted versus pH in all surface waters collected from 2003 to 2005. The range in compositions is similar to that shown by Plumlee *et al.* (1999) for waters draining low-sulfide, Au quartz vein deposits in Alaska. On average, As makes up more than 85% of the metalloid sum in most tailings-impacted waters from Nova Scotia, with Zn also present at significant concentrations in waters at Cochrane Hill.

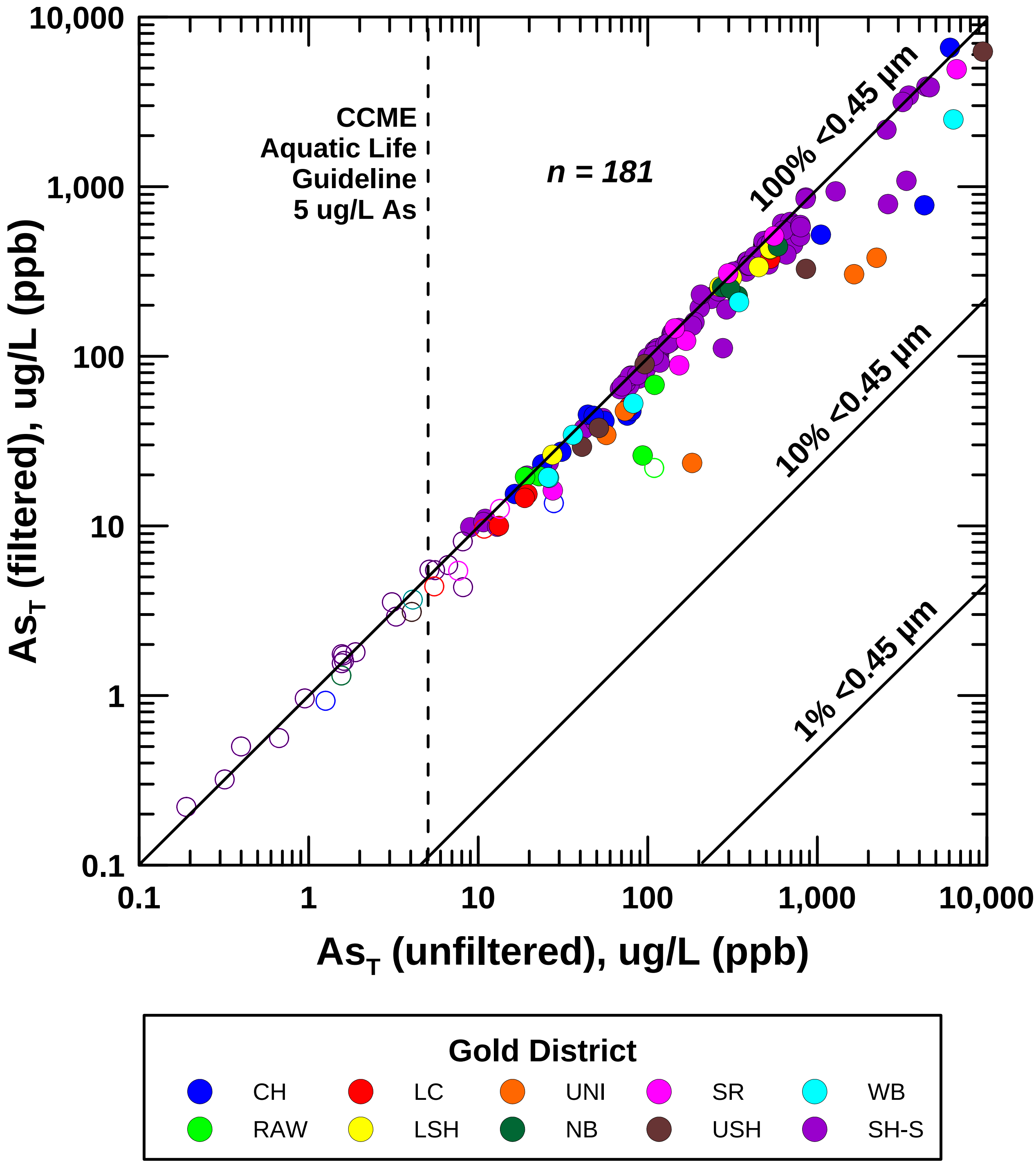


Fig. 113. Filtered (<0.45 µm) and unfiltered As concentrations in surface waters collected from nine historical gold districts in Nova Scotia between May 2003 and August 2005. Open symbols represent background (upstream) locations and filled symbols represent sites that are impacted by mine tailings. District abbreviations are provided in the text.

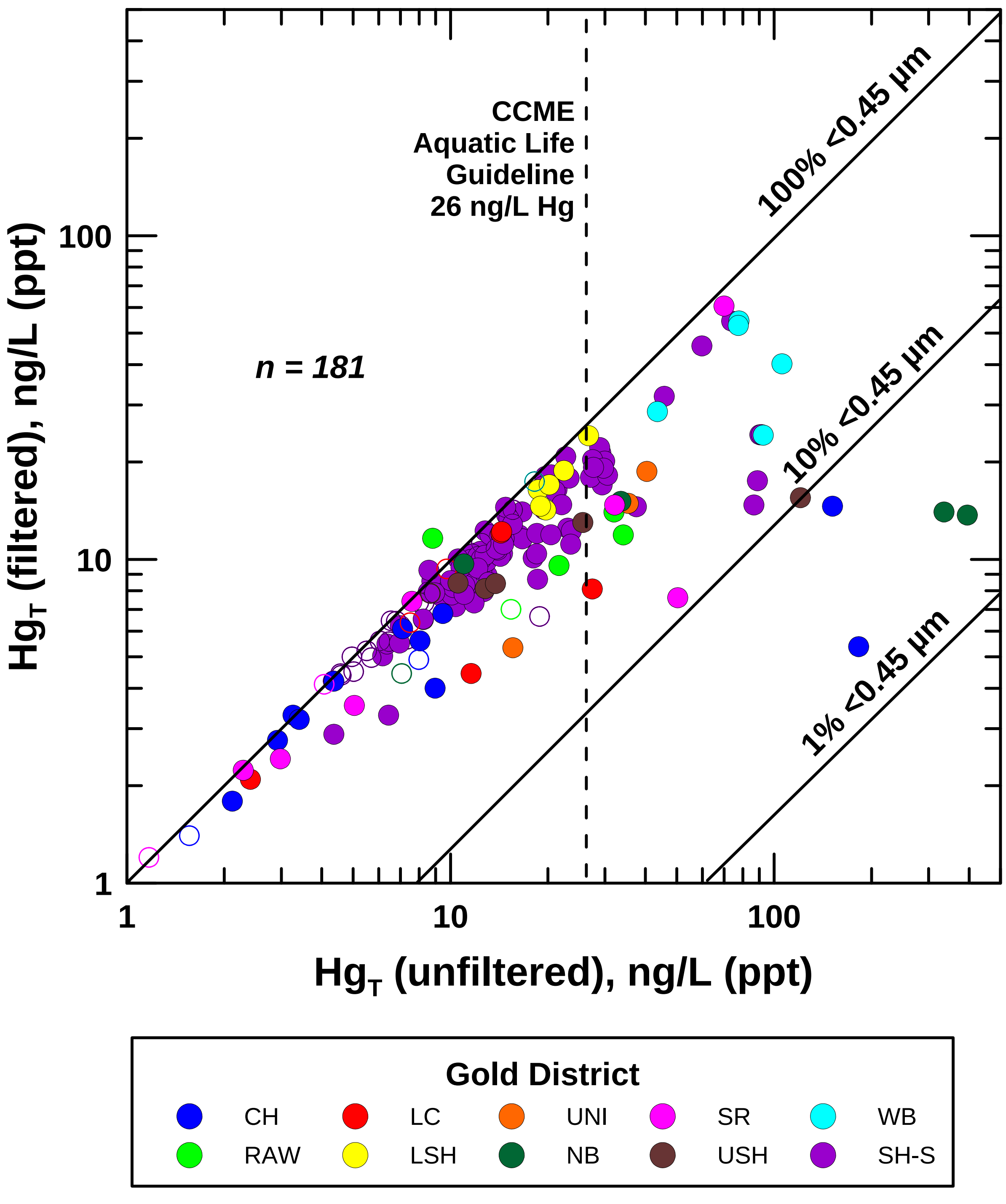


Fig. 114. Filtered (<0.45 µm) and unfiltered Hg concentrations in surface waters collected from nine historical gold districts in Nova Scotia between May 2003 and August 2005. Open symbols represent background (upstream) locations and filled symbols represent sites that are impacted by mine tailings. District abbreviations are provided in the text.

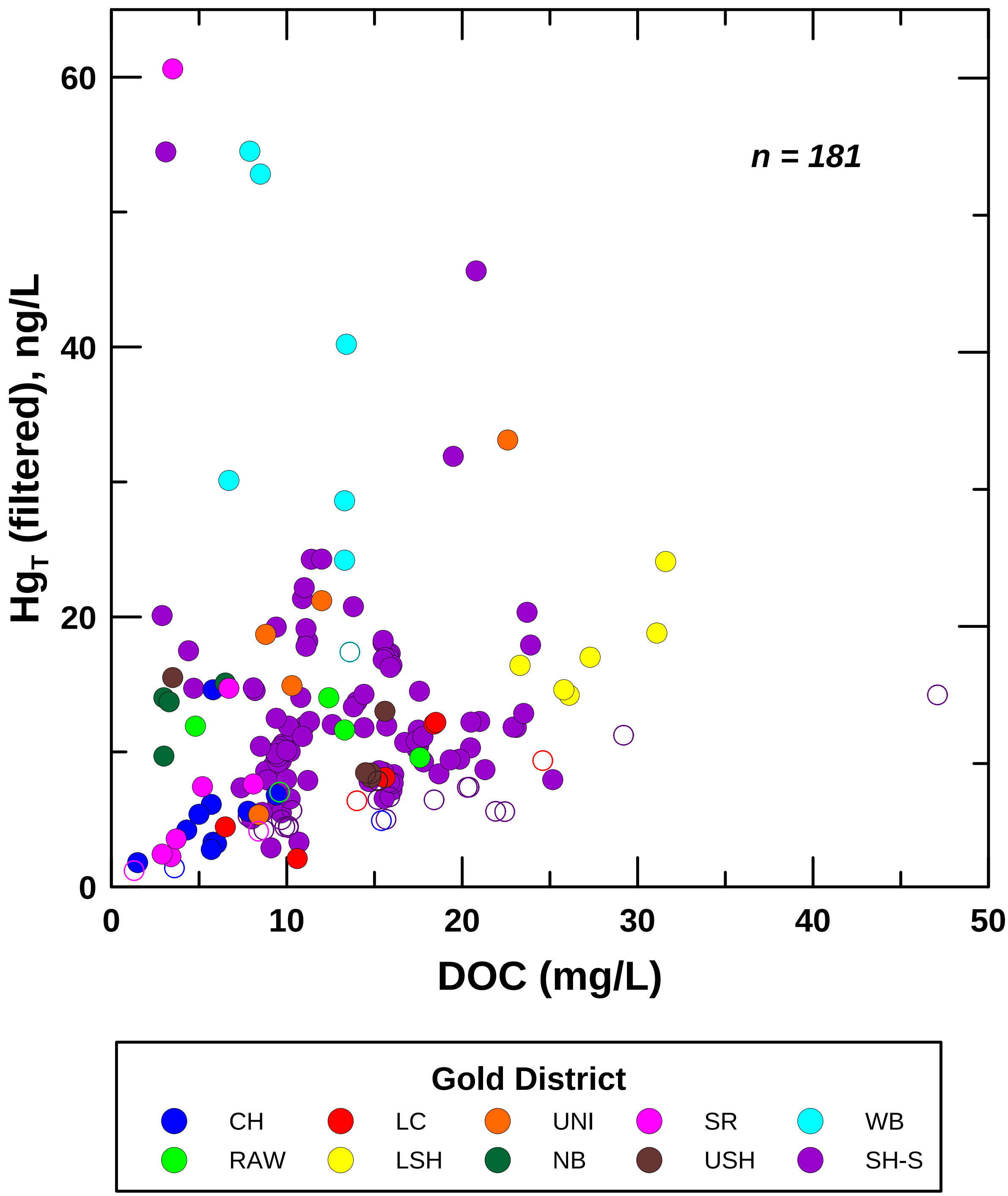


Fig. 115. Filtered (<0.45 µm) Hg versus dissolved organic carbon (DOC) in surface waters collected from Nova Scotia gold districts between May 2003 and August 2005. Open symbols represent background (upstream) locations and filled symbols represent sites that are impacted by mine tailings. District abbreviations are provided in the text.

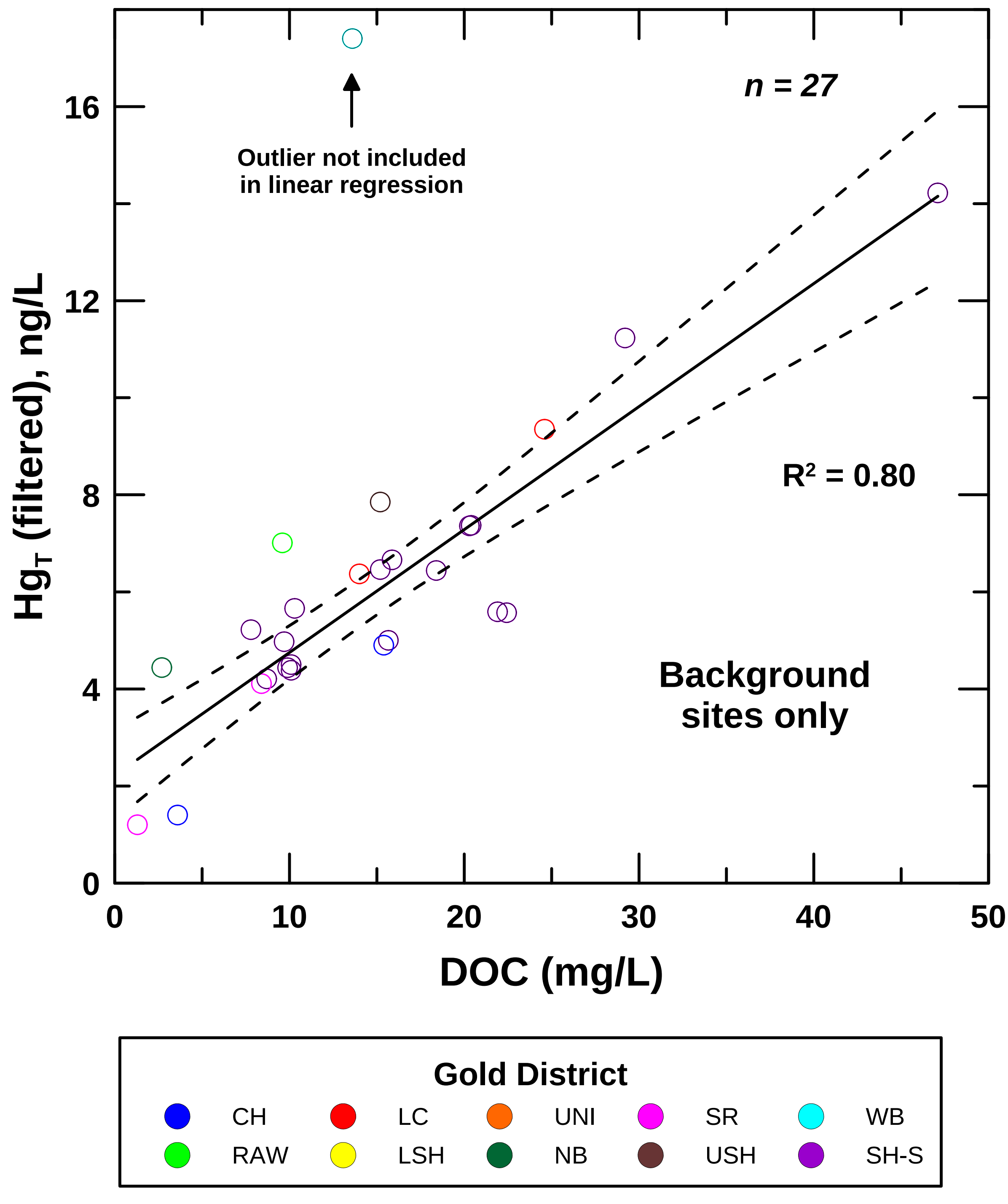


Fig. 116. Filtered (<0.45 µm) Hg versus dissolved organic carbon (DOC) concentrations in background surface waters collected from nine gold districts in Nova Scotia between May 2003 and August 2005. Linear regression of these data suggests that increases in DOC lead to increased Hg mobilization. District abbreviations are provided in the text.

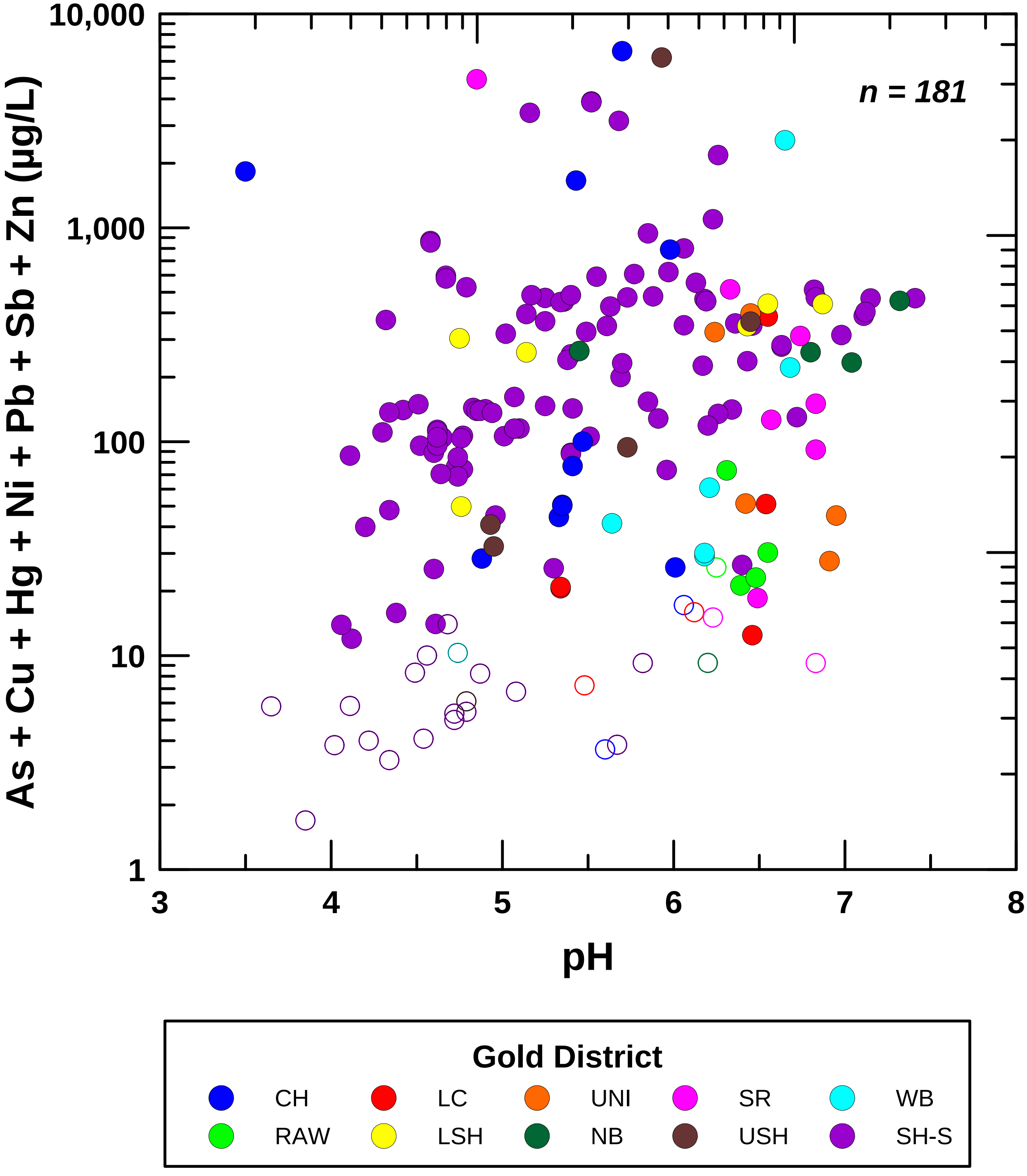


Fig. 117. Ficklin-style diagram [after Plumlee et al. (1999)] showing the sum of dissolved As, Cu, Hg, Ni, Pb, Sb, and Zn plotted versus pH in surface waters collected from nine historical gold districts in Nova Scotia between May 2003 and August 2005. Open symbols represent background (upstream) locations and filled symbols represent sites that are impacted by mine tailings. District abbreviations are provided in the text.

Background concentrations of As and Hg around the Seal Harbour Gold Districts

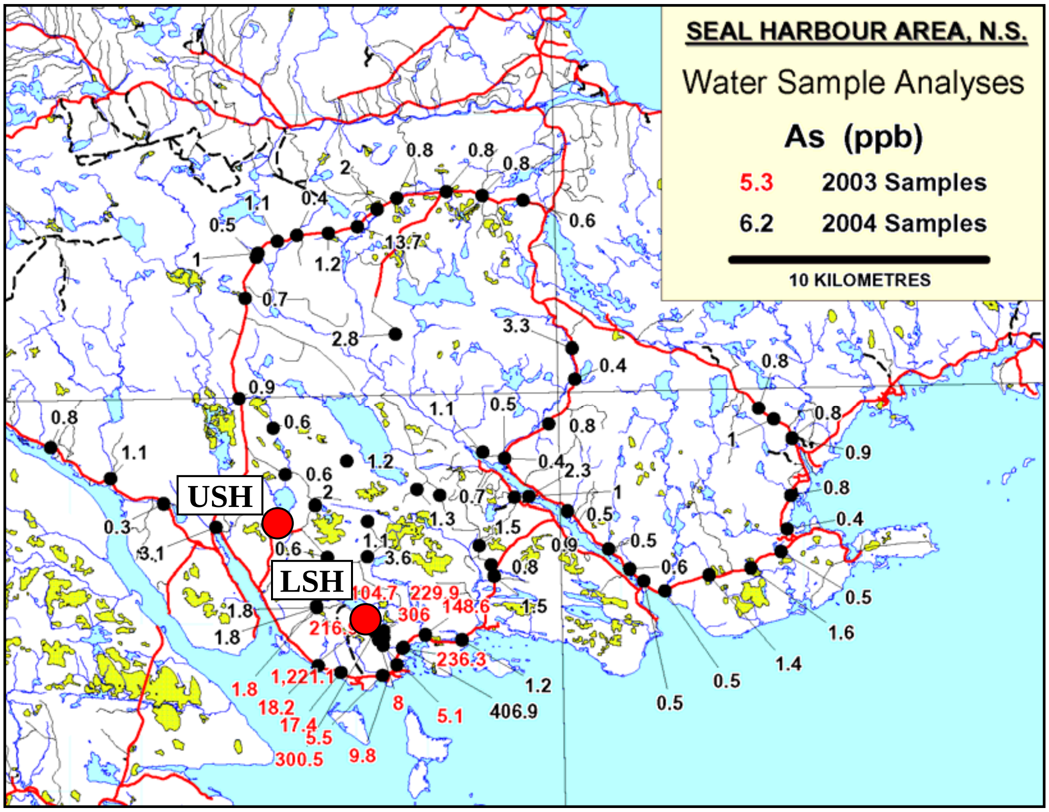
In September 2003 and August 2004, samples of surface waters and organic-rich streambank sediments were collected from approximately 60 sites in total within a 20 km radius of the Upper and Lower Seal Harbour gold districts (Fig. 1). The main purpose of this sampling was to establish ranges in regional background concentrations for both As and Hg in mineralized and unmineralized areas for comparison with mining-impacted waters and sediments. In 2003, most of the samples were collected in streams near the Lower Seal Harbour Gold District (LSH), and included sampling of tailings-impacted drainages for comparison purposes. In August 2004, samples were taken from a much broader area underlain by granites and bedrock of the Meguma Supergroup, but unaffected by mining activities. The range of stream widths included in this survey ranged from 0.5 to 10 m (A.L. Sangster, unpublished data, 2005).

The distributions of As and Hg are shown in surface waters in Figure 118, and in streambank sediments in Figure 119. These concentration ranges are summarized in Table 20, and compared to data for tailings-impacted waters and sediments in the Lower Seal Harbour District. The ranges in As and Hg concentrations are consistent with those observed in other gold mining districts throughout the Meguma Terrane in Nova Scotia (Figs. 105, 108, 114, 115).

Table 20. As and Hg concentrations in stream waters and sediments collected from background and tailings-impacted locations within 20 km of the Seal Harbour Gold Districts.

Stream Waters		
Element	**Medium**	**Concentration Range**
As	LSH tailings drainages	17 – 406 µg/L
As	Background streams	0.3 – 14 µg/L
Hg	LSH tailings drainages	8 – 16 ng/L
Hg	Background streams	1.6 – 10 ng/L
Streambank Sediments		
Element	**Medium**	**Concentration Range**
As	LSH tailings drainages	370 – 6500 mg/kg
As	Background streams	2.5 – 70 mg/kg
Hg	LSH tailings drainages	300 – 3900 µg/kg
Hg	Background streams	19 – 300 µg/kg

a)



b)

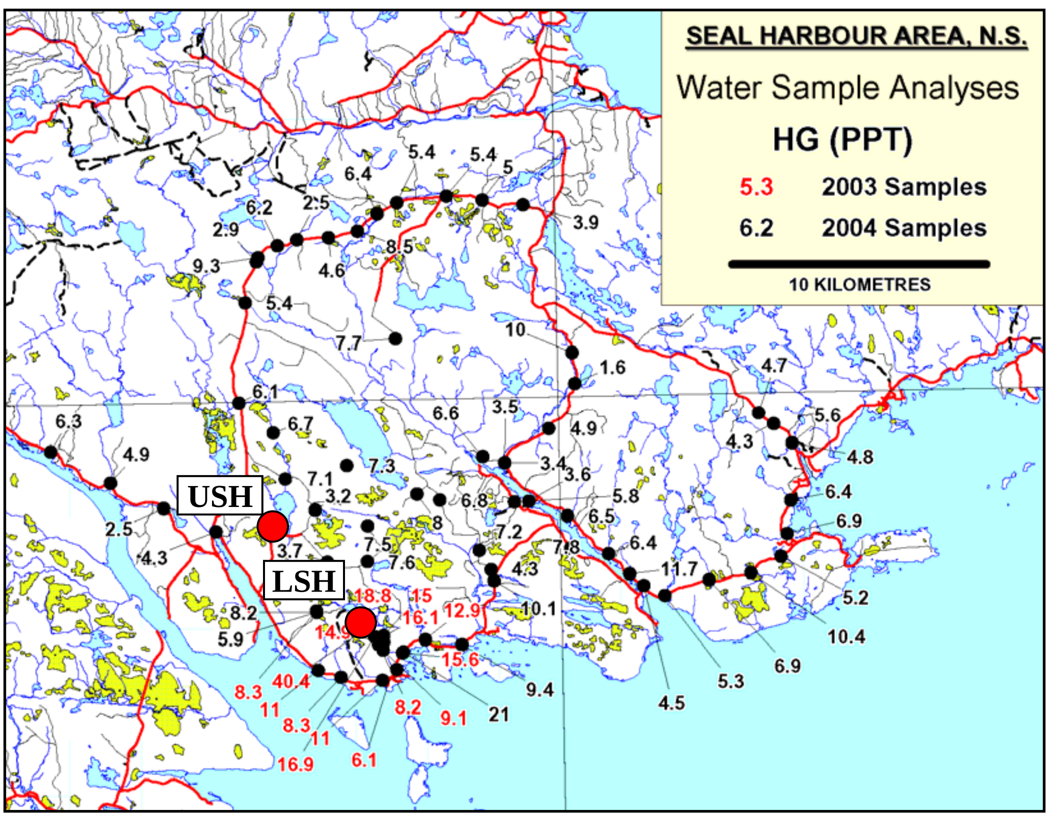
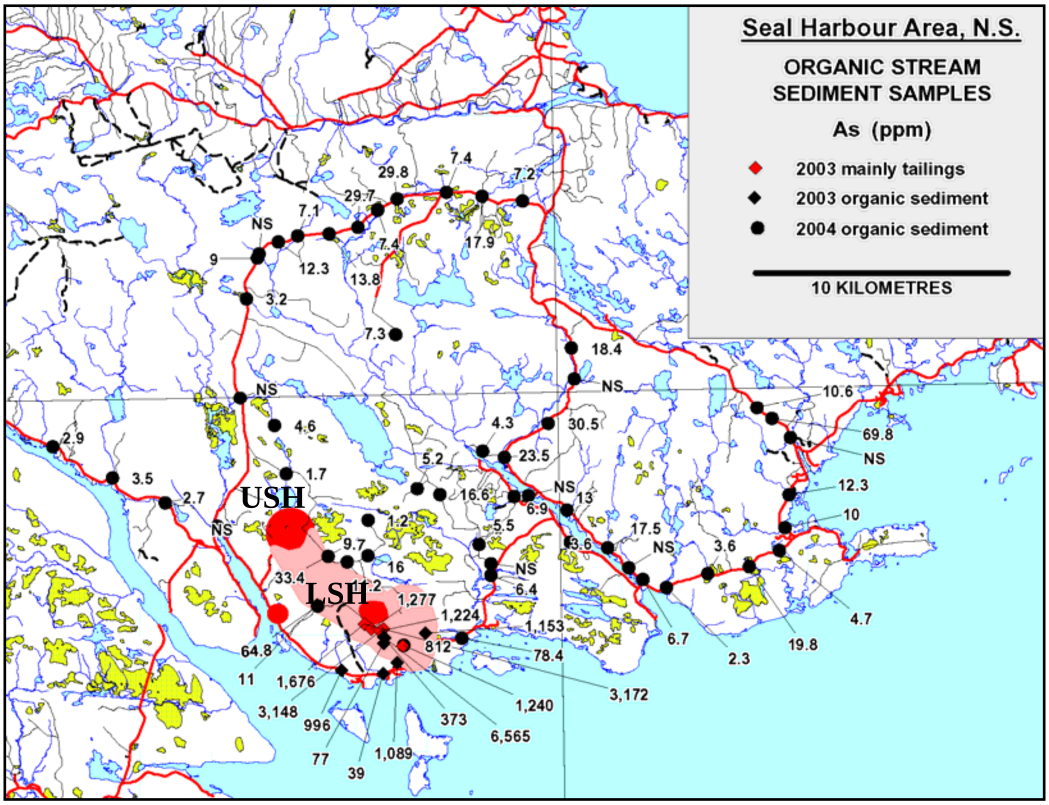


Fig. 118. Concentrations of **(a)** As and **(b)** Hg in filtered (<0.45 µm) stream water samples collected in 2003 and 2004 near the Upper and Lower Seal Harbour Gold Districts, Nova Scotia.

a)



b)

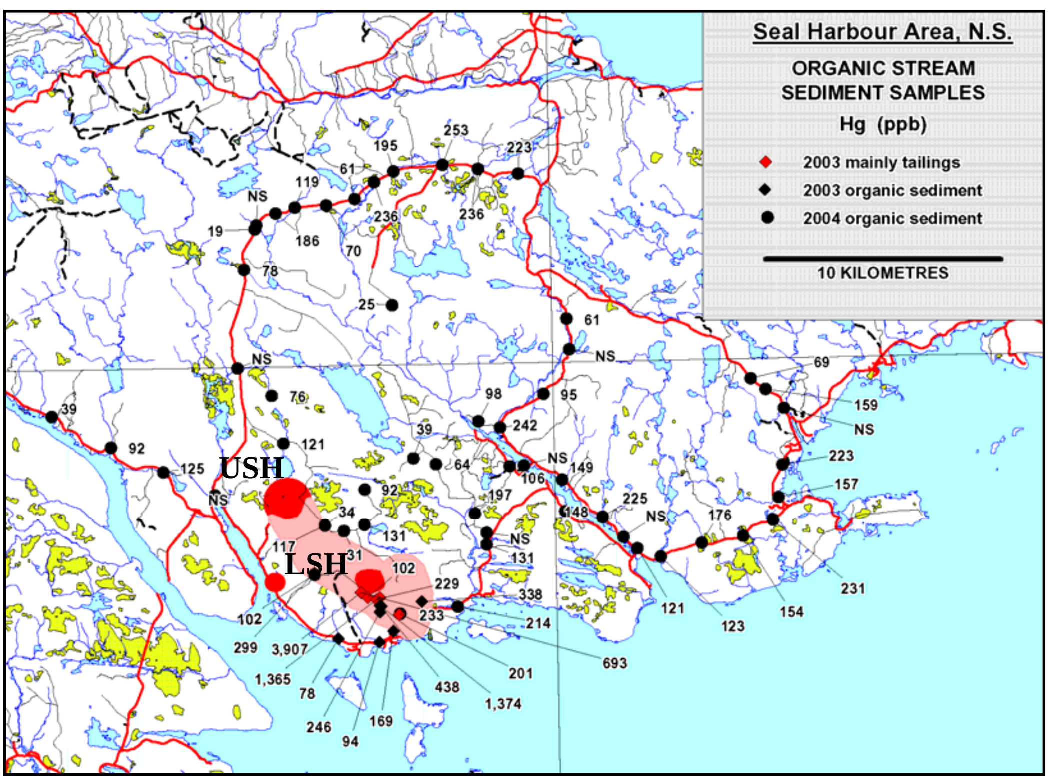


Fig. 119. Concentrations of **(a)** As and **(b)** Hg in organic-rich streambank sediments and tailings samples collected in 2003 and 2004 near the Upper and Lower Seal Harbour Gold Districts, Nova Scotia.

Seasonal variability in As and Hg concentrations at the Seal Harbour Gold Districts

In 2004 and 2005, detailed multi-disciplinary studies were carried out at the Upper and Lower Seal Harbour gold districts to characterize the seasonal variability, speciation, mobility, and bioaccumulation of metal(loid)s in both freshwater and marine environments. A wide variety of methods were employed by NRCan and its partners, including sequential extractions, As and Hg speciation measurements, biological sampling (fish, frogs, clams, invertebrates, mice), and sediment/water toxicity testing. Results from some of these studies have recently been published (Koch *et al.* 2007; Winch *et al.* 2008; Moriarty *et al.* 2009; Saunders *et al.* 2009, 2011; Corriveau *et al.* 2011a, 2011b; Percival *et al.* in press) and additional papers are forthcoming.

Documenting the temporal variations in As and Hg concentrations in surface waters is important for understanding the biogeochemical cycling of these elements in tailings environments, and also has significant implications for environmental monitoring of contaminated sites. Previous studies have shown that the dissolved concentrations of many trace elements exhibit large and consistent variations on both diurnal (24-hour) and seasonal timescales (e.g. Fuller and Davis 1989; Gammons *et al.* 2007; Masson *et al.* 2007). These variations are caused by changes in interrelated physical and chemical characteristics of streams and lakes including temperature, streamflow, dissolved oxygen and carbon dioxide, pH, dissolved organic carbon, and microbial activity (Nimick *et al.* 2011). In general, the magnitude of daily variations is small relative to seasonal cycles, but can be very significant in some environments.

Figure 120 shows the location of all sites at the Upper and Lower Seal Harbour districts where surface waters were collected in August 2003, May 2004, August 2004, November 2004 and August 2005. The identity of these sites are consistent with the water sampling locations shown previously for Lower Seal Harbour (Fig. 49) and Upper Seal Harbour (Fig. 93). The dissolved concentrations of As and Hg on each sampling date are shown in Figs. 121 and 122, respectively. Background concentrations of As and Hg within these districts range from 0.2-8.1 μg/L and 4-14 ng/L, respectively. In general, the concentrations of both As and Hg at most sites are higher during the summer months as compared to the Spring and Fall. The median dissolved concentrations of As and Hg are 3.6 and 1.4 times higher, respectively, in August as compared to May and November. Another important observation shown on Fig. 121 is the relatively high concentrations of As (37-150 μg/L) in the waters of East Brook (Site W21) where it drains into Seal Harbour. These elevated As concentrations most likely reflect the influence of tailings-impacted waters from Upper Seal Harbour draining through Seal Harbour Lake.

As shown in Fig. 123, the aqueous speciation of As also changes with the seasons and varies significantly between sampling sites. Arsenite [As(III)] is generally considered to be the more toxic and soluble form of As in the environment (Smedley and Kinniburgh 2002); therefore, determining the oxidation state of As is important for understanding its mobility, fate and biological impacts. In general, the highest percentages of arsenite occur in areas that receive significant inflows of low-oxygen ground waters (e.g. Sites W15, W17; Fig. 120), or where the surface waters are slow-flowing and organic-rich (e.g. Site W3). The seasonal variability in As concentrations and speciation in the surface waters at Upper and Lower Seal Harbour is controlled by many variables, including changes in water temperature and pH (Fig. 124), both of which increase in the summer months leading to changes in trace element behaviour.

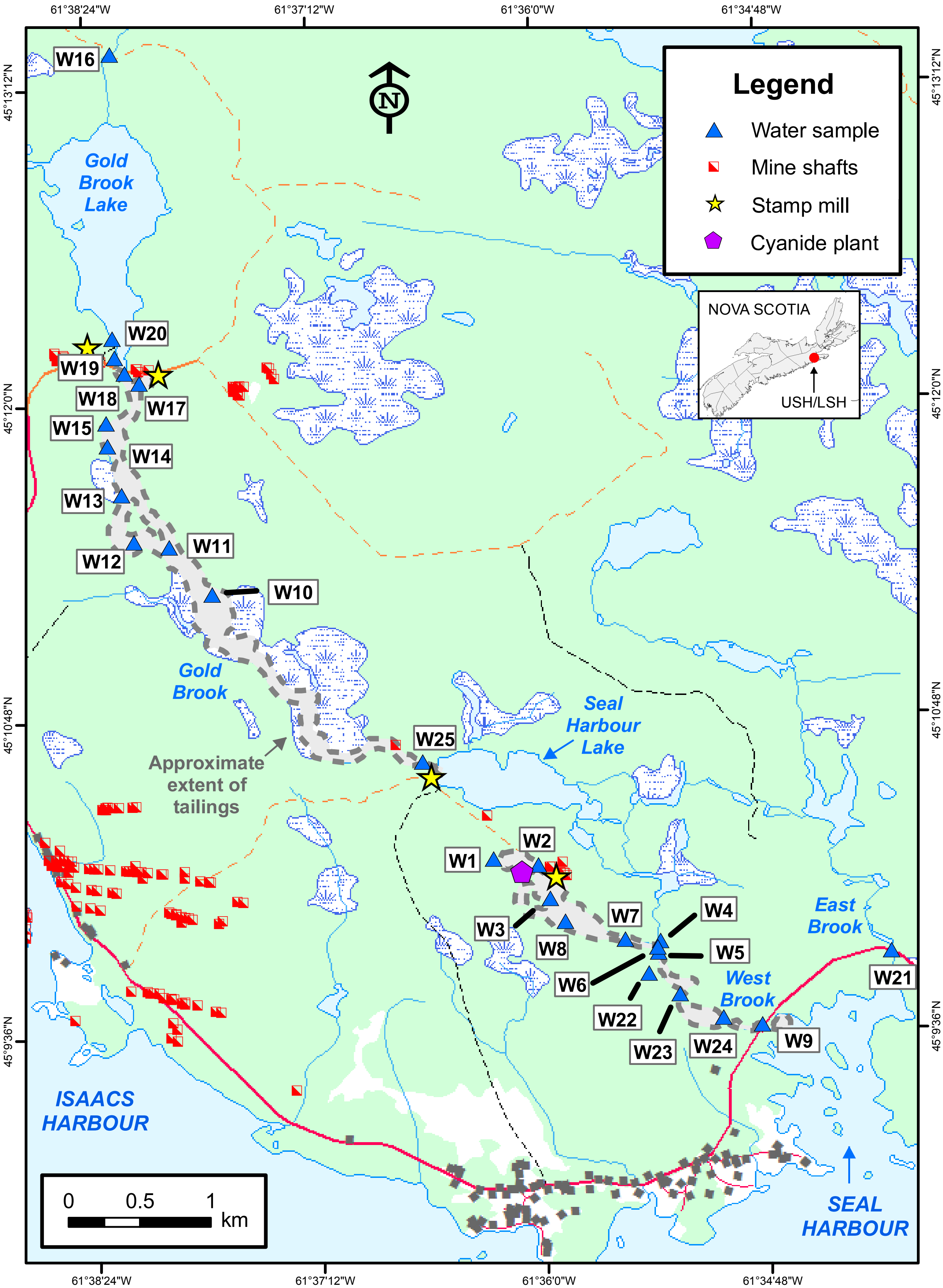


Fig. 120. Location of seasonal surface water samples in the Upper and Lower Seal Harbour gold districts between August 2003 and August 2005.

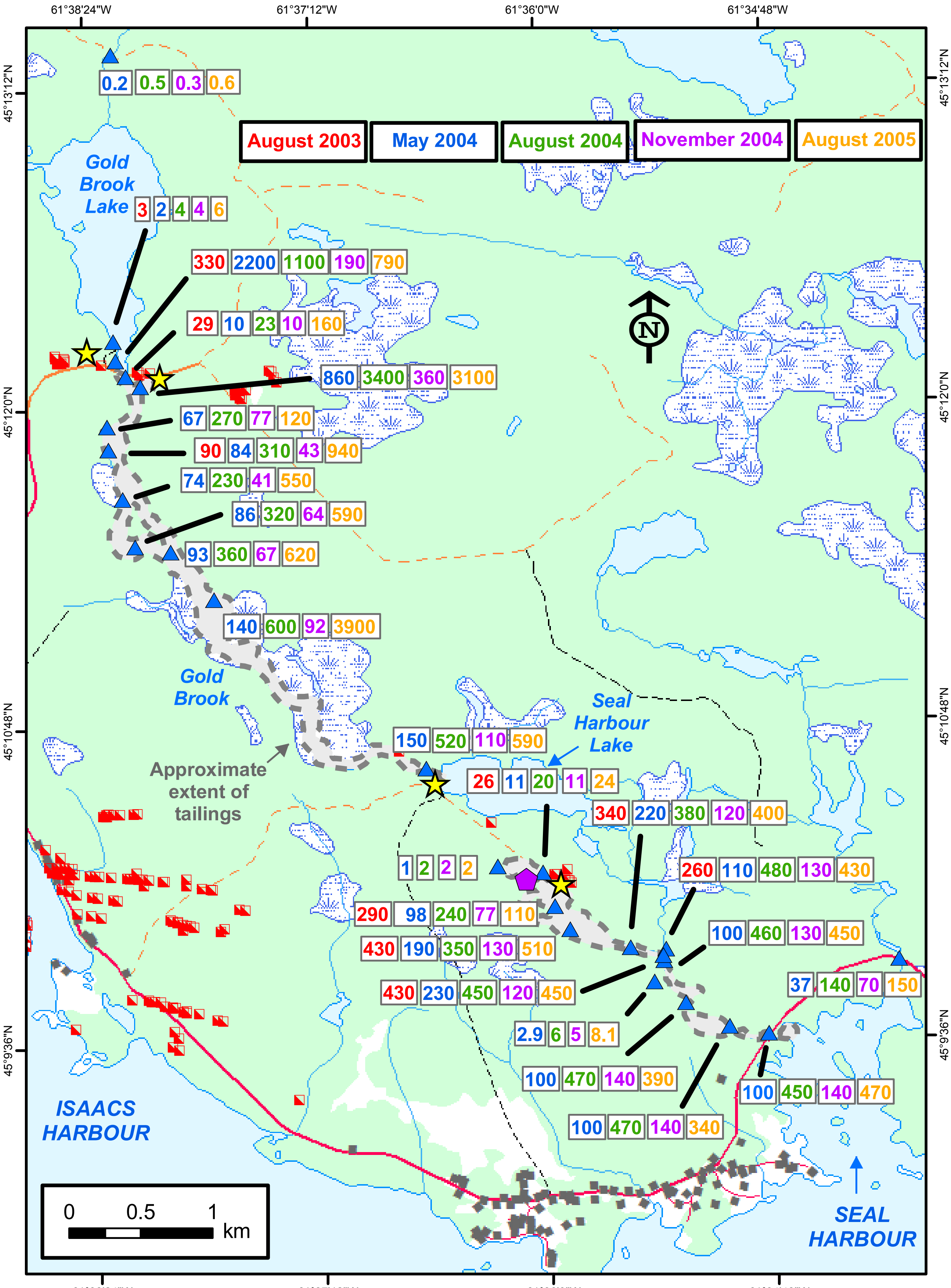


Fig. 121. As concentrations (µg/L) in filtered surface waters collected from the Upper and Lower Seal Harbour Gold Districts from August 2003 to August 2005.

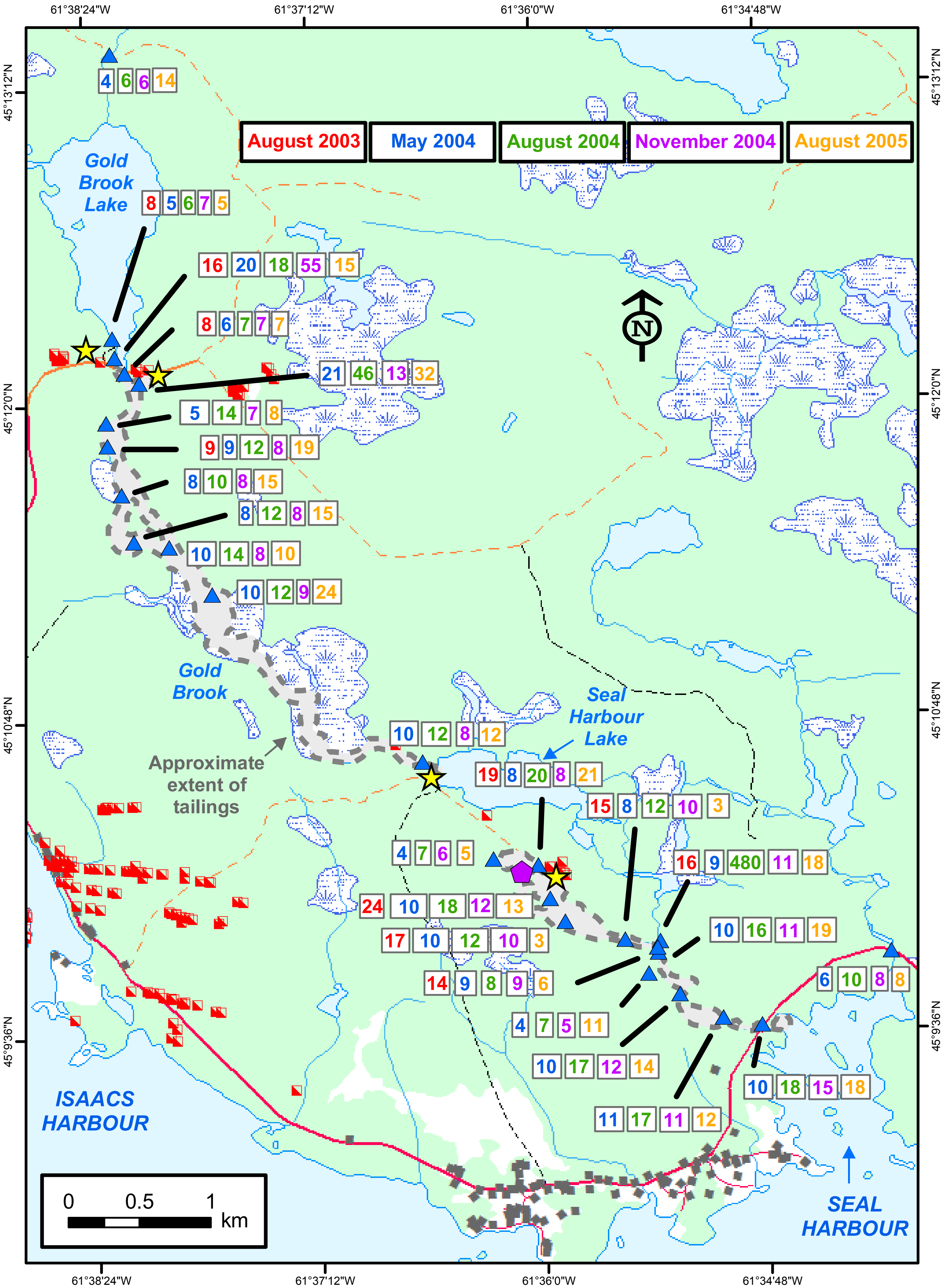


Fig. 122. Hg concentrations (ng/L) in filtered surface waters collected from the Upper and Lower Seal Harbour Gold Districts from August 2003 to August 2005.

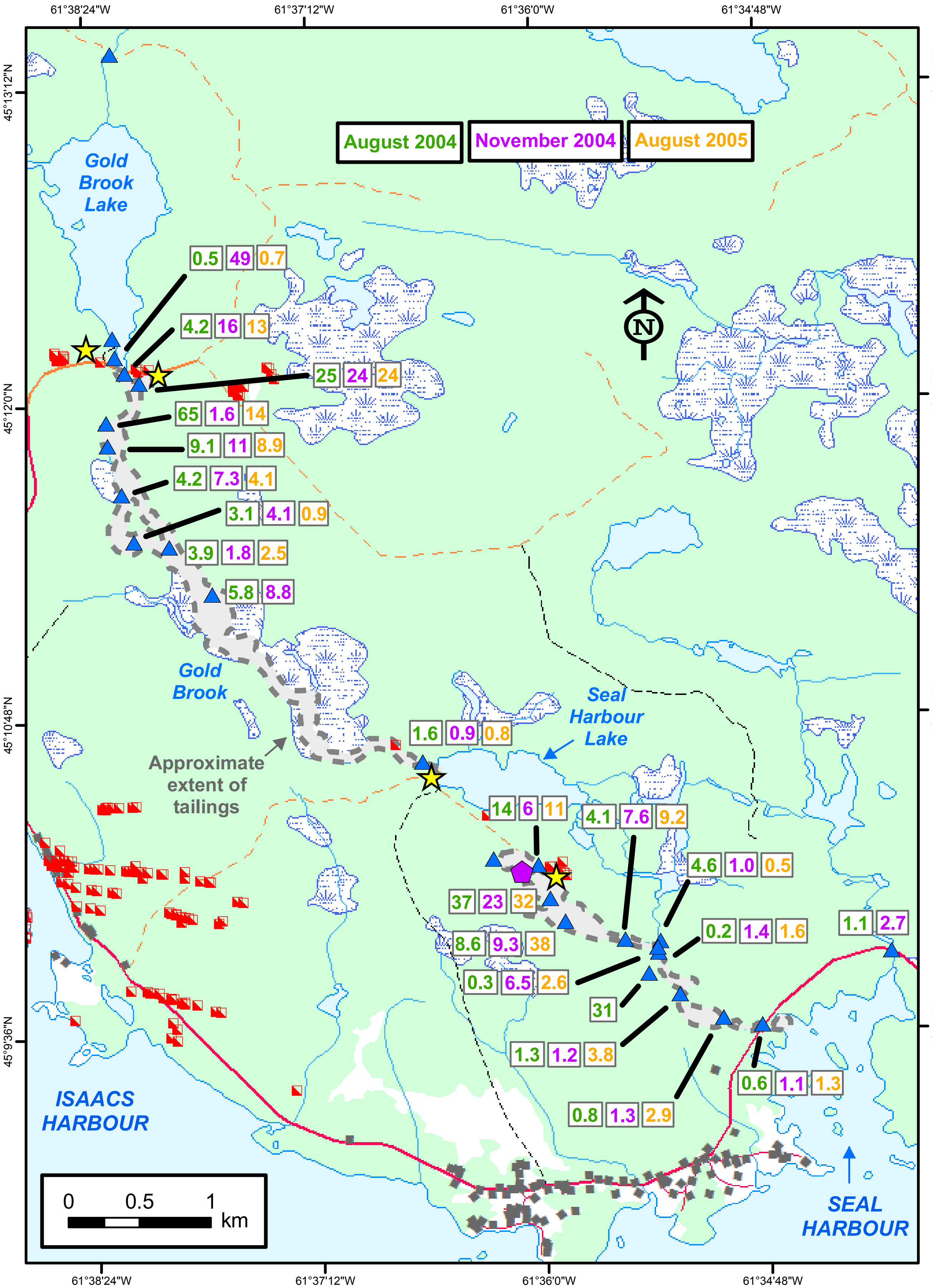


Fig. 123. Percentage of arsenite [%As(III)] in filtered surface waters collected from the Upper and Lower Seal Harbour Gold Districts in August 2004, November 2004, and August 2005.

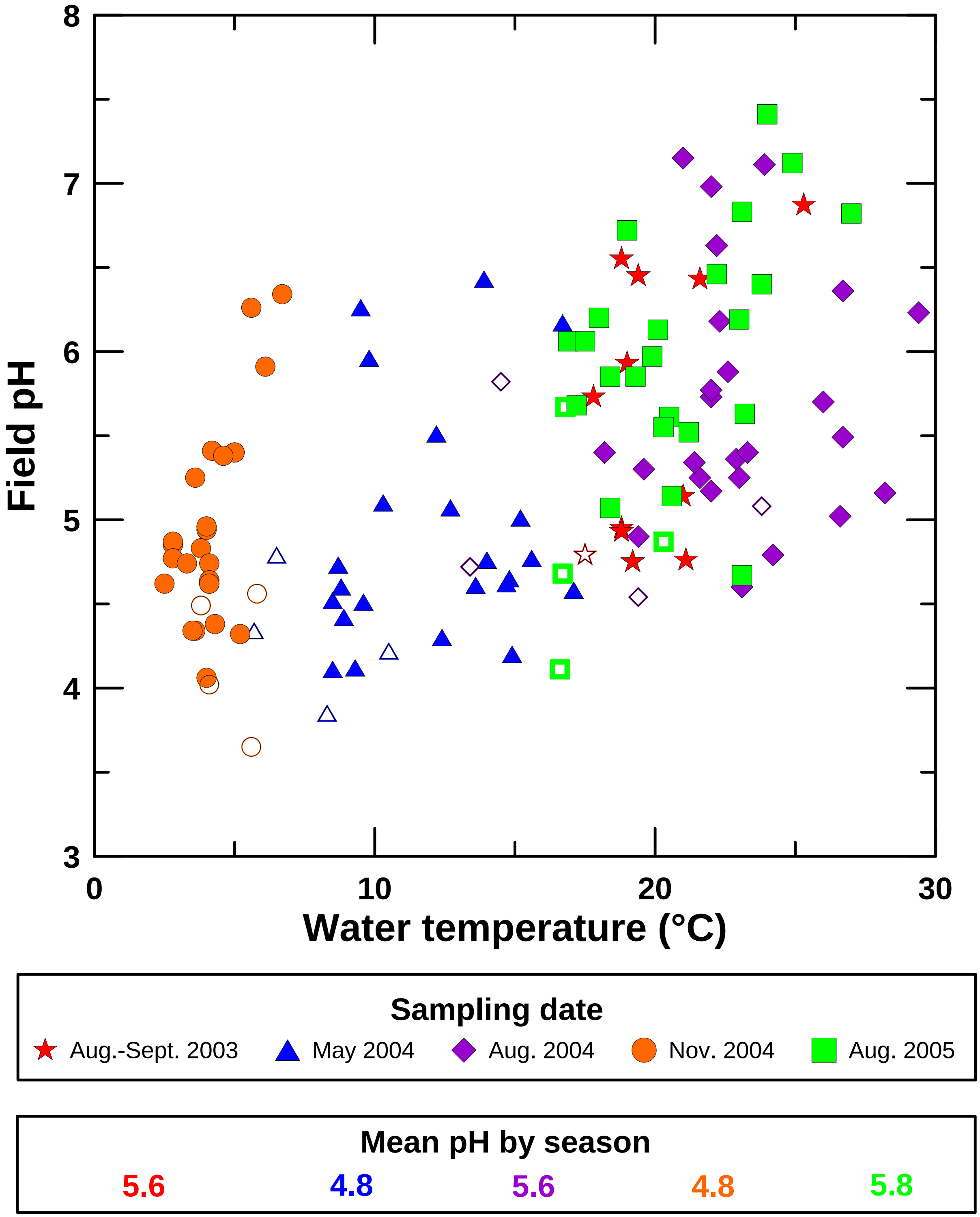


Fig. 124. Field pH and temperature measured in surface waters at the Upper and Lower Harbour gold districts between May 2003 and August 2005. Open symbols represent background locations and filled symbols represent sites impacted by mine tailings.

Sequential extraction results for As and Hg in tailings, Seal Harbour Gold Districts

In 2005, sequential extraction analysis (SEA) was used to investigate the mineral hosts for both As and Hg in selected tailings and sediment samples collected from the Upper and Lower Seal harbour districts. As shown in Table 3, two separate SEA procedures were used to assess the partitioning of As and Hg and the experimental conditions were optimized for each of these elements. The locations of samples from the Upper Seal Harbour and Lower Seal Harbour districts are shown in Figs. 89 and 44, respectively. Brief descriptions of each sample and full results from the SEA are tabulated in appendices D and E.

Sequential chemical extractions can provide important insights into the solid-phase speciation, mobility, bioavailability, and fate of As and Hg in the environment. Many previous studies have employed various SEA schemes to investigate the partitioning of both As (e.g. Keon *et al.* 2001; Wenzel *et al.* 2001; Mihaljevič *et al*., 2003; Filippi *et al.* 2007; Corriveau *et al.* 2011; Larios *et al.* 2012) and Hg (e.g. Bloom *et al.* 2003; Kim *et al.* 2003; Hall *et al.* 2005; Hall and Pelchat 2005) in sediments, soils, and mine wastes. In environmental studies, SEA analyses can help identify the fractions of As and Hg that are most weakly bound to the solid phase and which may thus have greater mobility and environmental impact. The solid-phase associations in a given SEA scheme are operationally defined and the specificity of the reagents for a given element should be tested using end-member mineral phases (Bacon and Davidson 2008).

Figure 125 shows the percentage of As and Hg leached from end-member minerals using the SEA procedures outlined in Table 3. For As, SEA was carried out on a sample of arsenopyrite, the original host for most of the As in the tailings, and >97 % of As is released during the *aqua regia* step, as expected. Results for scorodite and yukonite, two of the main weathering-related secondary minerals identified in the tailings (Walker *et al.* 2009), show that most of the scorodite (87 %) and yukonite (86 %) reported to the 4M HCl and amorphous Fe-oxyhydroxide steps (0.25 M $NH_2OH{\cdot}HCl$ in 0.25 M HCl), respectively. Both scorodite and yukonite release ~10% of their As during the crystalline Fe-oxide leach. These results show that the leaches designated as "Arsenopyrite-like" and "Scorodite-like" in Table 3 should recover ~90% of these mineral phases, but yukonite cannot be distinguished from amorphous Fe-oxyhydroxides based on this SEA procedure. For Hg, samples of pure cinnabar and cinnabar mixed with granite released 100% and 97%, respectively, of their Hg during the *aqua regia* step. Mercury sulfides (cinnabar, metacinnabar) have been identified in historical gold mine tailings from other mining areas (e.g. Kim *et al*. 2003) and may form from elemental Hg [Hg(0)] under reducing conditions.

Figure 126 shows the SEA results for tailings-impacted surface sediments collected from the Upper and Lower Seal harbour gold districts in 2005. At both sites, As is present mainly in arsenopyrite in samples closer to the stamp mills, and occurs in more labile forms (e.g. Fe/Al oxides) with increasing distance downstream. Mercury does not show the same pattern with increasing distance from the mill site, but it does seem to be associated mainly with organic matter in the oxbow lake 1.5 km downstream of the USH mill, and in the intertidal marine sediments of Seal Harbour, 2.3 km downstream of the LSH mill. In all tailings-impacted sediments, the main hosts for Hg are crystalline Fe/Al oxides and/or organics +/- Hg(0).

The solid-phase speciation of As and Hg was also investigated in vertical profiles through historical amalgamation and cyanidation tailings at Lower Seal Harbour (Figs. 127-129).

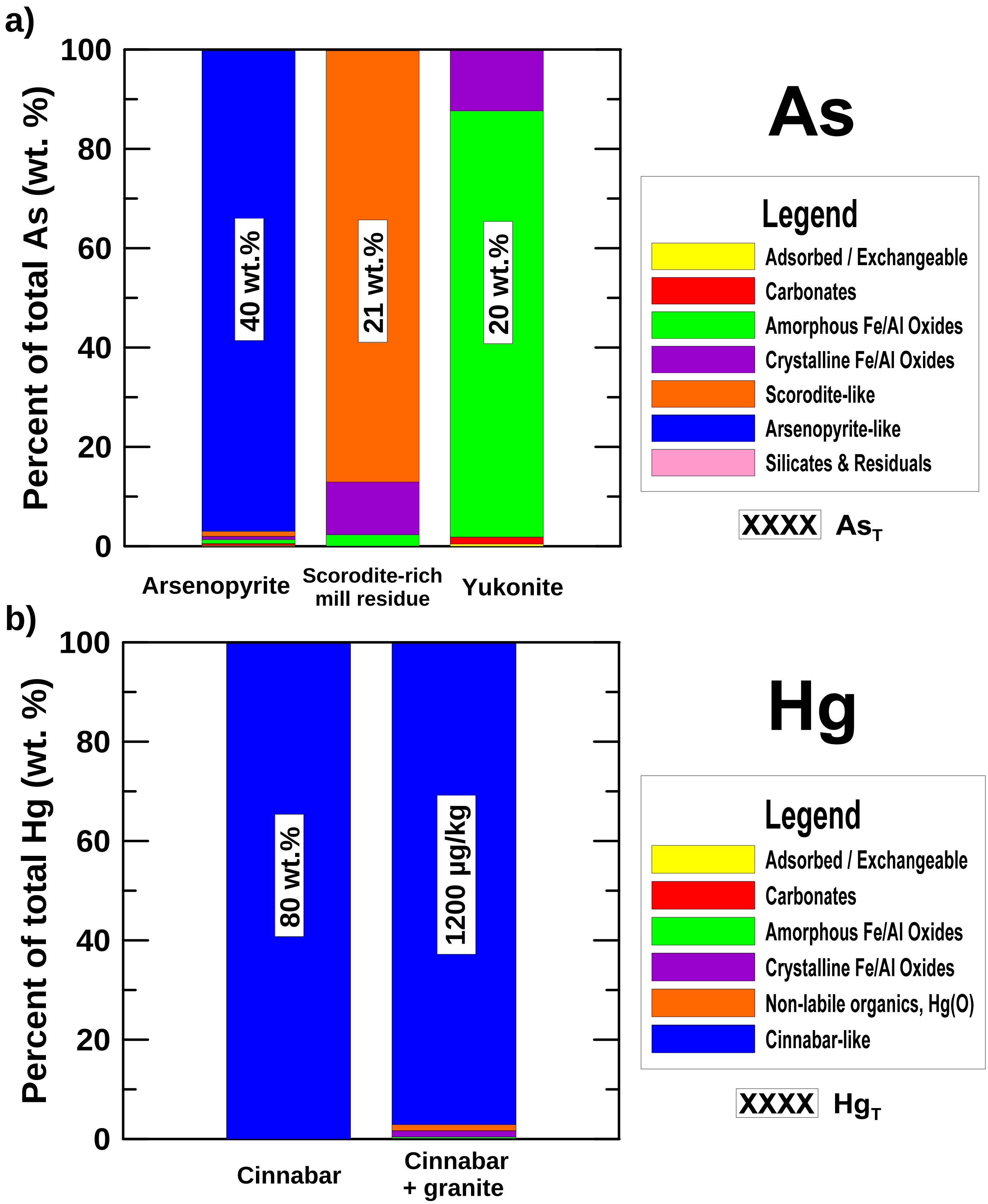


Fig. 125. Percentage of (a) As and (b) Hg leached during sequential extraction analyses of relatively pure end-member mineral phases to test the selectivity of various reagents. Details on the conditions of each leach step are provided in Table 3.

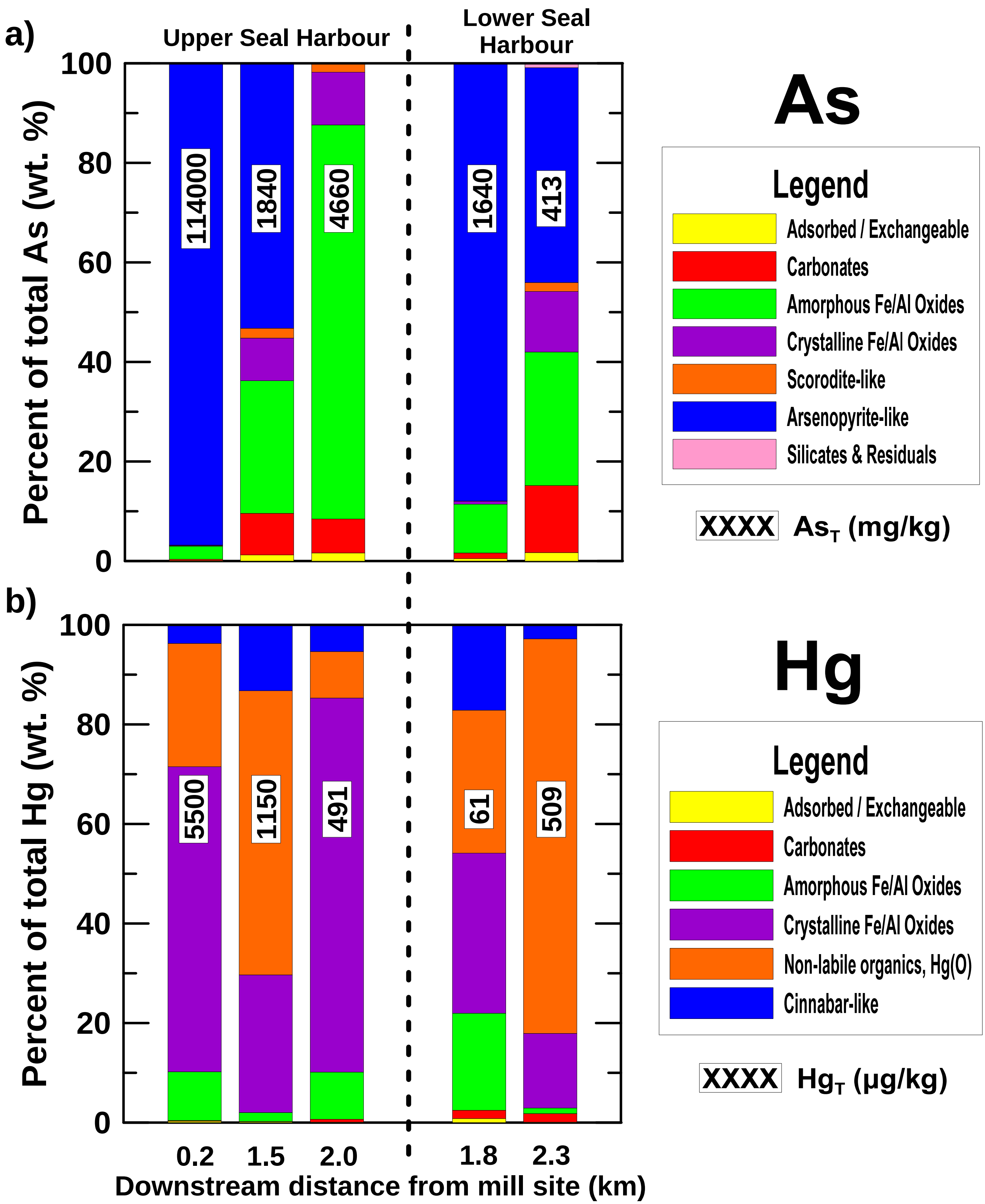
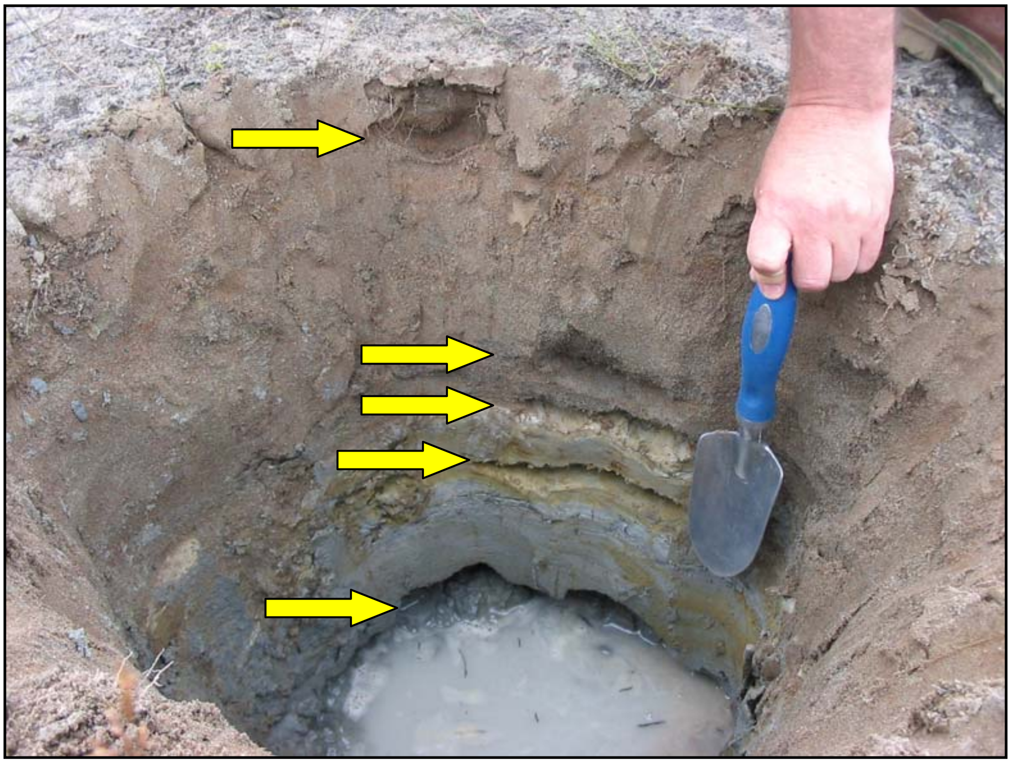


Fig. 126. Percentage of (a) As and (b) Hg leached during sequential extraction analyses of tailings-impacted sediments at the Upper and Lower Seal Harbour gold districts, Nova Scotia. Details on the conditions of each leach step are provided in Table 3.

a)



b)

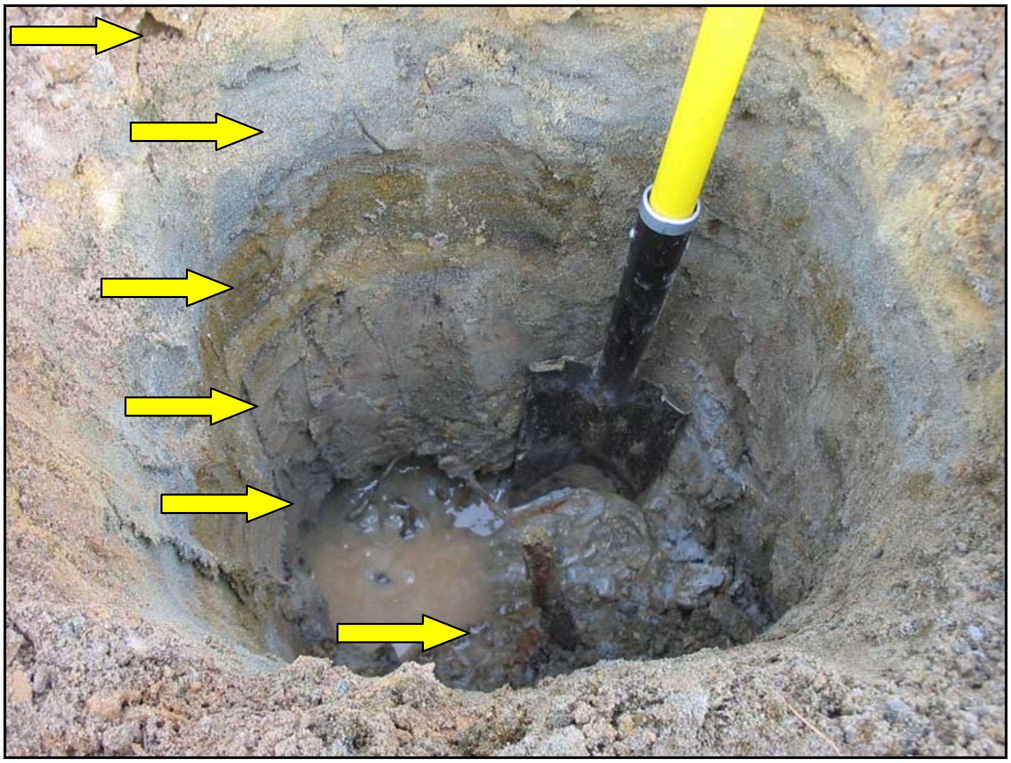


Fig. 127. (a) Depth profile through historical cyanidation tailings at the Lower Seal Harbour Gold District near Site T3 (Fig. 44). **(b)** Depth profile through historical amalgamation tailings at the Lower Seal Harbour Gold District near Site T13 (Fig. 44). In both pictures, the yellow arrows mark the location of subsamples collected for sequential extraction analyses.

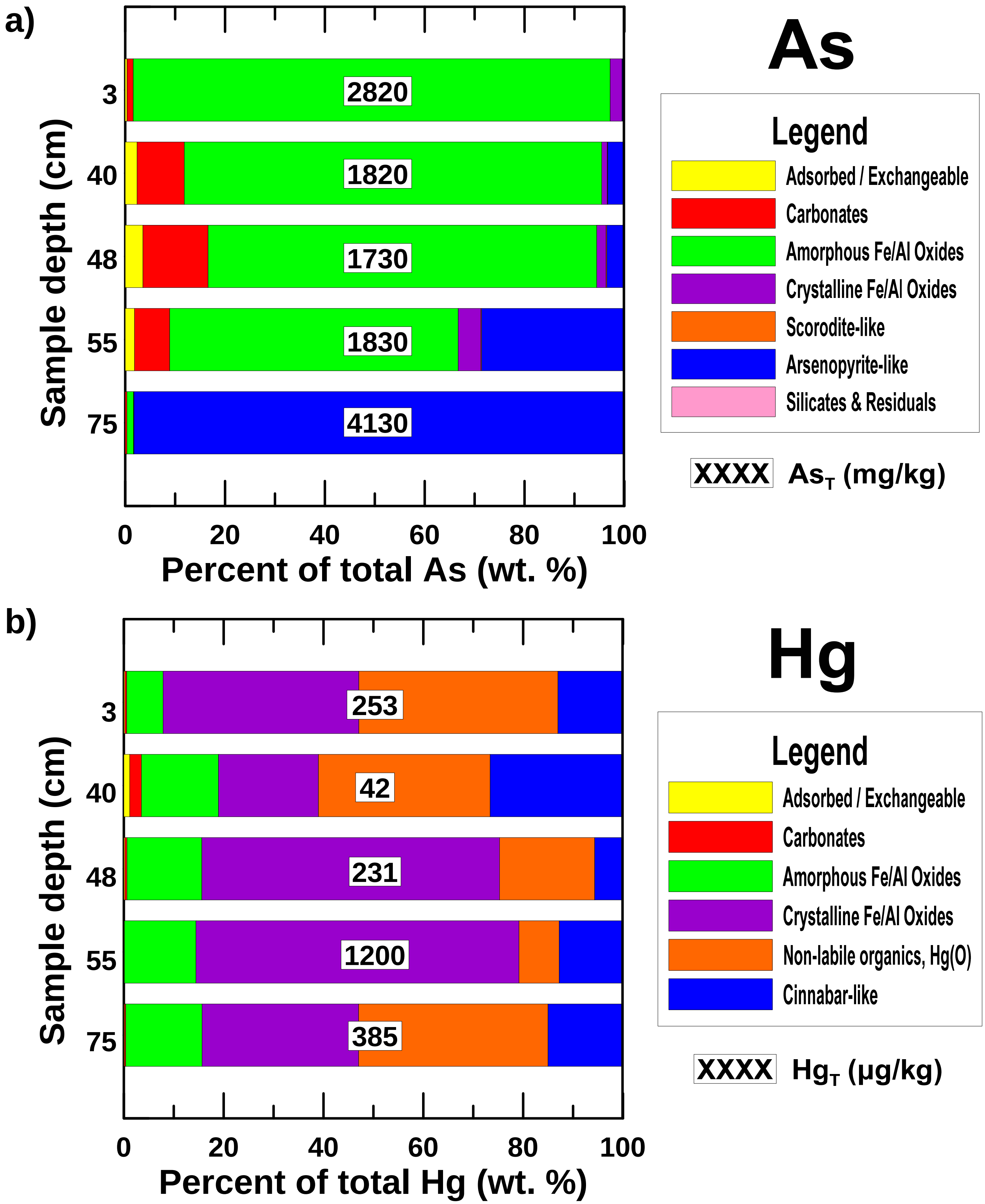


Fig. 128. Percentage of (a) As and (b) Hg leached during sequential extraction analyses of historical cyanidation tailings at the Lower Seal Harbour Gold District (Site T3), Nova Scotia. Details on the conditions of each leach step are provided in Table 3.

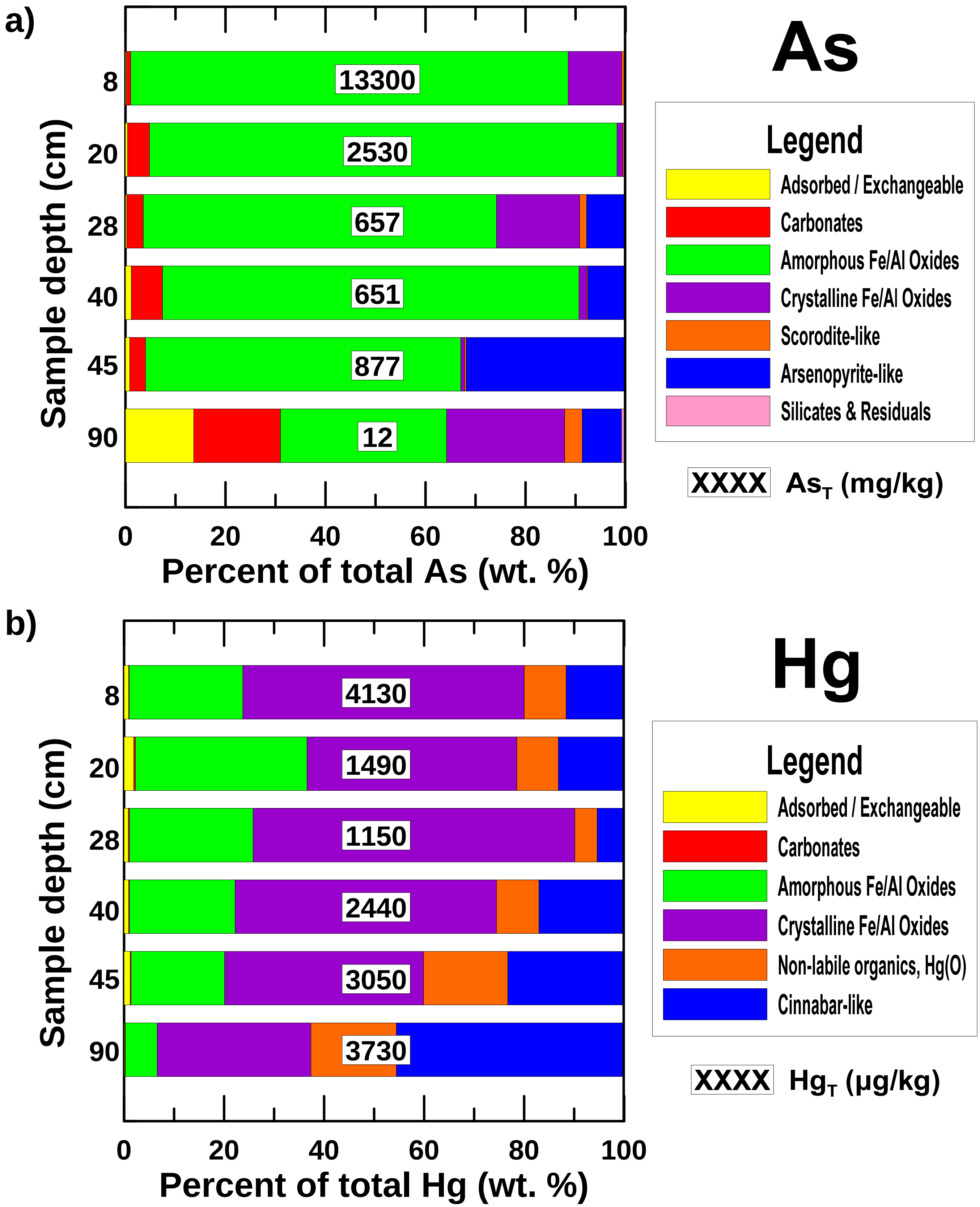


Fig. 129. Percentage of (a) As and (b) Hg leached during sequential extraction analyses of historical amalgamation tailings at the Lower Seal Harbour Gold District (Site T13), Nova Scotia. Details on the conditions of each leach step are provided in Table 3.

In both the cyanidation and amalgamation tailings, the dominant hosts for As in the top 55 cm of tailings are amorphous Fe/Al oxides, indicating that weathering reactions have oxidized most of the original arsenopyrite near the tailings surface. Below this depth, As is hosted mainly by arsenopyrite in the cyanidation tailings. In the amalgamation tailings, the total concentration of As drops to 12 mg/kg in the lowermost sample at 90 cm and is hosted by a range of different phases, suggesting that this sample represents natural soil underlying the tailings deposits. Iron oxides are also the main hosts for Hg in both types of tailings at Lower Seal Harbour. In the amalgamation tailings, the proportion of Hg hosted by sulphide phases generally increases with depth, whereas no such trend is apparent in the cyanidation tailings (Fig. 128, 129). Further interpretation of these SEA results will be published in a separate paper.

CONCLUSIONS AND RECOMMENDATIONS

Recent studies of 14 historical gold mines in Nova Scotia by NRCan and its partners have helped to characterize the environmental and human health hazards associated with these sites. The results of these investigations have led to the following key findings (Parsons 2007):

1) Most abandoned gold mines contain large volumes of tailings. In some areas the tailings have been transported significant distances (>2 km) offsite by local streams and rivers.
2) Tailings and stream sediments near these mine sites contain average concentrations of As and Hg that are about 340 and 140 times background levels in soils, respectively.
3) Dissolved As concentrations in stream waters that drain through tailings are well above Canadian guidelines for drinking water quality and the protection of aquatic life.
4) Since the mines closed, ongoing residential development, industrial construction, and recreational activities at some sites (e.g. ATV, dirt bike, and 4X4 racing) have increased the potential for human exposure to these mine wastes.

In response to the results of this study, the Province of Nova Scotia established the Historic Gold Mines Advisory Committee (HGMAC) in April 2005. The HGMAC has made significant progress in assessing the human health risks associated with these mine wastes, and has taken steps to reduce the public's exposure to these contaminated sites. This Open File Report provides the most comprehensive summary available of the history, distribution, and geochemistry of tailings at gold mines throughout Nova Scotia. The geographic coordinates on each sample location map can be used to quickly explore the tailings deposits via most web-based mapping services. The results of this study should be integrated into existing databases for abandoned mine lands in Nova Scotia and used to inform future land-use planning guidelines and decisions. Finally, these results can be used by industry and regulatory agencies to better understand the key environmental characteristics of orogenic gold deposits, and to help minimize the environmental impacts associated with past, present, and future gold extraction.

REFERENCES

ASHLEY, R.P. (2002) Geoenvironmental model for low-sulfide gold-quartz vein deposits. Chapter K. *In:* R.R. Seal II and N.K. Foley (eds.) Progress on Geoenvironmental Models for Selected Mineral Deposit Types, U.S. Geological Survey Open-File Report 02-195, Reston, VA, pp. 176-195.

BACON, J.R., DAVIDSON, C.M. (2008) Is there a future for sequential chemical extraction? *Analyst* 133: 25-46.

BATES, J.L.E. (1987) Gold in Nova Scotia. Nova Scotia Department of Natural Resources, Mineral Resources Branch, Information Series ME 13, 48 p. (available online at: http://www.gov.ns.ca/natr/meb/pdf/is13.asp).

BEAUCHAMP, S., TORDON, R., PHINNEY, L., ABRAHAM, K., PINETTE, A., MACINTOSH, A., RENCZ, A., WONG, H., DALZIEL, J. (2002) Air–surface exchange of mercury in natural and anthropogenically impacted landscapes in Atlantic Canada. *Geochemistry: Exploration, Environment, Analysis* 2: 157–165.

BLAKEMAN, W.B. (1978) An inventory of the known gold mines in Canada which practiced mercury amalgamation, 1855–1975. Unpublished report for Environment Canada, 144 p.

BLOOM, N.S., PREUS, E., KATON, J., HILTNER, M. (2003) Selective extractions to assess the biogeochemically relevant fractionation of inorganic mercury in sediments and soils. *Analytica Chimica Acta* 479: 233–248

BOTTOMLEY, D.J. (1984) Origins of some arseniferous groundwaters in Nova Scotia and New Brunswick, Canada. *Journal of Hydrology* 69: 223–257.

BROOKS, R.R., HOLZBECHER, J., RYAN, D.E. (1981) Horsetails (*Equisetum*) as indirect indicators of gold mineralization. *Journal of Geochemical Exploration* 16: 21–26.

BROOKS, R.R., FERGUSSON, J.E., HOLZBECHER, J., RYAN, D.E., ZHANG, H.F. (1982) Pollution by arsenic in a gold-mining district in Nova Scotia. *Environmental Pollution (Series B)* 4: 109–117.

BROWN, E.P. (1908) The treatment of stamp mill tailings at the Richardson Mine, Goldboro, N.S. *Canadian Mining Journal* 29: 400–401.

BRUNTON, S. (1928) Goldenville Gold District. *In* Nova Scotia Department of Public Works and Mines, Annual Report on the Mines, 1927, 425–474.

CANADIAN COUNCIL OF MINISTERS OF THE ENVIRONMENT (CCME) (1997) Canadian soil quality guidelines for the protection of environmental and human health: Arsenic (inorganic) fact sheet. Canadian Environmental Quality Guidelines, 7 p.

CANADIAN COUNCIL OF MINISTERS OF THE ENVIRONMENT (CCME) (1999) Canadian soil quality guidelines for the protection of environmental and human health: Mercury (inorganic) fact sheet. Canadian Environmental Quality Guidelines, 8 p.

CANADIAN COUNCIL OF MINISTERS OF THE ENVIRONMENT (CCME) (2012) Canadian Environmental Quality Guidelines and Summary Table. Available online at: http://ceqg-rcqe.ccme.ca/.

COATES, H.J., FRECKELTON, D.J. (1989) Assessment report on the 1988 exploration program, Development License 0094, Cochrane Hill Property, Guysborough County, Nova Scotia for Novagold Resources, Inc. Nova Scotia Department of Mines and Energy Assessment Report ME 1989-182, 1012 p.

CORRIVEAU, M.C., JAMIESON, H.E., PARSONS, M.B., CAMPBELL, J.L., LANZIROTTI, A. (2011a) Direct characterization of airborne particles associated with arsenic-rich mine tailings: Particle size, mineralogy and texture. *Applied Geochemistry* 26: 1639–1648.

CORRIVEAU, M.C., JAMIESON, H.E., PARSONS, M.B., HALL, G.E.M. (2011b) Mineralogical characterization of arsenic in gold mine tailings from three sites in Nova Scotia. *Geochemistry: Exploration, Environment, Analysis* 11: 179–192.

DALE, J.M., FREEDMAN, B. (1982) Arsenic pollution associated with tailings at an abandoned gold mine in Halifax County, Nova Scotia. *Proceedings of the Nova Scotia Institute of Science* 32: 337-349.

DESISTO, S.L., JAMIESON, H.E., PARSONS, M.B. (2011) Influence of hardpan layers on arsenic mobility in historical gold mine tailings. *Applied Geochemistry* 26: 2004–2018.

EPS (1978) Investigation of mercury related environmental effects associated with abandoned amalgamation operations in Nova Scotia. Environmental Protection Service (EPS) Atlantic Region, Environment Canada Report 234, 58 p.

FARIBAULT, E.R. (1897) Province of Nova Scotia, Halifax County, Sheet Harbour Sheet, No. 40. Geological Survey of Canada, Multicoloured Geological Map 592, 1 sheet.

FARIBAULT, E.R. (1898a) Plan and Sections, Caribou Gold District, Halifax County, Nova Scotia. Geological Survey of Canada, Multicoloured Geological Map 643, 1 sheet.

FARIBAULT, E.R. (1898b) Plan and Section, Goldenville Gold District, Guysborough County, Nova Scotia. Geological Survey of Canada, Multicoloured Geological Map 645, 1 sheet.

FARIBAULT, E.R. (1898c) Plan and Section, Salmon River Gold District, Halifax County, Nova Scotia. Geological Survey of Canada, Multicoloured Geological Map 647, 1 sheet.

FARIBAULT, E.R. (1899a) Plan and Section, Mooseland Gold District, Halifax County, Nova Scotia. Geological Survey of Canada, Multicoloured Geological Map 648, 1 sheet.

FARIBAULT, E.R. (1899b) Plan and Sections, Upper Seal Harbour, Guysborough County, Nova Scotia. Geological Survey of Canada, Multicoloured Geological Map 656, 1 sheet.

FARIBAULT, E.R. (1901) Plan and Section, Mount Uniacke Gold District, Hants County, Nova Scotia. Geological Survey of Canada, Multicoloured Geological Map 709, 1 sheet.

FARIBAULT, E.R. (1902a) Plan and Section, Lake Catcha Gold District, Halifax County, Nova Scotia. Geological Survey of Canada, Multicoloured Geological Map 765, 1 sheet.

FARIBAULT, E.R. (1902b) Plan and Section, Montague Gold District, Halifax County, Nova Scotia. Geological Survey of Canada, Multicoloured Geological Map 740, 1 sheet.

FARIBAULT, E.R. (1904) Plan and Section, Cochran Hill Gold District, Guysborough County, Nova Scotia. Geological Survey of Canada, Multicoloured Geological Map 843, 1 sheet.

FARIBAULT, E.R. (1906) Plan and Section, Leipsigate Gold District, Lunenburg County, Nova Scotia. Geological Survey of Canada, Multicoloured Geological Map 937, 1 sheet.

FARIBAULT, E.R. (1908) Plan and Sections, Brookfield Gold District, Queen's County, Nova Scotia. Geological Survey of Canada, Multicoloured Geological Map 1012, 1 sheet.

FARIBAULT, E.R. (1917) Whiteburn Gold District, Queens County, Nova Scotia. Geological Survey of Canada, Multicoloured Geological Map 1690, 1 sheet.

FILIPPI, M., DOUŠOVÁ, B., MACHOVIČ, V. (2007) Mineralogical speciation of arsenic in soils above the Mokrsko-west gold deposit, Czech Republic. *Geoderma* 139: 154–170

FORBES, H.L. (1904) The chlorination of gold ore of the North Brookfield Mine, Nova Scotia. *Journal of the Canadian Mining Institute,* Vol. VII, 308–318.

FULLER, C.C., DAVIS, J.A. (1989) Influence of coupling of sorption and photosynthetic processes on trace element cycles in natural waters. *Nature* 340: 52-54.

GAMMONS, C.H., GRANT, T.M., NIMICK, D.A., PARKER, S.R., DEGRANDPRE, M.D. (2007) Diel changes in water chemistry in an arsenic-rich stream and treatment-pond system. *Science of the Total Environment* 384: 433-451.

GLOVER, J.D., HALE, W.E., NEWMAN, D., WITTE, M.K., 1983. Gold, Forest Hill [and 23 Other Sites], Guysborough County, Nova Scotia. Report on Bulk Sampling, Assays and Meallurgical Testing of Tailings. Wright-Curtis Engineers; Witteck Development Incorporated; Seabright Resources Incorporated; Dawe, J.E.; Ecological and Resources Consultants Limited, Nova Scotia Department of Mines and Energy Assessment Report ME 11F/05B 21-G-13(21), 429 p.

GOODWIN, W.M. (1935) An interesting Nova Scotia gold mine: The Seal Harbor Mine. *Canadian Mining Journal* 56: 5–7.

GRAHAM, J.K. (1987) Assessment report, Dufferin Mine Property, Halifax County, Nova Scotia, Exploration license 4579, NTS 11D16C for Jascan Resources, Inc. Nova Scotia Department of Natural Resources Assessment Report AR87-130, 20 p.

GRANTHAM, D.A., JONES, J.F. (1977) Arsenic contamination of water wells in Nova Scotia. *Journal of the American Water Works Association* 69: 653–657.

GRAVES, M.C., ZENTILLI, M. (1982) A review of the geology of gold in Nova Scotia. *In* Geology of Canadian Gold Deposits, R.W. Hodder and W. Petruk (eds.), Canadian Institute of Mining and Metallurgy, Special Volume 24, 233–242.

GRAVES, M.C. (1992) Gold, Lake Catcha, Halifax County, Nova Scotia. Report on the Preliminary Evaluation of Concentration and Leach Tests on Tailings Samples (for Gold Bank Resources Incorporated). Nova Scotia Department of Natural Resources Assessment Report ME 1992-037, 33 p.

HALL, G.E.M. (1998) Cost-effective protocols for the collection, filtration and preservation of surface waters for detection of metals and metalloids at ppb (μg l^{-1}) and ppt (ng l^{-1}) levels Phase I: Evaluation of Bottle Type, Bottle Cleaning, Filter and Preservation Technique. Aquatic Effects Technology Evaluation Program (Task Force on Water Quality Issues), AETE Project 3.1.3, CANMET, Ottawa.

HALL, G.E.M. PELCHAT, J.C., GAUTHIER, G. (1999) Stability of inorganic arsenic (III) and arsenic (V) in water samples. *Journal of Analytical Atomic Spectroscopy,* 14: 205–213.

HALL, G.E.M., PELCHAT, J.C., PELCHAT, P.,VAIVE, J.E. (2002) Sample collection, filtration and preservation protocols for the determination of 'total dissolved' mercury in waters. *Analyst*, 127: 674–680.

HALL, G.E.M., PELCHAT, P., PERCIVAL, J.B. (2005) The design and application of sequential extractions for mercury, Part 1. Optimization of HNO_3 extraction for all non-sulphide forms of Hg. *Geochemistry: Exploration, Environment, Analysis* 5: 107–113.

HALL, G.E.M., PELCHAT, P. (2005) The design and application of sequential extractions for mercury, Part 2. Resorption of mercury onto the sample during leaching. *Geochemistry: Exploration, Environment, Analysis* 5: 115–121.

HAYNES, S.J. (1983) Typomorphism of turbidite-hosted auriferous quartz veins, southern Guysborough County. *In* Mines and Minerals Branch, Report of Activities 1982, K.A. Mills (ed.), Nova Scotia Department of Mines and Energy, Report 83-1, 183–224.

HAYNES, S.J. (1987) Classification of quartz veins in turbidite-hosted gold deposits, greenschist facies, eastern Nova Scotia. *CIM Bulletin* 80, No. 898, 37–51.

HEATHERINGTON, A. (1868) A Practical Guide for Tourists, Miners, and Investors, and all Persons Interested in the Development of the Gold Fields of Nova Scotia. John Lovell, Montreal, 177 p.

HENDERSON, E.H. (1935) Stamp-milling and amalgamation practices at Goldenville, N.S. *Canadian Institute of Mining and Metallurgy Bulletin*, 278: 222–242.

HENDERSON, J.R. & HENDERSON, M.N. (1987) Meguma Gold Deposits: nested saddle reefs or early hydraulic extension fractures? *In* Mines and Minerals Branch Report of Activities 1987, Part A, J.L. Bates & D.R. MacDonald (eds.), Report 87-5, 213–215.

HILL, J.D., MADDISON, L.A., KAVANAUGH, C. (1997) Surface subsidence associated with abandoned mine workings in the Goldenville mining district, Nova Scotia. *Atlantic Geology* 33, 157–167.

HIND, H.Y. (1872) Report on the Mount Uniacke, Oldham, and Renfrew gold mining districts, with plans and sections. Charles Annand, Halifax, NS, 136 p.

HINDMARSH, J.T., MCLETCHIE, O.R., HEFFERNAN, L.P.M., HAYN, O.A., ELLENBERGER, H.A., MCCURDY, R.F., THIEBAUX, H.J. (1977) Electromyographic abnormalities in chronic environmental arsenicalism. *Journal of Analytical Toxicology* 1: 270–276.

HORNE, R.J., COVEY, G., ALBERT, C. (2004) Geological report on the early stages of development of the Mooseland Gold District (NTS 11D/15), Halifax County. *In* Mineral Resources Branch, Report of Activities 2003, Nova Scotia Department of Natural Resources, Report 2004-1, pp. 25–39.

HORNE, R.J., JODREY, M. (2002) Geology of the Dufferin Gold Deposit (NTS 11D/16), Halifax County. *In* Minerals and Energy Branch, Report of Activities 2001, Nova Scotia Department of Natural Resources, Report ME 2002-1, pp. 51–67.

HURST, M.E. (1924) Arsenic resources of Nova Scotia. Nova Scotia Dept. of Mines and Energy, Open File Report 53, 7 p.

HURST, M.E. (1927) Arsenic-bearing deposits in Canada. Canada Dept. of Mines, Geological Survey (later Geological Survey of Canada), Economic Geology Series No. 4.

JACQUES WHITFORD AND ASSOCIATES LTD. (1984) Environmental Review of Seabright Resources Inc. Gold Tailings Project, Nova Scotia Department of Mines and Energy Assessment Report ME 1984-030, 122 p.

JACQUES WHITFORD AND ASSOCIATES LTD. (1985) Gold, Goldenville, Stirling, Seal Harbour, Isaacs Harbour, Country Harbour, Mount Uniacke, South Uniacke and Renfrew Areas, Guysborough, Richmond and Hants Counties, Nova Scotia. Report on Evaluation of Tailings Dumps [for Seabright Resources Inc.], Nova Scotia Department of Mines and Energy Assessment Report ME 1985-031, 386 p.

JAMIESON, H.E., WALKER, S.R., ANDRADE, C.F., WRYE, L.A., RASMUSSEN, P.E., LANZIROTTI, A., PARSONS, M.B. (2011) Direct identification of arsenic and metal compounds in contaminated soil, mine tailings and house dust using synchrotron-based microanalysis. *Human and Ecological Risk Assessment* 17: 1292–1309.

KEON, N.E., SWARTZ, C.H., BRABANDER, D.J., HARVEY, C., HEMOND, H.F. (2001) Validation of an arsenic sequential extraction method for evaluating mobility in sediments. *Environmental Science & Technology* 35: 2778-2784.

KEPPIE, J.D. (compiler) (2000): Geological Map of the Province of Nova Scotia. Nova Scotia Department of Natural Resources, Map ME 2000-1, Scale: 1:500 000.

KIM, C.S., BLOOM, N.S., RYTUBA, J.J., BROWN, G.E., JR. (2003) Mercury speciation by X-ray absorption fine structure spectroscopy and sequential chemical extractions: A comparison of speciation methods. *Environmental Science & Technology* 37: 5102-5108.

KOCH, I., MCPHERSON, K., SMITH, P., EASTON, L., DOE, K.G., REIMER, K.J. (2007) Arsenic bioaccessibility and speciation in clams and seaweed from a contaminated marine environment. *Marine Pollution Bulletin* 54: 586–594.

KONTAK, D.J. & JACKSON, S.J. (1999) Documentation of variable trace- and rare-earth-element abundances in carbonates from auriferous quartz veins in Meguma lode-gold deposits, Nova Scotia. *Canadian Mineralogist* 37: 469–488.

KONTAK, D.J., SMITH, P.K., KERRICH, R., WILLIAMS, P.F. (1990) Integrated model for Meguma Group lode gold deposits, Nova Scotia, Canada. *Geology* 18: 238–242.

LAIRD, B.D., VAN DE WIELE, T.R., CORRIVEAU, M.C., JAMIESON, H.E., PARSONS, M.B., VERSTRAETE, W., SICILIANO, S. (2007) Gastrointestinal microbes increase arsenic bioaccessibility of ingested mine tailings using the Simulator of the Human Intestinal Microbial Ecosystem (SHIME). *Environmental Science & Technology* 41: 5542–5547.

LANE, P.A., CROWELL, M.J., GRAVES, M.C. (1988) Heavy metal removal from gold mining and tailing effluents using indigeneous aquatic macrophytes (Phase 1). *In* Proceedings of the 5th Annual General Meeting of BIOMINET. Edited by R.G.L. McCready. CANMET SP88-23, pp. 3–37.

LANE, P.A., PETT, R.J., CROWELL, M.J., MACKINNON, D.S., GRAVES, M.C. (1989) Further studies on the distribution and fate of arsenic and mercury at a site contaminated by abandoned gold mine tailings. *In* Proceedings of the 6th Annual General Meeting of BIOMINET. pp. 78–107.

LARIOS, R., FERNÁNDEZ-MARTÍNEZ, R., RUCANDIO, I. (2012) Comparison of three sequential extraction procedures for fractionation of arsenic from highly polluted mining sediments. *Analytical and Bioanalytical Chemistry* 402: 2909–2921.

LYNCH, J. (1990) Provisional elemental values for eight new geochemical lake sediment and stream sediment reference materials: LKSD-1, LKSD-2, LKSD-3, LKSD-4, STSD-1, STSD-2, STSD-3 and STSD-4. *Geostandards Newsletter* 14: 153–167.

LYNCH, J. (1999) Additional provisional elemental values for LKSD-1, LKSD-2, LKSD-3, LKSD-4, STSD-1, STSD-2, STSD-3 and STSD-4. *Geostandards Newsletter* 23: 251–260.

MACDONALD, B. (1899) Mining plant of the Dufferin Gold Mine. *The Canadian Mining Review* 18: 15–18.

MACKENZIE, T.G. (1907) Notes on the mining property of the Seal Harbour Mining Company. *Transactions of the Mining Society of Nova Scotia* 12: 63–81.

MALCOLM, W. (1912) Gold Fields of Nova Scotia. Geological Survey of Canada, Memoir 20-E, 384 p.

MALCOLM, W. (1929) Gold Fields of Nova Scotia. Geological Survey of Canada, Memoir 156 (reprinted in 1976 as Memoir 385), 253 p.

MALTBY, P.D.R. (1982) Cochrane Hill Mine, Tailings Disposal and Environmental Protection, Report for Northumberland Mines, Ltd., Nova Scotia Department of Mines and Energy Assessment Report ME 1982-051, 27 p.

MASSON, M., SCHÄFER, J., BLANC, G., PIERRE, A. (2007) Seasonal variations and annual fluxes of arsenic in the Garonne, Dordogne and Isle Rivers, France. *Science of the Total Environment* 373: 196-207.

MCCLESKEY, R.B., NORDSTROM, D.K., MAEST, A.S. (2004) Preservation of water samples for arsenic(III/V) determinations: an evaluation of the literature and new analytical results. *Applied Geochemistry* 19: 995-1009.

MERANGER, J.C., SUBRAMANIAN, K.S., MCCURDY, R.F. (1984) Arsenic in Nova Scotian groundwater. The Science of the Total Environment 39: 49–55.

MEUNIER, L., WALKER, S.R., WRAGG, J., PARSONS, M.B., KOCH, I., JAMIESON, H.E., REIMER, K.J. (2010a) Effects of soil composition and mineralogy on the bioaccessibility of arsenic from tailings and soil in gold mine districts of Nova Scotia. *Environmental Science & Technology* 44: 2667–2674.

MEUNIER, L., WRAGG, J., KOCH, I., REIMER, K.J. (2010b) Method variables affecting the bioaccessibility of arsenic in soil. *Journal of Environmental Science and Health Part A* 45: 517–526.

MEUNIER, L., KOCH, I., REIMER, K.J. (2011) Effect of particle size on arsenic bioaccessibility in gold mine tailings of Nova Scotia. *Science of the Total Environment* 409: 2233–2243.

MIHALJEVIČ, M., POŇAVIČ, M., ETTLER, V, ŠEBEK, O. (2003) A comparison of sequential extraction techniques for determining arsenic fractionation in synthetic mineral mixtures. *Analytical and Bioanalytical Chemistry* 377: 723–729.

MILLS, R.F. (1997) Preliminary investigation of abandoned mill tailings at the Montague Gold District, Nova Scotia: Implications for development potential. Nova Scotia Department of Natural Resources, Report of Activities 1997, Report ME 1998-1, pp. 109-113.

MITCHELL, B. (1988) Assessment report on the 1987–1988 exploration licenses 11818, 12705, 14083, Dufferin, Halifax County, Nova Scotia, Nova Scotia Department of Natural Resources Assessment Report AR88-350, 50 p.

MOGGRIDGE KUSSISTO, K. (1978) Gold mining and milling in the Sherbrooke Gold District 1861–1906; Unpublished curatorial report for the Nova Scotia Museum (available online at: http://museum.gov.ns.ca/sv/history/goldenville/index.html).

MORELLI, R.M., CREASER, R.A., SELBY, D., KONTAK, D.J., HORNE, R.J. (2005) Rhenium-osmium geochronology of arsenopyrite in Meguma Group gold deposits, Meguma Terane, Nova Scotia, Canada: Evidence for multiple gold-mineralizing events. *Economic geology* 100: 1229–1242.

MORIARTY, M.M., KOCH, I., GORDON, R.A., REIMER, K.J. (2009) Arsenic speciation of terrestrial invertebrates. *Environmental Science & Technology* 43: 4818–4823.

MOSHER, A.L. (2004) Environmental Impacts of Historical Mine Tailings Disposal at Cochrane Hill Gold District, Nova Scotia. Unpublished B.Sc. thesis, Dalhousie University, 96 p.

MUDROCH, A., CLAIR, T.A. (Editors) (1985) The impact of past gold mining activities on the Shubenacadie River headwaters ecosystem. Environment Canada / N.S. Dept. of the Environment Report, IWD-AR-WQB-85-81, 195 p.

MUDROCH, A., CLAIR, T.A. (1986) Transport of arsenic and mercury from gold mining activities through an aquatic system. *The Science of the Total Environment* 57: 205–216.

MUDROCH, A., SANDILANDS, R. (1978) Geochemical analyses of lake bottom sediments in the Shubenacadie headwaters. Shubenacadie-Stewiacke River Basin Technical Report #9, Halifax, N.S., 89 p.

NOVA SCOTIA DEPARTMENT OF MINES (NSDM) (1961) Annual Report on Mines 1960. Queen's Printer, Halifax, NS, 127 p.

NIMICK, D.A., GAMMONS, C.H., PARKER, S.R. (2011) Diel biogeochemical processes and their effect on the aqueous chemistry of streams: A review. *Chemical Geology* 283: 3-17.

NRIAGU, J.O., WONG, H.K.T. (1997) Gold rushes and mercury pollution. *In* Metal Ions in Biological Systems. A. Sigel & H. Sigel (eds.), Chapter 5, 131–160.

PARENT, G., ETHIER, R. (1989) Assessment of the reserves at the Upper Seal Harbour Deposit, Nova Scotia. Nova Scotia Department of Natural Resources Assessment Report AR 89-250, 643 pp.

PARSONS, C.S. (1922) An investigation of the tailings and rock dumps at the gold mines of Nova Scotia—with a review of the past mining and milling methods, the present status of the gold industry in the Province, and some suggestions for the revival of the industry. Nova Scotia Dept. of Public Works and Mines, Annual Report on the Mines 1921, pp. 189–201.

PARSONS, M.B. (2007) Reducing Risks from Metals: Environmental Impacts of Historical Gold Mines. NRCan Making a Difference: 001 (two-page fact sheet available online at: http://gsc.nrcan.gc.ca/org/atlantic/gold_e.php).

PARSONS, M.B., SMITH, P.K., GOODWIN, T.A., HALL, G.E.M, SANGSTER, A.L., PERCIVAL, J.B. (2004) Distribution, cycling, and fate of mercury and associated elements at historical lode gold mines in Nova Scotia, Canada. *In* Proceedings of the 7th International Conference on Mercury as a Global Pollutant, Ljubljana, Slovenia, June 27–July 2, 2004. M. Horvat, N. Ogrinc, J. Faganeli, and J. Kotnik (eds.), *RMZ – Materials and the Geoenvironment*, 51: 185–189.

PERCIVAL, J.B., WHITE, H.P., GOODWIN, T.A., PARSONS, M.B., SMITH, P.K. (In press) Mineralogy and spectral reflectance of soils and tailings from historical gold mines, Nova Scotia. *Geochemistry: Exploration, Environment, Analysis.* Accepted in November 2011.

PHILLIPS, J.A. (1867) The mining and metallurgy of gold and silver. E. & F.N. Spon, London, 532 p.

PLUMLEE, G.S., SMITH, K.S., MONTOUR, M.R., FICKLIN, W.R., MOSIER, E.L., 1999, Geologic controls on the composition of natural waters and mine waters draining diverse mineral-deposit types: in, Filipek, L.H., Plumlee, G.S. (eds.), The Environmental Geochemistry of Mineral Deposits, Part B: Case Studies and Research Topics. Reviews in Economic Geology, Vol. 6B, Society of Economic Geologists, Littleton, CO, pp. 373–432 (Chapter 19).

RICHARDS, R.H., LOCKE, C.E. (1940) Textbook of ore dressing (3rd ed.); McGraw-Hill Book Co., New York, 608 p.

RITCHIE, J.N. (1901) Chlorination plant at Brookfield. *Industrial Advocate* 28: 11–15.

ROACH, A.G. (1937) The Seal Harbour Mill. *Mining Society of Nova Scotia, Transactions* 40: 263–277.

ROACH, A.G. (1940) Cyanide treatment of auriferous concentrate from Nova Scotia ores. *Mining Society of Nova Scotia, Transactions* 40: 709–731.

RYAN, R.J., SMITH, P.K. (1998): A review of the mesothermal gold deposits of the Meguma Group, Nova Scotia, Canada. *Ore Geology Reviews* 13: 153–183.

SANGSTER, A.L. (1990) Metallogeny of the Meguma Terrane, Nova Scotia. *In* Mineral Deposit Studies in Nova Scotia, Volume 1, A.L. Sangster (ed.), Geological Survey of Canada, Paper 90-8, 115–162.

SANGSTER, A.L., SMITH, P.K. (2007) Metallogenic summary of the Meguma gold deposits, Nova Scotia. *In* Mineral Deposits of Canada: A Synthesis of Major Deposit-Types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods. W.D. Goodfellow (ed.), Geological Association of Canada, Mineral Deposits Division, Special Publication No. 5, 723–732.

SAUNDERS, J.R., KNOPPER, L.D., YAGMINAS, A., KOCH, I., REIMER, K.J. (2009) Use of biomarkers to show sub-cellular effects in meadow voles (*Microtus pennsylvanicus*) living on an abandoned gold mine sites. *Science of the Total Environment* 407: 5548–5554.

SAUNDERS, J.R., KNOPPER, L.D., KOCH, I., REIMER, K.J. (2010) Arsenic transformations and biomarkers in meadow voles (*Microtus pennsylvanicus*) living on an abandoned gold mine site in Montague, Nova Scotia, Canada. *Science of the Total Environment* 408: 829–835.

SAUNDERS, J.R., KNOPPER, L.D., KOCH, I., REIMER, K.J. (2011) Inclusion of soil arsenic bioaccessibility in ecological risk assessment and comparison with biological effects. *Science of the Total Environment* 412-413: 132–137.

SMEDLEY, P.L., KINNIBURGH, D.G. (2002) A review of the source, behaviour and distribution of arsenic in natural waters. *Applied Geochemistry* 17: 517-568.

SMITH, P.K. (1982) Geology of the Cochrane Hill Gold Deposit, Guysborough County, Nova Scotia. *In* Nova Scotia Department of Mines and Energy, Mines and Minerals Branch, Report of Activities 1982, Report 83-1, 225–256.

SMITH, P.K. (1983) Geology and lithogeochemistry of the Cochrane Hill Gold Deposit – An indication of metalliferous source beds. *In* Nova Scotia Department of Mines and Energy, Mines and Minerals Branch, Report of Activities 1983, Report 84-1, 203–214.

SMITH, P.K. (1984) Summary of the Caribou Gold District. Nova Scotia Department of Mines and Energy, Open File Report ME 585, 45 p.

SMITH, P.K., GOODWIN, T.A. (2009) Historical gold mining areas in Nova Scotia map series. Nova Scotia Department of Natural Resources, Open File Map ME 2009-1, 64 Sheets, Scales 1:1000 to 1:10 000 (available online at: http://www.gov.ns.ca/natr/meb/download/mg/ofm/htm/ofm_2009-001.asp).

SMITH, P.K., KONTAK, D.J. (1987) Meguma gold studies: advances in geological insight as an aid to gold exploration. *In* Program and Summaries, Tenth Annual Open House and Review of Activities; Nova Scotia Department of Mines and Energy, Information Series No. 12, 105–114.

TETFORD, G. (1999) The problem of mercury in the environment: abandoned gold mines in Nova Scotia. Unpublished B.Sc. thesis, Saint Mary's University, Halifax, NS, 37 p.

WALKER, S.R., PARSONS, M.B., JAMIESON, H.E., LANZIROTTI, A. (2009) Arsenic mineralogy of near-surface tailings and soils: Influences on arsenic mineralogy and bioaccessibility in the Nova Scotia gold mining districts. *Canadian Mineralogist* 47: 533–556.

WELFRINGER, B., ZAGURY, G.J. (2009) Evaluation of two in vitro protocols for determination of mercury bioaccessibility: influence of mercury fractionation and soil properties. *Journal of Environmental Quality* 38: 2237–2244.

WENZEL, W.W., KIRCHBAUMER, N., PROHASKA, T., STINGEDER, T., LOMBI, E., ADRIANO, D.C. (2001) Arsenic fractionation in soils using an improved sequential extraction procedure. *Analytica Chimica Acta* 436: 309–323.

WHITE, C.E. (2010) Stratigraphy of the Lower Paleozoic Goldenville and Halifax groups in southwestern Nova Scotia. *Atlantic Geology* 46, 136–154.

WHITELAW, R.W. (1985) Report on Leipsigate Project. Nova Scotia Department of Mines and Energy Assessment Report ME 1985-082, 50 p.

WINCH, S., FORTIN, D., LEAN, D.R.S., PARSONS, M.B. (2008) Factors affecting methylmercury levels in surficial tailings from historical Nova Scotia gold mines. *Geomicrobiology Journal* 25 (2): 112–129.

WINCH, S., MILLS, H.J., KOSTKA, J.E., FORTIN, D., LEAN, D.R.S. (2009) Identification of sulfate-reducing bacteria in methylmercury-contaminated mine tailings by analysis of SSU rRNA genes. *FEMS Microbiology Ecology* 68: 94–107.

WONG, H.K.T., GAUTHIER, A., BEAUCHAMP, S., TORDON, R. (2002) Impact of toxic metals and metalloids from the Caribou gold-mining areas in Nova Scotia, Canada. *Geochemistry: Exploration, Environment, Analysis*, 2: 235–241.

WONG, H.K.T., GAUTHIER, A., NRIAGU, J.O. (1999) Dispersion and toxicity of metals from abandoned gold mine tailings at Goldenville, Nova Scotia, Canada. *Science of the Total Environment*, 228: 35–47.

WRYE, L.A. (2008) Distinguishing between natural and anthropogenic sources of arsenic in soils from the Giant Mine, Northwest Territories, and the North Brookfield Mine, Nova Scotia. Unpublished M.Sc. thesis, Queen’s University, 241 p.

APPENDICES

APPENDIX A

Sediment and tailings sample site descriptions and geochemical data

Gold District	Sample Site	Tailings Depth (cm)	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Subsample ID	GSCA Lab ID #	Tailings description
Caribou Gold District (CAR)									
CAR	T1	0-5	Tailings with broken hardpan adjacent to beginning of walking trail	0504741	4989277	28-Oct-05	CAR05-T01	-	0-1 cm consists of broken grey hardpan; 1-4 cm is grey-green scordite hardpan; 4-9 cm consists of yellowish brown hardpan.
CAR	T2	0-4	Tailings in middle of community walking trail	0504794	4989253	28-Oct-05	CAR05-T02	-	0-1 cm is medium brown silty tails; 1-4 cm is cream white tails; 4-7 cm is red tails; 7-10 is brown tails; 10-20+ are mixed red and brown tails with arsenopyrite. High arsenopyrite content at surface.
CAR	T3	0-8	~30 m before boardwalk in middle of walking trail	0504871	4989155	28-Oct-05	CAR05-T03	-	0-8 cm is light brown sandy tails; 8-8.5 cm is red-brown tails with arsenopyrite; 8.5-16.5 cm is mixed red and brown tails with arsenopyrite; 16.5-22+ cm is light grey silty tails.
CAR	T4	0-4	Tailings with brown, muddy surface in centre of ATV tracks	0504890	4989207	28-Oct-05	CAR05-T04	-	Upper 8 cm consists of reddish brown tails; 8-9 cm is clay-rich with a thin yellow upper & lower contact; 9-24 cm consists of light green-grey sandy tails; 24-34+ cm is med grey sandy tails.
CAR	T5	2-9	Tailings and hardpan near stamp mill foundation	0504707	4989208	28-Oct-05	CAR05-T05	-	Upper 2 cm is moss and root mass; 2-5 cm is light olive-green tails with hardpan flakes; 5-9 cm is medium dark, reddish-brown hardpan; 9-30+ cm is mixed brown/red/greenish tails.
Cochrane Hill Gold District (CH)									
CH	T1	10	Tailings ~5 m downhill of buried sodium cyanide drums; surface is covered in rocks and hardpan stained with blue precipitate	0577264	5011219	24-Sep-03	CH-03-T1B	195914	olive-brown tails
CH	T1	27		0577264	5011219	24-Sep-03	CH-03-T1C	195915	rusty, mottled tails
CH	T1	50		0577264	5011219	24-Sep-03	CH-03-T1D	195916	dk grey, unoxidized tails
CH	T2	15	Tailings just N of mill, ~30 m downhill of sodium cyanide drums; surface is covered with white salts	0577236	5011182	25-Sep-03	CH-03-T2B	195917	dk brown, sandy tails
CH	T2	32		0577236	5011182	25-Sep-03	CH-03-T2C	195918	rusty, mottled tails
CH	T2	50		0577236	5011182	25-Sep-03	CH-03-T2D	195919	dk grey, unoxidized tails
CH	T3	10	Tailings ~30 m W (downhill) of Site T2; surface has been actively re-worked by erosion	0577213	5011174	25-Sep-03	CH-03-T3A	195920	dk brown, sandy tails
CH	T3	22		0577213	5011174	25-Sep-03	CH-03-T3B	195921	dk grey tails; clay rich
CH	T3	36		0577213	5011174	25-Sep-03	CH-03-T3C	195922	dk brown, sandy tails
CH	T3	50		0577213	5011174	25-Sep-03	CH-03-T3D	195923	rusty, mottled tails
CH	T3	70		0577213	5011174	25-Sep-03	CH-03-T3E	195924	dk grey tails; saturated, clay rich
CH	T4	20	Pit near SW corner of impoundment	0577184	5011163	25-Sep-03	CH-03-T4A	195925	dk brown, sandy tails
CH	T4	35		0577184	5011163	25-Sep-03	CH-03-T4B	195926	coarse, dk layer
CH	T4	60		0577184	5011163	25-Sep-03	CH-03-T4C	195927	olive, mottled tails
CH	T4	80		0577184	5011163	25-Sep-03	CH-03-T4D	195928	dk grey, clay rich tails
CH	T5	30	Tailings mid-way across lower end of impoundment	0577181	5011210	25-Sep-03	CH-03-T5A	195929	dk brown, coarse tails
CH	T5	64		0577181	5011210	25-Sep-03	CH-03-T5B	195930	base of coarse tails
CH	T5	85		0577181	5011210	25-Sep-03	CH-03-T5C	195931	dk grey, slimy, clay rich tails
CH	T6	16	Tailings flat in mixed waste rock	0577224	5011214	25-Sep-03	CH-03-T6A	195932	sandy grey-brown tails
CH	T6	29		0577224	5011214	25-Sep-03	CH-03-T6B	195933	dark grey, rusty hard tails
CH	T6	46		0577224	5011214	25-Sep-03	CH-03-T6C	195934	sandy, dark brown rusty tails
CH	T6	60		0577224	5011214	25-Sep-03	CH-03-T6D	195935	dark grey consolidated tails
CH	T7	10	Tails in NE corner of impoundment	0577256	5011238	25-Sep-03	CH-03-T7A	195936	grey brown tails with rusty bands
CH	T7	24		0577256	5011238	25-Sep-03	CH-03-T7B	195937	grey-brown tails
CH	T7	26		0577256	5011238	25-Sep-03	CH-03-T7C	195938	olive-yellowish bands
CH	T7	67		0577256	5011238	25-Sep-03	CH-03-T7D	195939	dark grey clay-rich tails
CH	T8	7	Tails near northern rock berm	0577210	5011255	25-Sep-03	CH-03-T8A	195940	brwn-olive tails w lots of rusty mottles
CH	T8	54		0577210	5011255	25-Sep-03	CH-03-T8B	195941	brwn-olive tails w lots of rusty mottles
CH	T8	64		0577210	5011255	25-Sep-03	CH-03-T8C	195942	dark grey unoxidized tails
CH	T9	13	Tails in NW corner beneath bubbled area on surface (possible H_2S bubbles?), well stratified	0577167	5011246	25-Sep-03	CH-03-T9A	195943	light-grey rusty banded tails (fine)
CH	T9	22		0577167	5011246	25-Sep-03	CH-03-T9B	195944	coarse, dark grey sand
CH	T9	55		0577167	5011246	25-Sep-03	CH-03-T9C	195945	grey, soupy, clay-rich tails
CH	T10	13	Tails near NW corner of mill, coarse tailings with wood fragments	0577148	5011180	25-Sep-03	CH-03-T10A	195946	light grey olive coarse tails
CH	T10	21		0577148	5011180	25-Sep-03	CH-03-T10B	195947	dark grey tails with rusty bits
CH	T11	10	Vegetated, stratified sandy fine-grained tails	0577159	5011191	25-Sep-03	CH-03-T11A	195948	brown-grey tails
CH	T11	16		0577159	5011191	25-Sep-03	CH-03-T11B	195949	rusty brown tails
CH	T11	22		0577159	5011191	25-Sep-03	CH-03-T11C	195950	dark grey tails
CH	T12	3	Tails in open vegetated area	0577057	5011224	25-Sep-03	CH-03-T12A	195951	rusty brown tails
CH	T12	10		0577057	5011224	25-Sep-03	CH-03-T12B	195952	dark grey tails
CH	T13	8	Tails in marshy area	0577062	5011251	25-Sep-03	CH-03-T13A	195953	saturated grey tails
CH	T14	0	Tails along stream bank parallel to Hwy 7, stream runs S>N	0577003	5011292	25-Sep-03	CH-03-T14A	195954	rooty, muddy, org-rich tails
CH	T15	16	Mossy tails just west of NW corner of impoundment (adjacent to drainage channel)	0577134	5011266	25-Sep-03	CH-03-T15A	195955	dark grey silty tails
CH	T15	26		0577134	5011266	25-Sep-03	CH-03-T15B	195956	rooty brown soil +/- tails

Gold District	Sample Site	Tailings Depth (cm)	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Subsample ID	GSCA Lab ID #	Tailings description
CH	T16	7	Old amalgamation tails downslope (~ 30m W) of stamp mill, border brook (near site W5)	0577118	5011157	25-Sep-03	CH-03-T16A	195996	red-brown, oxic tails
CH	T16	20		0577118	5011157	25-Sep-03	CH-03-T16B	195997	coarse, dark grey tails (sulfides visible)
East Rawdon Gold District (RAW)									
RAW	T1	15	Small, sparsely vegetated tailings flat beside forest road	0440941	4988079	8-Jul-03	RAW-03-T1A	135001	oxic layer, dark brownish red
RAW	T1	40		0440941	4988079	8-Jul-03	RAW-03-T1B	135002	unoxidized tails have thin red horizon
RAW	T2	10	Small, sparsely vegetated tailings flat beside forest road	0440961	4988090	8-Jul-03	RAW-03-T2A	135003	brown/orange oxic layer with grey mottles
RAW	T2	60		0440961	4988090	8-Jul-03	RAW-03-T2B	135004	brown/orange oxic layer with grey mottles
RAW	T3	10	Small, sparsely vegetated tailings flat beside forest road	0440938	4988088	8-Jul-03	RAW-03-T3A	135005	thin, red-grey laminations
RAW	T3	30		0440938	4988088	8-Jul-03	RAW-03-T3B	135006	thin, red-grey laminations
RAW	T3	50		0440938	4988088	8-Jul-03	RAW-03-T3C	135007	massive grey tails
RAW	T4	10	Small, sparsely vegetated tailings flat beside forest road	0440954	4988098	8-Jul-03	RAW-03-T4A	135008	weakly oxidized grey-brown layers
RAW	T4	70		0440954	4988098	8-Jul-03	RAW-03-T4B	135009	weakly oxidized grey-brown layers
RAW	T5	20	~ 1.5-2m deep trench in tailings near edge of wetalnd - unoxidized layer encountered near 150 cm depth	0440944	4988103	8-Jul-03	RAW-03-T5A	135010	light-brown/orange
RAW	T5	50		0440944	4988103	8-Jul-03	RAW-03-T5B	135011	light-grey/orange
RAW	T5	80		0440944	4988103	8-Jul-03	RAW-03-T5C	135012	light-grey/orange
RAW	T5	110		0440944	4988103	8-Jul-03	RAW-03-T5D	135013	light-grey/orange
RAW	T5	140		0440944	4988103	8-Jul-03	RAW-03-T5E	135014	light grey
RAW	T5	170		0440944	4988103	8-Jul-03	RAW-03-T5F	135015	dark grey
RAW	T6	20	Small, sparsely vegetated tailings flat beside forest road	0440933	4988094	8-Jul-03	RAW-03-T6A	135016	grey layer over 5 cm band of orange hard pan (2 cm)
RAW	T6	50		0440933	4988094	8-Jul-03	RAW-03-T6B	135017	red/orange oxic material
RAW	T8	25	Small, sparsely vegetated tailings flat beside forest road	0440930	4988105	8-Jul-03	RAW-03-T8A	135018	lt grey sand over thinly laminated grey-red horizon
RAW	T8	40		0440930	4988105	8-Jul-03	RAW-03-T8B	135019	massive grey material with thin oxic layer
RAW	T9	10	Tailings ~ 2 m from marsh edge	0440944	4988113	8-Jul-03	RAW-03-T9A	135020	oxic layer (lots of ox sulf)
RAW	T9	50		0440944	4988113	8-Jul-03	RAW-03-T9B	135021	grey tails, vegetated at surface
RAW	T10	30	Near cattails directly on edge of marsh	0440973	4988074	8-Jul-03	RAW-03-T10A	135022	thin (2-3 cm) organic horizon over unoxidized tails
RAW	T11	15	Tailings near base of stamp mill foundation	0440951	4988150	8-Jul-03	RAW-03-T11A	135023	dark grey-blue unoxidized tails
RAW	T11	40		0440951	4988150	8-Jul-03	RAW-03-T11B	135024	dark grey-blue unoxidized tails
RAW	T12	10	Lower tailings on edge of swamp (samples taken from pit)	0440960	4988093	8-May-03	RAW-03-T12A	195991	oxidized tails
RAW	T12	40		0440960	4988093	8-May-03	RAW-03-T12B	195992	unoxidized tails have thin red horizon
RAW	T13	10	Overgrown, mossy tailings in skidder track near waste rock pile	0440853	4988214	8-May-03	RAW-03-T13A	195993	dark grey, unoxidized tails
Goldenville Gold District (GD)									
GD	T1	2	Surface of wind-blown ATV tracks	0577356	4997047	9-Jun-03	GD-03-1A	20030101	coarse, brownish sand
GD	T1	10		0577356	4997047	9-Jun-03	GD-03-1B	20030102	grey, iridescent lenses (2 cm thick), coarse brn sand
GD	T1	13		0577356	4997047	9-Jun-03	GD-03-1C	20030103	reddish-brown oxic layer
GD	T2	1	Hardpan crust S of stamp mill foundation	0577358	4997007	9-Jun-03	GD-03-2A	20030104	loose beige-green sand
GD	T2	3.5		0577358	4997007	9-Jun-03	GD-03-2B	20030105	3cm thick hard pan, beige-green
GD	T2	8		0577358	4997007	9-Jun-03	GD-03-2C	20030106	rusty brown sand lens
GD	T3	1	Pit at edge of tailings field near Gegogan Brook	0577361	4996989	9-Jun-03	GD-03-3A	20030107	coarse, brownish material
GD	T3	21		0577361	4996989	9-Jun-03	GD-03-3B	20030108	coarse, brownish-grey material
GD	T4	1	Tailings in brook immediately below waste rock road	0577361	4996976	9-Jun-03	GD-03-4A	20030109	sediment from slime pool
GD	T5	1	Coarse surface tails with thick grey lenses	0577335	4996951	9-Jun-03	GD-03-5A	20030110	brown-beige layer
GD	T5	8		0577335	4996951	9-Jun-03	GD-03-5B	20030111	2cm thick grey lens
GD	T6	1	Raised area near bales of hay	0577315	4996973	9-Jun-03	GD-03-6A	20030112	grey and brown coarse sand
GD	T6	17		0577315	4996973	9-Jun-03	GD-03-6B	20030113	oxidized reddish brown layer
GD	T7	1	Racetrack	0577293	4997000	9-Jun-03	GD-03-7A	20030114	beige-brown coarse sand
GD	T7	14		0577293	4997000	9-Jun-03	GD-03-7B	20030115	reddish-brown oxidized layer
GD	T8	1	Near beer shack and 4x4 Rally sign	0577284	4997037	9-Jun-03	GD-03-8A	20030116	brown-grey coarse sand
GD	T8	15		0577284	4997037	9-Jun-03	GD-03-8B	20030117	quartz-rich grey layer mixed with brown sand
GD	T9	1	Between shack and water pit	0577258	4997015	9-Jun-03	GD-03-9A	20030118	coarse brown sand
GD	T9	13		0577258	4997015	9-Jun-03	GD-03-9B	20030119	2 cm thick grey lens
GD	T10	1	Middle of racetrack	0577271	4996990	9-Jun-03	GD-03-10A	20030120	coarse brown sand
GD	T10	8		0577271	4996990	9-Jun-03	GD-03-10B	20030121	reddish-brown layer
GD	T10	20		0577271	4996990	9-Jun-03	GD-03-10C	20030122	brown-yellow hard pan
GD	T11	1	Middle of racing circle in a low dip	0577289	4996966	9-Jun-03	GD-03-11A	20030123	moist muck
GD	T11	10		0577289	4996966	9-Jun-03	GD-03-11B	20030124	reddish-brown lens
GD	T12	1	Edge of racetrack near stream and wetland	0577307	4996923	9-Jun-03	GD-03-12A	20030125	mucky, grey clay-like material
GD	T12	5		0577307	4996923	9-Jun-03	GD-03-12B	20030126	reddish-brown muck
GD	T12	19		0577307	4996923	9-Jun-03	GD-03-12C	20030127	grey clay-like material

Gold District	Sample Site	Tailings Depth (cm)	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Subsample ID	GSCA Lab ID #	Tailings description
GD	T13	1	Shallow hole at edge of racetrack near stream and wetland	0577267	4996926	9-Jun-03	GD-03-13A	20030128	coarse brown-beige sand
GD	T13	6		0577267	4996926	9-Jun-03	GD-03-13B	20030129	reddish-brown oxidized layer
GD	T13	8		0577267	4996926	9-Jun-03	GD-03-13C	20030130	grey, hard clay-like lens
GD	T15	1	Harpan near end of racetrack	0577236	4996961	9-Jun-03	GD-03-15A	20030131	colourful hard pan, reddish-brown surf w/ grn-yellow
GD	T15	5		0577236	4996961	9-Jun-03	GD-03-15B	20030132	grey-purple occurring in lenses
GD	T15	8		0577236	4996961	9-Jun-03	GD-03-15C	20030133	yellow-green pieces
GD	T16	4	Behind water pit	0577218	4997024	9-Jun-03	GD-03-16A	20030134	coarse beige-brown sand
GD	T16	8		0577218	4997024	9-Jun-03	GD-03-16B	20030135	yellow-green tails near hard pan
GD	T17	1	Oxidized sulphide concentrate near mill foundation surrounded by plastic bags	0577362	4997053	9-Jun-03	GD-03-17A	20030136	grey-green fine-grained fluffy material
GD	T1	0-5	Mint-green residue on surface immediately NW of the Stuart Shaft between stamp mill foundation and race track.	0577345	4997052	9-Dec-05	GD05-T01	-	mint-green, very fine grained with bits of wood and plastic
GD	T2	0-5	Centre of racetrack, ~2/3 of the way towards finish line.	0577291	4996990	9-Dec-05	GD05-T02	-	dark brown tails with abundant chips of hardpan on the surface
GD	T3	0-5	Broken-up hardpan at the end of racetrack.	0577239	4996956	9-Dec-05	GD05-T03	-	olive-green to light grey tails with abundant hardpan. Overlies solid hardpan that is ~20 cm thick.
GD	T4	0-5	At the margin of the tails on the northwest side of raceway (~25 m to north) and ~15 m before the beer shack	0577278	4997034	9-Dec-05	GD05-T04	-	light grey, sandy wind-blown tailings overlying brown to light yellow hardpan
GD	T5	0-5	Raised knoll adjacent to Gegogan Brook, ~100 m south of stamp mill foundation.	0577334	4996921	9-Dec-05	GD05-T05	-	greenish, very fine grained green to yellow tails on top of very fine grained grey, clay-rich tails
GD	T1	0-5	Along edge of Gegogan Brook, middle of ATV track	0576920	4996946	23-Nov-06	GD-06-T1	-	dark-grey/brown tails with rusty lenses, silty sand, well saturated; likely higher organic matter
GD	T2	0-5	Along edge of Gegogan Brook, middle of ATV track	0577062	4996891	23-Nov-06	GD-06-T2	-	sandier tails, minor rusty material (coarse sand), medium grey/brown, reasonably well-drained
GD	T3	0-5	South side of main tails area, north of brook & south of tires	0577282	4996922	23-Nov-06	GD-06-T3	-	olive-green top cm underlying medium grey unoxidized tails
GD	T4	0-5	N of stream; S edge of main tails; tires to W; South edge of parking lot during 4X4 Rally	0577322	4996922	23-Nov-06	GD-06-T4	-	surface silty sand underlying finer clay, medium grey; olive green top 3cm
GD	T5	0-10	Small hill in center of parking lot area, some ATV & dirt bike tracks	0577321	4996966	23-Nov-06	GD-06-T5	-	sandy, roots in tailings, small pieces of hardpan, top cm looks winnowed
GD	T6	0-10	Northern edge of parking lot, south of tires western end; fluvial erosion	0577296	4996968	23-Nov-06	GD-06-T6	-	homogeneous sandy in top 10cm; brownish grey; thin medium grey silty lenses
GD	T7	0-10	Tailings near west end of race track	0577274	4996989	23-Nov-06	GD-06-T7	-	sandy, greyish brown, well drained, top 0.5cm winnowed, minor scorodite chunks
GD	T8	0-10	Far end of race track (west) entrance of ATV trails along Gegogan Brook	0577239	4996956	23-Nov-06	GD-06-T8	-	scorodite chunks in hardpan; mostly sandy; well drained; brownish grey
GD	T9	0-10	Tailings in front of beer shack	0577267	4997022	23-Nov-06	GD-06-T9	-	well homogenized, silty medium grey lenses & minor rusty lense, grey-brown sandy tails
GD	T10	0-10	East end of race track	0577327	4997028	23-Nov-06	GD-06-T10	-	scorodite hardpan at 10 cm, lens of rusty material at 5 cm (iron staining), brown-grey sandy
GD	T11	0-5	Wind-blown tailings accumulation near stamp-mill foundation	0577329	4997076	23-Nov-06	GD-06-T11	-	surface veneer of small slate pebbles, wind blown, small bit of moss, homogeneous greenish-grey, sandy, top winnowed, minor root material
GD	T12	0-5	Mix of tailings and gravel on entrance road to mine site	0577371	4997141	23-Nov-06	GD-06-T12	-	green-grey, sandy with rocks
GD	T13	0-5	Light-green mill residue on surface near mill foundation	0577344	4997050	23-Nov-06	GD-06-T13	-	scorodite-rich, powdery, light pistachio-green varies to grey, slight sulfur odor
Lake Catcha Gold District (LC)									
LC	T1	7.5	~ 1.5 m deep pit in tails on raised grassy knoll near beach, oxidized to the bottom, at least 2 hard pan layers	0484315	4953602	8-Sep-03	LC-03-T1A	185438	altern. red & grey tails, hard pan/rusty
LC	T1	30		0484315	4953602	8-Sep-03	LC-03-T1B	185439	grey-olive tails, hard pan/scorodite
LC	T1	60		0484315	4953602	8-Sep-03	LC-03-T1C	185440	grey-olive tails, hard pan/scorodite
LC	T1	125		0484315	4953602	8-Sep-03	LC-03-T1D	185441	dark brown, oxic tails
LC	T2	15	Tailings on lake edge ~ 20 cm from water	0484315	4953607	8-Sep-03	LC-03-T2A	185442	rusty red/grey tails
LC	T2	30		0484315	4953607	8-Sep-03	LC-03-T2B	185443	brown tails
LC	T3	5	Tailings on beach near lake edge	0484313	4953614	8-Sep-03	LC-03-T3A	185444	brn mixed tails, black layer, rusty red
LC	T3	17		0484313	4953614	8-Sep-03	LC-03-T3B	185445	grey-orange tails
LC	T3	27		0484313	4953614	8-Sep-03	LC-03-T3C	185446	rusty red
LC	T3	35		0484313	4953614	8-Sep-03	LC-03-T3D	185447	brown
LC	T4	10	Dry tails ~ 15 m east of stamp mill	0484271	4953583	8-Sep-03	LC-03-T4A	185448	brown oxic tails
LC	T4	30		0484271	4953583	8-Sep-03	LC-03-T4B	185449	grey tails
LC	T4	50		0484271	4953583	8-Sep-03	LC-03-T4C	185450	rusty
LC	T4	70		0484271	4953583	8-Sep-03	LC-03-T4D	185451	brown
LC	T5	12	Tails in wetland on east side of lake, tails beneath cattails, marsh grass	0484673	4953944	8-Sep-03	LC-03-T5A	185452	below organics
LC	T5	30		0484673	4953944	8-Sep-03	LC-03-T5B	185453	dark grey, unoxidized tails
LC	T6	10	Well-saturated sand-sized tails	0484664	4953974	8-Sep-03	LC-03-T6A	185454	rust-brown oxic blebs

Gold District	Sample Site	Tailings Depth (cm)	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Subsample ID	GSCA Lab ID #	Tailings description
LC	T6	25	in wetland downslope of Oxford stamp mill	0484664	4953974	8-Sep-03	LC-03-T6B	185455	dark grey, unoxidized tails
LC	T7	20	Base of hill downslope from Oxford Mill (near base of clear cut)	0484633	4953973	8-Sep-03	LC-03-T7A	185456	brown oxic tails below forest soil
LC	T8	15	Tails near access road to east	0484652	4953916	8-Sep-03	LC-03-T8A	185457	sandy, brown oxic tails
LC	T8	30		0484652	4953916	8-Sep-03	LC-03-T8B	185458	clayey, grey tails
LC	T9	20	Tails in wetland	0484663	4953930	9-May-03	LC-03-T9A	195989	dark grey, sandy tails
LC	T1-02	20	Tailings in pit on lake edge ~ 2 m from water	0484315	4953605	24-Nov-02	LC-02-T1A	196904	brown-grey sandy tails
LC	T1-02	75		0484315	4953605	24-Nov-02	LC-02-T1B	196907	rusty-brown, sandy tails
LC	S1	5	Lake Catcha: ~ 75 m due east of beach (just beyond reeds)	0484371	4953643	31-Oct-03	LC-03-S1A	195957	Lake sediments: org-rich on surf./light-grey clay-rich below
LC	S2	5	Lake Catcha: ~ 75-85 m ESE of beach near opposite shore	0484397	4953617	31-Oct-03	LC-03-S2A	195958	Lake sediments: soupy, org-rich seds with minor tails
LC	S3	5	Lake Catcha: Northern edge of lake near 2nd access road	0484426	4953678	31-Oct-03	LC-03-S3A	195959	Lake sediments: org-rich sed, rooty w/ trace of tails
LC	S4	5	Lake Catcha: ~ 200 m ESE of beach	0484452	4953640	31-Oct-03	LC-03-S4A	195960	Lake sediments: seds full of weeds, some tails visible
LC	S5	5	Lake Catcha: In cove downhill from hilltop mill site	0484504	4953550	31-Oct-03	LC-03-S5A	195961	Lake sediments: rooty org-rich seds, no evid. of tails
LC	S6	5	Lake Catcha: farther along north shore (~ 500 m east of beach)	0484565	4953714	31-Oct-03	LC-03-S6A	195962	Lake sediments: seds are rooty, no tails obvious
LC	S7	5	Lake Catcha: middle of lake	0484612	4953659	31-Oct-03	LC-03-S7A	195963	Lake sediments: seds are rooty, no tails obvious
LC	S8	5	Lake Catcha: Near outlet of stream from east tails	0484693	4953574	31-Oct-03	LC-03-S8A	195964	Lake sediments: very rooty seds, hard to sample
LC	S9	5	Lake Catcha: NE corner of lake	0484664	4953727	31-Oct-03	LC-03-S9A	195965	Lake sediments: org-rich seds, no tails evident

Leipsigate Gold District (LEI)

Gold District	Sample Site	Tailings Depth (cm)	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Subsample ID	GSCA Lab ID #	Tailings description
LEI	T1	0	Within foundation of MicMac 15-stamp mill	0373158	4909499	18-Aug-03	LEI-03-T1A	185494	pulp in stamp mill battery, contains concrete fragments
LEI	T2	10	Tailings downslope of cyanide plant	0373215	4909564	18-Aug-03	LEI-03-T2A	185495	thin veneer Lt grey-orange tails, very rooty
LEI	T3	50	Hummocky area on north side of mill	0373225	4909609	18-Aug-03	LEI-03-T3A	185496	light-grey, sandy tails
LEI	T4	20	Open tails area on east side of road	0373264	4909583	18-Aug-03	LEI-03-T4A	185497	light-grey, clay rich
LEI	T4	50		0373264	4909583	18-Aug-03	LEI-03-T4B	185498	slightly coarser, some oxidized sulfides
LEI	T5	20	Sandy, light grey tails on east edge of main tails area	0373277	4909621	18-Aug-03	LEI-03-T5A	185499	reddish hue, no hematite visible
LEI	T5	60		0373277	4909621	18-Aug-03	LEI-03-T5B	185500	dark grey tails
LEI	T6	20	Tails in wooded swampy area downslope of mill	0373320	4909684	18-Aug-03	LEI-03-T6A	195901	light grey, some clay
LEI	T6	35		0373320	4909684	18-Aug-03	LEI-03-T6B	195902	dk grey, white grains visible (carbonate?)
LEI	T7	15	Wooded, swampy, down-drainage area	0373337	4909747	18-Aug-03	LEI-03-T7A	195903	clay-rich tails
LEI	T7	30		0373337	4909747	18-Aug-03	LEI-03-T7B	195904	coarse, orange-stained tails
LEI	T7	50		0373337	4909747	18-Aug-03	LEI-03-T7C	195905	dark grey, unoxidized tails
LEI	T8	10	Shallow pit in swampy area	0373365	4909793	18-Aug-03	LEI-03-T8A	195906	clay-rich, light grey tails w/ oxide stains
LEI	T9	20	Coxheath site, tails ~ 25 m south of mill near edge of swamp (appears to be southern extent)	0371969	4908378	18-Aug-03	LEI-03-T9A	195907	brownish-grey tails with oxic pockets
LEI	T9	40		0371969	4908378	18-Aug-03	LEI-03-T9B	195908	grey-blue silty clay with oxic layers
LEI	T10	20	Sandy tails ~ 10 m from east edge of stamp mill foundation	0371975	4908403	18-Aug-03	LEI-03-T10A	195909	brown-grey oxic tails
LEI	T10	40		0371975	4908403	18-Aug-03	LEI-03-T10B	195910	dark grey tails
LEI	T11	20	Tails ~ 25 m northeast of mill foundation	0372002	4908435	18-Aug-03	LEI-03-T11A	195911	very rooty, dark grey brown tails
LEI	T12	20	Tails in drainage downslope from mill	0372053	4908471	18-Aug-03	LEI-03-T12A	195912	brown-grey tails
LEI	T12	35		0372053	4908471	18-Aug-03	LEI-03-T12B	195913	oxic tails (orange)
LEI	T13	40	Tailings on right side of access road (have been quarried for fill)	0373264	4909624	14-May-03	LEI-03-T13A	196914	unoxidized tails
LEI	T14	25	Tractor cut just downhill of mill in tails hummock	0373225	4909600	14-May-03	LEI-03-T14A	196912	light-grey, sandy tails
LEI	T15	10	Site near recent Coxheath Rehab close to lakeshore	0372001	4908405	14-May-03	LEI-03-T15A	196911	dark grey, sandy tails

Lower Seal Harbour Gold District (LSH)

Gold District	Sample Site	Tailings Depth (cm)	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Subsample ID	GSCA Lab ID #	Tailings description
LSH	T1	5	Tailings within cyanide plant foundation	0609976	5002807	12-Aug-03	LSH-03-T1A	135075	light grey-green with some brown oxidation
LSH	T2	5	Tailings NW of cyanide plant foundation (~170 m NW)	0609804	5002885	12-Aug-03	LSH-03-T2A	135076	unoxidized grey tails near swamp
LSH	T3	0	Tailings ~ 30 m south of cyanide plant in 'parking lot' area, surface covered by light brown, broken hard pan	0609977	5002769	12-Aug-03	LSH-03-T3A	135077	brown oxic layer with chunks of hardpan
LSH	T3	20		0609977	5002769	12-Aug-03	LSH-03-T3B	135078	dark grey tails
LSH	T3	35		0609977	5002769	12-Aug-03	LSH-03-T3C	135079	brown, laminated tails
LSH	T3	45		0609977	5002769	12-Aug-03	LSH-03-T3D	135080	black, sulfide rich (concentrate layer?)
LSH	T3	60		0609977	5002769	12-Aug-03	LSH-03-T3E	135081	grey, silty tails
LSH	T4	25	Cyanidation tails in drainage on hill (near marijuana plants)	0609877	5002678	12-Aug-03	LSH-03-T4A	135082	brown oxide layer
LSH	T4	55		0609877	5002678	12-Aug-03	LSH-03-T4B	135083	orange oxide layer
LSH	T4	90		0609877	5002678	12-Aug-03	LSH-03-T4C	135084	grey unoxidized layer
LSH	T5	30	Tails in hilltop drainage, fairly homogeneous, reworked by water	0609862	5002601	12-Aug-03	LSH-03-T5A	135085	olive-grey, sulfide poor
LSH	T6	0	Tails near base of hill, downslope of cyanide plant [resampled in 2004 for sequential extraction analyses]	0610019	5002639	12-Aug-03	LSH-03-T6A	135086	brown tails
LSH	T6	40		0610019	5002639	12-Aug-03	LSH-03-T6B	135087	green/orange
LSH	T6	45		0610019	5002639	12-Aug-03	LSH-03-T6C	135088	light grey
LSH	T6	50		0610019	5002639	12-Aug-03	LSH-03-T6D	135089	dark grey

Gold District	Sample Site	Tailings Depth (cm)	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Subsample ID	GSCA Lab ID #	Tailings description
LSH	T7	30	Tailings on knoll near NW corner of main tailings area	0610124	5002564	12-Aug-03	LSH-03-T7A	135090	light grey tails on surface, mostly olive-grey
LSH	T7	120		0610124	5002564	12-Aug-03	LSH-03-T7B	135091	light grey tails on surface, mostly olive-grey
LSH	T8	30	Grey-brown tails, fairly homogeneous near brook	0610106	5002495	12-Aug-03	LSH-03-T8A	135092	
LSH	T8	70		0610106	5002495	12-Aug-03	LSH-03-T8B	135093	clay-rich, light grey/white layer
LSH	T9	0	Well-saturated tails in wide-open tailings field	0610255	5002536	12-Aug-03	LSH-03-T9A	135094	dark grey-brown
LSH	T9	50		0610255	5002536	12-Aug-03	LSH-03-T9B	135095	olive green
LSH	T9	55		0610255	5002536	12-Aug-03	LSH-03-T9C	135096	grey, unoxidized tails
LSH	T10	10	Tailings on floodplain of unnamed brook	0610219	5002454	12-Aug-03	LSH-03-T10A	135097	~2 cm oxidized tails over unoxidized tails
LSH	T10	40		0610219	5002454	12-Aug-03	LSH-03-T10B	135098	darker
LSH	T11	10	Tailings on floodplain along edge of brook	0610382	5002398	12-Aug-03	LSH-03-T11A	135099	discontinuous oxic brown lenses
LSH	T11	60		0610382	5002398	12-Aug-03	LSH-03-T11B	135100	light grey unoxidized tails
LSH	T11	120		0610382	5002398	12-Aug-03	LSH-03-T11C	185401	dark grey unoxidized tails
LSH	T12	5	Tailings in woods near downstream confluence with West Brook	0610834	5002270	12-Aug-03	LSH-03-T12A	185402	brown oxidized tails
LSH	T12	30		0610834	5002270	12-Aug-03	LSH-03-T12B	185403	grey, clay-rich material
LSH	T13	15	Old amalgamation tailings ~100 m SSE of stamp mill foundation; surface covered with hardpan, adjacent to second marijuana site [resampled in 2004 for sequential extraction analyses]	0610144	5002665	12-Aug-03	LSH-03-T13A	185404	organge-yellow hardpan
LSH	T13	30		0610144	5002665	12-Aug-03	LSH-03-T13B	185405	mixed mauve/green/yellow tails
LSH	T13	50		0610144	5002665	12-Aug-03	LSH-03-T13C	185406	mixed brn orange tails with lt grey interbands
LSH	T13	80		0610144	5002665	12-Aug-03	LSH-03-T13D	185407	mottled pink/mauve tails w/ dk brn small lenses
LSH	T13	100		0610144	5002665	12-Aug-03	LSH-03-T13E	185408	25cm + unoxidized grey tails
LSH	T14	0	Site adjacent to unnamed creek, downslope of cyanide plant; surface covered in hard pan; standing water in pool: pH = 3.59	0610016	5002774	13-Aug-03	LSH-03-T14A	185409	rusty-brown, broken hardpan waste
LSH	T14	0		0610016	5002774	13-Aug-03	LSH-03-T14B	185410	tan-colored precipitate from base of pool with pH 3.59
LSH	T15	10	Intertidal beach in Seal Harbour near mouth of West Brook (dug 30 cm deep pit)	0611666	5001731	13-Aug-03	LSH-03-T15A	185411	brown sand (lijkely tailings mixed with marine sediment)
LSH	T15	20		0611666	5001731	13-Aug-03	LSH-03-T15B	185412	black, organic-rich sand (strong H_2S smell)
LSH	T16	5	West Brook ~10 m upstream of bridge on coastal highway (above tidal influence of Seal Harbour)	0611560	5001736	13-Aug-03	LSH-03-T16A	185413	grey sandy tails along streambanks
LSH	T17	7.5	Tails near base of hill, downslope of cyanide plant [sampled by S. Winch (UOttawa) for methylmercury analyses]	0610004	5002665	14-Sep-03	LSH-03-T17A	185474	sandy, light brown tails
LSH	T17	27.5		0610004	5002665	14-Sep-03	LSH-03-T17B	185475	olive green tails
LSH	T18	7.5	Tailings on floodplain along edge of unnamed brook [sampled by S. Winch (UOttawa) for methylmercury analyses]	0610428	5002379	14-Sep-03	LSH-03-T18A	185414	med brown, oxidized sandy tails
LSH	T18	27.5		0610428	5002379	14-Sep-03	LSH-03-T18B	185415	dark grey, unoxidized sandy tails
LSH	T19	5	Thin tails northwest of cyanide plant foundation near swamp	0609908	5002835	21-May-03	LSH-03-T19A	196905	light grey, sandy tails mixed with waste rock
LSH	T20	5	Extensive, open tailings deposit south of cyanide plant	0610143	5002478	21-May-03	LSH-03-T20A	196906	med grey, saturated sandy tails along wetland
LSH	T1-04	5	Saturated tails near peeper site in First Pond on West Brook [sampled by S. Winch (UOttawa) for methylmercury analyses]	0611039	5001799	13-May-04	LSH-04-T1A	20040636	saturated, dark brown sandy tails
LSH	T1-04	15		0611039	5001799	13-May-04	LSH-04-T1B	20040637	saturated dark grey sandy tails
LSH	P2-WB	5	Middle of West Brook, centre of first pond (DFO peeper site)	0611088	5001787	13-May-04	LSH-04-P2-WB	20040639	med grey, saturated sandy tails in West Brook
LSH	P1-EB	5	Small pond just above falls on East Brook (DFO peeper site)	0612432	5002363	13-May-04	USH-04-P1-EB	20040638	soupy, organic-rich sediments (no sign of tails)
LSH	T30	2.5	Old stamp mill tails east of waste rock pile, horsetails on surface, thin oxic layer	0610050	5002735	10-Aug-04	LSH-04-T30A	20040645	light brown tails
LSH	T30	20		0610050	5002735	10-Aug-04	LSH-04-T30B	20040646	dark grey tails with black mottles
LSH	T31	5	Similar stamp mill tails to site T30, ~ 30 m south, thicker oxic layer overlying grey tails	0610066	5002690	10-Aug-04	LSH-04-T31A	20040647	brown oxic tails
LSH	T31	30		0610066	5002690	10-Aug-04	LSH-04-T31B	20040648	dark grey tails
LSH	T32	10	Old stamp mill tails again, ~ 30 m south of site T31 (~ 10 m N of log foot bridge over unnamed creek)	0610074	5002642	10-Aug-04	LSH-04-T32A	20040649	brown-grey silty tails
LSH	T32	45		0610074	5002642	10-Aug-04	LSH-04-T32B	20040650	lighr grey tails
LSH	MS1	5	Seal Harbour: marine mud in small bay just west of tails-impacted area (H_2S smell)	0611483	5001547	10-Aug-04	LSH-04-MS1A	20040651	silty w/ some sand, med-brn to brownish black
LSH	MS2	0	Seal Harbour: tails near high-water line, oxidized on surface - black to light grey below, strong H_2S smell	0611618	5001765	10-Aug-04	LSH-04-MS2A	20040652	0.5 cm thick brown oxic layer
LSH	MS2	10		0611618	5001765	10-Aug-04	LSH-04-MS2B	20040653	dark grey / black stinky seds
LSH	MS3	5	Seal Harbour: marine silty clay in intertidal tailings flat	0611653	5001787	10-Aug-04	LSH-04-MS3A	20040654	lt grey w/ dk grey mottles, surf light hard to dig
LSH	MS4	5	Seal Harbour: eastern corner of tails area	0611677	5001812	10-Aug-04	LSH-04-MS4A	20040655	lt brn surf/dk grey below, lots orgs. (rooty)
LSH	MS5	5	Seal Harbour: control site at mouth of East Brook	0612479	5002100	10-Aug-04	LSH-04-MS5A	20040656	dk brn silty mud w/ reddish mottles, lots of roots
LSH	T33	5	Seconfd Pond on West Brook; surface covered with small horsetails, no H_2S smell, no obvious oxic layer	0611018	5002003	10-Aug-04	LSH-04-T33A	20040657	light-grey silty tails
LSH	T33	30		0611018	5002003	10-Aug-04	LSH-04-T33B	20040658	light-grey silty tails
LSH	T34	5	North end of First Pond on West Brook	0611042	5001854	10-Aug-04	LSH-04-T34A	20040659	~1 cm oxid layer over med-grey sandy tails (occ clay lenses)
LSH	T34	30		0611042	5001854	10-Aug-04	LSH-04-T34B	20040660	
LSH	T35	5	Centre of First Pond on West Brook, lots of horsetails	0611130	5001798	10-Aug-04	LSH-04-T35A	20040661	dark grey silty sand tails with brown mottles from 0-25 cm
LSH	T35	20		0611130	5001798	10-Aug-04	LSH-04-T35B	20040662	
LSH	T35	40		0611130	5001798	10-Aug-04	LSH-04-T35C	20040663	
LSH	T36	5	South end of First Pond on West Brook	0611258	5001788	10-Aug-04	LSH-04-T36A	20040664	thin oxic layer (~3cm) overlying light grey tails
LSH	T36	25		0611258	5001788	10-Aug-04	LSH-04-T36B	20040665	

Gold District	Sample Site	Tailings Depth (cm)	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Subsample ID	GSCA Lab ID #	Tailings description
Montague Gold District (MG)									
MG	T1	2.5	Bog N of main tails areasfilled with quartzite boulders and thin tailings; many dead tree roots, horsetails	0458511	4951651	11-Jun-03	MG-03-1A	20030137	fine grey sand intermixed with organics
MG	T1	10		0458511	4951651	11-Jun-03	MG-03-1B	20030138	grey fine clay-like tailings
MG	T2	1	Northern edge of ATV racecourse on tailings with pylons; standing surface waters over brown, clay-rich tails	0458564	4951555	11-Jun-03	MG-03-2A	20030139	brown fine material
MG	T2	5		0458564	4951555	11-Jun-03	MG-03-2B	20030140	grey, clay-like
MG	T3	0	Disturbed, sandy tails on N edge of racetrack area	0458510	4951509	11-Jun-03	MG-03-3A	20030141	brown coarse sand
MG	T3	25		0458510	4951509	11-Jun-03	MG-03-3B	20030142	grey coarse tailings
MG	T4	7.5	Overgrown tailings in wetland adjacent to Mitchell Brook	0458547	4951431	11-Jun-03	MG-03-4A	20030143	below organic layer >5cm, many rootlets, dk brown
MG	T4	20		0458547	4951431	11-Jun-03	MG-03-4B	20030144	wet, coarse grey layer
MG	T5	1	2nd transect over tails; ripped up racetrack area; puddle in hole filled with red mucky water	0458589	4951468	11-Jun-03	MG-03-5A	20030145	loose crumbly dk brn bits then reddish thin layer
MG	T5	6		0458589	4951468	11-Jun-03	MG-03-5B	20030146	coarse grey material
MG	T6	0	Centre of racetrack near sedge islands	0458603	4951511	11-Jun-03	MG-03-6A	20030147	coarse dark brown bits
MG	T6	4		0458603	4951511	11-Jun-03	MG-03-6B	20030148	reddish brown, almost burgandy-rusty color
MG	T6	10		0458603	4951511	11-Jun-03	MG-03-6C	20030149	coarse, grey clay-like material
MG	T7	5	NE edge of racetrack behind ATV jumps with pylons, uniform, med grey tails with no obvious oxidation	0458658	4951523	11-Jun-03	MG-03-7A	20030150	brown with coarse bits graduating to greenish-brn
MG	T7	15		0458658	4951523	11-Jun-03	MG-03-7B	20030151	coarse grey layer
MG	T8	2.5	Hardpan area not far from jumps	0458649	4951486	11-Jun-03	MG-03-8A	20030152	coarse beige-brown hardpan + tails over solid hardpan
MG	T10	5	Dry deep rutted turn of racetrack behind hardpan brook	0458644	4951424	11-Jun-03	MG-03-10A	20030153	dry coarse beige-brown
MG	T10	15		0458644	4951424	11-Jun-03	MG-03-10B	20030154	dark brown material
MG	T11	6	Older tailings south of racetrack, closer to stamp mill sites	0458743	4951415	11-Jun-03	MG-03-11A	20030155	coarse brown material
MG	T11	15		0458743	4951415	11-Jun-03	MG-03-11B	20030156	coarse grey material
MG	T11	25		0458743	4951415	11-Jun-03	MG-03-11C	20030157	grey-green clay-like, fine
MG	T12	2.5	Middle of older tailings, surface is windblown	0458776	4951424	11-Jun-03	MG-03-12A	20030158	beige-brown, coarse windblown tailings
MG	T12	25		0458776	4951424	11-Jun-03	MG-03-12B	20030159	reddish coarse layer
MG	T13	0	Edge of older tailings near edge of sedges	0458818	4951411	11-Jun-03	MG-03-13A	20030160	moist brown coarse layers
MG	T13	15		0458818	4951411	11-Jun-03	MG-03-13B	20030161	coarse dark browm material
MG	T14	10	Disturbed, sandy tails on N edge of racetrack area	0458506	4951490	8-May-03	MG 03 T14A	195981	brown sandy-silty tails
MG	T15	5	Tailings along bank of Mitchell Brook	0458570	4951395	8-May-03	MG 03 T15B	195988	grey sandy tails along streambanks
MG	T1	0-6	Surface tailings that have been disturbed by ATV activity. Sample site is underlain by hardpan material.	0458648	4951466	25-Nov-05	MG05-T01	-	Medium brown tailings with abundant chunks of yellow-green hardpan between 1 mm and 1cm in size
MG	T2	0-5	Surface tailings in middle of ATV / dirtbike racetrack. Sample site is underlain by hardpan material.	0458668	4951507	25-Nov-05	MG05-T02	-	Light brown, medium grained tails with no larger hardpan chunks. The underlying hardpan layer is similar to that of site MG05-T1 but has additional reddish material.
MG	T3	0-15	Sample from the NW corner of the tailings area. These are much finer grained and there is no hardpan developed.	0458559	4951535	25-Nov-05	MG05-T03	-	Sample consists of ~30 cm of alternating brown, red and reddish-brown tails with variable amounts of clay size material and fine grained silt. This material sits on medium grey unoxidized tailings.
MG	T4	15-20	SW corner of the tailings area located ~20 m inside the grassed-over, wetland area alongside Mitchell Brook. Surface is waterlogged.	0458564	4951442	25-Nov-05	MG05-T04	-	15 cm of organic-rich dark-brown organic-rich sediments overlying fine grained silty light grey tails. Sample represents the transition from overlying organics to underlying silty tails.
MG	T1	0-10	Bank for ATV's in south corner of main tails area (in ATV track)	0458640	4951422	3-Nov-06	MG-06-T1	-	olive-green sandy tails, scorodite nearby but not obvious in sample
MG	T2	0-10	Sandy, scorodite-rich tails in hardpan area (~5-10cm of re-worked tails over hardpan)	0458635	4951481	3-Nov-06	MG-06-T2	-	olive-green tails, some coarse chunks
MG	T3	0-10	Top of large tails mound in middle of ATV track	0458605	4951458	3-Nov-06	MG-06-T3	-	sandy, grey-green tails
MG	T4	0-10	Small ATV bank on north side of main tails	0458549	4951514	3-Nov-06	MG-06-T4	-	tails are brown, slightly finer grained, no obvious hardpan
MG	T5	0-10	"New" jump/bank in NE corner of tails	0458578	4951548	3-Nov-06	MG-06-T5	-	grey, unoxidized tails mixed with brown oxic tails, no obvious hardpan, tails seem to be quite fine-grained
MG	T6	0-10	Fine-grained tails in NE corner of tails	0458554	4951580	3-Nov-06	MG-06-T6	-	clay-rich surface in ATV track leading to rock-filled tails area
MG	T7	0-10	Large double-jump with culvert on east edge of main tails near woods	0458620	4951537	3-Nov-06	MG-06-T7	-	olive-green, sandy tails, no hardpan
MG	T8	0-10	Large bank on SE corner of main tails	0458685	4951527	3-Nov-06	MG-06-T8	-	olive-green/brown sandy tails
MG	T9	0-10	Middle of access track on "old" tails	0458747	4951417	3-Nov-06	MG-06-T9	-	dark brown sandy tails
MG	T10	0-10	In center of well-used ATV access track	0458803	4951429	3-Nov-06	MG-06-T10	-	light brown/grey tails with rusty blebs, appears to be some hardpan on surface
MG	T11	0-10	Path leading onto private property, tails visible leading through woods on property, crown boundary line clearly blazed	0458843	4951433	3-Nov-06	MG-06-T11	-	dark brown, sandy tails
MG	T12	0-5	Middle of road near mill foundation	0458754	4951297	3-Nov-06	MG-06-T12	-	light brown tails with dark grey & rusty brown lenses, sample seems heavy, possible sulfides?
MG	T13	0-5	Junction of roads leading past main mill site	0458884	4951363	3-Nov-06	MG-06-T13	-	light-grey, sandy tails, no obvious hardpan/ rusty lenses
MG	T14	0-5	Main access road to mine, ~ 25m away from parking area, on edge of puddle	0458897	4951417	3-Nov-06	MG-06-T14	-	sample is a mix of sandy tails(?) & fine gravel (slate & quartz)

Gold District	Sample Site	Tailings Depth (cm)	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Subsample ID	GSCA Lab ID #	Tailings description
MG	S28	0-5	Overgrown tailings deposit in woods SE of main tailings area and due east of bog along Mitchell Brook	0459005	4951238	27-Aug-07	MG07-S28	20070193	Dark grey sandy tailings buried below spruce needles - appear to have run westward from old stamp mill on hill above wetland.
Mooseland Gold District (MSL)									
MSL	T1	4	Tails ~ 2 m east of Stemshorn mill foundation, moss-covered with scorodite hard pan at surface	0517904	4975793	14-Oct-03	ML-03-T1A	185476	scorodite hard pan
MSL	T1	12		0517904	4975793	14-Oct-03	ML-03-T1B	185477	olive-yellow sandy tails
MSL	T1	34		0517904	4975793	14-Oct-03	ML-03-T1C	185478	white-yellow sandy tails
MSL	T1	45		0517904	4975793	14-Oct-03	ML-03-T1D	185479	tan-colored sandy tails to bedrock
MSL	T2	7	Tails amongst stumps, grassy surface	0517933	4975820	14-Oct-03	ML-03-T2A	185480	coarse, brown sandy tails
MSL	T2	20		0517933	4975820	14-Oct-03	ML-03-T2B	185481	transition to rusty mottled tails (rooty)
MSL	T2	30		0517933	4975820	14-Oct-03	ML-03-T2C	185482	grey, silty, fine tails
MSL	T3	3	Tailings within mill foundation (stamps visible ~ 1.5 m away)	0517979	4975837	14-Oct-03	ML-03-T3A	185483	dark brown oxic tails
MSL	T3	15		0517979	4975837	14-Oct-03	ML-03-T3B	185484	yellow oxic tails with rusty hard pan layers
MSL	T3	25		0517979	4975837	14-Oct-03	ML-03-T3C	185485	sandy light grey unoxidized tails
MSL	T4	4	Tailings delta in Tangier River, abundant grass on surface	0518046	4975899	14-Oct-03	ML-03-T4A	185486	rooty brown soil (plus tails)
MSL	T4	15		0518046	4975899	14-Oct-03	ML-03-T4B	185487	yellow-beige-grey tails
MSL	T4	27		0518046	4975899	14-Oct-03	ML-03-T4C	185488	darker, coarse unoxidized tails
MSL	T5	5	Thin tails on boggy north side	0517945	4975852	14-Oct-03	ML-03-T5A	185489	rusty brown tails
MSL	T5	15		0517945	4975852	14-Oct-03	ML-03-T5B	185490	light grey silty tails
MSL	T5	23		0517945	4975852	14-Oct-03	ML-03-T5C	185491	dark grey silty tails
MSL	T6	5	Thin tails on northwest corner of Stemshorn tails, surface is quite wet, patchy vegetation	0517895	4975825	14-Oct-03	ML-03-T6A	185492	muddy, brown fine tails
MSL	T6	16		0517895	4975825	14-Oct-03	ML-03-T6B	185493	light grey, clay-rich tails
MSL	T7	20	Stemshorn tailings along Tangier River, grassy & overgrown	0517989	4975832	9-May-03	ML-03-T7A	195987	brown sandy tails with roots
MSL	T7	80		0517989	4975832	9-May-03	ML-03-T7B	195990	light grey, sandy tails
Mount Uniacke Gold District (UNI)									
UNI	T1	5	Tailings within PCF crusher mill foundation ~ 1 m from wall	0436680	4975416	16-Jul-03	UNI-03-T1A	135025	organic soil
UNI	T1	10		0436680	4975416	16-Jul-03	UNI-03-T1B	135026	oxic zone
UNI	T1	20		0436680	4975416	16-Jul-03	UNI-03-T1C	135027	grey tails
UNI	T2	20	Tailings ~ 20 m from northwest corner of mill foundation in clearing	0436659	4975450	16-Jul-03	UNI-03-T2A	135028	oxic, rust-brown tails with minor hard pan
UNI	T2	25		0436659	4975450	16-Jul-03	UNI-03-T2B	135029	unoxidized, loosely consolidated
UNI	T2	70		0436659	4975450	16-Jul-03	UNI-03-T2C	135030	black, unoxidized tails
UNI	T3	15	Tailings in waterlogged, swampy area, east side	0436696	4975583	16-Jul-03	UNI-03-T3A	135031	very rooty top 10 cm, then org-rich unoxid tails
UNI	T4	30	Tailings in waterlogged, swampy area	0436686	4975544	16-Jul-03	UNI-03-T4A	135032	~ 20 cm org-rich soil over grey unoxid tails
UNI	T5	25	Middle of swampy area, full of horsetails	0436659	4975526	16-Jul-03	UNI-03-T5A	135033	unoxidized tails below vegetation
UNI	T6	20	West end of swamp amidst horsetails	0436618	4975494	16-Jul-03	UNI-03-T6A	135034	oxic tails
UNI	T6	40		0436618	4975494	16-Jul-03	UNI-03-T6B	135035	unoxidized grey tails
UNI	T7	10	Just outside the east side of the Foster's Crusher foundation	0436250	4975189	16-Jul-03	UNI-03-T7A	135036	light grey tailsd
UNI	T7	25		0436250	4975189	16-Jul-03	UNI-03-T7B	135037	white tails
UNI	T8	2.5	~ 1 m deep pit near Foster's Crusher, in woods east of Mill Pond	0436232	4975229	16-Jul-03	UNI-03-T8A	135038	red, oxic layer under moss
UNI	T8	10		0436232	4975229	16-Jul-03	UNI-03-T8B	135039	white/red laminations
UNI	T8	40		0436232	4975229	16-Jul-03	UNI-03-T8C	135040	unoxidized grey tails
UNI	T8	80		0436232	4975229	16-Jul-03	UNI-03-T8D	135041	dark grey tails
UNI	T9	15	Middle of swamp east of Mill Pond	0436293	4975237	16-Jul-03	UNI-03-T9A	135042	~ 10 cm organics over grey unoxidized tails
UNI	T10	10	Horsetail forest in swamp east of Mill Pond	0436292	4975274	16-Jul-03	UNI-03-T10A	135043	~ 10 cm organics over grey unoxidized tails
UNI	T11	20	Tailings mixed with natural sediments along streambank	0436241	4975313	16-Jul-03	UNI-03-T11A	135044	oxidized horizon
UNI	T11	40		0436241	4975313	16-Jul-03	UNI-03-T11B	135045	dark grey unoxidized tails
UNI	T12	10	Water sampling site draining tails from Foster's Crusher	0436224	4975344	16-Jul-03	UNI-03-T12A	135046	oxid tails +/- organics; overlies unoxidized tails
UNI	T13	5	Tails in rocky stream channel (no water)	0436194	4975421	16-Jul-03	UNI-03-T13A	135047	grey, sandy thin tails
UNI	T14	15	Wetland along unnamed stream, N of Fosters Crusher	0436171	4975467	16-Jul-03	UNI-03-T14A	135048	tails on floodplain - organic-rich layer
UNI	T14	40		0436171	4975467	16-Jul-03	UNI-03-T14B	135049	grey tails
UNI	T15	2	Overgrown tailings in woods east of PCF crusher; sited is heavily wooded, but contains thick tailings deposit	0436879	4975380	16-Jul-03	UNI-03-T15A	135050	dark brown organic soil with pine needles
UNI	T15	10		0436378	4975384	16-Jul-03	UNI-03-T15B	135051	orange, oxic layer
UNI	T15	40		0436378	4975384	16-Jul-03	UNI-03-T15C	135052	massive grey-orange tails
UNI	T15	70		0436378	4975384	16-Jul-03	UNI-03-T15D	135053	red hard pan layer with wood fragments
UNI	T15	90		0436378	4975384	16-Jul-03	UNI-03-T15E	135054	grey tails
UNI	T15	100		0436378	4975384	16-Jul-03	UNI-03-T15F	135055	boulders, organic soil
UNI	T16	25	Tails near mill structure on hill due south of main mine area	0436790	4974976	16-Jul-03	UNI-03-T16A	135056	thin tails (<50cm) over soil in clearcut
UNI	T17	0	Tailings overlain by Fe-oxide biofilm in wetland	0436140	4975480	16-Jul-03	UNI-03-T17A	135057	rust-colored streambank sediment
UNI	T18	5	Tailings flat downslope of mill on access road; hill above is covered in a thin (<1m) tails layer	0436099	4975058	16-Jul-03	UNI-03-T18A	135058	brown, oxidized tails
UNI	T18	15		0436099	4975058	16-Jul-03	UNI-03-T18B	135059	white-red tails
UNI	T18	30		0436099	4975058	16-Jul-03	UNI-03-T18C	135060	grey, unoxidized tails

Gold District	Sample Site	Tailings Depth (cm)	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Subsample ID	GSCA Lab ID #	Tailings description
UNI	T19	5	Tailings south of Montreal Belt, PCF crusher/mill foundation in woods on hill	0436683	4975450	8-May-03	UNI-03-T19A	195978	rusty, oxidized tails
UNI	T19	20		0436683	4975450	8-May-03	UNI-03-T19B	195980	grey, unoxidized zone
UNI	T20	20	Overgrown tails east of dam on Mill Pond near Foster's Crusher, sample from pit overlain w/ pine needles (near Site T8)	0436240	4975218	8-May-03	UNI-03-T20A	195979	Med grey sandy tails with rusty lenses
North Brookfield Gold District (NB)									
NB	T1	5	NW extent of tailings along ATV track in woods	0347038	4919556	12-Jun-03	NB-03-T1A	20030162	intermixing of reddish and brown coarse layers
NB	T1	32.5		0347038	4919556	12-Jun-03	NB-03-T1B	20030163	coarse grey sandy material
NB	T1	37.5		0347038	4919556	12-Jun-03	NB-03-T1C	20030164	coarse bright red sandy material
NB	T2	0	Middle of ATV track farther uphill	0347053	4919550	12-Jun-03	NB-03-T2A	20030165	semi-lithified hard pan
NB	T3	5	Middle of ATV track further down towards main tailings area	0347066	4919528	12-Jun-03	NB-03-T3A	20030166	coarse reddish-brown sandy layer
NB	T3	25		0347066	4919528	12-Jun-03	NB-03-T3B	20030167	coarse grey sandy with red mineral bits
NB	T4	6	Further down ATV track onto beginning of flat tailings area, materia looks to be washed down	0347127	4919477	12-Jun-03	NB-03-T4A	20030168	brownish-grey material
NB	T4	12		0347127	4919477	12-Jun-03	NB-03-T4B	20030169	grey layer with much organics, some red material
NB	T4	20		0347127	4919477	12-Jun-03	NB-03-T4C	20030170	mottled red/brown/grey coarse sandy layer
NB	T5	5	West edge of main tailings area along brook	0347116	4919481	12-Jun-03	NB-03-T5A	20030171	composite brown-grey surface & bright orange layer
NB	T5	15		0347116	4919481	12-Jun-03	NB-03-T5B	20030172	coarse grey layer
NB	T6	2	Edge of main tailing flat on south side	0347121	4919428	12-Jun-03	NB-03-6A	20030173	black-dark brown
NB	T6	10		0347121	4919428	12-Jun-03	NB-03-6B	20030174	coarse grey-greem material
NB	T7	7	Edge of main tailing flat on south side, 25 m E of T6	0347151	4919443	12-Jun-03	NB-03-7A	20030175	coarse beige-brown layer
NB	T7	15		0347151	4919443	12-Jun-03	NB-03-7B	20030176	dark brown layer
NB	T7	19		0347151	4919443	12-Jun-03	NB-03-7C	20030177	grey clay-like material
NB	T8	2.5	Shallow hole near brook, no red oxidized layer, tailngs have been reworked by water	0347133	4919468	12-Jun-03	NB-03-8A	20030178	coarse brown re-worked surf layer with red min bits
NB	T8	10		0347133	4919468	12-Jun-03	NB-03-8B	20030179	fine grey silty layer
NB	T10	5	Wooded area on NE edge of tailings at edge of ATV track	0347207	4919488	12-Jun-03	NB-03-10A	20030180	brown-grey coarse material just below surface
NB	T10	50		0347207	4919488	12-Jun-03	NB-03-10B	20030181	brown (dark brown moist at depth)
NB	T11	5	Middle of first tailings area, edge of puddle	0347202	4919454	12-Jun-03	NB-03-11A	20030182	coarse brown-grey material
NB	T11	20		0347202	4919454	12-Jun-03	NB-03-11B	20030183	finer brown-grey material
NB	T12	6	Edge of extensive puddle in main tailings area	0347187	4919411	12-Jun-03	NB-03-12A	20030184	mottled reddish-brown layer with coarse sand bits
NB	T12	25		0347187	4919411	12-Jun-03	NB-03-12B	20030185	grey, silty sample
NB	T12	50		0347187	4919411	12-Jun-03	NB-03-12C	20030186	grey, sandy tails
NB	T13	5	Edge of racetrack near old railway line	0347239	4919422	12-Jun-03	NB-03-13A	20030187	coarse brown-grey sand
NB	T13	25		0347239	4919422	12-Jun-03	NB-03-13B	20030188	grey silty material
NB	T14	5	Circular ATV racetrack at beginning of tailings	0347259	4919456	12-Jun-03	NB-03-14A	20030189	coarse brown-grey sand
NB	T14	20		0347259	4919456	12-Jun-03	NB-03-14B	20030190	coarse brown-grey sand
NB	T15	5	Near ATV jump on east side of tails	0347226	4919450	12-Jun-03	NB-03-15A	20030191	coarse brown-grey sand
NB	T15	20		0347226	4919450	12-Jun-03	NB-03-15B	20030192	coarse brown-grey with red lens
NB	T16	0	Wide-open tailings flat with small drainage	0347119	4919489	14-May-03	NB-03-T16A	196909	streambank sed, (Fe(OH)3 in streambed
NB	T17	10	"Old tails" in cattail-filled wetland S of Libbey Shaft	0347203	4919673	14-May-03	NB-03-T17A	196910	sandy, dark grey saturated tails
NB	T18	10	East edge of main tailings areas near old railway bed	0347239	4919422	14-May-03	NB-03-T18A	196913	light grey sandy tails with reddish hue
NB	T19	35	In woods immediately south of Libbey Mill structure; ~50 m N of tailings area; tails overlain by rooty forest soil	0347091	4919568	24-Jul-03	NB-03-T19A	195966	med brown, oxic tails beneath ~25 cm of forest soil
NB	T19	55		0347091	4919568	24-Jul-03	NB-03-T19B	195967	grey, sandy tails
NB	T19	67		0347091	4919568	24-Jul-03	NB-03-T19C	195968	brick-red tailings overlying coal-like material
NB	T20	25	East side of main tailings area south of Libbey Mill; tails are ~2 m thick and bottom-out on rocky soil; highly oxidized	0347216	4919471	24-Jul-03	NB-03-T20A	195969	grey, sandy laminated tailings
NB	T20	50		0347216	4919471	24-Jul-03	NB-03-T20B	195970	mixed oxidized and unoxidized tails
NB	T20	75		0347216	4919471	24-Jul-03	NB-03-T20C	195971	lt brown, clay-rich sandy tails
NB	T21	1	King Mine, reprocessed tailings from operations of Gold Bank Resources in 1990s	0347330	4918587	24-Jul-03	NB-03-T21C	195974	highly oxidized tails beneath organic crust
NB	T21	15		0347330	4918587	24-Jul-03	NB-03-T21A	195972	light brown, oxic tails
NB	T21	40		0347330	4918587	24-Jul-03	NB-03-T21B	195973	grey, relatively unoxidized tails
NB	T22	25	"Old tails" in cattail-filled wetland S of Libbey Shaft	0347195	4919675	24-Jul-03	NB-03-T22A	195975	brown, oxidized sandy tailings
NB	T22	52		0347195	4919675	24-Jul-03	NB-03-T22B	195976	light grey, clay-rich layer
NB	T22	75		0347195	4919675	24-Jul-03	NB-03-T22C	195977	light grey, clay-rich sediments below peat (likely not tails)
NB	T1	0-10	SE side of abandoned railway track adjacent to the woods. Materia well disturbed by ATV activity.	0347269	4919428	2-Nov-05	NB05-T01	-	Well oxidized, sandy tails with minor silty-clay-rich layers. Light grey with distinct brick-red grains.
NB	T3	0-10	Sample located at the start of ATV jump, directly within ATV track.	0347237	4919445	2-Nov-05	NB05-T03	-	Tails are well oxidized, sandy and contain minor silty clay. Med grey from 0-10 cm, then reddish-brown below.
NB	T6	0-15	Open area in centre of ATV race track.	0347193	4919470	2-Nov-05	NB05-T06A	-	15 cm of brown-grey sandy tails with minor reddening.
NB	T6	15-35		0347193	4919470	2-Nov-05	NB05-T06B	-	20 cm of mixed red, chocolate brown and reddish brown sandy tailings with an overlying 1 cm thick section of red sandy tails.
NB	T6	35-65		0347193	4919470	2-Nov-05	NB05-T06C	-	>30 cm section of medium grey unoxidized tailings with obvious sulphides present.
NB	T7	0-5	Sample of sandy tailings at the east end of an ATV jump.	0347161	4919462	2-Nov-05	NB05-T07	-	light grey, sandy tailings.

Gold District	Sample Site	Tailings Depth (cm)	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Subsample ID	GSCA Lab ID #	Tailings description
NB	T8	0-10	Sample site is just east of a small drainage coming from the mill structure. The oxidized tails are ~30 cm thick and grade sharply into unoxidized alternating clay- and sand-rich tails below.	0347147	4919469	2-Nov-05	NB05-T08	-	~50:50 medium to light grey clay-rich tails and medium brown sandy tails
NB	T10	0-8	Small roadway leading north of tailings to the mill/roaster.	0347103	4919491	2-Nov-05	NB05-T10	-	Sandy, reddish-brown tails with lenses of black material and minor green hardpan. Unoxidized material at ~15 cm depth.
NB	T11	0-10	Small ATV track immediately west of the mill/roaster.	0347045	4919566	2-Nov-05	NB05-T11A	-	brick-red, sandy tails (hematite from roaster)
NB	T11	10-20		0347045	4919566	2-Nov-05	NB05-T11B	-	yellowish-green hardpan tails

Salmon River (Dufferin) Gold District (SR)

Gold District	Sample Site	Tailings Depth (cm)	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Subsample ID	GSCA Lab ID #	Tailings description
SR	T1	25	In drainage (dry) on southern edge of Dufferin Mill fdn; grenn, scorodite-rich pile ~15 m west	0547406	4978724	26-Aug-03	SR-03-T1A	185416	light grey-brown tails
SR	T2	20	In drainage southeast of Dufferin mill site, overgrown with ferns and sedge grass	0547631	4978702	26-Aug-03	SR-03-T2A	185417	mottled grey/rusty brown tails
SR	T2	35		0547631	4978702	26-Aug-03	SR-03-T2B	185418	rusty brown tails
SR	T2	60		0547631	4978702	26-Aug-03	SR-03-T2C	185419	light grey tails
SR	T3	5	Tails in open area of wetland southeast of Dufferin mill (~ 5 m east of twin drill casings)	0547688	4978723	26-Aug-03	SR-03-T3A	185420	rusty red, rooty material
SR	T3	15		0547688	4978723	26-Aug-03	SR-03-T3B	185421	light grey tails
SR	T4	15	Well-saturated tails in wetland; overgrown with grass	0547735	4978714	26-Aug-03	SR-03-T4A	185422	~ 10 cm soil overlying dark grey tails
SR	T5	40	Tails in middle of swamp, just before drainage enters woods	0547827	4978650	26-Aug-03	SR-03-T5A	185423	thick (>30 cm)org overlying grey unoxid tails
SR	T6	5	Streambank of brook running north to south (East Brook)	0547822	4978515	26-Aug-03	SR-03-T6A	185424	tailings in streambank (includes sig organics)
SR	T7	30	Modern (1990-2002) gravity tailings at Dufferin Resources Property (reprocessed using flotation from 2005-2008)	0547881	4980030	26-Aug-03	SR-03-T7A	185425	light grey, sandy, oxidized tailings
SR	T8	5	Tailings and hardpan adjacent to 1890's stamp mill near river	0547217	4977883	26-Aug-03	SR-03-T8C	185428	light brown, sandy tails
SR	T8	20		0547217	4977883	26-Aug-03	SR-03-T8A	185426	rusty-brown hard pan layer
SR	T8	80		0547217	4977883	26-Aug-03	SR-03-T8B	185427	clasts of scorodite (visible in tails)
SR	T9	30	Marshy tails just south of road (standing water all around)	0547235	4977822	26-Aug-03	SR-03-T9A	185429	~ 25 cm organics over coarse olive-grey tails
SR	T10	10	Tails in swampy area along Salmon River, S of mill site	0547249	4977798	26-Aug-03	SR-03-T10A	185430	~ 5 cm of organics overlying olive-grey tails
SR	T11	5	Tails on bank of Salmon River	0547207	4977764	26-Aug-03	SR-03-T11A	185431	rooty, olive-brown tails, organic-rich
SR	T12	5	Stream sediments at point where red, BIOS-filled brook drains to river	0547201	4977796	26-Aug-03	SR-03-T12A	185432	organic-rich stream sediment
SR	T13	15	Tails in marshy area filled with boulders, tails are quite thin	0547247	4977743	26-Aug-03	SR-03-T13A	185433	light olive-brown tails
SR	T14	10	Mossy tailings flat on east edge of tails, some hard pan material on surface	0547323	4977737	26-Aug-03	SR-03-T14A	185434	orange-brown, oxic tails
SR	T14	47.5		0547323	4977737	26-Aug-03	SR-03-T14B	185435	bright, rusty-red tails
SR	T14	60		0547323	4977737	26-Aug-03	SR-03-T14C	185436	light-grey unoxidized tails
SR	T15	5	Tails in bank of Salmon River near Murphy's Cottages	0547456	4977056	26-Aug-03	SR-03-T15A	185437	grey with oxic lenses, appear extensive, thin
SR	T16	10	Sloped wetland east of Duffferin mill	0547639	4978692	9-May-03	SR-03-T16A	195995	sampled grey tails from skidder track near woods
SR	T17	10	Tails from 1880-90s mill in direct contact with Salmon River	0547241	4977815	9-May-03	SR-03-T17A	195994	Brown-grey oxic tailings in boggy area

Upper Seal Harbour Gold District (USH)

Gold District	Sample Site	Tailings Depth (cm)	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Subsample ID	GSCA Lab ID #	Tailings description
USH	T1	5	Richardson stamp mill foundation (looks to be tailings from area of amalgamation plates)	0606979	5006428	14-Sep-03	USH-03-T1A	185459	grey-black tails
USH	T1	15		0606979	5006428	14-Sep-03	USH-03-T1B	185460	reddish-brown tails
USH	T2	5	Near base of mill foundation in drainage from amalgamation plates (adjacent water has lots of Fe-oxides, horsetails)	0606991	5006419	14-Sep-03	USH-03-T2A	185461	organic-rich, rooty coarse tails
USH	T2	15		0606991	5006419	14-Sep-03	USH-03-T2B	185462	dark grey, sulfide-rich tails
USH	T3	5	Between mill site and road	0607003	5006374	14-Sep-03	USH-03-T3A	185463	rocky soil with some sulfide
USH	T4	5	Tailings on Gold Brook floodplain ~ 50 m south of road, well saturated, sparse vegetation	0607016	5006308	14-Sep-03	USH-03-T4A	185464	muddy brown tails
USH	T4	20		0607016	5006308	14-Sep-03	USH-03-T4B	185465	dark grey, sandy tails
USH	T5	15	Raised floodplain along Gold Brook, surface covered with broken hardpan, tails banded	0607066	5006273	14-Sep-03	USH-03-T5A	185466	olive tails
USH	T5	20		0607066	5006273	14-Sep-03	USH-03-T5B	185467	grey tails
USH	T6	5	Raised floodplain, very little oxidation, near wetland bend in river	0607130	5006098	14-Sep-03	USH-03-T6A	185468	dark grey tails
USH	T7	5	Raised bank along Goold Brook	0607012	5005971	14-Sep-03	USH-03-T7A	185469	dark grey-brown tails
USH	T8	10	Thick tails in middle of brook covered with moss & horsetails (strong H_2S smell - bubbles emanating from lower oxidized zone)	0607013	5005773	14-Sep-03	USH-03-T8A	185470	brown-olive, semi-hard pan
USH	T8	35		0607013	5005773	14-Sep-03	USH-03-T8B	185471	dark grey, stinky tails
USH	T9	20	Tailings covered streambank along Gold Brook (took photo of Boston-Richardson headframe in distance)	0607063	5005406	14-Sep-03	USH-03-T9A	185472	dark brown tailis overlying 10 cm unoxidized grey tails
USH	T10	5	Tails in horsetail-filled oxbow pond along Gold Brook	0607107	5005121	14-Sep-03	USH-03-T10A	185473	organic-rich sample
USH	T11	5	Richardson stamp mill foundation (Au & Hg visible in tails), ~ 1 m from base of stamps	0607008	5006405	21-May-03	USH-03-T11A	196901	grey, sandy tails
USH	T12	5	Mill foundation (Au & Hg visible in tails), ~ 10 m from lake edge)	0606991	5006414	21-May-03	USH-03-T12A	196903	sampled in horsetail pond
USH	T13	5	Downstream from mill along Gold Brook	0607063	5005827	21-May-03	USH-03-T13A	196902	voluminous tails
USH	P3-SHR	5	Soft sediments in small pond immediately upstream of rapids leading into Seal Harbour Lake (DFO peeper site)	0609080	5003612	13-May-04	USH-04-P3-SHR	20040640	organic-rich mud +/- tails

Gold District	Sample Site	Tailings Depth (cm)	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Subsample ID	GSCA Lab ID #	Tailings description
USH	T2-04	10	Moss-covered floodplain just above rapids leading into Seal Harbour Lake	0609100	5003605	13-May-04	USH-04-T2A	20040641	Grey-brn tails with visible sulfides
USH	P4-GB	5	Middle of Gold Brook, ~ 30 m south of road (DFO peeper site)	0607049	5006309	13-May-04	USH-04-P4-GB	20040642	sandy, sulfide-rich tails (2 vials)
USH	T3-04	14	Tails from East Gold Brook mill	0607187	5006245	13-May-04	USH-04-T3A	20040643	rusty, oxic
USH	T3-04	25		0607187	5006245	13-May-04	USH-04-T3B	20040644	grey, unoxidized (reduced)
USH	T39	5	Saturated tails on Gold Brook floodplain, sparse vegetation	0607729	5004645	13-Aug-04	USH-04-T39A	20040666	dk brn - grey coarse sand
USH	T40	0	Wide-open tails flat on Gold Brook with slowly flowing water	0607543	5004870	13-Aug-04	USH-04-T40A	20040667	dk brn - grey coarse sand
USH	T40	15		0607543	5004870	13-Aug-04	USH-04-T40B	20040668	grey, coarse sand
USH	T41	0	Streambank tails on Gold Brook, moss on surface	0607371	5005071	13-Aug-04	USH-04-T41A	20040669	coarse, mossy tails
USH	T41	20		0607371	5005071	13-Aug-04	USH-04-T41B	20040670	grey, silty sand
Whiteburn Gold District (WB)									
WB	T1	90	In swamp SW of Crocker Mill, augered through peat	0334418	4908064	22-Jul-03	WHI-03-T1A	135061	dark grey, clay-rich sediments [not tailings]
WB	T2	100	In swamp SW of Crocker Mill, augered through peat	0334451	4908062	22-Jul-03	WHI-03-T2A	135062	seds start @ 80cm, still present @ 150cm [not tailings]
WB	T3	70	In swamp SW of Crocker Mill, augered through peat	0334487	4908048	22-Jul-03	WHI-03-T3A	135063	clay-rich with minor silt bands, dark grey [not tailings]
WB	T4	0	Streambank on McBride Brook near confluence	0334644	4907956	22-Jul-03	WHI-03-T4A	135064	light-grey, coarse tails
WB	T5	0	Streambank of Butler Brook ~10 m east of Crocker Mill	0334456	4908192	22-Jul-03	WHI-03-T5A	135065	very coarse tails, light grey
WB	T6	7	Near Parker Douglas Mill, along Mill Pond; dug pit near northeast corner of mill foundation	0334557	4908614	22-Jul-03	WHI-03-T6A	135066	rusty, oxic zone
WB	T6	50		0334557	4908614	22-Jul-03	WHI-03-T6B	135067	light-grey, coarse tails
WB	T6	110		0334557	4908614	22-Jul-03	WHI-03-T6C	135068	orange-brown oxic tails, organic-rich
WB	T7	10	Along brook amidst alders, (approx. 40 m southeast of site T6)	0334592	4908596	22-Jul-03	WHI-03-T7A	135069	sulfide-rich tails, (sulfides occur in thick lenses)
WB	T8	5	Overgrown tails in McBride Brook amongst alders	0334620	4908564	22-Jul-03	WHI-03-T8A	135070	coarse, light-grey tails
WB	T8	10		0334620	4908564	22-Jul-03	WHI-03-T8B	135071	fine, clay-rich grey tails
WB	T9	20	Overgrown tails in McBride Brook amongst alders	0334711	4908487	22-Jul-03	WHI-03-T9A	135072	coarse, light-grey tails
WB	T9	45		0334711	4908487	22-Jul-03	WHI-03-T9B	135073	fine, clay-rich grey tails
WB	T10	65	Tails along McBride Brook in alders, v. little water	0334681	4908385	22-Jul-03	WHI-03-T10A	135074	grey, fine/coarse tails below ~ 50 cm organic layer
WB	T11	10	McBride Brook just downstream of Mill Pond	0334586	4908608	14-May-03	WHI-03-T11A	196908	fairly coarse tails, swampy area
WB	T12	10	Overgrown tails in McBride Brook amongst alders	0334606	4908552	14-May-03	WHI-03-T12A	196915	grey, clay-rich tails
WB	T1	5-10	Overgrown tailings adjacent to Parker-Douglas mill foundation, alongside Mill Pond. Pipe visible in sampling pit.	0334556	4908611	2-Nov-05	WB05-T01	-	Medium grey - rust brown sandy tails

Gold District	Sample Site	Tailings Depth (cm)	Total carbon LECO (% dry wt.)	Organic carbon LECO (% dry wt.)	Inorganic carbon LECO (% dry wt.)	Ag ICP-MS (µg/kg) DL = 2	Al ICP-MS (% dry wt.) 0.01	As ICP-MS (mg/kg) 0.1	Au ICP-MS (µg/kg) 0.2	B ICP-MS (mg/kg) 1	Ba ICP-MS (mg/kg) 0.5	Be ICP-MS (mg/kg) 0.1	Bi ICP-MS (mg/kg) 0.02	Ca ICP-MS (% dry wt.) 0.01	Cd ICP-MS (mg/kg) 0.01	Ce ICP-MS (mg/kg) 0.1	Co ICP-MS (mg/kg) 0.1	Cr ICP-MS (mg/kg) 0.5	Cs ICP-MS (mg/kg) 0.02	Cu ICP-MS (mg/kg) 0.01
Caribou Gold District (CAR)																				
CAR	T1	0-5	0.65	0.04	0.61	769	0.06	61300	2058	<1	10.3	<0.1	2.57	<0.01	0.05	19.0	0.4	0.8	0.20	2.92
CAR	T2	0-4	4.16	1.59	2.57	7650	0.14	250400	41341	<1	3.8	0.1	13.66	0.02	0.44	2.9	394.6	2.1	0.10	126.98
CAR	T3	0-8	0.12	0.09	0.03	149	0.23	12200	373	<1	5.3	0.1	0.57	0.08	0.20	13.2	4.4	2.6	0.17	18.39
CAR	T4	0-4	0.50	0.02	0.48	207	0.44	6746	1293	<1	5.5	<0.1	0.36	0.83	0.32	12.0	7.8	4.5	0.15	22.98
CAR	T5	2-9	0.07	0.06	0.01	1334	0.10	47700	2011	1	5.5	<0.1	4.03	0.01	0.04	12.2	0.8	1.9	0.16	18.21
Cochrane Hill Gold District (CH)																				
CH	T1	10	0.30	0.30	0.00	57	1.83	7964	68	1	83.9	na	0.60	0.21	2.29	na	22.3	42.2	na	19.33
CH	T1	27	0.34	0.34	0.00	54	1.75	11197	77	< 1	80.7	na	0.54	0.21	1.85	na	11.2	38.7	na	16.66
CH	T1	50	0.36	0.29	0.07	81	1.80	7708	75	< 1	88.3	na	0.58	0.44	1.99	na	15.6	41.7	na	16.77
CH	T2	15	0.21	0.21	0.00	56	1.65	4415	205	< 1	77.7	na	0.27	0.11	0.42	na	4.9	33.9	na	13.41
CH	T2	32	0.21	0.21	0.00	66	1.57	2375	182	< 1	63.8	na	0.34	0.19	0.40	na	8.7	30.6	na	29.41
CH	T2	50	0.26	0.25	0.01	61	1.88	4090	174	1	87.1	na	0.28	0.34	1.14	na	22.3	35.7	na	20.92
CH	T3	10	0.18	0.18	0.00	44	1.61	2110	105	< 1	73.9	na	0.16	0.11	0.35	na	6.0	33.3	na	10.95
CH	T3	22	0.26	0.26	0.00	41	1.77	1940	101	< 1	78.6	na	0.21	0.25	0.72	na	7.2	40.1	na	18.65
CH	T3	36	0.17	0.17	0.00	40	1.56	844	77	< 1	69.0	na	0.22	0.11	0.56	na	7.1	31.9	na	17.87
CH	T3	50	0.15	0.15	0.00	43	1.73	392	71	< 1	81.9	na	0.23	0.28	1.77	na	30.6	35.7	na	15.11
CH	T3	70	0.30	0.22	0.08	48	1.84	781	57	1	83.8	na	0.22	0.54	0.47	na	10.6	41.3	na	13.29
CH	T4	20	0.25	0.25	0.00	73	1.66	6604	195	< 1	75.7	na	0.41	0.11	0.69	na	3.6	38.6	na	16.70
CH	T4	35	0.19	0.19	0.00	31	1.50	1768	72	< 1	66.0	na	0.12	0.10	0.28	na	7.4	30.0	na	12.75
CH	T4	60	0.30	0.30	0.00	91	1.97	4536	270	< 1	80.6	na	0.58	0.22	1.52	na	25.2	43.9	na	23.34
CH	T4	80	0.46	0.46	0.00	116	2.15	2449	228	< 1	78.8	na	0.60	0.26	1.48	na	29.0	40.6	na	36.33
CH	T5	30	0.20	0.20	0.00	36	1.56	5338	118	< 1	70.9	na	0.25	0.09	0.48	na	3.1	31.3	na	10.90
CH	T5	64	0.30	0.30	0.00	59	1.68	3832	163	< 1	66.7	na	0.39	0.16	0.99	na	16.4	36.0	na	16.90
CH	T5	85	0.32	0.32	0.00	85	1.91	3205	140	1	86.8	na	0.46	0.30	1.61	na	19.1	38.5	na	21.49
CH	T6	16	0.35	0.35	0.00	52	1.87	2029	130	< 1	83.6	na	0.24	0.08	1.05	na	12.9	40.0	na	18.05
CH	T6	29	0.38	0.39	0.00	68	1.86	1986	149	< 1	73.1	na	0.38	0.19	0.70	na	15.4	41.4	na	20.48
CH	T6	46	0.53	0.53	0.00	43	1.86	1031	20	< 1	65.0	na	0.18	0.11	0.63	na	18.2	32.5	na	12.41
CH	T6	60	0.27	0.27	0.00	56	1.70	1275	168	< 1	76.6	na	0.23	0.61	0.68	na	16.9	33.8	na	13.73
CH	T7	10	0.17	0.17	0.00	38	1.64	3465	65	< 1	68.7	na	0.18	0.10	0.20	na	4.1	33.6	na	12.05
CH	T7	24	0.19	0.19	0.00	57	1.59	2924	108	1	63.4	na	0.43	0.11	0.58	na	3.6	28.9	na	13.60
CH	T7	26	0.19	0.19	0.00	185	1.50	4348	4013	1	51.6	na	0.20	0.09	1.10	na	4.8	27.9	na	17.53
CH	T7	67	0.23	0.23	0.00	59	1.67	12113	181	1	61.2	na	0.45	0.11	1.88	na	19.8	39.1	na	19.35
CH	T8	7	0.20	0.19	0.01	37	1.61	3870	77	< 1	68.9	na	0.23	0.09	0.18	na	3.8	31.5	na	8.31
CH	T8	54	0.19	0.18	0.01	32	1.55	1329	45	< 1	63.9	na	0.09	0.14	1.31	na	8.2	31.0	na	10.29
CH	T8	64	0.26	0.19	0.07	32	1.56	1584	92	< 1	65.6	na	0.18	0.24	0.73	na	7.2	31.9	na	8.18
CH	T9	13	0.49	0.41	0.08	95	1.67	6801	231	1	68.5	na	0.54	0.14	0.81	na	5.1	39.6	na	20.55
CH	T9	22	0.24	0.24	0.00	45	1.75	3822	143	< 1	71.9	na	0.23	0.13	0.64	na	5.9	34.6	na	12.63
CH	T9	55	0.37	0.26	0.11	77	1.86	2378	146	1	80.2	na	0.32	0.65	1.49	na	10.0	39.7	na	24.77
CH	T10	13	0.47	0.45	0.02	3543	0.25	40667	15647	< 1	23.4	na	9.55	0.05	0.35	na	1.7	7.4	na	27.37
CH	T10	21	0.75	0.75	0.00	3537	0.07	178200	25421	< 1	11.1	na	15.17	0.01	0.58	na	100.8	< .5	na	94.45
CH	T11	10	1.57	1.57	0.00	244	1.59	8231	1127	< 1	111.7	na	0.92	0.17	0.84	na	2.4	28.6	na	23.16
CH	T11	16	0.48	0.39	0.09	187	1.57	13554	1397	< 1	68.2	na	0.70	0.14	0.42	na	1.5	29.0	na	5.62
CH	T11	22	0.39	0.38	0.01	154	1.87	3241	864	< 1	67.4	na	0.61	0.12	2.67	na	10.1	31.7	na	31.08
CH	T12	3	2.43	2.06	0.37	131	1.55	32741	623	< 1	101.1	na	0.55	0.33	0.84	na	4.9	26.5	na	13.60
CH	T12	10	3.47	3.17	0.30	142	1.33	275	460	< 1	46.0	na	0.36	0.15	0.19	na	9.8	22.3	na	16.23
CH	T13	8	0.34	0.29	0.05	82	1.73	4469	146	< 1	78.1	na	0.32	0.09	1.23	na	10.0	41.7	na	15.53
CH	T14	0	2.99	2.68	0.31	349	1.61	5618	2299	< 1	63.0	na	1.03	0.12	4.50	na	15.8	28.3	na	32.04
CH	T15	16	0.52	0.25	0.27	67	1.80	5967	128	1	77.5	na	0.37	0.19	1.47	na	10.4	42.2	na	17.26
CH	T15	26	3.62	3.31	0.31	176	1.91	3761	654	2	64.1	na	0.60	0.17	0.57	na	2.5	28.8	na	17.55

Gold District	Sample Site	Tailings Depth (cm)	Total carbon LECO (% dry wt.)	Organic carbon LECO (% dry wt.)	Inorganic carbon LECO (% dry wt.)	Ag ICP-MS (µg/kg) DL = 2	Al ICP-MS (% dry wt.) 0.01	As ICP-MS (mg/kg) 0.1	Au ICP-MS (µg/kg) 0.2	B ICP-MS (mg/kg) 1	Ba ICP-MS (mg/kg) 0.5	Be ICP-MS (mg/kg) 0.1	Bi ICP-MS (mg/kg) 0.02	Ca ICP-MS (% dry wt.) 0.01	Cd ICP-MS (mg/kg) 0.01	Ce ICP-MS (mg/kg) 0.1	Co ICP-MS (mg/kg) 0.1	Cr ICP-MS (mg/kg) 0.5	Cs ICP-MS (mg/kg) 0.02	Cu ICP-MS (mg/kg) 0.01
CH	T16	7	1.09	1.09	0.00	263	1.55	4212	1101	1	80.5	na	0.58	0.25	0.94	na	45.8	27.3	na	41.57
CH	T16	20	0.45	0.36	0.09	96	1.64	1333	422	< 1	66.6	na	0.28	0.14	0.46	na	2.5	29.7	na	30.68
East Rawdon Gold District (RAW)																				
RAW	T1	15	0.17	0.14	0.03	229	0.92	1593	557	1	37.2	na	0.64	0.20	0.26	na	18.2	11.9	na	112.87
RAW	T1	40	0.26	0.02	0.24	164	0.54	706	1696	1	44.2	na	0.41	0.56	0.06	na	5.2	6.1	na	37.57
RAW	T2	10	0.18	0.15	0.03	171	0.75	1807	385	1	61.6	na	0.56	0.12	0.21	na	14.1	9.7	na	102.44
RAW	T2	60	0.29	0.03	0.26	118	0.61	1364	201	1	53.5	na	0.59	0.54	0.10	na	7.3	8.0	na	59.85
RAW	T3	10	0.32	0.05	0.27	194	0.83	1281	530	1	47.3	na	0.57	0.68	0.20	na	18.3	12.4	na	96.42
RAW	T3	30	0.07	0.06	0.01	369	0.59	10858	714	< 1	102.2	na	1.18	0.21	0.09	na	53.7	7.2	na	63.75
RAW	T3	50	0.18	0.04	0.14	144	0.58	1904	284	1	64.6	na	0.68	0.39	0.12	na	11.4	6.5	na	76.11
RAW	T4	10	0.09	0.05	0.04	229	0.51	1019	237	< 1	45.5	na	1.00	0.17	0.24	na	7.5	6.3	na	71.03
RAW	T4	70	0.18	0.04	0.14	128	0.75	1186	116	1	44.6	na	0.78	0.35	0.13	na	6.6	8.8	na	39.73
RAW	T5	20	0.05	0.05	0.00	329	0.68	7122	448	< 1	60.7	na	1.66	0.08	0.27	na	37.4	9.6	na	97.20
RAW	T5	50	0.05	0.03	0.02	705	0.60	3639	281	1	41.1	na	2.97	0.06	0.07	na	25.5	7.3	na	41.40
RAW	T5	80	0.04	0.02	0.02	324	0.52	780	182	1	42.7	na	1.19	0.07	0.05	na	15.6	7.3	na	31.79
RAW	T5	110	0.03	0.03	0.00	348	0.72	1041	181	1	33.1	na	1.60	0.07	0.45	na	22.2	6.7	na	233.99
RAW	T5	140	0.33	0.02	0.31	79	0.54	659	148	1	37.8	na	0.49	0.75	0.08	na	5.7	6.2	na	36.82
RAW	T5	170	0.56	0.09	0.47	207	0.91	67	370	< 1	32.5	na	0.71	1.42	0.26	na	8.6	11.9	na	87.81
RAW	T6	20	0.03	0.03	0.00	203	0.50	5344	485	1	37.2	na	1.04	0.06	0.01	na	15.0	7.0	na	7.90
RAW	T6	50	0.02	0.02	0.00	215	0.30	3945	488	1	20.8	na	1.16	0.04	0.01	na	23.1	5.0	na	13.01
RAW	T8	25	0.27	0.05	0.22	418	0.93	2218	1521	1	21.0	na	1.02	0.68	0.23	na	20.3	13.6	na	121.35
RAW	T8	40	0.19	0.04	0.15	243	0.90	1396	908	1	28.4	na	0.74	0.60	0.18	na	15.5	12.9	na	86.23
RAW	T9	10	0.21	0.18	0.03	221	0.86	1656	428	1	39.1	na	0.73	0.16	0.22	na	14.7	11.5	na	90.66
RAW	T9	50	0.48	0.08	0.40	243	0.86	1518	1096	1	12.4	na	0.77	0.87	0.19	na	15.3	11.2	na	77.26
RAW	T10	30	0.15	0.14	0.01	173	1.05	211	116	< 1	10.0	na	0.36	0.15	0.15	na	11.9	14.2	na	104.26
RAW	T11	15	0.61	0.48	0.13	111	0.84	58	309	1	44.3	na	0.35	0.19	0.24	na	4.1	9.9	na	44.20
RAW	T11	40	0.07	0.07	0.00	101	1.09	304	210	1	12.9	na	0.31	0.13	0.24	na	13.6	16.8	na	68.53
RAW	T12	10	0.13	0.08	0.05	232	0.81	4606	717	< 1	77.1	na	0.64	0.18	0.28	na	22.3	12.0	na	93.69
RAW	T12	40	0.34	0.12	0.22	245	0.73	635	214	1	20.4	na	0.89	0.30	0.26	na	6.9	10.9	na	86.76
RAW	T13	10	0.26	0.19	0.07	243	0.81	81	801	< 1	8.6	na	0.55	0.12	0.32	na	8.9	11.1	na	193.12
Goldenville Gold District (GD)																				
GD	T1	2	0.21	0.21	0.00	356	0.53	21527	747	< 1	18.2	na	1.16	0.07	0.08	na	3.4	8.0	na	12.74
GD	T1	10	0.28	0.22	0.06	408	1.10	15031	387	1	37.2	na	1.27	0.08	0.12	na	4.4	16.4	na	12.67
GD	T1	13	0.45	0.30	0.15	562	0.65	23917	1155	< 1	45.6	na	2.18	0.12	0.09	na	7.6	11.5	na	14.86
GD	T2	1	0.09	0.09	0.00	591	0.44	29196	518	< 1	13.0	na	2.39	0.07	0.09	na	1.6	7.8	na	6.82
GD	T2	3.5	0.12	0.07	0.05	530	0.42	39382	744	< 1	14.7	na	2.08	0.02	0.15	na	1.6	6.8	na	15.18
GD	T2	8	0.04	0.03	0.01	68	0.56	6630	15	< 1	12.0	na	0.27	0.07	0.08	na	1.8	8.8	na	4.02
GD	T3	1	0.20	0.19	0.01	73	0.57	2942	182	< 1	19.5	na	0.31	0.13	0.10	na	4.9	8.3	na	17.38
GD	T3	21	0.09	0.07	0.02	72	0.69	858	20	< 1	17.3	na	0.25	0.20	0.15	na	7.5	10.3	na	29.80
GD	T4	1	0.58	0.50	0.08	74	0.53	3766	116	< 1	16.3	na	0.26	0.10	0.09	na	2.5	6.8	na	10.18
GD	T5	1	0.17	0.06	0.11	21	0.56	796	9	< 1	13.2	na	0.13	0.40	0.05	na	4.0	8.3	na	8.88
GD	T5	8	0.27	0.16	0.11	109	0.99	1630	84	< 1	24.2	na	0.37	0.61	0.26	na	12.3	14.2	na	34.52
GD	T6	1	0.16	0.16	0.00	180	0.91	12600	344	< 1	21.1	na	0.62	0.20	0.28	na	7.1	11.2	na	16.32
GD	T6	17	0.06	0.06	0.00	103	0.66	6239	813	< 1	13.3	na	0.31	0.11	0.04	na	3.2	8.5	na	8.90
GD	T7	1	0.13	0.12	0.01	430	0.53	21299	315	< 1	15.4	na	1.90	0.07	0.10	na	3.9	8.6	na	10.56
GD	T7	14	0.07	0.07	0.00	110	0.58	7424	134	< 1	15.8	na	0.40	0.09	0.02	na	1.5	7.8	na	4.33
GD	T8	1	0.13	0.13	0.00	182	1.13	4087	231	< 1	22.0	na	0.54	0.16	0.17	na	25.7	14.2	na	37.43
GD	T8	15	0.15	0.14	0.01	409	0.58	6469	1976	< 1	13.8	na	0.97	0.09	0.17	na	17.9	8.4	na	14.52
GD	T9	1	0.16	0.14	0.02	202	0.66	10558	803	1	14.6	na	0.72	0.11	0.08	na	5.1	9.2	na	13.85
GD	T9	13	0.21	0.20	0.01	190	1.34	4302	259	1	36.7	na	0.76	0.13	0.41	na	16.8	18.8	na	6.46
GD	T10	1	0.12	0.12	0.00	119	0.59	9217	113	< 1	12.8	na	0.49	0.07	0.06	na	2.4	7.1	na	8.13
GD	T10	8	0.07	0.07	0.00	96	0.66	2609	68	< 1	16.7	na	0.33	0.09	0.09	na	9.0	8.9	na	9.90
GD	T10	20	0.09	0.07	0.02	271	0.45	47414	1252	< 1	18.0	na	0.85	0.01	0.21	na	2.5	11.7	na	12.24
GD	T11	1	0.19	0.08	0.11	56	0.64	1090	61	< 1	16.3	na	0.20	0.49	0.13	na	8.1	9.5	na	25.96
GD	T11	10	0.13	0.06	0.07	84	0.66	1530	51	< 1	17.7	na	0.21	0.28	0.09	na	22.7	10.1	na	22.13
GD	T12	1	0.43	0.13	0.30	135	1.36	2846	379	< 1	33.7	na	0.43	0.94	0.11	na	9.2	16.6	na	27.27
GD	T12	5	0.16	0.12	0.04	143	1.29	3134	170	1	40.9	na	0.46	0.32	0.15	na	10.5	17.4	na	30.98
GD	T12	19	0.40	0.17	0.23	107	1.52	1475	117	1	45.4	na	0.37	0.74	0.10	na	9.5	21.2	na	21.77

Gold District	Sample Site	Tailings Depth (cm)	Total carbon LECO (% dry wt.)	Organic carbon LECO (% dry wt.)	Inorganic carbon LECO (% dry wt.)	Ag ICP-MS (µg/kg) DL = 2	Al ICP-MS (% dry wt.) 0.01	As ICP-MS (mg/kg) 0.1	Au ICP-MS (µg/kg) 0.2	B ICP-MS (mg/kg) 1	Ba ICP-MS (mg/kg) 0.5	Be ICP-MS (mg/kg) 0.1	Bi ICP-MS (mg/kg) 0.02	Ca ICP-MS (% dry wt.) 0.01	Cd ICP-MS (mg/kg) 0.01	Ce ICP-MS (mg/kg) 0.1	Co ICP-MS (mg/kg) 0.1	Cr ICP-MS (mg/kg) 0.5	Cs ICP-MS (mg/kg) 0.02	Cu ICP-MS (mg/kg) 0.01
GD	T13	1	0.55	0.37	0.18	51	0.67	1846	238	< 1	16.9	na	0.18	0.68	0.10	na	5.3	8.0	na	17.66
GD	T13	6	0.36	0.25	0.11	141	1.18	4712	260	< 1	37.7	na	0.43	0.74	0.23	na	12.1	15.1	na	32.80
GD	T13	8	0.46	0.20	0.26	110	1.49	686	164	1	49.0	na	0.36	0.74	0.11	na	7.6	19.7	na	22.67
GD	T15	1	0.14	0.14	0.00	231	0.31	39662	322	< 1	11.2	na	1.27	0.03	0.04	na	2.0	4.2	na	12.06
GD	T15	5	0.13	0.13	0.00	53	0.06	3689	171	< 1	3.9	na	0.25	<0.01	<0.01	na	0.5	0.5	na	2.23
GD	T15	8	0.45	0.25	0.20	4263	0.07	33264	16990	< 1	16.0	na	21.69	0.01	0.12	na	8.1	5.0	na	76.22
GD	T16	4	0.19	0.15	0.04	125	0.72	8256	118	1	17.5	na	0.53	0.11	0.12	na	6.7	10.0	na	9.08
GD	T16	8	1.02	0.62	0.40	4774	0.04	29678	9414	< 1	6.8	na	15.05	<0.01	0.16	na	19.1	7.6	na	138.33
GD	T17	1	0.95	0.74	0.21	7314	0.02	30430	5509	< 1	13.7	na	21.54	<0.01	0.29	na	4.1	5.0	na	136.85
GD	T1	0-5	0.20	0.17	0.03	8085	0.04	193200	7609	<1	8.7	<0.1	19.25	<0.01	0.41	5.3	5.4	4.3	0.18	198.39
GD	T2	0-5	0.15	0.14	0.01	217	0.64	13300	177	<1	12.2	<0.1	0.75	0.08	0.13	20.1	3.1	7.8	0.77	11.52
GD	T3	0-5	0.12	0.12	0.00	2151	0.15	86600	3441	<1	16.5	<0.1	7.24	0.01	0.07	14.5	21.2	5.2	0.43	49.87
GD	T4	0-5	0.12	0.11	0.01	219	0.64	13500	114	<1	11.3	0.1	0.80	0.10	0.10	18.6	4.1	8.3	0.75	7.35
GD	T5	0-5	0.29	0.11	0.18	107	0.97	5373	315	<1	18.2	<0.1	0.34	0.73	0.20	48.3	7.7	10.5	1.19	27.91
GD	T1	0-5	0.17	0.15	0.02	74	0.68	5222	172	<1	13.0	0.1	0.37	0.12	0.17	27.1	3.5	9.9	0.82	11.37
GD	T2	0-5	0.18	0.18	0.00	47	0.60	3144	21	<1	11.7	0.1	0.25	0.08	0.11	21.2	2.7	9.0	0.82	7.55
GD	T3	0-5	0.41	0.16	0.25	123	1.33	1776	160	1	34.2	0.3	0.41	1.02	0.15	59.9	9.5	18.6	1.10	29.29
GD	T4	0-5	0.17	0.13	0.04	92	0.97	6186	187	1	95.6	0.2	0.32	0.39	0.19	48.5	7.4	10.8	1.28	24.74
GD	T5	0-10	0.08	0.08	0.00	61	0.46	7239	41	1	9.9	0.1	0.21	0.05	0.07	11.5	1.1	6.1	0.65	2.21
GD	T6	0-10	0.16	0.06	0.10	76	0.63	1007	93	2	12.8	0.1	0.21	0.34	0.17	26.9	6.9	8.3	0.79	26.81
GD	T7	0-10	0.08	0.07	0.01	127	0.61	4120	56	<1	14.3	0.1	0.45	0.09	0.21	26.3	8.6	8.3	0.88	19.48
GD	T8	0-10	0.14	0.12	0.02	186	0.65	8461	175	<1	15.3	0.1	0.77	0.10	0.13	28.3	4.8	9.9	0.91	12.20
GD	T9	0-10	0.13	0.12	0.01	149	0.67	2698	101	1	12.4	0.2	0.46	0.09	0.15	29.7	10.4	9.1	0.79	23.38
GD	T10	0-10	0.09	0.07	0.02	306	0.63	12600	598	<1	15.9	0.1	1.09	0.08	0.17	27.9	10.2	9.2	0.82	16.92
GD	T11	0-5	0.12	0.11	0.01	86	0.44	4967	41	<1	11.9	0.1	0.38	0.06	0.05	13.5	2.5	6.9	0.59	6.73
GD	T12	0-5	0.58	0.51	0.07	224	1.36	17200	457	2	61.5	0.3	0.65	0.11	0.17	24.4	4.6	24.9	3.10	11.68
GD	T13	0-5	0.10	0.10	0.00	5161	0.01	209000	5574	<1	6.8	<0.1	15.12	<0.01	0.22	4.9	10.9	2.8	0.10	176.20
Lake Catcha Gold District (LC)																				
LC	T1	7.5	0.28	0.24	0.04	188	0.73	2423	1003	< 1	9.4	na	0.36	0.08	0.10	na	24.9	6.4	na	45.38
LC	T1	30	0.16	0.16	0.00	3757	0.22	94330	41554	< 1	5.4	na	7.87	<0.01	0.02	na	18.1	3.5	na	51.57
LC	T1	60	1.15	0.32	0.83	146	0.62	3736	1600	< 1	12.9	na	0.45	1.08	0.06	na	12.7	6.2	na	39.85
LC	T1	125	0.50	0.14	0.36	80	0.79	1227	671	< 1	9.3	na	0.59	0.59	0.07	na	11.2	8.2	na	59.00
LC	T2	15	0.62	0.11	0.51	174	0.77	1005	1171	< 1	10.4	na	0.57	0.83	0.05	na	11.4	8.4	na	39.06
LC	T2	30	0.32	0.20	0.12	63	0.44	968	286	< 1	10.9	na	0.30	0.18	0.04	na	8.6	5.4	na	19.55
LC	T3	5	1.38	1.20	0.18	48	0.60	1849	146	< 1	9.1	na	0.54	0.27	0.07	na	15.8	5.5	na	23.51
LC	T3	17	0.59	0.29	0.30	86	0.96	1038	598	< 1	19.7	na	0.34	0.46	0.07	na	13.9	9.5	na	40.91
LC	T3	27	0.48	0.12	0.36	59	0.70	1061	394	< 1	10.9	na	0.54	0.61	0.02	na	8.8	8.6	na	32.78
LC	T3	35	0.26	0.18	0.08	35	0.47	1017	239	< 1	13.8	na	0.14	0.06	0.04	na	8.7	6.2	na	12.51
LC	T4	10	0.47	0.36	0.11	349	0.72	4562	3423	< 1	10.2	na	1.48	0.19	0.13	na	17.5	7.1	na	86.27
LC	T4	30	0.12	0.10	0.02	32	0.99	1299	173	< 1	11.1	na	0.30	0.11	0.04	na	12.0	7.9	na	26.33
LC	T4	50	0.52	0.13	0.39	457	0.50	5466	6561	< 1	12.0	na	0.58	0.73	0.01	na	7.9	4.9	na	39.50
LC	T4	70	0.52	0.11	0.41	255	0.45	2545	3022	< 1	9.3	na	0.56	0.67	0.02	na	6.6	3.5	na	31.46
LC	T5	12	0.72	0.67	0.05	81	0.45	1143	377	< 1	9.2	na	0.35	0.14	0.05	na	4.7	3.2	na	33.37
LC	T5	30	1.09	0.64	0.45	117	0.54	775	133	< 1	5.4	na	0.70	0.55	0.05	na	14.3	4.5	na	68.29
LC	T6	10	0.97	0.93	0.04	295	0.56	10137	1785	< 1	9.6	na	0.83	0.21	0.09	na	14.6	4.6	na	65.12

Gold District	Sample Site	Tailings Depth (cm)	Total carbon LECO (% dry wt.)	Organic carbon LECO (% dry wt.)	Inorganic carbon LECO (% dry wt.)	Ag ICP-MS (µg/kg) DL = 2	Al ICP-MS (% dry wt.) 0.01	As ICP-MS (mg/kg) 0.1	Au ICP-MS (µg/kg) 0.2	B ICP-MS (mg/kg) 1	Ba ICP-MS (mg/kg) 0.5	Be ICP-MS (mg/kg) 0.1	Bi ICP-MS (mg/kg) 0.02	Ca ICP-MS (% dry wt.) 0.01	Cd ICP-MS (mg/kg) 0.01	Ce ICP-MS (mg/kg) 0.1	Co ICP-MS (mg/kg) 0.1	Cr ICP-MS (mg/kg) 0.5	Cs ICP-MS (mg/kg) 0.02	Cu ICP-MS (mg/kg) 0.01
LC	T6	25	0.74	0.30	0.44	133	0.61	2695	744	< 1	6.9	na	0.39	0.65	0.06	na	11.5	5.3	na	38.91
LC	T7	20	0.59	0.51	0.08	74	0.42	2243	407	< 1	8.8	na	0.40	0.11	0.06	na	11.8	3.7	na	43.71
LC	T8	15	0.57	0.54	0.03	735	0.53	3591	5001	2	13.8	na	0.93	0.09	0.11	na	18.0	4.5	na	76.29
LC	T8	30	0.17	0.15	0.02	116	1.04	1952	532	< 1	14.6	na	0.42	0.15	0.02	na	18.8	9.6	na	47.50
LC	T9	20	0.32	0.31	0.01	46	0.49	898	126	1	11.3	na	0.26	0.08	0.04	na	7.5	4.2	na	32.06
LC	T1-02	20	1.08	0.62	0.46	114	0.68	4215	646	1	7.1	na	0.49	0.61	0.09	na	21.2	5.8	na	59.93
LC	T1-02	75	1.23	0.86	0.37	95	0.51	2744	684	1	7.7	na	0.40	0.44	0.09	na	14.1	4.9	na	41.71
LC	S1	5	4.06	3.25	0.81	292	0.83	1728	2113	2	43.8	na	0.89	0.36	0.48	na	58.1	8.4	na	51.42
LC	S2	5	7.96	7.51	0.45	265	1.00	3019	950	2	52.2	na	0.75	0.25	0.90	na	45.3	11.4	na	57.19
LC	S3	5	14.35	14.35	0.00	222	0.87	3391	711	3	99.3	na	0.86	0.34	1.09	na	54.8	7.6	na	51.26
LC	S4	5	12.95	12.95	0.00	238	0.93	5030	609	3	117.0	na	0.73	0.22	1.30	na	45.8	7.8	na	49.35
LC	S5	5	22.25	22.25	0.00	169	0.89	4318	198	4	75.3	na	0.45	0.43	1.43	na	51.6	7.4	na	51.81
LC	S6	5	18.20	18.20	0.00	217	1.04	4711	238	4	97.9	na	0.61	0.55	2.08	na	85.0	8.2	na	63.76
LC	S7	5	21.23	21.23	0.00	152	1.06	2355	159	2	94.4	na	0.36	0.33	0.90	na	12.1	7.6	na	25.73
LC	S8	5	22.75	22.75	0.00	134	0.53	1464	98	3	55.1	na	0.31	0.46	0.89	na	8.2	6.4	na	25.66
LC	S9	5	22.55	22.55	0.00	183	1.37	5012	91	3	62.8	na	0.42	0.41	1.35	na	30.3	8.7	na	42.73
Leipsigate Gold District (LEI)																				
LEI	T1	0	6.84	3.49	3.35	60	1.94	36	33	5	114.8	na	0.24	11.20	0.06	na	16.5	24.8	na	28.65
LEI	T2	10	3.95	0.06	3.89	186	0.60	77	530	1	15.2	na	0.64	11.96	0.19	na	9.6	9.2	na	50.77
LEI	T3	50	4.91	0.04	4.87	177	0.54	52	617	< 1	15.7	na	0.66	14.99	0.15	na	9.8	9.6	na	77.75
LEI	T4	20	2.47	0.23	2.24	351	1.23	77	1646	< 1	29.4	na	0.83	7.13	0.26	na	17.9	23.7	na	48.92
LEI	T4	50	1.34	0.10	1.24	183	1.48	47	721	< 1	24.4	na	0.46	4.45	0.25	na	19.4	26.7	na	38.17
LEI	T5	20	2.14	0.06	2.08	207	0.70	189	674	1	9.8	na	0.78	6.21	0.39	na	18.5	15.4	na	58.08
LEI	T5	60	1.81	0.03	1.78	296	0.76	30	1287	< 1	8.9	na	0.40	5.37	0.20	na	11.6	17.0	na	28.61
LEI	T6	20	2.27	0.15	2.12	195	0.73	36	709	< 1	10.4	na	0.58	5.13	0.13	na	6.1	15.5	na	33.53
LEI	T6	35	1.56	0.06	1.50	295	0.85	11	1349	< 1	7.4	na	0.39	4.65	<0.01	na	3.6	16.6	na	23.94
LEI	T7	15	3.34	0.14	3.20	612	1.39	67	1010	< 1	39.6	na	1.20	9.75	0.52	na	20.3	26.8	na	32.93
LEI	T7	30	2.76	0.07	2.69	346	0.53	29	3420	2	10.7	na	0.38	6.97	0.09	na	8.0	8.8	na	16.24
LEI	T7	50	1.31	0.08	1.23	476	0.40	25	3286	1	6.9	na	0.36	3.90	0.07	na	8.2	5.9	na	36.36
LEI	T8	10	2.05	0.10	1.95	736	1.06	49	2141	2	15.8	na	0.68	5.93	0.45	na	13.6	18.7	na	64.53
LEI	T9	20	0.59	0.13	0.46	87	0.95	25	138	1	6.1	na	0.37	1.44	0.06	na	6.8	19.5	na	17.47
LEI	T9	40	0.38	0.10	0.28	119	1.19	51	243	1	11.6	na	0.34	1.18	0.17	na	14.2	30.2	na	32.19
LEI	T10	20	0.34	0.21	0.13	1068	1.03	62	3608	1	11.0	na	0.65	0.16	0.49	na	13.3	30.6	na	39.49
LEI	T10	40	0.30	0.17	0.13	144	1.08	44	199	< 1	6.5	na	0.48	0.69	0.11	na	9.9	25.5	na	33.85
LEI	T11	20	2.05	2.05	0.00	255	1.20	29	902	1	15.1	na	0.34	0.29	0.13	na	7.9	27.8	na	35.32
LEI	T12	20	0.17	0.15	0.02	450	0.97	26	1699	< 1	7.2	na	0.34	0.11	0.04	na	3.3	22.6	na	16.67
LEI	T12	35	0.26	0.26	0.00	258	1.29	112	831	1	15.5	na	0.68	0.16	<0.01	na	5.9	31.1	na	25.46
LEI	T13	40	1.64	0.05	1.59	564	1.02	76	2194	< 1	8.9	na	0.49	5.11	0.42	na	16.4	19.2	na	60.66
LEI	T14	25	4.23	0.05	4.18	104	0.75	66	361	< 1	16.2	na	0.76	13.65	0.12	na	12.6	12.1	na	61.87
LEI	T15	10	0.31	0.16	0.15	350	0.97	54	1293	< 1	6.4	na	0.33	0.60	0.15	na	11.5	21.3	na	41.19
Lower Seal Harbour Gold District (LSH)																				
LSH	T1	5	0.07	0.07	0.00	332	1.00	11603	2550	1	20.2	na	1.15	0.14	0.02	na	3.7	20.7	na	8.01
LSH	T2	5	0.36	0.08	0.28	58	1.10	1030	22	< 1	19.5	na	0.19	0.93	0.19	na	11.2	18.1	na	23.04
LSH	T3	0	0.42	0.42	0.00	6972	0.14	160800	10569	3	9.7	na	41.16	0.02	0.02	na	5.2	39.2	na	82.50
LSH	T3	20	4.92	4.92	0.00	6088	0.07	292700	9535	1	13.0	na	30.24	<0.01	0.64	na	216.3	5.5	na	199.89
LSH	T3	35	7.97	6.54	1.43	5192	0.40	312300	8805	1	4.8	na	29.40	0.05	0.74	na	219.8	20.8	na	142.73
LSH	T3	45	4.16	3.64	0.52	2710	0.45	173600	5134	1	9.9	na	14.50	0.30	0.78	na	163.8	11.9	na	113.12
LSH	T3	60	0.33	0.06	0.27	116	0.80	2636	68	< 1	11.7	na	0.42	0.53	0.19	na	13.5	14.0	na	31.65
LSH	T4	25	0.03	0.02	0.01	113	0.85	1761	84	< 1	9.0	na	0.36	0.12	0.14	na	9.5	13.8	na	27.04
LSH	T4	55	0.06	0.03	0.03	103	0.71	1531	167	< 1	8.6	na	0.23	0.11	0.06	na	4.3	12.2	na	15.08
LSH	T4	90	0.31	0.16	0.15	154	0.86	6453	186	< 1	13.7	na	0.69	0.48	0.20	na	26.5	14.8	na	38.16
LSH	T5	30	0.07	0.03	0.04	110	0.81	2929	163	< 1	10.6	na	0.41	0.25	0.14	na	10.8	13.0	na	27.12
LSH	T6	0	0.03	0.02	0.01	75	0.74	916	45	< 1	7.9	na	0.22	0.12	0.15	na	8.9	12.8	na	22.64
LSH	T6	40	0.12	0.02	0.10	97	1.03	3942	35	< 1	18.8	na	0.33	0.45	0.22	na	13.9	16.2	na	30.84
LSH	T6	45	0.16	0.01	0.15	92	0.73	971	35	< 1	9.3	na	0.17	0.51	0.11	na	9.0	11.4	na	17.13
LSH	T6	50	0.32	0.06	0.26	105	0.86	2680	52	< 1	15.4	na	0.32	0.81	0.18	na	14.3	15.0	na	23.74

Gold District	Sample Site	Tailings Depth (cm)	Total carbon LECO (% dry wt.)	Organic carbon LECO (% dry wt.)	Inorganic carbon LECO (% dry wt.)	Ag ICP-MS (µg/kg) DL = 2	Al ICP-MS (% dry wt.) 0.01	As ICP-MS (mg/kg) 0.1	Au ICP-MS (µg/kg) 0.2	B ICP-MS (mg/kg) 1	Ba ICP-MS (mg/kg) 0.5	Be ICP-MS (mg/kg) 0.1	Bi ICP-MS (mg/kg) 0.02	Ca ICP-MS (% dry wt.) 0.01	Cd ICP-MS (mg/kg) 0.01	Ce ICP-MS (mg/kg) 0.1	Co ICP-MS (mg/kg) 0.1	Cr ICP-MS (mg/kg) 0.5	Cs ICP-MS (mg/kg) 0.02	Cu ICP-MS (mg/kg) 0.01
LSH	T7	30	0.02	0.00	0.02	86	0.93	2677	126	< 1	11.6	na	0.29	0.11	0.07	na	11.0	15.8	na	17.00
LSH	T7	120	0.11	0.01	0.10	108	1.11	944	58	< 1	21.0	na	0.26	0.35	0.17	na	76.1	17.8	na	35.99
LSH	T8	30	0.16	0.03	0.13	24	0.92	157	6	< 1	11.2	na	0.08	0.47	0.05	na	10.2	15.7	na	20.12
LSH	T8	70	0.18	0.03	0.15	78	1.28	628	64	< 1	22.1	na	0.20	0.64	0.15	na	15.7	20.4	na	34.04
LSH	T9	0	0.11	0.03	0.08	123	0.94	1789	86	< 1	12.3	na	0.41	0.27	0.17	na	11.5	15.3	na	40.45
LSH	T9	50	0.09	0.03	0.06	113	0.93	2780	84	< 1	10.6	na	0.35	0.31	0.15	na	12.2	15.8	na	44.12
LSH	T9	55	0.22	0.02	0.20	112	1.05	790	32	< 1	15.6	na	0.35	0.68	0.21	na	14.1	15.5	na	37.26
LSH	T10	10	0.14	0.10	0.04	104	0.88	2547	103	< 1	11.0	na	0.34	0.23	0.14	na	12.9	13.4	na	47.60
LSH	T10	40	0.10	0.08	0.02	73	0.92	879	936	< 1	10.8	na	0.16	0.14	0.12	na	8.6	15.5	na	32.74
LSH	T11	10	0.14	0.09	0.05	38	0.98	1560	12	< 1	13.7	na	0.12	0.14	0.06	na	10.9	17.2	na	19.14
LSH	T11	60	0.19	0.13	0.06	121	0.87	1821	245	< 1	9.5	na	0.24	0.13	0.01	na	2.8	14.3	na	29.54
LSH	T11	120	0.13	0.04	0.09	131	0.90	4864	214	< 1	12.0	na	0.43	0.36	0.21	na	17.6	15.1	na	33.52
LSH	T12	5	0.14	0.07	0.07	47	0.83	2082	25	1	9.6	na	0.19	0.09	0.04	na	25.6	13.5	na	17.94
LSH	T12	30	0.08	0.06	0.02	307	0.96	6783	225	1	12.8	na	1.10	0.19	0.79	na	75.8	16.8	na	59.79
LSH	T13	15	0.02	0.02	0.00	1087	0.22	19973	2150	2	3.6	na	2.15	0.06	0.02	na	1.0	4.2	na	2.04
LSH	T13	30	0.01	0.01	0.00	174	1.24	3405	1530	< 1	13.1	na	0.49	0.12	0.01	na	3.0	18.3	na	3.89
LSH	T13	50	0.03	0.02	0.01	112	1.22	495	384	1	10.9	na	0.33	0.06	0.03	na	31.5	17.4	na	26.62
LSH	T13	80	0.01	0.01	0.00	47	0.45	421	97	< 1	5.3	na	0.07	0.07	0.09	na	8.1	7.0	na	30.58
LSH	T13	100	0.02	0.02	0.00	71	0.47	666	286	< 1	6.6	na	0.12	0.08	0.08	na	4.9	7.7	na	20.98
LSH	T14	0	0.90	0.66	0.24	394	0.23	144700	511	< 1	12.7	na	1.52	0.03	0.02	na	1.5	6.7	na	6.90
LSH	T14	0	1.86	1.34	0.52	260	0.05	220800	68	< 1	2.9	na	0.17	0.01	0.02	na	0.8	0.9	na	2.39
LSH	T15	10	0.44	0.44	0.00	31	0.85	2893	23	9	9.3	na	0.11	0.13	0.06	na	6.3	15.0	na	12.18
LSH	T15	20	0.54	0.54	0.00	38	0.92	333	54	7	8.4	na	0.11	0.14	0.05	na	7.3	15.2	na	13.55
LSH	T16	5	0.68	0.68	0.00	52	0.91	151	132	< 1	9.6	na	0.08	0.13	0.02	na	3.9	14.9	na	7.88
LSH	T17	7.5	0.05	0.05	0.00	77	0.80	2149	83	< 1	10.8	na	0.29	0.16	0.13	na	13.3	15.5	na	27.44
LSH	T17	27.5	0.26	0.01	0.25	73	0.79	1346	27	< 1	14.6	na	0.24	0.76	0.19	na	13.2	15.5	na	20.46
LSH	T18	7.5	0.91	0.68	0.23	126	1.05	6734	125	1	40.5	na	0.32	0.27	0.21	na	20.5	16.4	na	44.84
LSH	T18	27.5	0.36	0.30	0.06	59	0.99	1390	31	< 1	10.9	na	0.18	0.15	0.16	na	17.5	14.8	na	22.86
LSH	T19	5	0.22	0.03	0.19	90	0.72	2400	68	1	10.0	na	0.26	0.62	0.21	na	11.6	14.0	na	27.95
LSH	T20	5	0.22	0.01	0.21	49	1.05	506	23	1	15.9	na	0.12	0.76	0.14	na	12.6	17.3	na	27.38
LSH	T1-04	5	0.09	0.09	0.00	43	0.94	239	21	1	10.6	0.2	0.16	0.17	0.10	37.0	8.7	17.1	0.91	25.88
LSH	T1-04	15	0.24	0.04	0.20	66	0.96	888	25	<1	11.0	0.4	0.15	0.75	0.16	36.7	12.5	16.2	0.98	30.30
LSH	P2-WB	5	0.25	0.09	0.16	129	1.04	1577	48	<1	11.1	0.2	0.24	0.54	0.15	36.3	14.1	18.2	0.94	28.82
LSH	P1-EB	5	23.80	23.70	0.10	134	0.65	516	22	1	29.1	0.8	0.13	0.25	0.37	23.8	3.3	8.9	0.76	12.25
LSH	T30	2.5	0.15	0.12	0.03	88	0.76	4392	81	<1	11.1	0.2	0.33	0.18	0.19	33.2	10.4	14.4	0.68	32.71
LSH	T30	20	0.28	0.08	0.20	65	1.19	1235	65	1	19.6	0.5	0.26	0.74	0.16	44.6	10.4	21.5	0.80	20.29
LSH	T31	5	0.20	0.19	0.01	131	0.88	1992	78	<1	14.6	0.1	0.39	0.20	0.25	35.8	16.6	15.6	0.83	31.26
LSH	T31	30	0.56	0.34	0.22	75	1.17	1344	197	1	20.6	0.3	0.26	0.73	0.17	45.6	10.4	21.9	0.83	29.20
LSH	T32	10	0.13	0.11	0.02	116	0.89	837	66	<1	10.8	0.3	0.20	0.17	0.24	35.1	9.7	14.3	0.69	28.93
LSH	T32	45	0.35	0.06	0.29	73	1.10	1418	25	<1	17.2	0.3	0.23	0.93	0.17	42.4	13.6	19.4	0.99	26.20
LSH	MS1	5	4.40	4.40	0.00	78	1.15	124	22	46	18.7	0.6	0.20	0.26	0.32	41.1	8.9	20.7	1.10	15.02
LSH	MS2	0	4.23	3.91	0.32	45	0.94	645	27	23	19.2	0.3	0.12	0.27	0.09	33.2	5.0	17.6	0.86	21.37
LSH	MS2	10	11.80	10.80	1.00	57	0.70	130	8	8	18.6	0.4	0.15	0.22	0.11	27.7	3.2	11.7	1.16	6.44
LSH	MS3	5	0.30	0.27	0.03	73	1.55	558	64	1	23.0	0.4	0.23	0.12	0.13	49.1	6.5	26.3	0.74	17.00
LSH	MS4	5	0.24	0.20	0.04	82	1.73	485	63	5	26.3	0.5	0.23	0.17	0.15	58.5	7.9	30.7	0.87	20.32
LSH	MS5	5	10.90	10.90	0.00	69	0.63	99	15	57	7.6	0.3	0.12	0.40	0.21	27.5	7.4	10.4	0.55	9.03
LSH	T33	5	0.70	0.70	0.00	64	0.97	375	65	<1	10.5	0.4	0.20	0.15	0.12	31.2	8.1	17.3	0.78	24.34
LSH	T33	30	0.21	0.04	0.17	84	0.89	1463	62	<1	10.8	0.3	0.21	0.64	0.17	34.8	13.6	15.9	0.98	35.84
LSH	T34	5	0.83	0.74	0.09	83	1.06	728	95	1	11.7	0.3	0.20	0.22	0.28	38.8	17.5	17.6	0.97	32.21
LSH	T34	30	0.23	0.05	0.18	66	1.13	978	64	1	14.9	0.3	0.17	0.69	0.14	36.5	10.3	19.6	0.89	25.58
LSH	T35	5	0.14	0.13	0.01	21	0.99	124	7	<1	9.4	0.2	0.07	0.11	0.03	23.0	4.6	17.2	0.82	10.43
LSH	T35	20	0.93	0.80	0.13	71	1.01	212	46	1	12.0	0.2	0.23	0.14	0.17	38.4	6.6	16.7	0.86	30.17
LSH	T35	40	0.23	0.05	0.18	83	0.94	1027	86	<1	12.8	0.2	0.19	0.65	0.20	39.0	14.4	17.0	1.10	40.42
LSH	T36	5	0.18	0.18	0.00	58	0.94	425	65	<1	9.4	0.2	0.13	0.11	0.06	30.8	4.2	17.6	0.85	32.04
LSH	T36	25	0.27	0.26	0.01	71	0.95	445	211	<1	10.6	0.2	0.14	0.11	0.10	33.1	7.1	17.1	0.90	27.20

Gold District	Sample Site	Tailings Depth (cm)	Total carbon LECO (% dry wt.)	Organic carbon LECO (% dry wt.)	Inorganic carbon LECO (% dry wt.)	Ag ICP-MS (µg/kg) DL = 2	Al ICP-MS (% dry wt.) 0.01	As ICP-MS (mg/kg) 0.1	Au ICP-MS (µg/kg) 0.2	B ICP-MS (mg/kg) 1	Ba ICP-MS (mg/kg) 0.5	Be ICP-MS (mg/kg) 0.1	Bi ICP-MS (mg/kg) 0.02	Ca ICP-MS (% dry wt.) 0.01	Cd ICP-MS (mg/kg) 0.01	Ce ICP-MS (mg/kg) 0.1	Co ICP-MS (mg/kg) 0.1	Cr ICP-MS (mg/kg) 0.5	Cs ICP-MS (mg/kg) 0.02	Cu ICP-MS (mg/kg) 0.01
Montague Gold District (MG)																				
MG	T1	2.5	1.22	1.22	0.00	351	1.29	20720	516	5	145.6	na	2.34	0.54	0.80	na	37.4	16.1	na	100.18
MG	T1	10	0.46	0.23	0.23	236	1.54	14299	227	1	53.4	na	1.74	0.56	0.31	na	25.4	19.5	na	83.34
MG	T2	1	0.80	0.68	0.12	377	1.42	25482	763	2	98.4	na	2.18	0.64	0.73	na	33.8	18.0	na	124.54
MG	T2	5	0.51	0.26	0.25	278	1.44	13674	423	1	35.7	na	1.43	0.55	0.46	na	22.1	17.3	na	95.07
MG	T3	0	0.12	0.09	0.03	36	0.94	7130	62	1	37.7	na	0.56	0.13	0.19	na	4.3	10.5	na	38.54
MG	T3	25	0.49	0.16	0.33	138	1.04	9580	174	1	23.3	na	0.90	0.51	0.49	na	18.8	12.3	na	75.62
MG	T4	7.5	15.55	15.55	0.00	334	2.64	5312	793	3	116.4	na	1.31	0.38	1.05	na	75.6	21.8	na	74.50
MG	T4	20	0.39	0.35	0.04	69	1.14	2061	227	2	26.5	na	0.38	0.11	0.24	na	8.6	13.4	na	40.79
MG	T5	1	0.29	0.22	0.07	147	1.10	18168	275	1	41.0	na	1.05	0.28	0.31	na	21.0	13.1	na	75.27
MG	T5	6	0.36	0.05	0.31	80	1.05	4282	156	2	23.0	na	0.56	0.53	0.14	na	12.1	12.3	na	48.05
MG	T6	0	0.24	0.16	0.08	174	1.08	20707	335	1	29.5	na	1.13	0.34	0.34	na	22.7	13.3	na	109.26
MG	T6	4	0.23	0.10	0.13	185	0.94	23682	225	1	28.4	na	1.16	0.53	0.17	na	24.2	11.5	na	43.88
MG	T6	10	0.38	0.11	0.27	113	1.03	6229	109	1	22.6	na	0.66	0.48	0.24	na	17.3	12.3	na	55.10
MG	T7	5	0.23	0.12	0.11	135	1.08	13946	319	1	24.9	na	0.83	0.31	0.22	na	17.4	13.1	na	76.37
MG	T7	15	0.41	0.04	0.37	49	1.13	2139	62	1	26.0	na	0.31	0.71	0.12	na	8.0	13.5	na	30.66
MG	T8	2.5	0.12	0.10	0.02	719	0.70	41299	1378	1	22.3	na	4.50	0.05	0.19	na	2.3	10.9	na	33.59
MG	T10	5	0.09	0.08	0.01	258	1.01	31652	411	1	31.9	na	1.69	0.08	0.23	na	3.3	13.6	na	31.23
MG	T10	15	0.06	0.06	0.00	228	1.00	23249	334	1	25.6	na	1.60	0.09	0.21	na	3.4	13.2	na	18.62
MG	T11	6	0.11	0.11	0.00	85	1.24	9574	244	1	30.9	na	0.56	0.13	0.16	na	9.7	14.6	na	30.41
MG	T11	15	0.17	0.07	0.10	61	1.23	2373	167	2	32.0	na	0.42	0.34	0.14	na	16.0	14.7	na	45.28
MG	T11	25	0.10	0.09	0.01	116	1.83	5704	314	1	60.2	na	0.71	0.30	0.22	na	23.1	22.8	na	74.87
MG	T12	2.5	0.06	0.06	0.00	103	1.17	2691	1012	1	27.8	na	0.25	0.11	0.09	na	7.6	13.8	na	25.18
MG	T12	25	0.05	0.04	0.01	138	1.21	2783	1256	2	33.7	na	0.47	0.14	0.34	na	18.3	15.7	na	105.97
MG	T13	0	0.11	0.05	0.06	34	1.04	1719	278	1	24.0	na	0.25	0.19	0.08	na	9.8	12.3	na	36.25
MG	T13	15	0.13	0.12	0.01	101	1.19	3422	244	2	32.8	na	0.65	0.14	0.22	na	10.9	14.4	na	79.63
MG	T14	10	0.11	0.08	0.03	83	1.14	2958	232	1	29.4	na	0.61	0.14	0.14	na	8.2	14.0	na	59.41
MG	T15	5	0.74	0.74	0.00	251	1.22	14737	409	2	44.1	na	1.57	0.65	0.46	na	23.4	15.0	na	94.72
MG	T1	0-6	0.07	0.06	0.01	465	0.71	40100	2342	3	22.2	<0.1	2.69	0.05	0.14	25.2	1.9	9.5	2.53	34.30
MG	T2	0-5	0.09	0.06	0.03	186	1.13	16900	322	1	29.6	0.3	1.17	0.09	0.16	30.5	6.7	11.7	3.31	51.91
MG	T3	0-15	0.55	0.06	0.49	404	1.27	19100	673	5	97.6	0.3	1.94	0.42	0.69	38.4	21.4	13.3	3.05	120.37
MG	T4	15-20	0.16	0.15	0.01	367	0.64	18900	1283	<1	13.2	<0.1	1.32	0.06	0.08	15.2	3.4	8.4	0.91	10.69
MG	T1	0-10	0.12	0.12	0.00	289	1.12	16000	589	1	35.7	0.2	2.09	0.09	0.36	45.1	3.9	13.8	2.87	59.76
MG	T2	0-10	0.07	0.07	0.00	210	0.69	24500	472	<1	20.5	0.2	1.32	0.03	0.07	23.1	1.1	8.8	2.58	7.98
MG	T3	0-10	0.08	0.08	0.00	145	1.07	17000	224	<1	27.7	0.2	1.08	0.08	0.25	29.8	4.4	11.8	3.14	27.09
MG	T4	0-10	0.18	0.18	0.00	133	1.04	13900	349	1	41.6	0.3	0.95	0.28	0.34	26.5	9.4	10.6	2.60	82.09
MG	T5	0-10	0.43	0.33	0.10	307	1.37	17700	618	1	61.2	0.3	1.89	0.41	0.65	35.4	25.3	14.2	3.41	110.55
MG	T6	0-10	2.66	2.46	0.20	670	1.62	20500	749	2	171.0	0.7	4.13	0.40	1.63	47.6	80.4	16.2	3.54	153.34
MG	T7	0-10	0.23	0.23	0.00	123	1.15	9117	207	<1	26.5	0.2	0.84	0.33	0.25	28.1	14.3	12.6	3.02	67.49
MG	T8	0-10	0.16	0.08	0.08	110	1.12	9199	296	<1	24.8	0.1	0.70	0.25	0.18	27.9	10.3	12.0	2.80	56.91
MG	T9	0-10	0.14	0.13	0.01	204	1.08	26600	567	<1	28.2	0.2	1.71	0.08	0.16	40.3	4.4	12.6	3.49	14.51
MG	T10	0-10	0.08	0.07	0.01	141	1.04	26600	235	<1	25.7	0.1	1.13	0.08	0.06	32.0	3.8	12.0	3.22	11.95
MG	T11	0-10	0.63	0.63	0.00	106	1.13	5365	248	<1	27.0	0.3	0.80	0.13	0.17	39.4	10.6	13.1	3.34	45.34
MG	T12	0-5	0.44	0.37	0.07	336	0.67	13000	2710	<1	24.7	0.1	1.59	0.04	0.25	29.7	2.2	10.0	1.96	37.51
MG	T13	0-5	0.09	0.08	0.01	160	1.08	1028	136	<1	22.8	0.2	0.86	0.14	0.38	39.4	8.5	11.2	2.90	101.37
MG	T14	0-5	0.35	0.35	0.00	25	0.84	1001	45	<1	20.7	0.2	0.17	0.12	0.10	30.0	5.2	11.7	1.97	27.61

Gold District	Sample Site	Tailings Depth (cm)	Total carbon LECO (% dry wt.)	Organic carbon LECO (% dry wt.)	Inorganic carbon LECO (% dry wt.)	Ag ICP-MS (µg/kg) DL = 2	Al ICP-MS (% dry wt.) 0.01	As ICP-MS (mg/kg) 0.1	Au ICP-MS (µg/kg) 0.2	B ICP-MS (mg/kg) 1	Ba ICP-MS (mg/kg) 0.5	Be ICP-MS (mg/kg) 0.1	Bi ICP-MS (mg/kg) 0.02	Ca ICP-MS (% dry wt.) 0.01	Cd ICP-MS (mg/kg) 0.01	Ce ICP-MS (mg/kg) 0.1	Co ICP-MS (mg/kg) 0.1	Cr ICP-MS (mg/kg) 0.5	Cs ICP-MS (mg/kg) 0.02	Cu ICP-MS (mg/kg) 0.01
MG	S28	0-5	1.72	1.12	0.60	914	0.34	1860	3496	<20	5.7	na	3.99	0.02	0.13	na	1.1	2.4	na	32.46
Mooseland Gold District (MSL)																				
MSL	T1	4	0.47	0.47	0.00	3610	0.05	256200	19883	< 1	10.9	na	13.30	<0.01	0.04	na	42.5	4.3	na	18.64
MSL	T1	12	0.05	0.04	0.01	400	0.09	20808	670	< 1	6.6	na	1.75	0.04	<0.01	na	0.1	4.1	na	0.39
MSL	T1	34	0.03	0.02	0.01	103	0.12	3263	48	< 1	6.6	na	0.49	0.03	0.01	na	0.1	4.2	na	0.10
MSL	T1	45	0.06	0.05	0.01	133	0.26	7486	482	< 1	12.3	na	0.68	0.03	0.01	na	0.4	6.9	na	1.41
MSL	T2	7	0.19	0.15	0.04	94	0.36	7176	197	< 1	22.2	na	0.47	0.05	0.07	na	0.7	11.5	na	4.16
MSL	T2	20	0.15	0.10	0.05	404	0.70	10763	1735	< 1	36.0	na	0.97	0.27	0.33	na	11.5	20.3	na	12.04
MSL	T2	30	0.44	0.18	0.26	609	0.50	7327	1279	1	29.3	na	2.79	0.30	0.38	na	5.7	14.6	na	5.10
MSL	T3	3	2.45	2.13	0.32	806	0.18	42330	1435	< 1	87.0	na	1.48	0.01	0.17	na	1.0	9.1	na	8.78
MSL	T3	15	0.08	0.07	0.01	135	0.34	27292	223	< 1	30.3	na	0.68	0.01	0.27	na	0.3	12.4	na	1.28
MSL	T3	25	0.10	0.10	0.00	243	0.22	8270	405	< 1	14.3	na	1.95	0.01	0.04	na	2.6	8.4	na	8.16
MSL	T4	4	16.80	16.80	0.00	209	0.83	2874	240	1	34.9	na	0.59	0.11	0.61	na	4.1	13.7	na	10.18
MSL	T4	15	0.18	0.18	0.00	102	0.13	2577	195	1	4.7	na	0.52	0.04	0.28	na	2.3	4.5	na	3.06
MSL	T4	27	0.22	0.16	0.06	63	0.29	6106	212	< 1	15.7	na	0.41	0.23	0.26	na	4.4	10.1	na	6.47
MSL	T5	5	0.13	0.09	0.04	230	0.17	8370	650	< 1	9.5	na	0.81	0.25	0.18	na	6.8	5.4	na	4.42
MSL	T5	15	0.42	0.11	0.31	354	0.28	8971	870	1	16.5	na	1.58	0.42	0.25	na	5.7	9.5	na	6.56
MSL	T5	23	0.47	0.12	0.35	265	0.61	7108	642	1	36.2	na	1.35	0.45	0.32	na	4.9	19.3	na	8.32
MSL	T6	5	0.56	0.39	0.17	470	0.55	8433	917	1	36.9	na	1.47	0.21	0.43	na	9.7	13.8	na	60.87
MSL	T6	16	0.81	0.81	0.00	414	0.80	6120	826	1	45.3	na	1.40	0.18	0.32	na	9.1	23.0	na	12.04
MSL	T7	20	0.06	0.04	0.02	112	0.31	17492	68	< 1	14.2	na	0.49	0.01	0.29	na	0.2	8.5	na	2.39
MSL	T7	80	0.11	0.11	0.00	151	0.67	6843	868	< 1	23.2	na	0.77	0.09	0.31	na	5.0	14.5	na	9.24
Mount Uniacke Gold District (UNI)																				
UNI	T1	5	5.40	4.19	1.21	1000	0.63	2085	1395	1	15.2	na	3.24	0.46	1.13	na	9.8	9.1	na	39.52
UNI	T1	10	0.40	0.28	0.12	2603	0.48	13819	7610	2	30.4	na	6.68	0.16	3.85	na	23.0	8.0	na	114.38
UNI	T1	20	0.13	0.09	0.04	523	0.49	2105	617	1	2.7	na	1.60	0.07	0.26	na	2.6	7.0	na	42.01
UNI	T2	20	0.53	0.29	0.24	654	0.55	22311	214	1	13.0	na	1.85	0.12	0.31	na	4.6	9.7	na	38.60
UNI	T2	25	0.18	0.18	0.00	2631	0.30	465	1541	< 1	2.4	na	0.64	<0.01	0.33	na	3.1	4.3	na	88.50
UNI	T2	70	0.33	0.33	0.00	266	1.03	847	454	1	9.9	na	1.23	0.12	1.17	na	22.4	13.0	na	67.75
UNI	T3	15	10.40	9.45	0.95	274	1.09	56	358	2	30.1	na	1.28	0.75	1.00	na	4.9	12.7	na	52.33
UNI	T4	30	0.59	0.29	0.30	109	1.63	277	302	1	26.0	na	0.38	0.70	1.39	na	6.6	21.1	na	34.63
UNI	T5	25	0.34	0.23	0.11	300	0.71	1034	278	1	3.9	na	0.93	0.67	1.86	na	11.7	8.0	na	81.91
UNI	T6	20	0.45	0.34	0.11	858	0.58	5334	745	1	17.4	na	3.06	0.15	0.50	na	2.9	8.1	na	61.17
UNI	T6	40	0.60	0.41	0.19	1468	1.65	981	310	1	24.0	na	6.20	0.66	0.77	na	10.3	21.1	na	48.07
UNI	T7	10	0.12	0.10	0.02	1537	0.91	3326	1454	< 1	16.9	na	6.90	0.08	1.25	na	16.1	13.2	na	116.11
UNI	T7	25	0.05	0.04	0.01	210	0.48	360	298	1	9.8	na	0.81	0.04	0.23	na	8.3	7.2	na	35.30
UNI	T8	2.5	0.51	0.40	0.11	4798	0.69	8449	630	< 1	10.7	na	16.66	0.07	0.48	na	4.3	12.6	na	44.62
UNI	T8	10	0.12	0.12	0.00	4530	0.62	4118	556	< 1	10.6	na	12.00	0.07	6.80	na	10.3	10.2	na	182.38
UNI	T8	40	0.39	0.34	0.05	3362	0.86	11008	563	1	19.5	na	14.32	0.50	9.39	na	25.5	12.9	na	348.25
UNI	T8	80	0.11	0.11	0.00	328	0.70	976	218	1	9.8	na	1.30	0.08	0.79	na	12.1	9.9	na	50.73
UNI	T9	15	0.19	0.13	0.06	720	0.90	1237	268	1	14.7	na	3.04	0.13	1.03	na	10.6	10.8	na	73.90
UNI	T10	10	0.13	0.12	0.01	350	0.89	1320	205	1	12.4	na	1.37	0.17	1.35	na	9.0	11.9	na	78.36
UNI	T11	20	0.12	0.08	0.04	105	0.92	391	60	1	15.9	na	2.23	0.10	0.15	na	8.7	15.3	na	39.59
UNI	T11	40	0.16	0.16	0.00	391	1.47	415	275	1	25.6	na	1.71	0.11	2.18	na	15.2	21.5	na	86.07
UNI	T12	10	2.56	1.58	0.98	198	1.16	2473	128	1	129.3	na	1.34	0.16	2.32	na	45.5	16.5	na	35.20
UNI	T13	5	0.21	0.21	0.00	268	0.86	175	82	1	10.8	na	1.49	0.09	0.54	na	5.1	11.3	na	48.20
UNI	T14	15	6.98	6.88	0.10	711	0.91	339	482	1	24.8	na	2.90	0.22	2.56	na	6.1	11.3	na	62.35
UNI	T14	40	0.38	0.17	0.21	764	0.99	845	297	1	16.6	na	3.25	0.74	2.35	na	10.4	14.6	na	100.62
UNI	T15	2	3.29	3.29	0.00	321	0.50	2954	1245	1	23.2	na	1.48	0.10	0.25	na	2.4	7.0	na	11.90
UNI	T15	10	0.34	0.21	0.13	238	0.69	408	38	1	17.0	na	0.73	0.01	0.08	na	7.7	9.4	na	31.43
UNI	T15	40	0.07	0.04	0.03	331	0.38	3998	878	1	5.7	na	1.16	0.04	0.25	na	2.1	4.6	na	15.85
UNI	T15	70	0.47	0.22	0.25	899	0.34	45832	2426	< 1	18.4	na	6.93	0.02	0.15	na	2.0	5.5	na	19.89
UNI	T15	90	0.94	0.94	0.00	320	1.09	494	635	< 1	23.1	na	1.45	0.05	0.10	na	2.3	13.9	na	46.58
UNI	T15	100	16.40	15.10	1.30	436	4.44	612	18	2	36.1	na	0.41	0.10	2.62	na	11.0	39.5	na	99.69
UNI	T16	25	0.31	0.27	0.04	105	1.23	39	284	< 1	17.4	na	0.27	0.14	0.10	na	11.0	12.6	na	35.70
UNI	T17	0	9.89	8.45	1.44	567	0.94	11054	233	1	254.8	na	2.16	0.56	2.37	na	36.5	11.4	na	68.89
UNI	T18	5	0.16	0.13	0.03	267	0.85	1564	199	1	21.8	na	0.84	0.16	0.47	na	13.8	14.9	na	105.37
UNI	T18	15	0.20	0.13	0.07	207	0.77	1203	166	< 1	17.7	na	0.81	0.14	0.45	na	8.6	14.4	na	82.14
UNI	T18	30	0.25	0.08	0.17	123	1.68	1167	317	< 1	25.9	na	0.40	0.64	0.28	na	15.9	25.8	na	57.36

Gold District	Sample Site	Tailings Depth (cm)	Total carbon LECO (% dry wt.)	Organic carbon LECO (% dry wt.)	Inorganic carbon LECO (% dry wt.)	Ag ICP-MS (µg/kg) DL = 2	Al ICP-MS (% dry wt.) 0.01	As ICP-MS (mg/kg) 0.1	Au ICP-MS (µg/kg) 0.2	B ICP-MS (mg/kg) 1	Ba ICP-MS (mg/kg) 0.5	Be ICP-MS (mg/kg) 0.1	Bi ICP-MS (mg/kg) 0.02	Ca ICP-MS (% dry wt.) 0.01	Cd ICP-MS (mg/kg) 0.01	Ce ICP-MS (mg/kg) 0.1	Co ICP-MS (mg/kg) 0.1	Cr ICP-MS (mg/kg) 0.5	Cs ICP-MS (mg/kg) 0.02	Cu ICP-MS (mg/kg) 0.01
UNI	T19	5	0.93	0.93	0.00	4590	0.58	15398	2893	< 1	32.4	na	16.52	0.13	6.48	na	57.6	9.0	na	206.93
UNI	T19	20	0.23	0.22	0.01	744	0.67	1401	1992	< 1	6.4	na	2.60	0.09	1.90	na	7.5	9.0	na	71.32
UNI	T20	20	0.14	0.08	0.06	2205	0.77	1432	71	< 1	9.1	na	7.54	0.07	0.09	na	3.2	13.8	na	25.30
North Brookfield Gold District (NB)																				
NB	T1	5	0.15	0.15	0.00	548	0.81	9071	836	2	29.0	na	2.61	0.12	0.06	na	66.3	12.1	na	56.86
NB	T1	32.5	0.08	0.08	0.00	337	0.74	925	1388	1	21.6	na	0.77	0.11	0.01	na	2.9	9.8	na	9.82
NB	T1	37.5	0.10	0.10	0.00	754	0.34	2817	3342	1	19.6	na	1.10	0.02	0.01	na	1.5	5.5	na	34.90
NB	T2	0	0.09	0.08	0.01	434	0.79	17596	1133	2	20.2	na	2.44	0.12	0.25	na	41.5	13.3	na	58.47
NB	T3	5	0.20	0.12	0.08	543	0.94	1246	551	2	37.7	na	1.74	0.47	0.23	na	81.4	14.7	na	104.02
NB	T3	25	0.35	0.08	0.27	88	0.83	2013	263	< 1	20.5	na	0.59	0.62	0.08	na	10.7	10.8	na	52.69
NB	T4	6	0.17	0.12	0.05	102	0.86	836	342	< 1	17.6	na	0.40	0.25	0.15	na	21.8	11.1	na	30.87
NB	T4	12	1.81	0.55	1.26	119	0.79	629	598	< 1	21.5	na	0.43	3.52	0.39	na	24.2	10.4	na	34.93
NB	T4	20	0.36	0.22	0.14	293	1.05	1719	1809	< 1	25.6	na	0.72	0.51	0.16	na	8.7	13.9	na	58.73
NB	T5	5	0.49	0.10	0.39	122	0.91	70	605	< 1	28.3	na	0.38	1.08	0.04	na	4.5	12.0	na	33.04
NB	T5	15	0.71	0.21	0.50	100	0.92	1660	646	< 1	26.1	na	0.30	1.52	0.09	na	11.3	12.7	na	31.24
NB	T6	2	0.55	0.13	0.42	166	0.91	862	1199	< 1	34.1	na	0.44	1.09	0.13	na	18.9	12.4	na	43.93
NB	T6	10	1.32	0.24	1.08	132	0.79	519	1119	< 1	21.8	na	0.33	3.88	0.14	na	10.7	11.6	na	35.72
NB	T7	7	0.38	0.08	0.30	133	0.90	1073	909	1	53.9	na	0.38	1.02	0.07	na	13.4	12.4	na	42.33
NB	T7	15	0.74	0.07	0.67	245	1.09	1082	2130	1	27.5	na	0.76	1.66	0.10	na	15.1	15.9	na	89.11
NB	T7	19	0.35	0.08	0.27	70	1.08	451	259	< 1	13.5	na	0.36	0.66	0.05	na	12.7	15.0	na	31.88
NB	T8	2.5	0.53	0.09	0.44	249	1.40	1004	2163	1	38.0	na	0.64	1.37	0.13	na	14.0	20.5	na	69.61
NB	T8	10	0.40	0.07	0.33	153	0.91	412	3191	< 1	16.7	na	0.41	1.05	0.07	na	10.5	12.2	na	48.44
NB	T10	5	0.93	0.91	0.02	146	0.94	388	1136	1	15.8	na	0.38	0.31	0.09	na	8.8	12.4	na	38.75
NB	T10	50	0.27	0.07	0.20	84	0.87	646	553	< 1	14.9	na	0.36	0.78	0.06	na	10.8	12.1	na	47.75
NB	T11	5	0.32	0.10	0.22	44	0.91	222	268	< 1	12.4	na	0.15	0.67	0.02	na	5.1	11.0	na	25.36
NB	T11	20	0.48	0.07	0.41	115	1.22	790	502	1	24.1	na	0.40	1.11	0.05	na	11.5	15.6	na	58.06
NB	T12	6	0.53	0.08	0.45	78	0.85	676	429	< 1	16.1	na	0.26	1.21	0.06	na	11.5	12.0	na	33.76
NB	T12	25	0.56	0.08	0.48	177	1.13	196	1292	< 1	28.8	na	0.47	1.34	0.04	na	10.2	15.9	na	48.38
NB	T12	50	0.28	0.11	0.17	91	0.85	843	543	< 1	22.8	na	0.28	0.50	0.10	na	13.4	11.0	na	37.25
NB	T13	5	0.45	0.11	0.34	169	1.03	331	1026	< 1	15.4	na	0.29	1.11	0.06	na	8.7	13.5	na	34.20
NB	T13	25	0.46	0.07	0.39	118	0.87	272	814	< 1	14.9	na	0.33	1.31	0.06	na	10.2	12.4	na	34.59
NB	T14	5	0.34	0.13	0.21	45	1.01	284	270	1	14.9	na	0.23	0.68	0.05	na	8.0	12.9	na	27.33
NB	T14	20	0.39	0.07	0.32	263	1.00	366	2733	< 1	14.9	na	0.35	1.14	0.06	na	10.4	12.8	na	44.14
NB	T15	5	0.32	0.10	0.22	59	0.94	254	319	< 1	13.7	na	0.24	0.78	0.04	na	6.3	12.3	na	57.14
NB	T15	20	0.34	0.10	0.24	129	0.95	328	670	1	14.5	na	0.18	0.80	0.05	na	6.9	12.3	na	30.40
NB	T16	0	0.54	0.09	0.45	94	1.39	502	209	< 1	11.0	na	0.53	1.10	0.04	na	10.4	20.6	na	42.91
NB	T17	10	0.48	0.48	0.00	366	1.36	843	1363	< 1	22.3	na	0.71	0.23	0.16	na	8.4	14.8	na	89.70
NB	T18	10	0.40	0.10	0.30	221	0.85	273	1341	< 1	12.6	na	0.27	0.95	0.04	na	8.9	11.3	na	32.50
NB	T19	35	0.38	0.25	0.13	137	1.04	4083	475	1	12.0	na	0.65	0.13	0.04	na	7.7	10.2	na	25.79
NB	T19	55	0.20	0.14	0.06	284	0.97	1773	1186	1	15.5	na	0.69	0.13	0.09	na	10.5	13.0	na	22.90
NB	T19	67	3.33	1.96	1.37	1436	1.19	2249	2731	1	52.3	na	1.92	0.05	0.10	na	70.7	17.1	na	143.79
NB	T20	25	0.24	0.12	0.12	40	1.00	343	138	1	12.4	na	0.20	0.47	0.05	na	7.3	11.2	na	24.95
NB	T20	50	0.40	0.08	0.32	79	0.86	268	568	1	13.2	na	0.27	1.52	0.08	na	7.2	11.0	na	39.43
NB	T20	75	0.59	0.53	0.06	110	0.90	541	682	1	23.1	na	0.46	0.72	0.11	na	12.9	11.2	na	49.05
NB	T21	1	0.62	0.62	0.00	120	0.62	2445	461	< 1	10.7	na	0.51	0.25	0.02	na	6.2	6.6	na	37.66
NB	T21	15	0.11	0.05	0.06	90	0.35	4172	350	< 1	4.7	na	0.40	0.19	0.02	na	3.2	3.6	na	16.40
NB	T21	40	0.43	0.43	0.00	112	0.34	36776	503	1	11.8	na	0.50	0.95	0.05	na	18.2	4.2	na	16.20
NB	T22	25	0.35	0.17	0.18	342	1.28	1814	1270	1	26.7	na	0.73	0.37	0.13	na	13.3	13.1	na	75.43
NB	T22	52	0.47	0.32	0.15	338	1.59	472	1238	1	28.7	na	0.67	0.37	0.03	na	8.6	15.7	na	100.54
NB	T22	75	0.26	0.26	0.00	30	2.35	9	0	< 1	62.7	na	0.36	0.09	0.03	na	14.4	40.5	na	32.30
NB	T1	0-10	0.35	0.18	0.17	52	1.00	292	224	1	16.5	0.3	0.22	0.82	0.08	46.9	8.1	11.6	1.60	27.40
NB	T3	0-10	0.34	0.09	0.25	82	1.00	628	446	<1	14.6	0.2	0.27	0.91	0.04	42.3	8.8	11.1	1.67	32.52
NB	T6	0-15	0.15	0.05	0.10	160	1.11	464	836	1	11.4	0.2	0.27	0.36	0.07	42.6	7.6	10.8	1.57	41.89
NB	T6	15-35	0.06	0.06	0.00	230	1.16	618	976	3	11.8	0.5	0.45	0.12	0.08	47.5	10.5	11.6	1.88	73.40
NB	T6	35-65	0.35	0.11	0.24	922	1.13	4152	4414	1	10.1	0.3	1.48	1.00	0.15	11.8	34.8	10.5	1.90	159.36
NB	T7	0-5	0.31	0.11	0.20	100	1.02	298	518	1	15.4	0.4	0.24	0.77	0.05	44.8	7.7	11.0	1.55	32.60

Gold District	Sample Site	Tailings Depth (cm)	Total carbon LECO (% dry wt.)	Organic carbon LECO (% dry wt.)	Inorganic carbon LECO (% dry wt.)	Ag ICP-MS (µg/kg) DL = 2	Al ICP-MS (% dry wt.) 0.01	As ICP-MS (mg/kg) 0.1	Au ICP-MS (µg/kg) 0.2	B ICP-MS (mg/kg) 1	Ba ICP-MS (mg/kg) 0.5	Be ICP-MS (mg/kg) 0.1	Bi ICP-MS (mg/kg) 0.02	Ca ICP-MS (% dry wt.) 0.01	Cd ICP-MS (mg/kg) 0.01	Ce ICP-MS (mg/kg) 0.1	Co ICP-MS (mg/kg) 0.1	Cr ICP-MS (mg/kg) 0.5	Cs ICP-MS (mg/kg) 0.02	Cu ICP-MS (mg/kg) 0.01
NB	T8	0-10	0.45	0.07	0.38	153	1.07	583	936	3	20.8	0.6	0.37	1.14	0.05	35.4	10.3	12.3	2.03	40.54
NB	T10	0-8	0.30	0.22	0.08	224	0.97	1576	619	4	22.7	0.2	0.84	0.29	0.24	43.7	50.9	10.6	1.53	59.30
NB	T11	0-10	0.09	0.07	0.02	526	1.01	3762	816	2	31.2	0.3	2.21	0.13	0.20	34.6	101.1	12.2	1.88	86.89
NB	T11	10-20	0.07	0.07	0.00	185	0.88	5304	343	<1	13.4	0.1	0.80	0.10	0.06	51.7	7.7	9.7	1.93	41.77
Salmon River (Dufferin) Gold District (SR)																				
SR	T1	25	0.64	0.46	0.18	295	0.58	3733	2124	< 1	27.7	na	0.44	0.12	0.07	na	2.6	7.3	na	34.40
SR	T2	20	0.23	0.15	0.08	62	0.35	1983	241	< 1	10.4	na	0.16	0.10	0.04	na	5.8	3.3	na	10.30
SR	T2	35	0.16	0.09	0.07	73	0.17	1932	242	1	8.7	na	0.11	0.08	0.03	na	2.8	1.9	na	12.65
SR	T2	60	0.40	0.40	0.00	270	0.37	3104	1017	1	20.4	na	0.24	0.14	0.13	na	21.6	4.3	na	37.70
SR	T3	5	6.58	5.25	1.33	56	0.16	17049	104	1	67.3	na	0.14	0.39	0.17	na	4.2	2.1	na	12.64
SR	T3	15	0.62	0.16	0.46	109	0.41	1628	598	1	14.1	na	0.21	0.74	0.05	na	6.2	4.5	na	19.53
SR	T4	15	0.49	0.24	0.25	26	0.29	137	90	< 1	7.5	na	0.09	0.23	0.04	na	3.2	3.2	na	11.72
SR	T5	40	0.55	0.32	0.23	152	0.20	4198	1624	< 1	6.1	na	0.30	0.23	0.09	na	6.3	2.3	na	22.38
SR	T6	5	1.27	1.27	0.00	56	0.38	1468	243	1	65.7	na	0.09	0.13	0.37	na	14.5	2.9	na	5.54
SR	T7	30	0.41	0.13	0.28	137	0.19	7419	754	< 1	4.7	na	0.73	0.46	0.04	na	8.8	7.8	na	9.70
SR	T8	5	0.28	0.24	0.04	1375	0.05	149800	4366	< 1	8.3	na	4.65	0.03	0.06	na	4.8	18.9	na	60.70
SR	T8	20	0.47	0.24	0.23	159	0.23	11862	1516	< 1	10.2	na	0.52	0.47	0.14	na	12.0	2.1	na	18.08
SR	T8	80	2.15	0.39	1.76	306	0.23	15229	1504	1	15.0	na	0.61	0.44	0.12	na	26.2	2.7	na	30.04
SR	T9	30	1.33	1.27	0.06	131	0.28	4203	609	< 1	21.6	na	0.44	0.14	0.10	na	7.9	2.7	na	12.82
SR	T10	10	0.75	0.25	0.50	137	0.16	5332	695	< 1	7.9	na	0.47	0.70	0.11	na	6.0	1.5	na	14.81
SR	T11	5	5.16	5.16	0.00	60	0.66	1801	204	< 1	15.8	na	0.19	0.04	0.14	na	8.2	8.2	na	5.62
SR	T12	5	5.65	5.65	0.00	302	0.85	3979	885	< 1	45.8	na	0.63	0.10	0.31	na	75.4	10.5	na	21.94
SR	T13	15	1.87	1.80	0.07	392	0.72	1919	1275	1	32.8	na	0.75	0.10	0.12	na	10.9	9.7	na	23.34
SR	T14	10	0.21	0.16	0.05	344	0.17	14248	2334	< 1	6.3	na	0.75	0.17	0.08	na	5.3	1.9	na	11.92
SR	T14	47.5	0.20	0.17	0.03	124	0.21	17771	598	< 1	8.2	na	0.48	0.41	0.07	na	3.0	2.5	na	10.74
SR	T14	60	0.55	0.15	0.40	116	0.20	2648	728	< 1	6.3	na	0.39	0.51	0.06	na	4.9	2.3	na	10.73
SR	T15	5	1.33	1.04	0.29	228	0.59	4186	2279	< 1	43.2	na	0.68	0.05	0.12	na	12.6	6.9	na	7.81
SR	T16	10	0.32	0.25	0.07	39	0.36	1656	211	< 1	8.9	na	0.13	0.11	0.05	na	7.5	3.2	na	15.53
SR	T17	10	1.40	1.21	0.19	306	0.28	7628	1577	1	49.0	na	0.89	0.16	0.15	na	9.2	3.4	na	21.21
Upper Seal Harbour Gold District (USH)																				
USH	T1	5	0.34	0.28	0.06	292	1.57	13027	992	1	108.1	na	0.98	0.17	0.54	na	2.5	28.8	na	19.14
USH	T1	15	0.83	0.70	0.13	519	1.14	18533	3422	< 1	154.5	na	1.13	0.11	1.06	na	6.4	18.9	na	24.70
USH	T2	5	2.28	1.65	0.63	2307	0.56	71961	19464	11	70.6	na	4.96	0.12	3.48	na	22.7	9.8	na	180.49
USH	T2	15	1.50	1.01	0.49	1685	0.49	50737	14812	< 1	53.9	na	3.16	<0.01	2.44	na	62.3	24.4	na	795.77
USH	T3	5	3.65	2.58	1.07	289	1.04	10924	344	1	73.8	na	0.81	0.15	0.04	na	4.5	19.3	na	15.61
USH	T4	5	1.59	1.27	0.32	338	1.48	8193	1590	< 1	99.5	na	0.83	0.15	0.82	na	3.1	25.2	na	35.53
USH	T4	20	0.15	0.15	0.00	41	0.79	1144	180	1	47.4	na	0.14	0.08	0.87	na	3.0	15.8	na	8.11
USH	T5	15	0.15	0.14	0.01	379	0.54	10156	2115	1	28.1	na	0.80	0.01	0.01	na	0.2	10.5	na	4.92
USH	T5	20	0.14	0.13	0.01	222	0.80	5991	1535	< 1	41.0	na	0.60	0.02	0.02	na	0.3	13.7	na	5.57
USH	T6	5	0.86	0.63	0.23	247	1.53	4037	1072	1	79.7	na	0.62	0.16	0.38	na	6.5	22.3	na	52.01
USH	T7	5	0.66	0.43	0.23	212	1.02	6933	1255	< 1	57.0	na	0.59	0.07	0.04	na	1.2	18.8	na	6.02
USH	T8	10	0.31	0.23	0.08	240	0.90	15529	1132	< 1	50.2	na	0.78	0.06	0.03	na	2.0	16.8	na	4.02
USH	T8	35	0.16	0.16	0.00	176	0.49	6000	1496	< 1	27.7	na	0.35	0.06	0.44	na	6.6	10.4	na	8.01
USH	T9	20	0.76	0.54	0.22	139	0.89	7025	701	< 1	51.1	na	0.69	0.11	0.06	na	1.9	18.7	na	17.69
USH	T10	5	0.39	0.38	0.01	32	0.73	304	88	< 1	54.4	na	0.15	0.09	0.05	na	1.2	15.9	na	9.09
USH	T11	5	0.49	0.45	0.04	694	0.81	20791	3303	1	58.8	na	1.99	0.02	0.04	na	1.8	16.2	na	13.08
USH	T12	5	0.72	0.54	0.18	841	0.80	26479	6144	1	75.0	na	1.45	0.17	0.12	na	4.9	16.8	na	24.08
USH	T13	5	0.41	0.34	0.07	370	0.75	13683	2271	1	39.7	na	0.99	0.08	0.60	na	22.7	12.9	na	12.26
USH	P3-SHR	5	14.70	14.70	0.00	147	0.74	52	1	1	7.6	0.6	0.06	0.03	0.13	27.0	0.8	10.5	0.42	4.11

Gold District	Sample Site	Tailings Depth (cm)	Total carbon LECO (% dry wt.)	Organic carbon LECO (% dry wt.)	Inorganic carbon LECO (% dry wt.)	Ag ICP-MS (µg/kg) DL = 2	Al ICP-MS (% dry wt.) 0.01	As ICP-MS (mg/kg) 0.1	Au ICP-MS (µg/kg) 0.2	B ICP-MS (mg/kg) 1	Ba ICP-MS (mg/kg) 0.5	Be ICP-MS (mg/kg) 0.1	Bi ICP-MS (mg/kg) 0.02	Ca ICP-MS (% dry wt.) 0.01	Cd ICP-MS (mg/kg) 0.01	Ce ICP-MS (mg/kg) 0.1	Co ICP-MS (mg/kg) 0.1	Cr ICP-MS (mg/kg) 0.5	Cs ICP-MS (mg/kg) 0.02	Cu ICP-MS (mg/kg) 0.01
USH	T2-04	10	3.75	3.56	0.19	230	2.16	1810	833	1	102.4	0.8	0.55	0.18	0.09	45.7	2.3	35.0	5.32	22.51
USH	P4-GB	5	1.14	0.39	0.75	321	0.97	5200	1190	<1	56.8	0.3	1.11	0.13	0.40	21.3	26.4	20.2	2.39	24.71
USH	T3-04	14	0.36	0.30	0.06	216	1.26	25000	758	<1	85.1	1.3	0.63	0.18	3.16	150.0	2.4	23.2	2.99	55.32
USH	T3-04	25	0.21	0.19	0.02	209	1.28	6308	708	<1	78.0	0.6	0.79	0.12	0.59	39.4	8.4	22.1	3.38	24.23
USH	T39	5	0.53	0.45	0.08	114	1.30	2162	849	1	75.9	0.2	0.42	0.14	0.10	29.6	2.0	25.1	3.14	10.30
USH	T40	0	0.23	0.17	0.06	122	1.08	2594	966	1	65.7	0.5	0.26	0.14	0.08	26.8	2.2	22.6	3.10	9.02
USH	T40	15	0.10	0.10	0.00	71	1.14	1774	545	<1	67.4	0.6	0.17	0.15	0.32	30.5	6.9	23.7	3.83	18.34
USH	T41	0	0.62	0.44	0.18	139	1.26	3335	759	<1	73.1	0.8	0.35	0.12	0.06	34.1	1.6	25.0	3.54	16.80
USH	T41	20	0.23	0.21	0.02	138	2.05	4279	421	1	126.4	0.7	0.49	0.17	0.41	49.7	9.0	35.3	5.90	34.85
Whiteburn Gold District (WB)																				
WB	T1	90	0.25	0.18	0.07	27	1.37	10	2	< 1	30.5	na	0.16	0.05	0.05	na	6.9	20.5	na	15.30
WB	T2	100	0.28	0.25	0.03	53	1.85	18	2	< 1	50.1	na	0.26	0.06	0.03	na	11.8	25.6	na	28.44
WB	T3	70	0.83	0.74	0.09	59	1.70	9	2	< 1	49.5	na	0.25	0.13	0.27	na	10.0	25.1	na	33.37
WB	T4	0	0.08	0.07	0.01	23	0.59	11	279	< 1	3.8	na	0.07	0.07	0.01	na	1.8	8.3	na	3.48
WB	T5	0	0.10	0.09	0.01	328	0.83	36	1486	< 1	4.9	na	1.51	0.08	0.21	na	2.2	11.6	na	27.97
WB	T6	7	0.58	0.47	0.11	632	0.80	19473	4124	< 1	19.1	na	2.66	0.13	0.59	na	32.6	47.3	na	58.02
WB	T6	50	0.57	0.38	0.19	42	0.81	382	40	< 1	6.2	na	0.23	0.09	0.07	na	7.4	12.5	na	26.22
WB	T6	110	0.21	0.15	0.06	1227	0.44	4538	2364	< 1	8.1	na	5.24	0.12	0.10	na	6.5	7.7	na	35.62
WB	T7	10	2.93	2.93	0.00	1965	0.44	146400	19169	< 1	3.3	na	8.07	0.38	2.21	na	578.5	8.7	na	213.72
WB	T8	5	0.13	0.08	0.05	71	0.73	657	159	< 1	4.0	na	0.26	0.09	0.12	na	9.5	15.9	na	46.88
WB	T8	10	0.47	0.46	0.01	16	2.29	126	4	1	56.9	na	0.22	0.07	0.01	na	13.7	30.0	na	7.67
WB	T9	20	0.26	0.26	0.00	148	0.88	31	395	< 1	7.1	na	0.72	0.11	0.13	na	5.0	11.8	na	46.04
WB	T9	45	0.40	0.33	0.07	149	1.87	106	713	< 1	33.8	na	0.83	0.16	0.14	na	12.4	27.9	na	43.63
WB	T10	65	0.98	0.92	0.06	69	2.16	10	3	< 1	72.1	na	0.33	0.05	0.13	na	8.9	33.0	na	38.79
WB	T11	10	0.38	0.28	0.10	656	1.03	1075	1652	1	16.2	na	2.63	0.20	0.42	na	22.2	14.9	na	72.90
WB	T12	10	0.79	0.57	0.22	73	1.08	224	312	< 1	16.3	na	0.44	0.22	0.09	na	5.9	17.2	na	31.25
WB	T1	5-10	0.41	0.29	0.12	501	0.75	28600	3243	<1	6.8	<0.1	1.95	0.13	0.17	28.4	6.3	19.2	0.60	12.25
Statistics		**Min.**	0.01	0.00	0.00	16	0.01	9	0.3	< 1	2.4	<0.1	0.06	<0.01	<0.01	2.9	0.1	0.5	0.10	0.10
		Max.	23.80	23.70	4.87	8085	4.44	312300	41554	57	254.8	1.3	41.16	14.99	9.39	150.0	578.5	47.3	5.90	795.77
		Mean	1.18	0.95	0.23	425	0.92	11779	1249	2	31.0	0.3	1.49	0.55	0.40	33.3	15.8	14.7	1.63	42.18
		Median	0.32	0.16	0.06	146	0.89	2473	358	1	19.5	0.3	0.53	0.17	0.16	32.0	9.0	12.4	0.99	30.84
		n	487	487	487	487	487	487	487	218	487	76	487	476	483	87	487	486	87	487
		Std Dev	3.15	3.09	0.52	1000	0.49	35198	3625	5	29.5	0.2	3.77	1.49	0.81	17.3	37.0	9.1	1.21	51.75
		95th pctl	4.92	4.11	1.08	1641	1.79	39968	3892	4	86.3	0.7	5.91	1.32	1.63	49.5	45.7	34.9	3.53	112.17
		90th pctl	2.27	1.27	0.45	707	1.59	20798	2225	3	73.4	0.6	2.27	0.83	0.98	47.5	25.0	28.8	3.32	86.81
		75th pctl	0.59	0.37	0.23	306	1.13	7283	971	1	41.0	0.4	1.01	0.50	0.35	39.9	14.5	17.4	2.59	49.61
		50th pctl	0.32	0.16	0.06	146	0.89	2473	358	1	19.5	0.3	0.53	0.17	0.16	32.0	9.0	12.4	0.99	30.84
		25th pctl	0.16	0.08	0.01	83	0.60	843	142	1	11.3	0.2	0.31	0.10	0.08	26.4	4.9	8.5	0.80	16.28

Notes: na = not analyzed; DL = detection limit

Gold District	Sample Site	Tailings Depth (cm)	Fe ICP-MS (% dry wt.) 0.01	Ga ICP-MS (mg/kg) 0.1	Ge ICP-MS (mg/kg) 0.1	Hf ICP-MS (mg/kg) 0.02	Hg ICP-MS (µg/kg) 5	In ICP-MS (mg/kg) 0.02	K ICP-MS (% dry wt.) 0.01	La ICP-MS (mg/kg) 0.5	Li ICP-MS (mg/kg) 0.1	Mg ICP-MS (% dry wt.) 0.01	Mn ICP-MS (mg/kg) 1	Mo ICP-MS (mg/kg) 0.01	Na ICP-MS (% dry wt.) 0.001	Nb ICP-MS (mg/kg) 0.02	Ni ICP-MS (mg/kg) 0.1	P ICP-MS (% dry wt.) 0.001	Pb ICP-MS (mg/kg) 0.01	Rb ICP-MS (mg/kg) 0.1
Caribou Gold District (CAR)																				
CAR	T1	0-5	5.74	0.1	0.1	0.12	9626	0.03	0.04	9.2	0.6	0.01	6	2.21	0.002	0.11	1.3	0.016	505.84	2.3
CAR	T2	0-4	34.46	0.4	0.2	0.17	12539	0.26	0.01	1.2	1.5	0.04	48	7.09	<0.001	0.39	661.0	0.011	1640.06	0.7
CAR	T3	0-8	1.91	0.6	<0.1	0.08	536	<0.02	0.02	6.3	3.8	0.12	108	0.21	0.001	<0.02	11.1	0.024	77.29	1.3
CAR	T4	0-4	2.32	1.1	0.1	0.15	988	<0.02	0.02	5.8	8.1	0.47	529	0.15	0.001	<0.02	22.4	0.034	28.24	1.3
CAR	T5	2-9	5.36	0.4	0.1	0.12	3684	0.06	0.02	5.8	1.4	0.05	9	0.85	0.001	0.11	4.1	0.021	418.78	1.3
Cochrane Hill Gold District (CH)																				
CH	T1	10	3.79	6.8	na	na	7	na	0.85	13.4	na	1.08	1017	0.45	0.023	na	41.7	0.041	393.43	na
CH	T1	27	4.40	6.7	na	na	< 5	na	0.81	13.2	na	1.08	754	0.45	0.019	na	25.1	0.040	306.37	na
CH	T1	50	3.78	6.9	na	na	8	na	0.92	12.9	na	1.06	766	0.44	0.024	na	30.6	0.041	317.55	na
CH	T2	15	3.47	6.0	na	na	5	na	0.78	8.7	na	1.01	287	0.42	0.014	na	12.2	0.035	86.50	na
CH	T2	32	2.87	5.4	na	na	6	na	0.73	8.9	na	0.90	268	0.33	0.015	na	18.3	0.033	57.87	na
CH	T2	50	3.87	6.6	na	na	< 5	na	0.90	9.9	na	1.12	390	0.38	0.020	na	50.5	0.037	80.80	na
CH	T3	10	3.09	5.7	na	na	10	na	0.84	9.8	na	0.96	289	0.28	0.015	na	12.4	0.036	61.12	na
CH	T3	22	3.13	6.1	na	na	6	na	0.70	13.8	na	1.00	326	0.36	0.017	na	25.0	0.037	71.11	na
CH	T3	36	2.79	5.4	na	na	< 5	na	0.78	6.0	na	0.91	212	0.23	0.014	na	15.7	0.031	50.54	na
CH	T3	50	3.27	6.2	na	na	< 5	na	0.81	30.6	na	0.99	274	0.34	0.019	na	81.8	0.039	35.69	na
CH	T3	70	3.29	6.3	na	na	7	na	0.91	14.7	na	1.05	410	0.40	0.024	na	27.0	0.041	55.58	na
CH	T4	20	3.62	5.9	na	na	10	na	0.77	13.9	na	0.99	321	1.07	0.015	na	12.1	0.038	175.36	na
CH	T4	35	2.62	5.2	na	na	< 5	na	0.71	8.3	na	0.87	233	0.26	0.013	na	10.6	0.032	49.48	na
CH	T4	60	3.92	6.4	na	na	14	na	0.68	22.1	na	1.07	575	0.54	0.020	na	61.2	0.045	237.41	na
CH	T4	80	4.11	6.7	na	na	20	na	0.61	29.4	na	1.17	632	0.61	0.024	na	63.5	0.042	244.41	na
CH	T5	30	3.10	5.3	na	na	6	na	0.75	9.5	na	0.93	264	0.45	0.013	na	7.8	0.033	78.61	na
CH	T5	64	3.38	5.5	na	na	15	na	0.66	14.5	na	0.94	397	0.45	0.016	na	42.3	0.035	145.79	na
CH	T5	85	3.43	6.2	na	na	10	na	0.74	22.9	na	1.04	500	0.44	0.038	na	51.3	0.042	210.57	na
CH	T6	16	3.50	6.2	na	na	11	na	0.78	13.8	na	1.07	392	0.44	0.017	na	20.2	0.031	88.03	na
CH	T6	29	3.40	6.0	na	na	25	na	0.60	19.7	na	0.98	519	0.51	0.021	na	40.9	0.036	160.24	na
CH	T6	46	3.35	5.8	na	na	11	na	0.51	15.5	na	0.77	553	0.48	0.010	na	24.8	0.031	45.48	na
CH	T6	60	3.08	5.5	na	na	7	na	0.70	11.3	na	0.93	345	0.44	0.015	na	42.7	0.037	53.40	na
CH	T7	10	3.55	5.5	na	na	7	na	0.79	8.9	na	0.98	294	0.97	0.012	na	9.1	0.032	50.64	na
CH	T7	24	2.64	5.5	na	na	6	na	0.67	8.2	na	0.90	259	0.33	0.014	na	9.5	0.032	92.49	na
CH	T7	26	2.59	4.7	na	na	6	na	0.61	8.1	na	0.85	269	0.27	0.012	na	10.7	0.028	58.31	na
CH	T7	67	3.71	5.3	na	na	< 5	na	0.65	9.1	na	1.00	349	0.44	0.014	na	41.1	0.033	175.87	na
CH	T8	7	3.45	5.5	na	na	< 5	na	0.68	8.3	na	0.97	287	0.31	0.014	na	8.9	0.032	52.86	na
CH	T8	54	2.63	5.2	na	na	< 5	na	0.77	7.4	na	0.94	367	0.11	0.016	na	18.7	0.027	41.07	na
CH	T8	64	2.58	5.4	na	na	< 5	na	0.72	6.9	na	0.95	483	0.12	0.017	na	16.3	0.024	38.85	na
CH	T9	13	3.86	6.1	na	na	12	na	0.65	16.9	na	0.96	368	0.71	0.017	na	17.8	0.041	181.97	na
CH	T9	22	3.31	5.9	na	na	5	na	0.71	11.8	na	1.03	352	0.36	0.016	na	15.6	0.029	77.03	na
CH	T9	55	3.19	6.3	na	na	< 5	na	0.70	20.6	na	1.06	602	0.46	0.031	na	27.2	0.039	214.06	na
CH	T10	13	3.65	1.9	na	na	63162	na	0.08	7.9	na	0.10	294	1.48	0.005	na	4.4	0.022	398.42	na
CH	T10	21	14.82	0.3	na	na	60166	na	0.02	0.7	na	0.02	321	3.44	0.005	na	96.7	0.005	87.25	na
CH	T11	10	3.93	5.8	na	na	7407	na	0.53	11.3	na	0.91	633	0.34	0.012	na	7.5	0.043	170.87	na
CH	T11	16	4.75	5.3	na	na	9748	na	0.70	9.5	na	1.00	539	0.19	0.012	na	4.6	0.033	63.61	na
CH	T11	22	3.21	6.3	na	na	6400	na	0.79	6.9	na	1.13	316	0.29	0.014	na	19.5	0.045	81.35	na
CH	T12	3	6.69	5.8	na	na	10024	na	0.53	9.6	na	0.89	1723	0.37	0.020	na	5.8	0.048	131.36	na
CH	T12	10	1.67	5.4	na	na	9062	na	0.34	14.2	na	0.62	569	0.24	0.014	na	7.7	0.027	57.71	na
CH	T13	8	3.24	5.9	na	na	14	na	0.81	8.2	na	1.07	812	0.27	0.016	na	25.5	0.032	135.35	na
CH	T14	0	3.60	5.3	na	na	11720	na	0.35	10.0	na	0.77	398	0.78	0.010	na	17.3	0.049	183.90	na
CH	T15	16	3.93	6.3	na	na	21	na	0.82	9.7	na	1.11	627	0.49	0.017	na	32.5	0.039	169.04	na
CH	T15	26	3.81	6.0	na	na	3359	na	0.60	14.5	na	1.00	329	0.27	0.013	na	7.3	0.049	178.28	na

Gold District	Sample Site	Tailings Depth (cm)	Fe ICP-MS (% dry wt.) 0.01	Ga ICP-MS (mg/kg) 0.1	Ge ICP-MS (mg/kg) 0.1	Hf ICP-MS (mg/kg) 0.02	Hg ICP-MS (µg/kg) 5	In ICP-MS (mg/kg) 0.02	K ICP-MS (% dry wt.) 0.01	La ICP-MS (mg/kg) 0.5	Li ICP-MS (mg/kg) 0.1	Mg ICP-MS (% dry wt.) 0.01	Mn ICP-MS (mg/kg) 1	Mo ICP-MS (mg/kg) 0.01	Na ICP-MS (% dry wt.) 0.001	Nb ICP-MS (mg/kg) 0.02	Ni ICP-MS (mg/kg) 0.1	P ICP-MS (% dry wt.) 0.001	Pb ICP-MS (mg/kg) 0.01	Rb ICP-MS (mg/kg) 0.1
CH	T16	7	3.49	5.0	na	na	6578	na	0.51	10.0	na	0.85	1436	0.38	0.012	na	20.9	0.035	46.92	na
CH	T16	20	2.60	5.0	na	na	11501	na	0.81	10.3	na	0.93	257	0.21	0.016	na	9.4	0.038	67.13	na
East Rawdon Gold District (RAW)																				
RAW	T1	15	2.80	2.4	na	na	8106	na	0.02	19.3	na	0.54	1017	0.39	0.001	na	39.3	0.054	101.27	na
RAW	T1	40	1.40	1.3	na	na	5076	na	0.02	10.1	na	0.42	692	0.35	0.001	na	14.0	0.033	21.85	na
RAW	T2	10	2.45	2.1	na	na	6450	na	0.02	16.4	na	0.45	866	0.45	0.001	na	40.7	0.051	70.36	na
RAW	T2	60	1.89	1.8	na	na	2881	na	0.02	12.0	na	0.55	766	0.23	0.001	na	15.3	0.039	43.32	na
RAW	T3	10	2.60	2.6	na	na	5502	na	0.02	18.7	na	0.70	1015	0.16	0.001	na	37.0	0.052	72.14	na
RAW	T3	30	3.78	1.7	na	na	8833	na	0.03	9.3	na	0.36	611	1.18	0.001	na	44.6	0.042	134.99	na
RAW	T3	50	1.87	1.5	na	na	5014	na	0.02	10.6	na	0.44	745	0.44	0.001	na	37.1	0.035	42.98	na
RAW	T4	10	1.51	1.4	na	na	5408	na	0.02	10.1	na	0.32	679	0.26	0.002	na	19.6	0.029	83.28	na
RAW	T4	70	1.92	2.0	na	na	3687	na	0.03	13.1	na	0.51	789	0.62	0.001	na	20.1	0.040	43.20	na
RAW	T5	20	2.99	2.1	na	na	14880	na	0.04	13.0	na	0.44	1089	0.79	0.001	na	39.8	0.044	123.85	na
RAW	T5	50	2.30	1.7	na	na	21389	na	0.03	9.7	na	0.34	567	0.73	0.001	na	15.6	0.037	273.00	na
RAW	T5	80	1.61	1.5	na	na	4751	na	0.02	8.3	na	0.29	550	0.42	0.001	na	15.7	0.035	99.55	na
RAW	T5	110	1.56	1.6	na	na	6374	na	0.02	13.4	na	0.30	1356	0.46	0.001	na	62.6	0.032	105.06	na
RAW	T5	140	1.48	1.5	na	na	3802	na	0.02	8.1	na	0.47	743	0.48	0.001	na	24.7	0.033	24.96	na
RAW	T5	170	2.22	2.7	na	na	10972	na	0.05	15.7	na	0.67	1116	0.20	0.002	na	21.2	0.046	115.49	na
RAW	T6	20	2.23	1.6	na	na	5262	na	0.02	7.5	na	0.32	392	0.48	0.001	na	10.1	0.034	96.09	na
RAW	T6	50	2.78	1.1	na	na	9375	na	0.01	3.6	na	0.20	315	0.32	0.001	na	7.8	0.032	88.69	na
RAW	T8	25	2.89	2.9	na	na	7706	na	0.03	21.4	na	0.72	1200	0.49	0.001	na	39.4	0.053	182.13	na
RAW	T8	40	2.77	2.6	na	na	4199	na	0.03	17.8	na	0.61	819	0.44	0.001	na	42.8	0.061	85.85	na
RAW	T9	10	2.64	2.4	na	na	8982	na	0.02	17.7	na	0.53	647	1.28	0.002	na	34.9	0.051	109.11	na
RAW	T9	50	2.39	2.3	na	na	6698	na	0.02	11.7	na	0.71	891	0.48	0.002	na	34.7	0.049	88.05	na
RAW	T10	30	2.38	2.7	na	na	2522	na	0.03	18.4	na	0.64	249	0.15	0.001	na	31.1	0.056	52.51	na
RAW	T11	15	1.87	2.2	na	na	7201	na	0.03	13.9	na	0.52	319	1.46	0.002	na	38.1	0.046	35.46	na
RAW	T11	40	2.58	3.2	na	na	3948	na	0.03	21.5	na	0.72	253	1.10	0.001	na	50.7	0.054	40.35	na
RAW	T12	10	2.93	2.3	na	na	5139	na	0.02	17.9	na	0.48	534	0.32	0.001	na	41.3	0.047	92.12	na
RAW	T12	40	1.97	2.0	na	na	16374	na	0.02	13.8	na	0.49	839	0.39	0.001	na	16.4	0.042	111.07	na
RAW	T13	10	2.15	2.3	na	na	4455	na	0.02	17.2	na	0.48	1507	0.16	0.001	na	26.4	0.053	127.21	na
Goldenville Gold District (GD)																				
GD	T1	2	3.12	1.7	na	na	1637	na	0.09	7.4	na	0.39	184	0.87	0.002	na	8.3	0.047	94.50	na
GD	T1	10	3.67	3.5	na	na	2332	na	0.17	16.3	na	0.77	346	2.53	0.002	na	12.5	0.048	96.99	na
GD	T1	13	4.12	2.2	na	na	4008	na	0.10	16.3	na	0.47	286	2.00	0.002	na	10.7	0.074	201.29	na
GD	T2	1	3.79	1.6	na	na	897	na	0.08	5.8	na	0.34	112	1.09	0.001	na	9.1	0.055	173.82	na
GD	T2	3.5	4.26	1.5	na	na	980	na	0.07	5.6	na	0.33	101	1.08	0.001	na	9.3	0.039	176.85	na
GD	T2	8	2.29	1.7	na	na	88	na	0.09	6.2	na	0.40	114	0.66	0.001	na	9.0	0.040	28.02	na
GD	T3	1	1.66	1.7	na	na	111	na	0.08	12.0	na	0.42	275	0.51	0.002	na	12.4	0.051	28.90	na
GD	T3	21	1.76	2.1	na	na	219	na	0.14	14.7	na	0.50	487	0.33	0.001	na	20.4	0.052	19.15	na
GD	T4	1	2.06	1.6	na	na	325	na	0.07	9.4	na	0.39	145	0.38	0.002	na	8.1	0.042	28.11	na
GD	T5	1	1.30	1.8	na	na	52	na	0.11	11.4	na	0.41	301	0.62	0.001	na	12.2	0.036	11.07	na
GD	T5	8	2.25	3.0	na	na	418	na	0.19	24.9	na	0.69	474	0.80	0.002	na	42.4	0.071	27.95	na
GD	T6	1	3.40	2.8	na	na	354	na	0.15	22.6	na	0.70	395	0.44	0.002	na	16.2	0.055	33.70	na
GD	T6	17	2.38	1.9	na	na	171	na	0.11	12.5	na	0.48	191	0.40	0.001	na	10.8	0.058	25.81	na
GD	T7	1	3.16	1.9	na	na	2165	na	0.10	7.6	na	0.39	157	0.90	0.001	na	10.0	0.047	95.09	na
GD	T7	14	2.55	2.0	na	na	271	na	0.12	3.6	na	0.42	128	2.17	0.001	na	6.6	0.068	22.87	na
GD	T8	1	2.79	3.2	na	na	715	na	0.14	25.6	na	0.75	596	0.54	0.003	na	28.5	0.063	42.01	na
GD	T8	15	1.91	1.7	na	na	709	na	0.10	20.6	na	0.45	424	0.26	0.001	na	10.7	0.043	59.00	na
GD	T9	1	2.52	2.0	na	na	259	na	0.10	9.8	na	0.47	212	0.47	0.002	na	11.3	0.053	42.97	na
GD	T9	13	2.99	4.1	na	na	1579	na	0.19	18.2	na	0.88	462	0.74	0.003	na	15.7	0.062	61.16	na
GD	T10	1	2.16	1.5	na	na	744	na	0.08	7.5	na	0.42	174	0.56	0.001	na	7.1	0.040	34.17	na
GD	T10	8	1.93	2.0	na	na	294	na	0.12	9.3	na	0.46	222	0.87	0.001	na	11.9	0.050	25.31	na
GD	T10	20	4.82	1.5	na	na	330	na	0.06	8.2	na	0.33	140	2.38	0.001	na	11.7	0.037	51.20	na
GD	T11	1	1.57	1.9	na	na	166	na	0.11	15.3	na	0.46	510	1.09	0.002	na	24.5	0.044	16.05	na
GD	T11	10	1.93	2.0	na	na	187	na	0.11	15.9	na	0.48	566	0.57	0.001	na	47.4	0.049	14.66	na
GD	T12	1	2.68	3.8	na	na	1443	na	0.21	30.2	na	0.91	533	4.28	0.006	na	21.9	0.062	28.31	na
GD	T12	5	3.39	3.7	na	na	1430	na	0.19	31.4	na	0.84	956	3.04	0.005	na	24.6	0.066	30.66	na
GD	T12	19	2.96	4.1	na	na	1357	na	0.20	35.8	na	0.96	682	1.20	0.006	na	26.9	0.053	26.32	na

Gold District	Sample Site	Tailings Depth (cm)	Fe ICP-MS (% dry wt.) 0.01	Ga ICP-MS (mg/kg) 0.1	Ge ICP-MS (mg/kg) 0.1	Hf ICP-MS (mg/kg) 0.02	Hg ICP-MS (µg/kg) 5	In ICP-MS (mg/kg) 0.02	K ICP-MS (% dry wt.) 0.01	La ICP-MS (mg/kg) 0.5	Li ICP-MS (mg/kg) 0.1	Mg ICP-MS (% dry wt.) 0.01	Mn ICP-MS (mg/kg) 1	Mo ICP-MS (mg/kg) 0.01	Na ICP-MS (% dry wt.) 0.001	Nb ICP-MS (mg/kg) 0.02	Ni ICP-MS (mg/kg) 0.1	P ICP-MS (% dry wt.) 0.001	Pb ICP-MS (mg/kg) 0.01	Rb ICP-MS (mg/kg) 0.1
GD	T13	1	1.60	1.9	na	na	168	na	0.11	16.4	na	0.50	370	0.71	0.002	na	15.1	0.048	13.66	na
GD	T13	6	3.19	3.4	na	na	932	na	0.21	30.5	na	0.84	1445	2.68	0.006	na	23.5	0.078	29.84	na
GD	T13	8	2.80	4.1	na	na	1390	na	0.20	35.1	na	0.94	669	3.05	0.007	na	17.1	0.061	22.43	na
GD	T15	1	10.50	1.0	na	na	1696	na	0.05	5.9	na	0.20	107	3.88	0.001	na	4.8	0.039	53.43	na
GD	T15	5	0.37	0.1	na	na	165	na	0.02	8.4	na	0.03	13	0.96	0.002	na	0.8	0.003	5.98	na
GD	T15	8	16.26	1.0	na	na	6358	na	0.01	3.3	na	0.02	31	12.08	0.002	na	12.0	0.070	533.01	na
GD	T16	4	2.54	2.3	na	na	686	na	0.13	10.9	na	0.48	291	0.52	0.002	na	9.5	0.055	31.41	na
GD	T16	8	20.21	0.5	na	na	11137	na	0.01	3.1	na	0.01	38	7.34	0.001	na	29.6	0.029	797.20	na
GD	T17	1	17.94	0.3	na	na	28652	na	0.01	3.3	na	0.01	7	3.07	0.002	na	7.6	0.031	1796.79	na
GD	T1	0-5	18.20	0.1	0.2	1.37	48455	0.29	0.01	2.9	0.7	0.02	<1	2.68	0.002	1.33	13.9	0.051	1967.86	1.2
GD	T2	0-5	2.75	1.9	0.1	0.05	1621	<0.02	0.11	8.5	10.5	0.42	179	0.71	0.001	0.37	7.9	0.050	59.64	7.9
GD	T3	0-5	12.11	1.1	<0.1	0.18	2481	0.08	0.04	7.5	2.3	0.08	37	9.20	0.001	1.41	33.0	0.066	387.06	3.3
GD	T4	0-5	3.06	2.0	0.1	0.11	243	0.02	0.11	8.3	10.4	0.45	178	0.68	0.001	0.30	10.5	0.052	59.01	8.6
GD	T5	0-5	2.33	2.4	<0.1	0.2	494	<0.02	0.19	22.6	17.0	0.71	510	0.68	0.002	0.16	22.0	0.063	23.43	13.3
GD	T1	0-5	2.08	2.0	0.1	0.08	201	<0.02	0.12	12.7	12.2	0.50	186	0.53	0.002	0.39	11.1	0.067	28.74	7.9
GD	T2	0-5	1.62	2.0	<0.1	0.08	93	<0.02	0.10	9.9	11.8	0.44	156	0.48	0.001	0.36	8.8	0.045	24.44	7.2
GD	T3	0-5	2.64	3.9	0.1	0.54	1223	<0.02	0.25	29.0	23.6	0.93	551	4.54	0.004	0.10	24.1	0.073	29.35	16.6
GD	T4	0-5	2.38	2.7	0.1	0.33	567	<0.02	0.18	22.1	17.8	0.76	448	0.45	0.002	0.12	19.6	0.062	19.48	12.6
GD	T5	0-10	1.85	1.7	0.1	0.2	68	<0.02	0.10	5.4	8.5	0.36	110	0.25	0.001	0.18	6.6	0.051	11.51	6.5
GD	T6	0-10	1.55	1.8	<0.1	0.13	145	<0.02	0.11	12.5	12.2	0.46	357	0.64	0.002	0.10	19.7	0.046	18.49	8.1
GD	T7	0-10	1.90	2.1	0.1	0.17	457	<0.02	0.13	11.7	11.5	0.44	326	0.76	0.002	0.14	14.6	0.051	35.09	8.7
GD	T8	0-10	2.25	2.2	0.1	0.13	715	0.02	0.12	13.0	11.8	0.47	203	1.32	0.001	0.25	9.5	0.062	41.18	8.5
GD	T9	0-10	1.82	2.0	0.1	0.22	387	<0.02	0.12	13.4	12.7	0.50	419	0.31	0.001	0.12	11.6	0.045	38.88	7.8
GD	T10	0-10	2.49	2.1	<0.1	0.15	1125	0.02	0.13	11.7	12.9	0.44	243	0.89	0.001	0.22	12.9	0.049	61.35	8.6
GD	T11	0-5	1.45	1.5	<0.1	0.12	293	<0.02	0.08	5.9	9.4	0.33	123	0.42	0.001	0.21	6.4	0.037	33.25	6.3
GD	T12	0-5	4.12	5.8	0.1	0.07	143	0.04	0.62	10.9	33.9	0.83	260	0.92	0.010	0.67	11.1	0.051	158.42	47.2
GD	T13	0-5	20.91	0.1	0.2	1.72	37400	0.26	0.01	2.9	0.1	<0.01	5	2.36	0.001	0.79	22.2	0.037	1404.02	0.7
Lake Catcha Gold District (LC)																				
LC	T1	7.5	3.40	1.9	na	na	4075	na	0.03	13.5	na	0.49	881	0.09	0.001	na	65.5	0.039	35.36	na
LC	T1	30	12.66	0.7	na	na	150000	na	0.02	3.8	na	0.13	175	0.79	0.001	na	25.2	0.021	853.07	na
LC	T1	60	3.70	1.4	na	na	12701	na	0.05	17.8	na	0.87	775	0.07	0.001	na	27.6	0.044	47.20	na
LC	T1	125	3.57	2.2	na	na	2912	na	0.04	13.2	na	0.60	805	0.13	0.001	na	27.8	0.048	48.52	na
LC	T2	15	3.35	2.2	na	na	7014	na	0.05	13.9	na	0.64	671	0.12	0.002	na	36.6	0.051	45.91	na
LC	T2	30	4.19	1.3	na	na	3672	na	0.03	10.7	na	0.25	495	0.40	0.002	na	22.7	0.045	52.52	na
LC	T3	5	4.66	1.6	na	na	1371	na	0.02	9.8	na	0.82	872	0.13	0.001	na	28.8	0.042	31.14	na
LC	T3	17	3.93	2.5	na	na	4994	na	0.07	21.3	na	0.69	651	0.08	0.003	na	37.8	0.065	27.39	na
LC	T3	27	3.12	2.1	na	na	3583	na	0.04	12.7	na	0.56	684	0.10	0.001	na	23.7	0.047	33.91	na
LC	T3	35	3.59	1.3	na	na	2088	na	0.03	12.5	na	0.16	391	0.45	0.002	na	18.6	0.042	12.73	na
LC	T4	10	4.32	2.0	na	na	8421	na	0.05	13.5	na	0.51	1041	0.15	0.001	na	42.4	0.046	119.25	na
LC	T4	30	3.44	2.4	na	na	3189	na	0.04	17.2	na	0.57	590	0.20	0.001	na	43.3	0.049	10.12	na
LC	T4	50	3.06	1.5	na	na	32756	na	0.05	24.8	na	0.51	654	0.08	0.002	na	11.3	0.055	19.10	na
LC	T4	70	2.13	1.1	na	na	6942	na	0.04	13.5	na	0.45	553	0.08	0.001	na	12.7	0.040	14.12	na
LC	T5	12	2.14	1.0	na	na	2149	na	0.02	8.4	na	0.33	268	0.14	0.001	na	15.4	0.046	34.52	na
LC	T5	30	4.10	1.2	na	na	1457	na	0.02	6.8	na	0.72	866	0.30	0.001	na	28.1	0.044	71.80	na
LC	T6	10	5.16	1.4	na	na	3500	na	0.02	6.3	na	0.61	577	0.25	0.001	na	34.8	0.052	66.55	na

Gold District	Sample Site	Tailings Depth (cm)	Fe ICP-MS (% dry wt.) 0.01	Ga ICP-MS (mg/kg) 0.1	Ge ICP-MS (mg/kg) 0.1	Hf ICP-MS (mg/kg) 0.02	Hg ICP-MS (µg/kg) 5	In ICP-MS (mg/kg) 0.02	K ICP-MS (% dry wt.) 0.01	La ICP-MS (mg/kg) 0.5	Li ICP-MS (mg/kg) 0.1	Mg ICP-MS (% dry wt.) 0.01	Mn ICP-MS (mg/kg) 1	Mo ICP-MS (mg/kg) 0.01	Na ICP-MS (% dry wt.) 0.001	Nb ICP-MS (mg/kg) 0.02	Ni ICP-MS (mg/kg) 0.1	P ICP-MS (% dry wt.) 0.001	Pb ICP-MS (mg/kg) 0.01	Rb ICP-MS (mg/kg) 0.1
LC	T6	25	2.95	1.7	na	na	2735	na	0.03	7.1	na	0.62	537	0.15	0.001	na	31.6	0.040	36.49	na
LC	T7	20	3.40	1.2	na	na	4157	na	0.03	13.2	na	0.44	1069	0.13	0.002	na	54.7	0.041	28.48	na
LC	T8	15	4.92	1.4	na	na	2193	na	0.03	13.5	na	0.42	984	0.44	0.001	na	40.4	0.050	46.24	na
LC	T8	30	3.38	2.8	na	na	3174	na	0.06	30.1	na	0.59	533	0.16	0.002	na	47.4	0.066	28.47	na
LC	T9	20	2.58	1.2	na	na	1255	na	0.02	16.1	na	0.29	204	0.27	0.001	na	28.6	0.043	20.12	na
LC	T1-02	20	5.21	1.7	na	na	7368	na	0.03	12.3	na	0.96	1092	0.10	0.001	na	52.7	0.045	40.40	na
LC	T1-02	75	5.34	1.5	na	na	3688	na	0.04	9.5	na	0.94	1048	0.12	0.001	na	36.3	0.055	31.97	na
LC	S1	5	3.78	2.1	na	na	11180	na	0.09	19.2	na	0.51	1301	0.52	0.004	na	77.3	0.083	91.04	na
LC	S2	5	3.28	2.1	na	na	12862	na	0.13	14.4	na	0.37	663	1.00	0.006	na	61.7	0.073	114.66	na
LC	S3	5	2.54	1.9	na	na	10756	na	0.13	8.7	na	0.21	1122	1.18	0.011	na	88.3	0.066	97.61	na
LC	S4	5	3.11	1.9	na	na	8789	na	0.13	9.9	na	0.19	1958	1.52	0.011	na	72.4	0.070	162.30	na
LC	S5	5	1.84	1.6	na	na	3487	na	0.07	6.3	na	0.11	1270	1.73	0.011	na	88.3	0.077	52.79	na
LC	S6	5	2.45	1.8	na	na	4206	na	0.08	8.9	na	0.13	1451	1.85	0.012	na	110.5	0.075	66.12	na
LC	S7	5	1.28	1.7	na	na	2053	na	0.05	6.5	na	0.11	1316	1.00	0.010	na	31.1	0.100	44.58	na
LC	S8	5	0.79	1.2	na	na	1148	na	0.03	4.6	na	0.07	541	0.95	0.015	na	27.3	0.057	64.58	na
LC	S9	5	1.32	1.7	na	na	1545	na	0.03	8.2	na	0.10	896	1.60	0.011	na	64.1	0.110	52.41	na
Leipsigate Gold District (LEI)																				
LEI	T1	0	2.54	5.2	na	na	98	na	0.11	17.0	na	0.49	501	4.46	0.023	na	36.5	0.067	80.57	na
LEI	T2	10	1.53	2.0	na	na	2940	na	0.06	11.8	na	0.29	1973	28.88	0.002	na	14.9	0.030	22.99	na
LEI	T3	50	1.52	2.0	na	na	1669	na	0.06	10.6	na	0.27	2102	20.95	0.002	na	14.6	0.031	31.74	na
LEI	T4	20	2.61	4.0	na	na	3690	na	0.11	20.1	na	0.58	1548	44.95	0.003	na	26.7	0.071	44.16	na
LEI	T4	50	3.33	4.9	na	na	1915	na	0.09	22.2	na	0.76	1114	48.56	0.003	na	32.6	0.061	23.02	na
LEI	T5	20	2.19	2.7	na	na	635	na	0.04	10.9	na	0.39	1223	17.63	0.002	na	30.9	0.055	34.93	na
LEI	T5	60	1.92	2.9	na	na	445	na	0.04	14.4	na	0.43	1096	14.79	0.002	na	18.0	0.043	16.78	na
LEI	T6	20	1.73	2.6	na	na	1467	na	0.04	19.5	na	0.39	1005	26.88	0.002	na	13.1	0.066	22.41	na
LEI	T6	35	2.01	3.1	na	na	436	na	0.04	16.4	na	0.47	974	45.15	0.001	na	12.6	0.046	16.78	na
LEI	T7	15	2.91	5.0	na	na	5173	na	0.10	21.1	na	0.66	2281	181.62	0.005	na	27.6	0.044	46.00	na
LEI	T7	30	1.29	1.8	na	na	802	na	0.03	13.4	na	0.51	1781	32.34	0.002	na	11.7	0.037	10.78	na
LEI	T7	50	0.93	1.4	na	na	3936	na	0.04	7.1	na	0.21	759	50.32	0.001	na	14.8	0.026	15.04	na
LEI	T8	10	2.30	3.5	na	na	4085	na	0.06	19.1	na	0.53	1287	63.48	0.003	na	21.1	0.054	48.83	na
LEI	T9	20	2.04	3.7	na	na	307	na	0.03	19.2	na	0.53	457	9.66	0.001	na	17.4	0.051	20.15	na
LEI	T9	40	2.62	4.0	na	na	2031	na	0.05	16.0	na	0.67	473	30.12	0.003	na	29.0	0.056	36.83	na
LEI	T10	20	2.42	3.7	na	na	5952	na	0.04	21.8	na	0.59	487	3.69	0.002	na	22.4	0.054	186.35	na
LEI	T10	40	2.38	3.9	na	na	2518	na	0.03	19.6	na	0.62	474	17.56	0.002	na	21.4	0.059	33.08	na
LEI	T11	20	2.54	4.4	na	na	1049	na	0.04	21.8	na	0.68	288	15.12	0.004	na	23.9	0.065	35.38	na
LEI	T12	20	2.13	3.5	na	na	685	na	0.03	18.9	na	0.55	186	3.15	0.001	na	14.3	0.048	31.96	na
LEI	T12	35	3.23	4.7	na	na	2668	na	0.06	34.6	na	0.73	271	32.21	0.003	na	18.6	0.078	80.59	na
LEI	T13	40	2.53	3.9	na	na	732	na	0.04	17.2	na	0.54	1080	20.13	0.002	na	26.4	0.042	42.18	na
LEI	T14	25	1.82	2.5	na	na	3858	na	0.06	13.1	na	0.34	2039	24.52	0.002	na	17.3	0.035	27.26	na
LEI	T15	10	2.30	3.6	na	na	609	na	0.03	17.4	na	0.58	450	5.24	0.001	na	21.5	0.051	30.90	na
Lower Seal Harbour Gold District (LSH)																				
LSH	T1	5	3.48	3.4	na	na	7205	na	0.16	7.1	na	0.60	218	0.47	0.004	na	16.4	0.066	290.93	na
LSH	T2	5	2.29	3.2	na	na	1590	na	0.15	23.0	na	0.65	509	0.13	0.006	na	24.7	0.065	65.40	na
LSH	T3	0	15.51	1.8	na	na	24748	na	0.01	4.2	na	0.07	153	10.49	0.001	na	7.4	0.038	6781.33	na
LSH	T3	20	23.16	0.6	na	na	22882	na	0.01	2.8	na	0.03	94	7.06	0.001	na	217.3	0.001	2972.31	na
LSH	T3	35	28.19	2.1	na	na	28945	na	0.04	7.6	na	0.16	274	5.98	0.001	na	232.7	0.033	3270.70	na
LSH	T3	45	16.89	1.9	na	na	9649	na	0.08	17.6	na	0.39	938	2.84	0.001	na	169.0	0.039	1893.85	na
LSH	T3	60	1.95	2.3	na	na	926	na	0.11	20.8	na	0.49	422	0.17	0.003	na	25.6	0.052	101.10	na
LSH	T4	25	1.96	2.5	na	na	37	na	0.09	19.4	na	0.54	502	0.16	0.003	na	23.9	0.043	59.43	na
LSH	T4	55	1.73	2.1	na	na	60	na	0.08	12.8	na	0.43	165	0.13	0.002	na	13.2	0.046	77.21	na
LSH	T4	90	2.52	2.5	na	na	4192	na	0.13	21.0	na	0.53	365	0.25	0.003	na	35.6	0.062	127.92	na
LSH	T5	30	2.02	2.4	na	na	85	na	0.11	18.0	na	0.51	350	0.13	0.002	na	21.9	0.044	73.88	na
LSH	T6	0	1.72	2.4	na	na	49	na	0.08	17.4	na	0.48	355	0.08	0.001	na	27.4	0.043	50.81	na
LSH	T6	40	2.35	3.0	na	na	1971	na	0.14	22.6	na	0.63	397	0.10	0.003	na	25.3	0.057	89.71	na
LSH	T6	45	1.59	2.2	na	na	365	na	0.09	15.3	na	0.47	339	0.12	0.002	na	17.4	0.034	68.56	na
LSH	T6	50	2.09	2.6	na	na	890	na	0.13	20.1	na	0.52	446	0.20	0.003	na	26.1	0.050	66.63	na

Gold District	Sample Site	Tailings Depth (cm)	Fe ICP-MS (% dry wt.) 0.01	Ga ICP-MS (mg/kg) 0.1	Ge ICP-MS (mg/kg) 0.1	Hf ICP-MS (mg/kg) 0.02	Hg ICP-MS (µg/kg) 5	In ICP-MS (mg/kg) 0.02	K ICP-MS (% dry wt.) 0.01	La ICP-MS (mg/kg) 0.5	Li ICP-MS (mg/kg) 0.1	Mg ICP-MS (% dry wt.) 0.01	Mn ICP-MS (mg/kg) 1	Mo ICP-MS (mg/kg) 0.01	Na ICP-MS (% dry wt.) 0.001	Nb ICP-MS (mg/kg) 0.02	Ni ICP-MS (mg/kg) 0.1	P ICP-MS (% dry wt.) 0.001	Pb ICP-MS (mg/kg) 0.01	Rb ICP-MS (mg/kg) 0.1
LSH	T7	30	2.23	2.9	na	na	18	na	0.15	13.7	na	0.58	287	0.12	0.002	na	16.9	0.045	63.01	na
LSH	T7	120	2.31	3.5	na	na	18	na	0.19	23.1	na	0.68	569	0.15	0.004	na	36.7	0.060	63.45	na
LSH	T8	30	1.87	2.8	na	na	21	na	0.13	19.8	na	0.59	383	0.07	0.001	na	19.4	0.045	22.15	na
LSH	T8	70	2.53	3.7	na	na	15	na	0.20	27.8	na	0.75	489	0.11	0.004	na	31.6	0.076	60.87	na
LSH	T9	0	2.21	2.9	na	na	12	na	0.13	20.4	na	0.60	371	0.11	0.002	na	24.7	0.054	78.24	na
LSH	T9	50	2.24	2.9	na	na	48	na	0.13	21.0	na	0.60	351	0.17	0.002	na	27.5	0.059	76.13	na
LSH	T9	55	2.18	3.2	na	na	39	na	0.17	22.5	na	0.66	419	0.10	0.003	na	29.7	0.058	74.02	na
LSH	T10	10	2.09	2.7	na	na	149	na	0.12	20.5	na	0.56	318	0.11	0.002	na	24.2	0.058	65.61	na
LSH	T10	40	1.94	2.8	na	na	113	na	0.12	18.1	na	0.60	256	0.10	0.001	na	20.0	0.046	36.27	na
LSH	T11	10	2.46	3.1	na	na	54	na	0.12	20.6	na	0.64	408	0.12	0.002	na	21.9	0.051	30.28	na
LSH	T11	60	1.93	2.7	na	na	118	na	0.11	12.0	na	0.56	206	0.09	0.001	na	14.1	0.054	45.45	na
LSH	T11	120	2.38	2.8	na	na	336	na	0.14	21.2	na	0.57	337	0.18	0.002	na	32.7	0.054	74.29	na
LSH	T12	5	2.05	2.5	na	na	145	na	0.10	15.9	na	0.56	383	0.14	0.001	na	15.5	0.042	46.47	na
LSH	T12	30	2.46	2.7	na	na	1672	na	0.13	13.9	na	0.58	211	0.35	0.003	na	78.2	0.101	348.48	na
LSH	T13	15	2.73	0.8	na	na	23075	na	0.03	4.5	na	0.14	49	0.64	0.001	na	5.0	0.039	396.61	na
LSH	T13	30	3.02	4.3	na	na	2470	na	0.20	9.9	na	0.83	302	0.08	0.001	na	20.0	0.065	56.06	na
LSH	T13	50	2.94	3.7	na	na	1640	na	0.16	15.9	na	0.79	685	0.11	0.001	na	21.6	0.046	36.30	na
LSH	T13	80	1.04	1.3	na	na	1772	na	0.04	11.6	na	0.28	497	0.07	0.001	na	12.6	0.035	48.53	na
LSH	T13	100	1.13	1.4	na	na	3679	na	0.06	15.0	na	0.32	323	0.08	0.002	na	12.6	0.043	61.99	na
LSH	T14	0	24.52	1.3	na	na	4184	na	0.06	3.6	na	0.18	91	1.17	0.001	na	4.7	0.024	437.20	na
LSH	T14	0	23.91	0.2	na	na	500	na	0.02	1.2	na	0.02	18	1.36	0.002	na	1.9	0.015	49.32	na
LSH	T15	10	2.22	2.8	na	na	86	na	0.12	15.3	na	0.62	223	0.32	0.281	na	15.7	0.046	22.53	na
LSH	T15	20	2.10	2.6	na	na	126	na	0.13	15.6	na	0.64	230	0.48	0.320	na	16.0	0.047	26.11	na
LSH	T16	5	1.92	3.0	na	na	180	na	0.09	12.2	na	0.61	246	0.12	0.002	na	14.2	0.059	16.37	na
LSH	T17	7.5	2.09	2.6	na	na	749	na	0.09	17.3	na	0.52	357	0.13	0.002	na	22.9	0.051	54.13	na
LSH	T17	27.5	1.86	2.6	na	na	1530	na	0.12	18.5	na	0.53	443	0.15	0.003	na	23.7	0.053	61.03	na
LSH	T18	7.5	4.60	3.1	na	na	338	na	0.13	24.0	na	0.67	768	0.15	0.002	na	34.2	0.066	83.37	na
LSH	T18	27.5	1.97	2.8	na	na	226	na	0.11	20.5	na	0.60	276	0.11	0.002	na	28.8	0.051	47.65	na
LSH	T19	5	1.79	2.1	na	na	408	na	0.11	18.1	na	0.46	351	0.13	0.002	na	21.6	0.044	62.69	na
LSH	T20	5	2.13	3.0	na	na	68	na	0.17	21.8	na	0.65	455	0.12	0.003	na	26.1	0.059	41.97	na
LSH	T1-04	5	1.89	2.8	0.1	0.19	66	<0.02	0.14	20.6	24.9	0.58	244	0.08	0.002	0.38	21.4	0.064	46.92	11.1
LSH	T1-04	15	1.98	2.8	<0.1	0.2	93	<0.02	0.16	20.7	23.7	0.59	410	0.12	0.002	0.27	25.5	0.063	51.93	12.8
LSH	P2-WB	5	2.28	3.0	0.1	0.19	693	<0.02	0.15	20.3	24.6	0.64	373	0.11	0.002	0.27	28.6	0.068	57.04	11.8
LSH	P1-EB	5	0.45	2.1	0.1	0.03	561	<0.02	0.02	16.8	2.2	0.11	170	1.07	0.012	1.34	8.9	0.038	19.80	2.0
LSH	T30	2.5	2.29	2.2	0.1	0.14	467	<0.02	0.09	18.5	16.6	0.46	230	0.14	0.002	0.41	22.0	0.049	88.05	7.6
LSH	T30	20	2.44	3.4	<0.1	0.32	2902	<0.02	0.14	25.3	27.4	0.72	481	0.20	0.004	0.18	24.0	0.064	71.94	10.5
LSH	T31	5	2.17	2.6	0.1	0.12	1074	<0.02	0.11	20.4	19.8	0.53	525	0.13	0.002	0.34	26.5	0.059	105.15	9.5
LSH	T31	30	2.47	3.5	0.1	0.28	3784	<0.02	0.16	25.4	25.1	0.72	464	0.26	0.006	0.35	26.3	0.065	74.03	11.4
LSH	T32	10	1.97	2.5	0.1	0.11	106	<0.02	0.08	19.7	18.6	0.55	468	0.10	0.002	0.37	21.5	0.062	72.42	7.5
LSH	T32	45	2.51	3.0	0.1	0.29	951	<0.02	0.16	23.9	24.3	0.67	553	0.13	0.006	0.24	28.0	0.074	65.49	12.7
LSH	MS1	5	2.32	3.2	<0.1	0.06	499	0.02	0.20	20.6	33.7	0.70	335	4.27	1.119	1.26	17.3	0.074	36.98	10.9
LSH	MS2	0	2.94	2.7	<0.1	0.04	131	<0.02	0.19	18.9	24.3	0.60	278	1.44	0.974	1.22	14.2	0.080	30.94	10.1
LSH	MS2	10	1.06	3.0	<0.1	<0.02	242	<0.02	0.13	17.3	14.6	0.32	108	1.78	0.296	1.32	8.2	0.032	16.83	10.9
LSH	MS3	5	2.96	4.4	0.1	0.27	703	<0.02	0.19	27.5	34.6	0.98	344	0.29	0.047	0.20	25.1	0.052	64.73	11.0
LSH	MS4	5	3.40	4.9	0.1	0.47	691	<0.02	0.22	34.0	38.7	1.16	409	0.61	0.360	0.17	30.1	0.057	71.20	13.3
LSH	MS5	5	1.58	1.9	<0.1	0.03	234	<0.02	0.14	27.7	13.9	0.57	127	12.86	1.692	0.94	9.8	0.051	25.10	5.8
LSH	T33	5	1.96	2.7	0.1	0.07	185	<0.02	0.08	17.7	22.1	0.58	228	0.08	0.003	0.79	19.6	0.059	59.27	6.7
LSH	T33	30	2.00	2.6	<0.1	0.19	162	<0.02	0.16	19.7	22.0	0.56	416	0.10	0.003	0.37	25.5	0.062	62.65	12.3
LSH	T34	5	2.15	2.9	<0.1	0.13	158	<0.02	0.13	22.1	23.0	0.64	321	0.10	0.003	0.76	30.6	0.074	62.83	10.3
LSH	T34	30	2.39	3.2	<0.1	0.24	135	<0.02	0.15	20.7	26.3	0.72	474	0.10	0.003	0.17	24.4	0.063	54.32	11.4
LSH	T35	5	1.98	2.8	<0.1	0.15	32	<0.02	0.12	12.6	22.2	0.62	226	0.08	0.002	0.39	15.9	0.051	18.60	9.8
LSH	T35	20	2.11	2.8	<0.1	0.06	299	<0.02	0.09	21.2	22.2	0.59	278	0.12	0.002	0.85	20.0	0.056	59.89	8.1
LSH	T35	40	2.06	2.8	<0.1	0.2	76	<0.02	0.16	22.3	22.5	0.58	453	0.10	0.003	0.39	29.0	0.073	56.85	13.4
LSH	T36	5	2.01	2.9	<0.1	0.13	90	<0.02	0.12	17.1	22.6	0.58	209	0.07	0.002	0.49	17.4	0.057	24.94	9.9
LSH	T36	25	1.95	2.9	<0.1	0.14	114	<0.02	0.13	18.4	23.0	0.59	211	0.07	0.002	0.48	20.3	0.053	32.34	9.7

Gold District	Sample Site	Tailings Depth (cm)	Fe ICP-MS (% dry wt.) 0.01	Ga ICP-MS (mg/kg) 0.1	Ge ICP-MS (mg/kg) 0.1	Hf ICP-MS (mg/kg) 0.02	Hg ICP-MS (µg/kg) 5	In ICP-MS (mg/kg) 0.02	K ICP-MS (% dry wt.) 0.01	La ICP-MS (mg/kg) 0.5	Li ICP-MS (mg/kg) 0.1	Mg ICP-MS (% dry wt.) 0.01	Mn ICP-MS (mg/kg) 1	Mo ICP-MS (mg/kg) 0.01	Na ICP-MS (% dry wt.) 0.001	Nb ICP-MS (mg/kg) 0.02	Ni ICP-MS (mg/kg) 0.1	P ICP-MS (% dry wt.) 0.001	Pb ICP-MS (mg/kg) 0.01	Rb ICP-MS (mg/kg) 0.1
Montague Gold District (MG)																				
MG	T1	2.5	5.12	4.0	na	na	4034	na	0.26	23.4	na	0.89	2144	0.47	0.013	na	76.7	0.061	141.61	na
MG	T1	10	4.47	4.9	na	na	8392	na	0.51	14.4	na	1.21	643	0.39	0.008	na	52.6	0.079	125.90	na
MG	T2	1	5.98	4.7	na	na	3537	na	0.29	18.7	na	1.02	1653	0.46	0.008	na	53.7	0.078	131.82	na
MG	T2	5	4.49	4.6	na	na	3177	na	0.39	12.3	na	1.22	658	0.29	0.004	na	51.4	0.065	87.57	na
MG	T3	0	2.80	2.8	na	na	245	na	0.21	17.2	na	0.62	292	0.13	0.005	na	15.0	0.043	34.97	na
MG	T3	25	3.27	3.1	na	na	2243	na	0.28	11.3	na	0.92	482	0.23	0.003	na	40.0	0.046	54.22	na
MG	T4	7.5	5.22	4.4	na	na	6684	na	0.08	29.6	na	0.51	8284	4.18	0.037	na	51.6	0.121	167.93	na
MG	T4	20	2.63	3.6	na	na	1916	na	0.28	15.3	na	0.78	298	0.15	0.005	na	21.2	0.051	21.92	na
MG	T5	1	4.91	3.6	na	na	1243	na	0.31	8.8	na	0.83	582	0.26	0.006	na	50.0	0.047	60.48	na
MG	T5	6	2.79	3.2	na	na	873	na	0.32	11.3	na	0.93	479	0.13	0.003	na	28.9	0.045	26.25	na
MG	T6	0	4.56	3.4	na	na	1392	na	0.32	10.1	na	0.80	706	0.38	0.004	na	43.2	0.047	65.69	na
MG	T6	4	4.59	3.1	na	na	1585	na	0.30	7.3	na	0.76	1079	0.33	0.002	na	41.6	0.039	68.36	na
MG	T6	10	2.91	3.1	na	na	1498	na	0.30	10.5	na	0.89	479	0.19	0.003	na	34.6	0.045	43.59	na
MG	T7	5	3.62	3.4	na	na	1058	na	0.32	10.1	na	0.82	500	0.25	0.003	na	36.2	0.049	52.93	na
MG	T7	15	2.72	3.5	na	na	1029	na	0.35	16.7	na	1.01	566	0.10	0.002	na	23.8	0.052	13.80	na
MG	T8	2.5	7.05	3.0	na	na	3224	na	0.22	11.5	na	0.47	146	1.27	0.002	na	11.4	0.038	267.58	na
MG	T10	5	5.32	3.7	na	na	1388	na	0.30	14.1	na	0.72	200	0.55	0.002	na	17.1	0.047	101.57	na
MG	T10	15	4.78	3.5	na	na	1573	na	0.31	12.6	na	0.74	203	0.45	0.002	na	16.9	0.046	98.30	na
MG	T11	6	3.67	3.8	na	na	454	na	0.39	18.8	na	0.86	342	0.23	0.004	na	23.2	0.050	37.11	na
MG	T11	15	2.96	3.9	na	na	746	na	0.40	26.0	na	0.93	778	0.10	0.003	na	53.0	0.051	15.25	na
MG	T11	25	4.16	5.8	na	na	1807	na	0.66	33.2	na	1.21	734	0.13	0.004	na	61.5	0.078	35.82	na
MG	T12	2.5	2.86	3.6	na	na	166	na	0.35	18.0	na	0.81	341	0.09	0.002	na	22.5	0.052	16.57	na
MG	T12	25	3.03	3.7	na	na	1584	na	0.44	27.5	na	0.81	496	0.14	0.002	na	29.9	0.052	17.24	na
MG	T13	0	2.40	3.2	na	na	450	na	0.32	20.6	na	0.74	411	0.08	0.002	na	23.8	0.045	10.62	na
MG	T13	15	3.16	3.7	na	na	1512	na	0.35	21.6	na	0.81	344	0.10	0.003	na	29.6	0.052	26.55	na
MG	T14	10	2.71	3.2	na	na	703	na	0.30	22.0	na	0.77	316	0.10	0.003	na	20.9	0.045	24.52	na
MG	T15	5	4.46	3.5	na	na	2861	na	0.32	14.3	na	0.97	1111	0.22	0.003	na	48.6	0.052	107.56	na
MG	T1	0-6	6.01	3.1	0.2	0.24	2328	0.05	0.27	11.9	12.3	0.46	131	0.95	0.002	0.39	11.3	0.041	193.63	22.1
MG	T2	0-5	3.88	3.4	0.2	0.2	909	<0.02	0.35	14.0	21.4	0.74	233	0.31	0.002	0.16	21.2	0.053	70.33	29.4
MG	T3	0-15	5.32	4.0	0.1	0.2	3146	0.03	0.25	18.6	25.7	0.80	907	0.50	0.006	0.55	38.8	0.061	153.08	22.7
MG	T4	15-20	3.60	2.0	0.1	0.11	499	0.03	0.13	7.0	11.9	0.46	149	1.43	0.001	0.48	12.2	0.050	67.53	9.1
MG	T1	0-10	5.50	3.4	0.1	0.23	1648	0.06	0.29	21.7	17.2	0.73	229	0.75	0.002	0.31	19.3	0.063	129.79	24.7
MG	T2	0-10	3.78	2.6	0.1	0.22	1153	0.02	0.30	11.5	10.0	0.48	119	0.36	0.002	0.29	9.6	0.042	64.98	21.5
MG	T3	0-10	4.14	3.3	0.1	0.23	1050	0.02	0.34	14.9	17.9	0.74	220	0.35	0.002	0.27	17.7	0.049	66.69	26.8
MG	T4	0-10	3.90	3.0	0.1	0.18	917	0.03	0.26	13.2	19.8	0.72	433	0.27	0.007	0.30	25.9	0.050	57.28	21.0
MG	T5	0-10	5.11	4.0	0.1	0.27	3164	0.04	0.34	17.2	26.5	0.99	918	0.35	0.005	0.39	49.0	0.070	109.26	26.2
MG	T6	0-10	7.54	3.6	0.1	0.07	6559	0.08	0.26	24.8	23.9	0.79	2506	0.75	0.011	0.70	71.5	0.089	257.85	20.7
MG	T7	0-10	3.56	3.3	0.1	0.25	1188	0.02	0.35	14.0	23.5	0.88	562	0.20	0.002	0.22	37.3	0.056	49.01	25.9
MG	T8	0-10	3.44	3.2	0.1	0.25	778	0.02	0.34	13.3	22.0	0.83	374	0.27	0.004	0.22	29.2	0.055	41.06	26.0
MG	T9	0-10	5.30	3.3	0.1	0.26	1086	0.05	0.35	19.8	16.9	0.71	195	0.53	0.002	0.41	18.6	0.057	89.02	29.1
MG	T10	0-10	4.08	3.3	0.1	0.23	3416	0.03	0.32	16.0	17.3	0.70	199	0.32	0.002	0.27	15.4	0.050	67.78	28.2
MG	T11	0-10	3.16	3.4	0.1	0.13	656	0.02	0.31	19.1	21.6	0.78	370	0.16	0.002	0.38	25.7	0.056	37.86	29.5
MG	T12	0-5	3.58	2.6	0.1	0.15	6230	0.04	0.20	14.7	11.2	0.45	133	0.51	0.002	0.30	9.0	0.044	51.18	15.2
MG	T13	0-5	2.54	3.0	0.1	0.3	751	<0.02	0.28	19.7	21.4	0.75	317	0.08	0.002	0.18	25.7	0.050	45.59	23.5
MG	T14	0-5	2.27	2.5	0.1	0.11	484	<0.02	0.22	15.1	18.4	0.57	232	0.38	0.003	0.22	17.2	0.050	13.66	18.1

Gold District	Sample Site	Tailings Depth (cm)	Fe ICP-MS (% dry wt.) 0.01	Ga ICP-MS (mg/kg) 0.1	Ge ICP-MS (mg/kg) 0.1	Hf ICP-MS (mg/kg) 0.02	Hg ICP-MS (µg/kg) 5	In ICP-MS (mg/kg) 0.02	K ICP-MS (% dry wt.) 0.01	La ICP-MS (mg/kg) 0.5	Li ICP-MS (mg/kg) 0.1	Mg ICP-MS (% dry wt.) 0.01	Mn ICP-MS (mg/kg) 1	Mo ICP-MS (mg/kg) 0.01	Na ICP-MS (% dry wt.) 0.001	Nb ICP-MS (mg/kg) 0.02	Ni ICP-MS (mg/kg) 0.1	P ICP-MS (% dry wt.) 0.001	Pb ICP-MS (mg/kg) 0.01	Rb ICP-MS (mg/kg) 0.1
MG	S28	0-5	1.02	1.1	na	na	69953	na	0.03	6.0	na	0.19	76	0.35	<0.001	na	4.1	0.022	356.70	na
Mooseland Gold District (MSL)																				
MSL	T1	4	20.37	1.0	na	na	30000	na	0.01	1.5	na	<0.01	11	6.77	0.001	na	58.9	0.019	230.65	na
MSL	T1	12	2.13	0.6	na	na	3988	na	0.05	2.8	na	0.04	19	0.27	0.002	na	0.9	0.043	69.98	na
MSL	T1	34	0.48	0.6	na	na	1826	na	0.05	2.2	na	0.07	54	0.07	0.004	na	0.6	0.015	20.94	na
MSL	T1	45	1.10	1.2	na	na	2857	na	0.09	3.2	na	0.15	102	0.19	0.005	na	1.3	0.022	31.53	na
MSL	T2	7	1.36	1.6	na	na	1057	na	0.16	5.2	na	0.22	131	0.17	0.006	na	2.7	0.025	25.25	na
MSL	T2	20	2.42	3.3	na	na	9967	na	0.32	20.9	na	0.50	919	0.13	0.013	na	16.0	0.049	46.97	na
MSL	T2	30	1.62	2.2	na	na	9048	na	0.24	21.2	na	0.38	433	0.23	0.013	na	14.8	0.050	116.41	na
MSL	T3	3	4.73	1.4	na	na	19000	na	0.08	4.6	na	0.10	56	0.38	0.003	na	2.5	0.061	397.28	na
MSL	T3	15	2.79	1.9	na	na	7373	na	0.15	7.9	na	0.21	124	0.38	0.004	na	1.7	0.059	55.04	na
MSL	T3	25	0.91	1.7	na	na	8018	na	0.10	1.4	na	0.15	75	0.34	0.003	na	5.3	0.009	33.14	na
MSL	T4	4	0.85	2.6	na	na	2792	na	0.04	18.9	na	0.21	151	0.38	0.007	na	16.9	0.064	45.05	na
MSL	T4	15	0.37	0.6	na	na	2875	na	0.03	7.0	na	0.10	66	0.05	0.002	na	5.7	0.016	25.00	na
MSL	T4	27	1.21	1.6	na	na	3160	na	0.19	12.2	na	0.34	310	0.34	0.005	na	9.3	0.024	13.14	na
MSL	T5	5	1.31	0.8	na	na	5794	na	0.07	10.8	na	0.13	531	0.08	0.004	na	13.0	0.037	41.08	na
MSL	T5	15	1.42	1.3	na	na	8156	na	0.16	13.3	na	0.33	370	0.33	0.006	na	13.7	0.051	75.60	na
MSL	T5	23	2.02	2.8	na	na	6276	na	0.36	21.7	na	0.58	581	0.20	0.011	na	13.5	0.052	57.14	na
MSL	T6	5	2.32	2.4	na	na	6149	na	0.26	18.7	na	0.34	497	0.21	0.011	na	20.4	0.041	76.94	na
MSL	T6	16	1.59	3.6	na	na	4715	na	0.40	22.7	na	0.51	344	0.18	0.015	na	17.0	0.057	62.16	na
MSL	T7	20	1.84	1.2	na	na	762	na	0.10	7.5	na	0.17	140	0.10	0.004	na	1.0	0.019	27.61	na
MSL	T7	80	1.24	2.4	na	na	6931	na	0.27	2.4	na	0.39	231	0.19	0.007	na	15.3	0.045	31.50	na
Mount Uniacke Gold District (UNI)																				
UNI	T1	5	2.12	1.7	na	na	25740	na	0.02	49.5	na	0.38	335	0.28	0.001	na	16.6	0.054	297.75	na
UNI	T1	10	4.62	1.5	na	na	130000	na	0.01	30.6	na	0.26	155	0.74	0.004	na	21.2	0.041	444.24	na
UNI	T1	20	1.39	1.6	na	na	31923	na	0.01	3.4	na	0.33	137	0.07	0.001	na	8.8	0.034	61.40	na
UNI	T2	20	8.77	2.0	na	na	7029	na	0.04	13.8	na	0.40	492	0.52	0.001	na	8.6	0.038	134.65	na
UNI	T2	25	1.31	1.0	na	na	83000	na	0.01	2.4	na	0.19	42	0.06	0.003	na	13.5	0.011	7.08	na
UNI	T2	70	2.47	2.9	na	na	7103	na	0.06	18.8	na	0.72	410	0.17	0.001	na	22.7	0.046	63.82	na
UNI	T3	15	1.75	2.8	na	na	11375	na	0.06	22.5	na	0.56	413	0.17	0.004	na	24.1	0.039	69.71	na
UNI	T4	30	3.24	4.7	na	na	4561	na	0.07	19.5	na	1.10	774	0.10	0.004	na	25.3	0.051	21.65	na
UNI	T5	25	1.90	1.9	na	na	6580	na	0.03	15.7	na	0.43	417	0.08	0.001	na	27.0	0.033	52.04	na
UNI	T6	20	3.21	1.8	na	na	5797	na	0.02	10.8	na	0.39	206	0.18	0.002	na	11.0	0.029	248.75	na
UNI	T6	40	3.36	4.9	na	na	4118	na	0.08	20.0	na	1.05	735	0.11	0.004	na	27.1	0.044	485.61	na
UNI	T7	10	2.54	3.2	na	na	14763	na	0.13	20.0	na	0.59	471	0.09	0.002	na	23.5	0.039	500.46	na
UNI	T7	25	1.06	1.7	na	na	9407	na	0.08	6.4	na	0.32	251	0.04	0.001	na	9.1	0.020	91.91	na
UNI	T8	2.5	3.19	2.9	na	na	46623	na	0.09	5.3	na	0.62	122	0.38	0.002	na	15.9	0.045	1004.82	na
UNI	T8	10	2.66	2.4	na	na	7296	na	0.06	3.4	na	0.42	148	0.34	0.001	na	31.4	0.041	724.83	na
UNI	T8	40	3.59	3.1	na	na	9463	na	0.17	29.4	na	0.57	348	0.22	0.002	na	62.0	0.042	707.40	na
UNI	T8	80	1.67	2.3	na	na	3065	na	0.09	12.6	na	0.47	194	0.08	0.001	na	23.0	0.029	101.31	na
UNI	T9	15	2.11	3.0	na	na	4171	na	0.15	18.5	na	0.59	414	0.08	0.002	na	26.0	0.032	227.39	na
UNI	T10	10	2.13	2.8	na	na	9128	na	0.12	14.1	na	0.59	281	0.07	0.003	na	21.4	0.038	108.78	na
UNI	T11	20	2.25	3.3	na	na	2246	na	0.08	13.1	na	0.61	938	0.04	0.002	na	16.1	0.033	164.17	na
UNI	T11	40	2.88	5.1	na	na	4791	na	0.12	22.8	na	0.97	422	0.07	0.004	na	34.2	0.042	126.87	na
UNI	T12	10	4.70	3.8	na	na	2826	na	0.02	17.4	na	0.64	8603	0.54	0.001	na	39.0	0.050	216.31	na
UNI	T13	5	1.91	3.0	na	na	2803	na	0.06	8.8	na	0.56	287	0.08	0.004	na	14.5	0.034	99.65	na
UNI	T14	15	1.54	2.2	na	na	6215	na	0.02	28.9	na	0.37	420	0.35	0.003	na	15.6	0.057	183.13	na
UNI	T14	40	2.15	3.5	na	na	4054	na	0.13	23.4	na	0.65	495	0.09	0.002	na	23.7	0.037	225.74	na
UNI	T15	2	1.89	1.8	na	na	1970	na	0.05	7.2	na	0.32	318	0.27	0.003	na	8.7	0.042	79.71	na
UNI	T15	10	2.14	2.3	na	na	1095	na	0.24	4.1	na	0.43	201	0.06	0.002	na	10.3	0.017	27.42	na
UNI	T15	40	1.79	1.2	na	na	12748	na	0.04	12.2	na	0.26	125	0.13	0.001	na	6.3	0.021	66.90	na
UNI	T15	70	7.48	1.3	na	na	22493	na	0.04	5.1	na	0.23	165	0.73	0.001	na	5.5	0.046	556.92	na
UNI	T15	90	1.98	3.6	na	na	18571	na	0.08	11.7	na	0.67	218	0.14	0.003	na	10.6	0.031	80.32	na
UNI	T15	100	1.77	6.6	na	na	1132	na	0.04	39.5	na	0.33	256	2.40	0.004	na	42.1	0.200	67.90	na
UNI	T16	25	2.51	3.8	na	na	4919	na	0.16	22.6	na	0.75	517	0.23	0.002	na	27.6	0.046	19.73	na
UNI	T17	0	14.93	2.3	na	na	4466	na	0.04	34.4	na	0.33	3628	0.61	0.005	na	32.5	0.061	148.29	na
UNI	T18	5	2.89	2.9	na	na	2890	na	0.07	22.9	na	0.58	633	0.15	0.001	na	39.4	0.050	79.59	na
UNI	T18	15	2.07	2.5	na	na	5003	na	0.11	20.4	na	0.54	638	0.07	0.001	na	29.1	0.049	77.19	na
UNI	T18	30	3.56	5.6	na	na	9171	na	0.30	31.1	na	1.13	528	0.10	0.002	na	44.7	0.072	24.11	na

Gold District	Sample Site	Tailings Depth (cm)	Fe ICP-MS (% dry wt.) 0.01	Ga ICP-MS (mg/kg) 0.1	Ge ICP-MS (mg/kg) 0.1	Hf ICP-MS (mg/kg) 0.02	Hg ICP-MS (µg/kg) 5	In ICP-MS (mg/kg) 0.02	K ICP-MS (% dry wt.) 0.01	La ICP-MS (mg/kg) 0.5	Li ICP-MS (mg/kg) 0.1	Mg ICP-MS (% dry wt.) 0.01	Mn ICP-MS (mg/kg) 1	Mo ICP-MS (mg/kg) 0.01	Na ICP-MS (% dry wt.) 0.001	Nb ICP-MS (mg/kg) 0.02	Ni ICP-MS (mg/kg) 0.1	P ICP-MS (% dry wt.) 0.001	Pb ICP-MS (mg/kg) 0.01	Rb ICP-MS (mg/kg) 0.1
UNI	T19	5	4.62	1.8	na	na	56887	na	0.02	25.8	na	0.40	2469	0.41	0.002	na	57.0	0.043	1931.75	na
UNI	T19	20	1.61	2.1	na	na	21921	na	0.04	8.7	na	0.44	224	0.10	0.001	na	17.5	0.037	172.23	na
UNI	T20	20	1.77	2.7	na	na	4891	na	0.08	3.7	na	0.50	180	0.90	0.001	na	13.4	0.039	365.61	na
North Brookfield Gold District (NB)																				
NB	T1	5	6.30	3.1	na	na	405	na	0.12	13.8	na	0.48	164	24.41	0.005	na	75.1	0.061	175.59	na
NB	T1	32.5	2.46	3.2	na	na	1305	na	0.11	19.0	na	0.41	108	7.26	0.009	na	10.0	0.060	37.78	na
NB	T1	37.5	3.55	1.3	na	na	3284	na	0.08	16.3	na	0.18	52	8.00	0.005	na	4.9	0.025	41.13	na
NB	T2	0	6.32	2.9	na	na	517	na	0.10	17.3	na	0.48	196	9.04	0.003	na	58.5	0.061	139.36	na
NB	T3	5	6.06	3.1	na	na	691	na	0.15	21.8	na	0.55	726	8.63	0.010	na	108.9	0.062	100.77	na
NB	T3	25	2.86	2.4	na	na	1313	na	0.07	23.9	na	0.71	796	4.49	0.002	na	20.9	0.052	17.64	na
NB	T4	6	2.97	2.5	na	na	225	na	0.07	20.0	na	0.56	667	6.10	0.003	na	36.8	0.051	25.07	na
NB	T4	12	2.54	2.4	na	na	277	na	0.07	13.3	na	0.52	981	11.97	0.003	na	43.1	0.047	26.41	na
NB	T4	20	3.16	3.0	na	na	1514	na	0.09	28.0	na	0.63	522	6.69	0.004	na	27.4	0.057	29.44	na
NB	T5	5	2.25	2.7	na	na	1626	na	0.10	21.9	na	0.58	619	7.04	0.003	na	13.8	0.050	14.61	na
NB	T5	15	2.54	2.8	na	na	651	na	0.07	23.5	na	0.64	1282	6.24	0.003	na	25.0	0.057	12.86	na
NB	T6	2	2.62	2.8	na	na	1163	na	0.08	28.5	na	0.60	1640	4.23	0.004	na	35.5	0.057	16.16	na
NB	T6	10	2.20	2.5	na	na	803	na	0.08	20.5	na	0.58	1011	6.36	0.004	na	23.4	0.049	16.71	na
NB	T7	7	2.68	2.8	na	na	1652	na	0.10	27.9	na	0.58	2509	9.50	0.003	na	28.4	0.055	12.81	na
NB	T7	15	2.83	3.3	na	na	3415	na	0.13	17.0	na	0.77	983	18.43	0.004	na	35.1	0.069	37.97	na
NB	T7	19	3.04	3.2	na	na	412	na	0.06	16.3	na	0.81	776	7.23	0.003	na	29.8	0.055	13.11	na
NB	T8	2.5	3.16	4.1	na	na	4829	na	0.17	18.9	na	0.80	759	26.71	0.005	na	36.2	0.067	36.90	na
NB	T8	10	2.52	2.9	na	na	678	na	0.10	23.2	na	0.57	704	5.56	0.003	na	26.3	0.055	15.27	na
NB	T10	5	2.58	2.9	na	na	208	na	0.08	22.6	na	0.59	657	4.70	0.002	na	25.2	0.061	14.61	na
NB	T10	50	2.48	2.8	na	na	359	na	0.08	25.5	na	0.52	729	4.03	0.002	na	27.2	0.059	11.31	na
NB	T11	5	2.31	2.6	na	na	172	na	0.06	18.6	na	0.64	574	2.72	0.002	na	18.1	0.050	4.72	na
NB	T11	20	2.91	3.1	na	na	1663	na	0.11	31.8	na	0.88	796	1.81	0.003	na	27.7	0.068	9.81	na
NB	T12	6	2.35	2.7	na	na	469	na	0.08	23.8	na	0.55	1074	7.22	0.004	na	23.0	0.050	9.98	na
NB	T12	25	2.72	3.5	na	na	1821	na	0.14	20.0	na	0.72	720	30.24	0.004	na	25.1	0.062	16.26	na
NB	T12	50	2.43	2.5	na	na	824	na	0.08	22.6	na	0.54	1032	7.92	0.002	na	33.7	0.049	13.30	na
NB	T13	5	2.63	3.0	na	na	140	na	0.08	22.4	na	0.63	758	4.78	0.003	na	24.0	0.062	14.43	na
NB	T13	25	2.39	2.7	na	na	468	na	0.08	25.4	na	0.54	761	5.52	0.005	na	23.4	0.062	10.34	na
NB	T14	5	2.60	3.0	na	na	92	na	0.08	21.1	na	0.62	666	5.11	0.002	na	22.7	0.063	8.26	na
NB	T14	20	2.71	3.1	na	na	356	na	0.08	23.2	na	0.59	740	4.23	0.002	na	26.5	0.063	10.44	na
NB	T15	5	2.45	2.9	na	na	116	na	0.08	21.5	na	0.59	583	4.94	0.003	na	19.4	0.058	5.55	na
NB	T15	20	2.54	2.9	na	na	109	na	0.08	21.9	na	0.63	605	3.97	0.002	na	20.4	0.056	6.39	na
NB	T16	0	3.45	4.1	na	na	2158	na	0.06	13.2	na	1.14	839	10.39	0.003	na	30.8	0.069	8.29	na
NB	T17	10	3.40	3.2	na	na	9157	na	0.09	28.5	na	0.81	419	14.67	0.002	na	23.3	0.071	52.04	na
NB	T18	10	2.40	2.6	na	na	294	na	0.07	21.5	na	0.56	663	5.94	0.002	na	22.3	0.050	9.28	na
NB	T19	35	3.46	2.3	na	na	582	na	0.05	21.4	na	0.54	207	15.81	0.002	na	16.7	0.062	29.50	na
NB	T19	55	2.85	2.4	na	na	619	na	0.06	22.5	na	0.51	144	16.80	0.002	na	20.2	0.086	77.19	na
NB	T19	67	5.84	4.0	na	na	246	na	0.12	14.8	na	0.26	217	13.73	0.007	na	89.6	0.151	150.89	na
NB	T20	25	2.54	2.8	na	na	110	na	0.07	21.2	na	0.62	618	5.02	0.002	na	23.0	0.054	8.99	na
NB	T20	50	2.28	2.4	na	na	282	na	0.07	18.5	na	0.50	741	7.62	0.002	na	23.2	0.055	8.12	na
NB	T20	75	2.53	2.7	na	na	579	na	0.07	25.5	na	0.57	776	6.09	0.002	na	30.1	0.055	17.39	na
NB	T21	1	1.74	1.4	na	na	671	na	0.05	15.1	na	0.28	282	0.19	0.001	na	15.0	0.044	4.65	na
NB	T21	15	1.30	0.9	na	na	302	na	0.03	9.2	na	0.17	276	0.10	0.001	na	6.7	0.023	4.41	na
NB	T21	40	3.65	0.9	na	na	380	na	0.04	9.5	na	0.16	2105	0.44	0.002	na	10.7	0.025	4.80	na
NB	T22	25	3.63	3.0	na	na	7266	na	0.10	23.9	na	0.83	896	15.89	0.002	na	29.7	0.062	21.13	na
NB	T22	52	3.71	3.5	na	na	6645	na	0.12	23.8	na	1.04	600	39.73	0.003	na	27.4	0.080	10.05	na
NB	T22	75	3.77	7.6	na	na	17	na	0.12	30.8	na	0.89	2041	1.35	0.007	na	30.9	0.010	18.55	na
NB	T1	0-10	2.66	2.5	<0.1	0.2	81	<0.02	0.08	21.7	28.1	0.63	640	3.99	0.002	0.02	22.9	0.069	8.21	5.7
NB	T3	0-10	2.55	2.7	0.1	0.19	295	<0.02	0.09	20.5	26.1	0.61	622	5.73	0.002	0.03	24.9	0.067	11.72	6.4
NB	T6	0-15	2.83	2.5	<0.1	0.21	372	0.02	0.07	20.7	29.5	0.71	707	2.95	0.002	0.03	33.8	0.065	6.25	5.2
NB	T6	15-35	3.00	2.7	0.1	0.2	1209	<0.02	0.06	23.1	32.8	0.69	1111	1.43	0.002	<0.02	40.0	0.063	5.58	4.6
NB	T6	35-65	3.89	2.9	0.1	0.29	1632	<0.02	0.06	5.6	33.2	0.81	733	2.72	0.002	0.02	84.0	0.060	27.64	4.6
NB	T7	0-5	2.48	2.7	<0.1	0.2	289	<0.02	0.08	21.6	28.1	0.65	633	3.86	0.002	0.02	22.4	0.062	9.42	5.7

Gold District	Sample Site	Tailings Depth (cm)	Fe ICP-MS (% dry wt.) 0.01	Ga ICP-MS (mg/kg) 0.1	Ge ICP-MS (mg/kg) 0.1	Hf ICP-MS (mg/kg) 0.02	Hg ICP-MS (µg/kg) 5	In ICP-MS (mg/kg) 0.02	K ICP-MS (% dry wt.) 0.01	La ICP-MS (mg/kg) 0.5	Li ICP-MS (mg/kg) 0.1	Mg ICP-MS (% dry wt.) 0.01	Mn ICP-MS (mg/kg) 1	Mo ICP-MS (mg/kg) 0.01	Na ICP-MS (% dry wt.) 0.001	Nb ICP-MS (mg/kg) 0.02	Ni ICP-MS (mg/kg) 0.1	P ICP-MS (% dry wt.) 0.001	Pb ICP-MS (mg/kg) 0.01	Rb ICP-MS (mg/kg) 0.1
NB	T8	0-10	2.62	2.9	<0.1	0.3	2141	0.02	0.10	17.3	29.0	0.68	613	15.31	0.004	<0.02	27.4	0.061	20.01	6.9
NB	T10	0-8	3.99	2.6	<0.1	0.11	361	<0.02	0.09	21.2	24.7	0.54	1052	10.96	0.004	0.09	69.5	0.069	40.63	5.8
NB	T11	0-10	7.22	3.0	<0.1	0.12	399	0.03	0.13	16.8	22.0	0.53	306	21.32	0.007	0.12	118.1	0.080	138.86	8.4
NB	T11	10-20	3.47	2.7	<0.1	0.26	1532	0.02	0.08	25.1	22.3	0.47	153	4.75	0.002	0.09	19.4	0.071	38.60	6.3
Salmon River (Dufferin) Gold District (SR)																				
SR	T1	25	2.87	1.7	na	na	13405	na	0.03	11.2	na	0.39	341	0.25	0.001	na	9.3	0.066	219.39	na
SR	T2	20	1.88	1.1	na	na	994	na	0.03	11.1	na	0.26	728	0.10	0.001	na	8.7	0.040	18.24	na
SR	T2	35	1.57	0.5	na	na	1859	na	0.02	11.7	na	0.14	474	0.10	0.001	na	6.5	0.034	9.30	na
SR	T2	60	1.40	1.0	na	na	7850	na	0.06	22.4	na	0.21	179	0.30	0.002	na	62.0	0.062	27.87	na
SR	T3	5	15.55	0.5	na	na	630	na	0.02	3.9	na	0.17	1165	0.34	0.004	na	12.1	0.056	17.31	na
SR	T3	15	2.13	1.2	na	na	1270	na	0.04	15.7	na	0.52	561	0.15	0.002	na	23.3	0.058	17.06	na
SR	T4	15	1.60	0.9	na	na	914	na	0.02	10.3	na	0.30	351	0.06	0.001	na	9.5	0.035	8.09	na
SR	T5	40	1.84	0.6	na	na	1744	na	0.02	6.1	na	0.30	345	0.14	0.001	na	14.0	0.043	30.81	na
SR	T6	5	2.26	0.9	na	na	703	na	0.02	9.6	na	0.18	3554	0.85	0.001	na	23.3	0.060	12.25	na
SR	T7	30	1.80	0.6	na	na	12	na	0.02	4.3	na	0.31	343	1.44	0.001	na	20.6	0.023	34.14	na
SR	T8	5	15.27	0.6	na	na	49000	na	0.03	9.2	na	0.01	36	3.79	0.002	na	11.3	0.093	498.67	na
SR	T8	20	2.84	0.7	na	na	6561	na	0.03	14.0	na	0.34	594	0.29	0.001	na	19.7	0.049	41.83	na
SR	T8	80	3.06	0.8	na	na	4558	na	0.03	8.6	na	0.21	908	0.61	0.002	na	43.2	0.048	46.66	na
SR	T9	30	2.30	0.8	na	na	3997	na	0.02	9.7	na	0.21	1008	0.24	0.001	na	11.8	0.042	37.68	na
SR	T10	10	1.78	0.5	na	na	5775	na	0.02	7.9	na	0.37	612	0.17	0.001	na	13.9	0.041	47.60	na
SR	T11	5	3.19	1.7	na	na	1686	na	0.01	13.8	na	0.21	395	0.99	0.001	na	5.8	0.027	34.20	na
SR	T12	5	1.83	2.5	na	na	7426	na	0.04	19.0	na	0.19	697	1.09	0.003	na	42.0	0.046	73.92	na
SR	T13	15	2.35	3.2	na	na	14356	na	0.05	19.0	na	0.19	298	1.13	0.003	na	22.4	0.053	80.55	na
SR	T14	10	2.51	0.5	na	na	4436	na	0.02	9.1	na	0.17	306	0.34	0.001	na	11.0	0.039	61.99	na
SR	T14	47.5	3.27	0.5	na	na	2932	na	0.02	8.1	na	0.17	487	0.29	0.002	na	8.4	0.035	44.14	na
SR	T14	60	1.56	0.6	na	na	7235	na	0.02	10.0	na	0.29	370	0.13	0.001	na	13.1	0.036	38.13	na
SR	T15	5	2.29	1.3	na	na	7147	na	0.02	14.3	na	0.19	868	0.97	0.001	na	9.8	0.036	87.66	na
SR	T16	10	2.10	0.9	na	na	705	na	0.03	16.5	na	0.27	517	0.09	0.001	na	17.8	0.048	12.25	na
SR	T17	10	2.52	1.0	na	na	7961	na	0.04	14.2	na	0.20	2151	0.43	0.002	na	17.4	0.052	78.40	na
Upper Seal Harbour Gold District (USH)																				
USH	T1	5	3.92	5.6	na	na	10103	na	0.74	36.8	na	1.01	514	0.85	0.011	na	12.3	0.089	87.02	na
USH	T1	15	3.35	3.8	na	na	52000	na	0.60	52.4	na	0.68	466	0.43	0.007	na	15.8	0.035	447.81	na
USH	T2	5	7.78	2.1	na	na	80000	na	0.14	17.7	na	0.18	147	1.43	0.009	na	41.7	0.024	453.56	na
USH	T2	15	4.75	4.2	na	na	120000	na	0.23	10.8	na	0.27	214	1.49	0.004	na	97.6	0.006	146.77	na
USH	T3	5	3.88	4.4	na	na	2725	na	0.42	13.0	na	0.61	318	3.95	0.006	na	13.0	0.049	77.99	na
USH	T4	5	3.96	5.1	na	na	5128	na	0.64	24.8	na	0.92	435	0.43	0.013	na	17.0	0.058	66.54	na
USH	T4	20	1.33	2.7	na	na	1102	na	0.40	13.1	na	0.48	247	0.14	0.006	na	10.4	0.031	11.48	na
USH	T5	15	1.64	2.1	na	na	12369	na	0.24	5.7	na	0.31	144	0.42	0.004	na	2.2	0.027	49.70	na
USH	T5	20	1.65	3.1	na	na	7787	na	0.41	7.0	na	0.49	212	0.36	0.005	na	3.8	0.022	34.76	na
USH	T6	5	2.65	5.1	na	na	5247	na	0.70	22.0	na	0.97	447	0.52	0.014	na	21.8	0.063	45.31	na
USH	T7	5	2.49	3.8	na	na	4812	na	0.50	12.1	na	0.63	312	0.28	0.007	na	7.0	0.038	45.14	na
USH	T8	10	3.22	3.7	na	na	5155	na	0.42	11.4	na	0.61	270	0.57	0.007	na	7.9	0.053	127.69	na
USH	T8	35	1.35	2.2	na	na	3497	na	0.29	7.8	na	0.38	181	0.23	0.005	na	16.2	0.024	17.35	na
USH	T9	20	2.24	3.6	na	na	2727	na	0.47	12.8	na	0.58	264	0.54	0.008	na	8.4	0.052	42.72	na
USH	T10	5	1.41	3.0	na	na	824	na	0.41	11.3	na	0.51	254	0.16	0.007	na	6.4	0.036	20.02	na
USH	T11	5	3.43	4.3	na	na	10821	na	0.44	10.6	na	0.48	204	1.13	0.006	na	6.8	0.029	99.15	na
USH	T12	5	4.29	3.2	na	na	9927	na	0.36	13.9	na	0.46	253	0.79	0.006	na	11.4	0.038	119.04	na
USH	T13	5	2.17	2.8	na	na	11220	na	0.41	15.5	na	0.49	228	0.51	0.006	na	47.1	0.032	46.60	na
USH	P3-SHR	5	0.11	2.0	<0.1	<0.02	99	<0.02	0.01	18.2	2.1	0.04	25	0.44	0.007	0.60	3.3	0.058	10.73	1.6

Gold District	Sample Site	Tailings Depth (cm)	Fe ICP-MS (% dry wt.) 0.01	Ga ICP-MS (mg/kg) 0.1	Ge ICP-MS (mg/kg) 0.1	Hf ICP-MS (mg/kg) 0.02	Hg ICP-MS (µg/kg) 5	In ICP-MS (mg/kg) 0.02	K ICP-MS (% dry wt.) 0.01	La ICP-MS (mg/kg) 0.5	Li ICP-MS (mg/kg) 0.1	Mg ICP-MS (% dry wt.) 0.01	Mn ICP-MS (mg/kg) 1	Mo ICP-MS (mg/kg) 0.01	Na ICP-MS (% dry wt.) 0.001	Nb ICP-MS (mg/kg) 0.02	Ni ICP-MS (mg/kg) 0.1	P ICP-MS (% dry wt.) 0.001	Pb ICP-MS (mg/kg) 0.01	Rb ICP-MS (mg/kg) 0.1
USH	T2-04	10	3.93	7.5	0.1	0.21	2911	0.02	1.04	26.1	50.1	1.31	585	0.49	0.017	2.70	16.4	0.074	45.55	63.2
USH	P4-GB	5	3.07	3.2	<0.1	0.19	3156	0.04	0.53	10.8	25.5	0.55	273	0.84	0.008	0.59	42.3	0.056	64.74	31.7
USH	T3-04	14	5.54	3.9	<0.1	0.11	3267	0.06	0.62	79.3	25.9	0.63	481	1.89	0.008	0.53	10.4	0.081	59.81	36.6
USH	T3-04	25	2.41	3.9	0.1	0.21	3169	0.02	0.60	28.1	25.9	0.66	325	0.59	0.011	0.38	19.4	0.062	62.26	38.0
USH	T39	5	2.67	4.8	0.1	0.29	1489	0.02	0.69	16.8	32.3	0.79	375	0.28	0.012	0.80	11.2	0.052	31.41	41.7
USH	T40	0	2.08	3.8	0.1	0.26	635	0.02	0.62	15.0	27.7	0.66	355	0.35	0.012	0.58	9.0	0.049	21.69	39.4
USH	T40	15	2.12	4.0	0.1	0.29	432	0.02	0.70	17.6	32.8	0.71	378	0.30	0.018	0.50	23.4	0.058	18.98	44.2
USH	T41	0	2.54	4.7	0.1	0.18	1668	0.02	0.69	20.4	32.0	0.76	354	0.50	0.011	0.98	10.1	0.052	30.65	43.5
USH	T41	20	3.92	7.2	0.1	0.39	2821	0.02	1.29	28.5	52.4	1.41	666	0.53	0.016	0.50	30.3	0.063	41.35	78.7
Whiteburn Gold District (WB)																				
WB	T1	90	1.82	3.8	na	na	22	na	0.04	24.0	na	0.40	680	0.36	0.004	na	21.9	0.005	8.93	na
WB	T2	100	2.52	5.4	na	na	28	na	0.07	35.3	na	0.53	972	0.71	0.007	na	30.6	0.005	14.07	na
WB	T3	70	2.39	4.9	na	na	24	na	0.06	47.4	na	0.55	829	0.32	0.006	na	30.3	0.014	13.53	na
WB	T4	0	1.26	1.8	na	na	1603	na	0.02	12.4	na	0.40	116	0.05	0.001	na	6.3	0.029	5.07	na
WB	T5	0	1.80	2.6	na	na	10192	na	0.03	13.0	na	0.58	165	0.06	0.001	na	10.9	0.039	45.77	na
WB	T6	7	5.23	2.8	na	na	350000	na	0.03	13.5	na	0.54	373	0.47	0.002	na	55.6	0.050	195.87	na
WB	T6	50	1.78	2.4	na	na	3492	na	0.03	14.9	na	0.50	143	0.07	0.002	na	25.6	0.042	20.40	na
WB	T6	110	2.26	1.7	na	na	160000	na	0.05	7.9	na	0.40	115	0.31	0.003	na	16.4	0.035	404.81	na
WB	T7	10	14.85	1.5	na	na	27000	na	0.02	3.5	na	0.40	325	3.43	0.001	na	745.9	0.037	375.69	na
WB	T8	5	1.99	2.2	na	na	2784	na	0.02	12.5	na	0.52	260	0.12	0.001	na	34.6	0.037	19.84	na
WB	T8	10	3.48	6.6	na	na	137	na	0.08	17.3	na	0.60	894	1.26	0.007	na	33.7	0.010	12.79	na
WB	T9	20	1.85	2.5	na	na	2810	na	0.04	15.3	na	0.58	217	0.11	0.001	na	16.2	0.043	56.22	na
WB	T9	45	3.67	5.6	na	na	4653	na	0.09	31.0	na	1.07	469	0.22	0.004	na	34.6	0.062	53.97	na
WB	T10	65	2.65	6.5	na	na	97	na	0.08	39.3	na	0.67	994	0.54	0.007	na	32.3	0.013	17.99	na
WB	T11	10	2.80	3.2	na	na	7506	na	0.07	17.9	na	0.66	782	0.19	0.003	na	41.0	0.049	214.26	na
WB	T12	10	2.40	3.4	na	na	3490	na	0.04	20.0	na	0.69	305	0.22	0.002	na	22.3	0.072	35.94	na
WB	T1	5-10	4.18	2.8	0.1	0.12	53129	<0.02	0.02	13.6	10.9	0.48	195	0.28	0.002	0.39	30.1	0.066	151.48	2.5
Statistics		**Min.**	0.11	0.1	<0.1	<0.02	<5	<0.02	0.01	0.7	0.1	0.01	<1	0.04	<0.001	<0.02	0.6	0.001	4.41	0.7
		Max.	34.46	7.6	0.2	1.72	350000	0.29	1.29	79.3	52.4	1.41	8603	181.62	1.692	2.70	745.9	0.200	6781.3	78.7
		Mean	3.50	2.9	0.1	0.22	6838	0.05	0.18	15.9	20.0	0.57	566	3.15	0.015	0.44	28.8	0.049	135.39	15.4
		Median	2.60	2.7	0.1	0.19	1652	0.03	0.10	14.9	22.0	0.56	414	0.43	0.002	0.36	21.9	0.049	52.04	10.3
		n	487	487	56	85	477	39	487	487	87	485	486	487	485	83	487	487	487	87
		Std Dev	3.61	1.5	0.0	0.23	22473	0.07	0.22	8.3	10.3	0.27	685	10.83	0.105	0.41	49.0	0.018	421.28	14.1
		95th pctl	7.40	5.9	0.2	0.38	24946	0.26	0.71	29.5	33.8	1.04	1416	15.66	0.017	1.31	63.2	0.074	414.59	43.0
		90th pctl	4.91	5.3	0.1	0.30	11038	0.08	0.60	25.0	32.5	0.95	1037	7.07	0.014	0.92	47.4	0.067	217.54	33.7
		75th pctl	3.53	3.5	0.1	0.24	5155	0.05	0.21	20.6	25.8	0.72	677	1.30	0.005	0.52	30.7	0.058	93.50	21.8
		50th pctl	2.60	2.7	0.1	0.19	1652	0.03	0.10	14.9	22.0	0.56	414	0.43	0.002	0.36	21.9	0.049	52.04	10.3
		25th pctl	2.08	1.9	0.1	0.12	399	0.02	0.04	9.9	12.2	0.40	250	0.17	0.001	0.18	12.8	0.038	27.52	6.6

Notes: na = not analyzed; DL = detection limit

Gold District	Sample Site	Tailings Depth (cm)	Re ICP-MS (µg/kg) 1	S ICP-MS (% dry wt.) 0.02	Sb ICP-MS (mg/kg) 0.02	Sc ICP-MS (mg/kg) 0.1	Se ICP-MS (mg/kg) 0.1	Sn ICP-MS (mg/kg) 0.1	Sr ICP-MS (mg/kg) 0.5	Ta ICP-MS (mg/kg) 0.05	Te ICP-MS (mg/kg) 0.02	Th ICP-MS (mg/kg) 0.1	Ti ICP-MS (% dry wt.) 0.001	Tl ICP-MS (mg/kg) 0.02	U ICP-MS (mg/kg) 0.1	V ICP-MS (mg/kg) 2	W ICP-MS (mg/kg) 0.1	Y ICP-MS (mg/kg) 0.01	Zn ICP-MS (mg/kg) 0.1	Zr ICP-MS (mg/kg) 0.1
Caribou Gold District (CAR)																				
CAR	T1	0-5	<1	0.18	31.49	0.2	0.7	<0.1	0.9	<0.05	0.93	3.0	0.001	0.04	0.3	<2	4.0	0.59	2.4	5.8
CAR	T2	0-4	1	16.25	606.17	0.1	11.6	0.1	6.7	<0.05	16.51	1.5	0.001	0.11	0.4	<2	51.8	1.43	36.5	6.9
CAR	T3	0-8	<1	0.19	15.66	0.5	0.2	0.1	17.4	<0.05	0.47	2.0	0.002	0.02	0.3	2	4.3	1.84	25.6	3.7
CAR	T4	0-4	1	0.43	7.52	0.7	0.2	0.1	86.1	<0.05	0.35	2.6	0.002	<0.02	0.3	2	3.3	2.33	84.8	5.6
CAR	T5	2-9	1	0.38	58.45	0.1	1.1	0.1	1.2	<0.05	1.77	2.3	0.002	0.02	0.2	<2	19.4	0.67	13.0	4.4
Cochrane Hill Gold District (CH)																				
CH	T1	10	na	0.25	3.89	4.9	0.2	na	16.4	na	0.11	3.9	0.128	0.39	0.7	47	0.2	na	1005.6	na
CH	T1	27	na	0.37	4.48	4.2	0.2	na	17.7	na	0.10	3.7	0.119	0.39	0.5	45	0.2	na	508.2	na
CH	T1	50	na	0.53	4.36	5.0	0.2	na	11.2	na	0.12	3.4	0.119	0.43	0.5	45	0.2	na	579.1	na
CH	T2	15	na	0.08	2.25	4.3	0.1	na	2.8	na	0.05	3.4	0.117	0.33	0.4	43	0.1	na	106.5	na
CH	T2	32	na	0.20	1.40	3.7	0.1	na	3.7	na	0.03	3.3	0.103	0.29	0.5	37	0.2	na	134.6	na
CH	T2	50	na	0.56	1.96	4.3	0.1	na	5.8	na	0.06	2.6	0.132	0.42	0.4	47	0.2	na	377.6	na
CH	T3	10	na	0.03	1.49	4.2	<0.1	na	3.2	na	0.03	3.7	0.106	0.34	0.4	39	0.1	na	104.3	na
CH	T3	22	na	0.06	1.15	4.3	0.1	na	4.9	na	0.04	3.9	0.120	0.31	0.5	44	0.3	na	192.9	na
CH	T3	36	na	0.16	0.47	4.2	<0.1	na	2.7	na	<0.02	2.3	0.101	0.31	0.3	41	<0.1	na	202.8	na
CH	T3	50	na	0.33	0.30	4.5	<0.1	na	5.0	na	<0.02	3.3	0.122	0.34	0.4	43	0.2	na	395.1	na
CH	T3	70	na	0.25	0.39	5.1	0.1	na	10.1	na	<0.02	4.0	0.117	0.32	0.6	45	0.3	na	148.8	na
CH	T4	20	na	0.04	3.33	4.3	0.2	na	3.6	na	0.09	4.0	0.120	0.31	0.5	42	0.2	na	152.0	na
CH	T4	35	na	0.03	1.08	3.7	0.1	na	2.8	na	0.03	3.0	0.092	0.31	0.4	38	0.1	na	99.6	na
CH	T4	60	na	0.15	2.21	5.0	0.2	na	12.5	na	0.07	5.9	0.106	0.34	0.9	44	0.4	na	579.2	na
CH	T4	80	na	0.19	1.42	4.7	0.2	na	10.9	na	0.06	8.1	0.095	0.30	1.2	45	0.5	na	476.9	na
CH	T5	30	na	0.05	2.78	3.9	0.2	na	3.0	na	0.06	2.8	0.107	0.32	0.4	38	0.2	na	99.3	na
CH	T5	64	na	0.19	2.32	3.9	0.2	na	6.9	na	0.06	4.0	0.098	0.31	0.6	38	0.2	na	558.7	na
CH	T5	85	na	0.26	1.71	5.0	0.1	na	11.3	na	0.03	6.0	0.092	0.32	0.9	41	0.3	na	471.2	na
CH	T6	16	na	0.01	1.08	4.5	0.1	na	2.9	na	0.03	3.4	0.126	0.34	0.5	47	0.2	na	142.5	na
CH	T6	29	na	0.09	0.99	4.3	0.1	na	10.7	na	0.04	5.2	0.086	0.27	0.7	40	0.3	na	328.6	na
CH	T6	46	na	0.09	0.59	4.2	0.5	na	3.9	na	0.02	3.0	0.079	0.26	0.6	43	<0.1	na	139.3	na
CH	T6	60	na	0.42	0.74	4.1	0.2	na	7.8	na	0.03	3.4	0.104	0.30	0.6	40	0.4	na	270.4	na
CH	T7	10	na	0.07	1.63	3.9	0.1	na	2.6	na	0.03	3.9	0.101	0.30	0.7	41	0.2	na	70.6	na
CH	T7	24	na	0.08	2.34	4.1	0.1	na	3.1	na	0.06	3.0	0.095	0.29	0.4	38	0.2	na	169.3	na
CH	T7	26	na	0.16	2.71	3.5	0.1	na	3.5	na	0.05	2.4	0.088	0.29	0.3	37	<0.1	na	159.4	na
CH	T7	67	na	0.67	6.47	3.9	0.3	na	2.9	na	0.14	2.6	0.110	0.35	0.4	39	0.2	na	558.5	na
CH	T8	7	na	0.04	1.74	4.1	0.1	na	2.7	na	0.05	3.4	0.109	0.30	0.4	39	0.1	na	76.5	na
CH	T8	54	na	0.12	0.72	4.5	<0.1	na	4.6	na	0.02	2.2	0.110	0.32	0.3	41	0.1	na	289.4	na
CH	T8	64	na	0.14	0.87	4.0	<0.1	na	5.8	na	0.02	2.5	0.118	0.34	0.3	39	0.3	na	278.1	na
CH	T9	13	na	0.04	3.52	4.2	0.2	na	5.6	na	0.09	5.2	0.090	0.31	0.6	37	0.3	na	170.3	na
CH	T9	22	na	0.03	1.64	4.0	0.1	na	4.6	na	0.04	3.3	0.108	0.32	0.4	43	0.2	na	188.9	na
CH	T9	55	na	0.19	1.03	5.5	<0.1	na	13.7	na	0.03	5.5	0.103	0.31	0.8	43	0.3	na	492.1	na
CH	T10	13	na	0.25	46.08	2.3	4.6	na	1.1	na	1.45	2.9	0.030	0.23	<0.1	23	3.9	na	74.4	na
CH	T10	21	na	8.05	148.36	1.1	8.7	na	2.1	na	2.16	0.5	<0.001	0.89	<0.1	15	2.6	na	146.6	na
CH	T11	10	na	0.02	5.41	3.9	0.6	na	6.4	na	0.10	3.1	0.099	0.36	0.4	39	0.3	na	155.8	na
CH	T11	16	na	<0.01	2.73	3.8	0.2	na	6.7	na	0.07	3.2	0.100	0.34	0.4	38	0.3	na	60.2	na
CH	T11	22	na	0.26	3.58	4.4	0.1	na	2.0	na	0.06	2.5	0.113	0.46	0.3	43	0.2	na	320.0	na
CH	T12	3	na	0.02	3.26	3.6	0.5	na	14.4	na	0.07	3.0	0.086	0.36	0.3	37	0.4	na	97.7	na
CH	T12	10	na	0.03	0.69	2.7	0.4	na	3.6	na	0.02	2.2	0.049	0.20	0.5	28	0.1	na	51.3	na
CH	T13	8	na	0.33	2.73	4.4	<0.1	na	2.8	na	0.07	2.7	0.121	0.38	0.4	44	0.2	na	405.4	na
CH	T14	0	na	0.41	4.71	3.7	0.7	na	3.3	na	0.14	2.6	0.066	0.28	0.4	40	0.5	na	265.6	na
CH	T15	16	na	0.36	3.17	4.5	0.1	na	4.4	na	0.09	2.9	0.126	0.39	0.4	45	0.2	na	462.5	na
CH	T15	26	na	0.19	2.30	3.9	0.7	na	3.8	na	0.06	3.5	0.081	0.34	0.5	42	<0.1	na	99.6	na

Gold District	Sample Site	Tailings Depth (cm)	Re ICP-MS (µg/kg) 1	S ICP-MS (% dry wt.) 0.02	Sb ICP-MS (mg/kg) 0.02	Sc ICP-MS (mg/kg) 0.1	Se ICP-MS (mg/kg) 0.1	Sn ICP-MS (mg/kg) 0.1	Sr ICP-MS (mg/kg) 0.5	Ta ICP-MS (mg/kg) 0.05	Te ICP-MS (mg/kg) 0.02	Th ICP-MS (mg/kg) 0.1	Ti ICP-MS (% dry wt.) 0.001	Tl ICP-MS (mg/kg) 0.02	U ICP-MS (mg/kg) 0.1	V ICP-MS (mg/kg) 2	W ICP-MS (mg/kg) 0.1	Y ICP-MS (mg/kg) 0.01	Zn ICP-MS (mg/kg) 0.1	Zr ICP-MS (mg/kg) 0.1
CH	T16	7	na	<0.01	1.42	3.3	0.3	na	6.0	na	0.06	3.3	0.086	0.30	0.4	36	0.2	na	211.3	na
CH	T16	20	na	0.02	0.88	3.7	0.1	na	3.1	na	0.03	3.3	0.100	0.33	0.4	38	<0.1	na	88.7	na
East Rawdon Gold District (RAW)																				
RAW	T1	15	na	0.02	2.30	0.8	0.2	na	19.1	na	0.31	4.2	0.004	0.13	0.4	8	<0.1	na	128.3	na
RAW	T1	40	na	0.03	0.50	0.5	0.1	na	26.3	na	0.06	2.3	0.002	0.03	0.2	4	<0.1	na	39.1	na
RAW	T2	10	na	0.01	1.64	0.7	0.2	na	10.9	na	0.15	3.8	0.003	0.07	0.4	6	<0.1	na	94.8	na
RAW	T2	60	na	<0.01	0.63	0.5	0.1	na	29.0	na	0.12	2.9	0.002	0.02	0.3	4	<0.1	na	47.6	na
RAW	T3	10	na	0.01	1.22	0.8	0.1	na	39.5	na	0.13	4.1	0.004	0.07	0.4	6	<0.1	na	102.0	na
RAW	T3	30	na	0.04	6.36	0.5	0.4	na	21.5	na	0.70	2.9	0.002	0.15	0.4	3	<0.1	na	38.4	na
RAW	T3	50	na	<0.01	1.27	0.4	0.1	na	24.1	na	0.16	2.5	0.002	0.04	0.3	3	<0.1	na	50.3	na
RAW	T4	10	na	<0.01	0.79	0.4	0.1	na	13.4	na	0.09	2.5	0.003	0.04	0.3	3	<0.1	na	62.4	na
RAW	T4	70	na	<0.01	0.67	0.6	0.1	na	19.3	na	0.08	3.3	0.004	0.06	0.4	4	<0.1	na	61.7	na
RAW	T5	20	na	0.09	2.25	0.7	0.3	na	8.6	na	0.54	3.1	0.002	0.10	0.5	4	<0.1	na	52.2	na
RAW	T5	50	na	0.04	2.29	0.5	0.3	na	6.2	na	0.50	2.9	0.004	0.08	0.3	5	<0.1	na	31.4	na
RAW	T5	80	na	<0.01	0.73	0.7	0.1	na	6.2	na	0.10	3.2	0.006	0.06	0.3	4	<0.1	na	31.1	na
RAW	T5	110	na	0.01	0.96	0.7	0.2	na	7.0	na	0.11	2.9	0.003	0.06	0.6	3	<0.1	na	64.1	na
RAW	T5	140	na	0.13	0.73	0.5	0.1	na	27.7	na	0.06	2.1	0.001	0.03	0.3	3	<0.1	na	45.1	na
RAW	T5	170	na	0.17	0.69	1.1	0.1	na	25.2	na	0.08	3.6	0.004	0.06	0.4	6	<0.1	na	124.6	na
RAW	T6	20	na	0.05	2.30	0.3	0.2	na	6.0	na	0.51	2.3	0.002	0.07	0.2	3	<0.1	na	25.9	na
RAW	T6	50	na	0.12	1.42	0.2	0.2	na	5.2	na	0.54	1.5	0.001	0.06	0.1	2	<0.1	na	16.4	na
RAW	T8	25	na	0.02	2.22	1.1	0.2	na	29.6	na	0.22	5.0	0.003	0.10	0.5	8	<0.1	na	106.0	na
RAW	T8	40	na	0.03	1.72	0.9	0.2	na	22.6	na	0.14	4.2	0.003	0.10	0.4	7	<0.1	na	95.5	na
RAW	T9	10	na	0.01	2.37	0.9	0.2	na	12.6	na	0.28	4.1	0.002	0.07	0.4	6	<0.1	na	103.2	na
RAW	T9	50	na	0.29	1.83	0.8	0.2	na	38.2	na	0.19	3.2	0.002	0.09	0.4	6	<0.1	na	88.3	na
RAW	T10	30	na	0.26	1.33	0.8	0.1	na	10.5	na	0.06	4.3	0.003	0.08	0.4	7	<0.1	na	97.2	na
RAW	T11	15	na	0.03	0.80	0.8	0.1	na	12.0	na	0.10	3.0	0.002	0.06	0.4	6	<0.1	na	94.7	na
RAW	T11	40	na	0.21	1.87	0.8	0.1	na	10.5	na	0.10	5.0	0.004	0.08	0.4	9	<0.1	na	208.3	na
RAW	T12	10	na	<0.01	2.53	0.8	0.2	na	19.0	na	0.32	4.8	0.010	0.15	0.6	5	<0.1	na	117.9	na
RAW	T12	40	na	0.03	3.23	0.7	0.3	na	16.0	na	0.32	3.1	0.006	0.08	0.4	5	<0.1	na	75.7	na
RAW	T13	10	na	0.02	2.01	0.8	0.1	na	10.2	na	0.08	3.7	0.008	0.12	0.3	6	<0.1	na	190.3	na
Goldenville Gold District (GD)																				
GD	T1	2	na	0.10	19.13	0.6	0.3	na	11.2	na	0.45	3.1	0.021	0.07	0.2	6	3.4	na	26.2	na
GD	T1	10	na	0.03	10.76	1.1	0.3	na	12.8	na	0.36	5.7	0.025	0.10	0.6	12	1.7	na	48.6	na
GD	T1	13	na	0.05	20.14	0.7	0.5	na	15.0	na	1.35	5.8	0.023	0.08	0.3	9	3.5	na	31.0	na
GD	T2	1	na	0.34	34.52	0.5	0.6	na	8.7	na	0.87	3.9	0.021	0.08	0.3	6	9.2	na	25.3	na
GD	T2	3.5	na	0.32	29.54	0.5	0.6	na	2.6	na	0.82	3.7	0.022	0.09	0.2	5	12.7	na	22.8	na
GD	T2	8	na	0.04	1.33	0.4	0.1	na	8.2	na	0.12	2.5	0.020	0.05	0.2	6	0.3	na	31.5	na
GD	T3	1	na	<0.01	2.64	0.5	0.1	na	16.8	na	0.07	3.6	0.021	0.06	0.3	6	1.0	na	44.1	na
GD	T3	21	na	0.02	0.85	0.7	<0.1	na	23.5	na	0.05	3.3	0.025	0.07	0.3	6	0.4	na	50.6	na
GD	T4	1	na	0.03	4.12	0.5	0.1	na	11.9	na	0.09	2.8	0.020	0.05	0.2	4	0.4	na	33.1	na
GD	T5	1	na	0.01	0.77	0.5	<0.1	na	28.2	na	0.02	2.8	0.020	0.05	0.2	6	0.1	na	33.9	na
GD	T5	8	na	0.20	2.55	1.0	0.1	na	43.9	na	0.06	5.6	0.033	0.12	0.5	11	0.9	na	67.6	na
GD	T6	1	na	0.01	8.54	0.9	0.3	na	26.4	na	0.25	6.8	0.030	0.11	0.4	8	1.7	na	48.9	na
GD	T6	17	na	0.04	5.88	0.6	0.1	na	15.1	na	0.14	4.3	0.023	0.07	0.3	5	0.9	na	36.2	na
GD	T7	1	na	0.21	23.72	0.6	0.4	na	9.9	na	0.58	3.9	0.021	0.07	0.3	5	4.6	na	27.3	na
GD	T7	14	na	0.10	3.24	0.6	0.1	na	16.2	na	0.10	2.7	0.024	0.07	0.2	6	0.9	na	38.2	na
GD	T8	1	na	<0.01	3.76	1.1	0.1	na	23.1	na	0.11	6.5	0.026	0.09	0.5	11	1.4	na	67.6	na
GD	T8	15	na	0.01	6.17	0.6	0.2	na	11.5	na	0.17	4.7	0.021	0.07	0.4	5	0.8	na	31.9	na
GD	T9	1	na	0.09	9.70	0.6	0.2	na	14.6	na	0.21	7.0	0.022	0.07	0.8	7	2.3	na	31.7	na
GD	T9	13	na	0.02	2.90	1.3	0.1	na	17.0	na	0.13	8.9	0.024	0.10	0.7	13	1.8	na	58.4	na
GD	T10	1	na	0.05	7.33	0.5	0.1	na	11.6	na	0.18	3.1	0.021	0.05	0.2	4	2.2	na	23.9	na
GD	T10	8	na	0.02	2.34	0.6	0.1	na	11.5	na	0.11	3.7	0.023	0.06	0.3	5	0.7	na	34.5	na
GD	T10	20	na	0.17	28.49	0.6	0.4	na	2.6	na	0.42	4.1	0.023	0.12	0.2	3	2.2	na	22.3	na
GD	T11	1	na	0.02	1.02	0.6	0.1	na	33.7	na	0.04	3.5	0.023	0.06	0.3	7	0.4	na	47.3	na
GD	T11	10	na	0.05	0.88	0.6	<0.1	na	23.6	na	0.04	3.8	0.023	0.06	0.3	7	0.4	na	84.3	na
GD	T12	1	na	0.08	2.71	1.4	0.2	na	73.2	na	0.08	7.3	0.026	0.10	0.7	12	1.7	na	66.9	na
GD	T12	5	na	0.04	1.69	1.4	0.1	na	36.0	na	0.06	8.1	0.027	0.09	0.7	13	1.5	na	69.8	na
GD	T12	19	na	0.12	0.94	1.4	0.1	na	54.9	na	0.04	8.3	0.021	0.09	1.0	14	0.6	na	67.9	na

Gold District	Sample Site	Tailings Depth (cm)	Re ICP-MS (µg/kg) 1	S ICP-MS (% dry wt.) 0.02	Sb ICP-MS (mg/kg) 0.02	Sc ICP-MS (mg/kg) 0.1	Se ICP-MS (mg/kg) 0.1	Sn ICP-MS (mg/kg) 0.1	Sr ICP-MS (mg/kg) 0.5	Ta ICP-MS (mg/kg) 0.05	Te ICP-MS (mg/kg) 0.02	Th ICP-MS (mg/kg) 0.1	Ti ICP-MS (% dry wt.) 0.001	Tl ICP-MS (mg/kg) 0.02	U ICP-MS (mg/kg) 0.1	V ICP-MS (mg/kg) 2	W ICP-MS (mg/kg) 0.1	Y ICP-MS (mg/kg) 0.01	Zn ICP-MS (mg/kg) 0.1	Zr ICP-MS (mg/kg) 0.1
GD	T13	1	na	0.03	1.56	0.7	0.1	na	51.5	na	0.05	3.9	0.022	0.06	0.3	6	0.7	na	39.8	na
GD	T13	6	na	0.03	2.63	1.4	0.1	na	72.7	na	0.07	7.3	0.031	0.11	0.6	12	1.9	na	67.6	na
GD	T13	8	na	0.07	1.11	1.6	0.1	na	54.6	na	0.04	8.1	0.026	0.09	0.9	14	1.3	na	64.5	na
GD	T15	1	na	0.15	65.00	0.4	0.8	na	7.0	na	1.79	2.1	0.013	0.09	0.1	2	0.8	na	12.6	na
GD	T15	5	na	0.03	6.56	0.1	0.2	na	0.6	na	0.25	1.8	0.002	<0.02	0.2	< 2	0.1	na	1.9	na
GD	T15	8	na	1.58	597.39	0.9	9.5	na	1.4	na	28.48	4.8	0.023	0.18	0.2	< 2	1.6	na	14.4	na
GD	T16	4	na	0.06	7.05	0.8	0.2	na	13.0	na	0.18	3.9	0.024	0.08	0.3	7	1.0	na	29.0	na
GD	T16	8	na	2.25	359.19	0.2	6.4	na	3.3	na	8.42	2.8	0.008	0.20	0.3	< 2	30.0	na	13.6	na
GD	T17	1	na	2.19	260.98	0.3	6.0	na	6.5	na	8.88	1.0	0.014	0.22	0.1	< 2	65.8	na	12.9	na
GD	T1	0-5	<1	2.54	291.54	<0.1	5.5	1.9	7.8	<0.05	9.17	0.9	0.013	0.29	0.1	<2	54.8	0.46	36.5	44.4
GD	T2	0-5	<1	0.07	11.68	0.8	0.1	0.2	11.9	<0.05	0.25	3.5	0.020	0.08	0.3	6	5.9	3.48	28.0	3.4
GD	T3	0-5	<1	1.92	162.50	0.4	2.5	0.2	2.9	<0.05	5.56	3.7	0.022	0.19	0.3	2	1.4	1.44	9.3	6.4
GD	T4	0-5	<1	0.10	14.25	0.6	0.1	0.1	15.4	<0.05	0.36	3.1	0.023	0.07	0.3	7	7.2	3.47	52.3	3.4
GD	T5	0-5	<1	0.11	3.83	1.0	<0.1	0.1	57.1	<0.05	0.06	7.0	0.031	0.10	0.7	9	3.0	6.87	57.8	6.7
GD	T1	0-5	<1	0.01	3.83	0.7	<0.1	0.1	13.0	<0.05	0.13	4.4	0.025	0.08	0.5	8	6.0	3.73	37.2	4.2
GD	T2	0-5	<1	<0.01	2.48	0.6	0.2	0.1	9.9	<0.05	0.06	3.3	0.022	0.07	0.4	7	0.9	3.46	34.3	3.8
GD	T3	0-5	2	0.12	1.50	1.3	0.1	0.2	76.5	<0.05	0.03	6.8	0.030	0.12	0.9	12	1.9	7.70	67.3	17.8
GD	T4	0-5	1	0.15	4.73	0.9	0.1	0.1	40.1	<0.05	0.11	5.6	0.028	0.10	0.6	9	2.3	6.35	57.8	10.6
GD	T5	0-10	<1	0.03	5.06	0.5	0.1	0.1	7.5	<0.05	0.07	2.9	0.019	0.06	0.3	6	1.3	2.49	23.8	6.3
GD	T6	0-10	<1	<0.01	1.00	0.6	0.2	0.1	28.2	<0.05	0.04	2.9	0.020	0.07	0.3	6	0.4	3.33	43.2	4.3
GD	T7	0-10	<1	<0.01	4.20	0.7	0.2	0.1	11.8	<0.05	0.15	3.3	0.022	0.11	0.4	6	1.8	3.92	36.6	5.9
GD	T8	0-10	<1	0.03	11.01	0.8	0.2	0.1	15.6	<0.05	0.43	3.8	0.023	0.09	0.4	7	2.9	3.74	34.2	5.6
GD	T9	0-10	1	0.01	2.62	0.7	0.2	0.1	9.8	<0.05	0.06	3.7	0.020	0.07	0.4	6	0.5	3.97	36.2	6.7
GD	T10	0-10	1	0.06	12.38	0.8	0.4	0.2	10.2	<0.05	0.36	3.6	0.022	0.09	0.4	7	2.4	3.67	37.0	5.9
GD	T11	0-5	1	0.02	5.30	0.5	0.1	0.1	8.4	<0.05	0.11	2.3	0.017	0.05	0.3	5	0.6	2.36	25.7	4.8
GD	T12	0-5	<1	0.31	9.36	3.2	0.6	1.2	8.1	<0.05	0.18	3.9	0.085	0.40	0.6	33	0.2	3.62	90.1	3.1
GD	T13	0-5	2	3.83	340.28	0.1	5.4	1.2	5.6	<0.05	6.97	1.0	0.007	0.27	0.2	<2	68.4	0.54	16.8	49.9
Lake Catcha Gold District (LC)																				
LC	T1	7.5	na	0.01	5.86	1.8	0.2	na	9.5	na	0.71	4.3	0.006	0.02	0.3	6	<0.1	na	84.0	na
LC	T1	30	na	0.98	135.96	1.2	4.7	na	6.5	na	21.89	1.0	0.018	0.07	0.1	7	0.4	na	40.7	na
LC	T1	60	na	0.02	5.47	2.2	0.2	na	168.5	na	0.87	5.2	0.001	0.03	0.4	5	<0.1	na	67.5	na
LC	T1	125	na	<0.01	3.13	1.5	0.1	na	81.8	na	0.39	4.4	0.009	0.02	0.3	8	0.2	na	72.6	na
LC	T2	15	na	0.01	3.29	1.5	0.1	na	97.4	na	0.37	4.5	0.009	0.03	0.4	8	0.2	na	58.8	na
LC	T2	30	na	<0.01	4.24	1.1	0.4	na	22.0	na	0.15	3.4	0.010	0.02	0.3	7	0.1	na	58.8	na
LC	T3	5	na	<0.01	5.94	2.4	0.2	na	37.2	na	0.38	3.0	0.006	0.02	0.2	6	<0.1	na	70.6	na
LC	T3	17	na	<0.01	4.90	2.0	0.1	na	59.8	na	0.18	6.4	0.005	0.05	0.5	9	0.4	na	87.3	na
LC	T3	27	na	0.02	2.86	1.3	0.1	na	72.7	na	0.27	4.1	0.005	0.03	0.3	7	0.1	na	57.9	na
LC	T3	35	na	<0.01	3.21	0.9	0.4	na	5.8	na	0.03	3.6	0.006	0.02	0.4	9	<0.1	na	36.1	na
LC	T4	10	na	<0.01	8.85	1.7	0.3	na	38.4	na	1.55	3.8	0.006	0.04	0.3	6	<0.1	na	109.5	na
LC	T4	30	na	<0.01	1.95	1.5	<0.1	na	15.3	na	0.07	4.5	0.007	0.02	0.4	8	<0.1	na	84.8	na
LC	T4	50	na	<0.01	5.65	1.6	0.2	na	112.0	na	1.01	6.7	0.002	0.02	0.4	5	<0.1	na	32.7	na
LC	T4	70	na	0.02	3.65	1.3	0.1	na	91.8	na	0.25	3.6	0.004	0.02	0.3	3	<0.1	na	26.8	na
LC	T5	12	na	0.05	4.01	1.3	0.1	na	15.7	na	0.23	3.1	0.002	0.02	0.3	3	<0.1	na	43.5	na
LC	T5	30	na	0.18	4.38	2.4	0.2	na	62.0	na	0.31	3.0	0.004	<0.02	0.3	6	2.3	na	66.3	na
LC	T6	10	na	0.39	31.99	2.4	0.6	na	43.4	na	2.51	2.9	0.002	0.03	0.4	4	0.5	na	71.1	na

Gold District	Sample Site	Tailings Depth (cm)	Re ICP-MS (µg/kg) 1	S ICP-MS (% dry wt.) 0.02	Sb ICP-MS (mg/kg) 0.02	Sc ICP-MS (mg/kg) 0.1	Se ICP-MS (mg/kg) 0.1	Sn ICP-MS (mg/kg) 0.1	Sr ICP-MS (mg/kg) 0.5	Ta ICP-MS (mg/kg) 0.05	Te ICP-MS (mg/kg) 0.02	Th ICP-MS (mg/kg) 0.1	Ti ICP-MS (% dry wt.) 0.001	Tl ICP-MS (mg/kg) 0.02	U ICP-MS (mg/kg) 0.1	V ICP-MS (mg/kg) 2	W ICP-MS (mg/kg) 0.1	Y ICP-MS (mg/kg) 0.01	Zn ICP-MS (mg/kg) 0.1	Zr ICP-MS (mg/kg) 0.1
LC	T6	25	na	0.29	7.02	1.6	0.2	na	79.0	na	0.54	3.1	<0.001	0.02	0.4	6	<0.1	na	67.4	na
LC	T7	20	na	<0.01	4.95	1.7	0.1	na	14.4	na	0.15	4.0	<0.001	0.02	0.3	4	0.2	na	69.5	na
LC	T8	15	na	<0.01	8.22	2.5	0.4	na	12.2	na	0.78	4.1	<0.001	0.03	0.5	6	0.1	na	92.7	na
LC	T8	30	na	<0.01	7.58	1.6	0.1	na	19.2	na	0.16	7.8	<0.001	0.02	0.5	7	0.3	na	72.1	na
LC	T9	20	na	<0.01	5.14	1.5	0.2	na	9.0	na	0.14	4.5	0.008	0.02	0.4	4	<0.1	na	46.3	na
LC	T1-02	20	na	0.04	9.49	2.7	0.3	na	87.2	na	0.72	3.7	0.001	0.02	0.3	2	<0.1	na	89.6	na
LC	T1-02	75	na	0.08	8.18	3.0	0.2	na	60.9	na	0.45	3.7	<0.001	0.03	0.4	4	<0.1	na	90.4	na
LC	S1	5	na	0.28	6.07	2.4	1.0	na	38.2	na	0.56	5.3	0.008	0.11	0.8	9	0.1	na	165.2	na
LC	S2	5	na	0.55	4.77	2.1	1.8	na	26.9	na	0.31	3.3	0.003	0.15	1.0	13	0.2	na	193.9	na
LC	S3	5	na	0.62	4.83	1.7	2.2	na	30.1	na	0.21	1.5	<0.001	0.19	1.0	14	0.2	na	208.9	na
LC	S4	5	na	0.57	4.69	1.7	2.7	na	22.4	na	0.20	1.4	0.004	0.24	1.1	15	0.2	na	224.4	na
LC	S5	5	na	0.93	5.46	1.3	3.7	na	40.2	na	0.14	0.6	0.007	0.23	1.0	12	0.2	na	211.0	na
LC	S6	5	na	1.11	5.06	2.0	4.1	na	42.3	na	0.20	1.2	0.009	0.32	1.5	17	0.2	na	273.4	na
LC	S7	5	na	0.47	1.77	1.2	3.5	na	30.1	na	0.08	0.7	0.009	0.18	0.7	10	0.1	na	105.9	na
LC	S8	5	na	0.51	1.34	1.1	3.2	na	39.7	na	0.10	0.5	0.003	0.12	0.8	12	<0.1	na	93.4	na
LC	S9	5	na	0.63	3.34	1.7	4.7	na	37.9	na	0.11	0.8	0.005	0.19	1.4	14	<0.1	na	130.1	na
Leipsigate Gold District (LEI)																				
LEI	T1	0	na	0.19	0.80	3.1	0.4	na	265.7	na	0.04	4.3	0.054	0.09	1.0	28	0.1	na	44.4	na
LEI	T2	10	na	0.02	0.64	1.0	0.2	na	988.4	na	0.16	2.2	0.001	0.12	0.3	7	0.4	na	90.4	na
LEI	T3	50	na	0.06	0.73	1.2	0.3	na	1448.1	na	0.20	2.1	<0.001	0.15	0.3	6	0.4	na	90.2	na
LEI	T4	20	na	0.02	0.60	1.7	0.3	na	486.5	na	0.13	4.7	0.008	0.13	0.5	14	0.4	na	201.4	na
LEI	T4	50	na	0.02	0.50	1.8	0.1	na	278.8	na	0.07	6.1	0.004	0.10	0.8	14	0.1	na	201.3	na
LEI	T5	20	na	0.10	1.55	1.2	0.1	na	426.2	na	0.14	3.6	0.004	0.27	0.4	10	0.3	na	226.9	na
LEI	T5	60	na	0.03	0.61	1.2	0.1	na	250.0	na	0.10	4.2	0.015	0.12	0.4	11	0.2	na	124.2	na
LEI	T6	20	na	0.01	0.36	1.3	0.1	na	319.6	na	0.07	4.1	0.004	0.09	0.4	8	0.2	na	163.1	na
LEI	T6	35	na	0.03	0.25	1.3	0.1	na	219.0	na	0.08	4.7	0.007	0.06	0.5	11	0.1	na	78.8	na
LEI	T7	15	na	0.03	1.35	1.9	0.1	na	479.1	na	0.36	4.9	0.003	0.33	0.4	17	0.6	na	393.7	na
LEI	T7	30	na	0.03	0.47	0.8	0.1	na	357.9	na	0.06	3.0	0.005	0.07	0.3	4	0.2	na	84.1	na
LEI	T7	50	na	0.18	0.60	0.6	<0.1	na	489.5	na	0.07	1.7	0.006	0.10	0.3	3	0.1	na	66.6	na
LEI	T8	10	na	0.07	1.08	1.4	0.1	na	300.9	na	0.16	5.1	0.016	0.21	0.4	13	0.3	na	237.5	na
LEI	T9	20	na	0.01	0.18	1.2	0.1	na	44.6	na	0.03	4.3	0.012	0.03	0.3	15	<0.1	na	46.1	na
LEI	T9	40	na	0.08	0.32	1.3	<0.1	na	34.3	na	0.02	4.7	0.016	0.05	0.5	15	<0.1	na	98.6	na
LEI	T10	20	na	<0.01	0.42	1.0	0.1	na	7.0	na	0.05	4.4	0.005	0.04	0.4	16	0.1	na	154.5	na
LEI	T10	40	na	0.04	0.29	1.3	0.1	na	18.2	na	0.06	4.9	0.002	0.06	0.4	15	<0.1	na	71.1	na
LEI	T11	20	na	0.03	0.22	1.3	0.3	na	12.8	na	0.02	4.7	0.006	0.05	0.7	17	<0.1	na	93.8	na
LEI	T12	20	na	<0.01	0.19	1.0	0.1	na	5.5	na	0.03	4.2	0.009	0.03	0.3	14	<0.1	na	35.1	na
LEI	T12	35	na	0.01	0.47	1.5	0.2	na	8.4	na	0.06	6.5	0.012	0.04	0.6	17	<0.1	na	52.2	na
LEI	T13	40	na	0.08	0.90	1.3	0.2	na	214.3	na	0.12	4.9	<0.001	0.20	0.5	14	0.3	na	204.8	na
LEI	T14	25	na	0.08	0.93	1.3	0.2	na	1055.9	na	0.18	3.0	0.003	0.18	0.3	6	0.4	na	136.6	na
LEI	T15	10	na	0.02	0.25	1.1	0.1	na	21.8	na	0.04	4.5	<0.001	0.03	0.4	13	<0.1	na	82.2	na
Lower Seal Harbour Gold District (LSH)																				
LSH	T1	5	na	0.06	34.17	0.9	0.5	na	10.2	na	0.72	5.2	0.030	0.11	0.6	14	0.9	na	45.4	na
LSH	T2	5	na	0.11	3.88	1.1	0.1	na	69.2	na	0.06	5.7	0.027	0.10	0.7	13	0.5	na	137.2	na
LSH	T3	0	na	1.22	1841.98	0.4	16.6	na	2.6	na	33.17	6.1	0.025	0.50	0.5	3	1.5	na	24.5	na
LSH	T3	20	na	10.92	1231.05	0.3	22.5	na	2.6	na	34.81	3.8	0.028	0.71	0.4	< 2	0.9	na	233.8	na
LSH	T3	35	na	12.30	1254.00	0.2	18.4	na	3.4	na	30.78	2.5	0.019	1.05	0.6	5	0.6	na	240.3	na
LSH	T3	45	na	6.66	613.11	0.4	8.5	na	12.0	na	13.44	5.9	0.015	0.73	0.7	5	0.7	na	255.5	na
LSH	T3	60	na	0.25	10.17	0.7	0.2	na	37.2	na	0.17	5.8	0.019	0.10	0.6	9	0.2	na	120.7	na
LSH	T4	25	na	<0.01	5.17	0.7	0.1	na	12.0	na	0.20	6.2	0.027	0.10	0.7	11	<0.1	na	96.2	na
LSH	T4	55	na	<0.01	4.84	0.7	0.2	na	6.5	na	0.10	4.7	0.019	0.06	0.5	8	0.1	na	53.2	na
LSH	T4	90	na	0.43	24.78	0.8	0.4	na	33.0	na	0.55	5.5	0.029	0.13	0.7	11	0.6	na	124.0	na
LSH	T5	30	na	0.05	10.26	0.8	0.2	na	23.8	na	0.26	4.9	0.028	0.09	0.5	10	0.1	na	84.4	na
LSH	T6	0	na	0.01	2.86	0.6	0.1	na	14.6	na	0.12	4.7	0.023	0.08	0.5	9	<0.1	na	135.2	na
LSH	T6	40	na	0.05	10.76	1.0	0.1	na	48.7	na	0.12	5.3	0.026	0.11	0.6	12	0.2	na	132.3	na
LSH	T6	45	na	0.06	9.96	0.7	0.1	na	39.2	na	0.09	4.3	0.021	0.07	0.4	8	0.1	na	94.0	na
LSH	T6	50	na	0.24	10.39	0.8	0.2	na	64.3	na	0.17	5.1	0.025	0.11	0.7	11	0.3	na	107.6	na

Gold District	Sample Site	Tailings Depth (cm)	Re ICP-MS (µg/kg) 1	S ICP-MS (% dry wt.) 0.02	Sb ICP-MS (mg/kg) 0.02	Sc ICP-MS (mg/kg) 0.1	Se ICP-MS (mg/kg) 0.1	Sn ICP-MS (mg/kg) 0.1	Sr ICP-MS (mg/kg) 0.5	Ta ICP-MS (mg/kg) 0.05	Te ICP-MS (mg/kg) 0.02	Th ICP-MS (mg/kg) 0.1	Ti ICP-MS (% dry wt.) 0.001	Tl ICP-MS (mg/kg) 0.02	U ICP-MS (mg/kg) 0.1	V ICP-MS (mg/kg) 2	W ICP-MS (mg/kg) 0.1	Y ICP-MS (mg/kg) 0.01	Zn ICP-MS (mg/kg) 0.1	Zr ICP-MS (mg/kg) 0.1
LSH	T7	30	na	0.02	11.22	0.9	0.2	na	7.0	na	0.48	5.6	0.032	0.09	0.5	12	0.1	na	45.0	na
LSH	T7	120	na	0.03	5.04	1.1	0.1	na	33.2	na	0.10	6.0	0.033	0.15	0.7	13	0.3	na	112.9	na
LSH	T8	30	na	<0.01	0.70	0.8	0.1	na	41.8	na	<0.02	5.1	0.025	0.09	0.6	10	<0.1	na	62.5	na
LSH	T8	70	na	0.02	2.49	1.3	0.1	na	47.4	na	0.04	6.9	0.039	0.11	0.9	15	0.2	na	112.8	na
LSH	T9	0	na	<0.01	5.71	0.8	0.2	na	28.6	na	0.24	5.5	0.032	0.11	0.6	11	0.1	na	91.9	na
LSH	T9	50	na	0.06	6.61	0.9	0.2	na	29.7	na	0.22	5.9	0.028	0.10	0.7	11	0.3	na	96.1	na
LSH	T9	55	na	0.12	6.53	1.0	0.1	na	48.3	na	0.09	5.8	0.038	0.12	0.6	11	<0.1	na	109.8	na
LSH	T10	10	na	0.18	10.50	0.8	0.2	na	15.8	na	0.24	5.2	0.025	0.11	0.6	10	0.2	na	88.4	na
LSH	T10	40	na	0.07	3.10	0.7	0.1	na	10.2	na	0.10	5.7	0.036	0.09	0.6	11	<0.1	na	82.2	na
LSH	T11	10	na	<0.01	2.47	0.8	0.1	na	12.0	na	0.05	5.7	0.032	0.09	0.6	12	<0.1	na	77.3	na
LSH	T11	60	na	0.02	6.84	0.8	0.1	na	7.2	na	0.17	5.1	0.029	0.08	0.6	12	0.2	na	39.8	na
LSH	T11	120	na	0.39	19.79	0.8	0.3	na	26.8	na	0.37	5.4	0.034	0.13	0.6	11	0.2	na	134.7	na
LSH	T12	5	na	<0.01	4.63	0.6	0.2	na	6.2	na	0.09	4.9	0.025	0.09	0.5	10	0.1	na	52.0	na
LSH	T12	30	na	0.52	39.13	0.8	0.5	na	12.3	na	0.54	5.6	0.025	0.27	0.8	10	0.4	na	312.9	na
LSH	T13	15	na	0.21	96.43	0.2	1.9	na	3.5	na	3.88	2.8	0.008	0.07	0.3	3	0.1	na	17.5	na
LSH	T13	30	na	<0.01	1.99	1.0	0.2	na	9.4	na	0.41	6.1	0.034	0.12	0.5	14	<0.1	na	63.7	na
LSH	T13	50	na	<0.01	1.99	0.9	0.1	na	5.6	na	0.98	4.1	0.030	0.13	0.4	12	<0.1	na	77.4	na
LSH	T13	80	na	0.01	1.47	0.4	0.1	na	3.8	na	0.12	3.1	0.010	0.06	0.3	3	<0.1	na	50.8	na
LSH	T13	100	na	<0.01	1.94	0.4	0.1	na	4.6	na	0.12	3.2	0.013	0.04	0.4	3	0.2	na	73.5	na
LSH	T14	0	na	1.28	73.10	0.3	1.4	na	4.9	na	1.83	4.6	0.009	0.08	0.3	17	0.3	na	17.4	na
LSH	T14	0	na	0.99	13.08	<0.1	0.6	na	2.8	na	0.92	0.5	0.002	0.04	0.1	< 2	<0.1	na	5.7	na
LSH	T15	10	na	0.07	0.83	0.8	0.1	na	13.0	na	0.03	4.9	0.026	0.07	0.7	12	<0.1	na	59.7	na
LSH	T15	20	na	0.18	1.26	0.8	0.1	na	13.2	na	0.04	5.2	0.027	0.07	0.7	12	<0.1	na	62.7	na
LSH	T16	5	na	<0.01	0.30	0.7	0.2	na	8.5	na	0.03	4.1	0.029	0.06	0.5	11	0.3	na	47.7	na
LSH	T17	7.5	na	0.01	7.32	0.8	0.2	na	17.1	na	0.22	5.4	0.027	0.10	0.7	12	<0.1	na	83.1	na
LSH	T17	27.5	na	0.14	5.66	0.9	0.1	na	57.9	na	0.10	5.6	0.017	0.11	0.7	9	0.4	na	110.4	na
LSH	T18	7.5	na	0.02	5.00	1.0	0.3	na	29.8	na	0.14	5.2	0.027	0.12	0.6	12	0.2	na	118.4	na
LSH	T18	27.5	na	0.11	4.72	0.8	0.2	na	11.0	na	0.09	4.8	0.029	0.09	0.6	11	<0.1	na	103.6	na
LSH	T19	5	na	0.22	9.41	0.7	0.2	na	48.9	na	0.17	4.2	0.019	0.09	0.4	6	0.5	na	113.9	na
LSH	T20	5	na	0.08	2.35	0.9	0.1	na	55.4	na	0.04	5.0	0.028	0.11	1.4	12	0.1	na	95.1	na
LSH	T1-04	5	<1	<0.01	1.40	0.8	<0.1	0.3	10.3	<0.05	0.09	4.7	0.033	0.08	0.6	11	0.1	9.13	83.7	6.3
LSH	T1-04	15	<1	0.15	3.59	0.9	<0.1	0.1	51.4	<0.05	0.07	4.7	0.031	0.10	0.6	11	<0.1	9.25	101.2	6.0
LSH	P2-WB	5	<1	0.17	6.55	0.8	0.1	0.2	38.2	<0.05	0.12	4.6	0.029	0.10	0.5	12	0.1	8.91	104.3	6.3
LSH	P1-EB	5	<1	0.57	0.61	0.7	3.1	0.4	22.8	<0.05	<0.02	0.3	0.017	0.05	0.7	9	0.2	6.31	25.5	0.9
LSH	T30	2.5	<1	0.13	18.20	0.7	0.2	0.2	20.9	<0.05	0.22	4.2	0.021	0.08	0.5	8	0.2	8.37	117.7	5.0
LSH	T30	20	<1	0.16	4.72	1.1	<0.1	0.2	48.8	<0.05	0.09	6.3	0.023	0.09	0.8	13	0.1	10.59	121.0	9.8
LSH	T31	5	<1	<0.01	5.00	0.8	0.1	0.2	18.3	<0.05	0.18	4.2	0.024	0.09	0.6	10	0.1	9.24	136.8	4.8
LSH	T31	30	<1	0.24	4.94	1.1	0.1	0.2	47.4	<0.05	0.13	6.3	0.023	0.10	0.8	13	0.1	11.28	134.5	9.1
LSH	T32	10	<1	<0.01	2.40	0.8	0.1	0.1	11.9	<0.05	0.06	4.4	0.023	0.08	0.5	10	0.2	9.33	100.8	4.8
LSH	T32	45	<1	0.13	8.32	1.1	0.1	0.2	65.0	<0.05	0.13	5.4	0.028	0.11	0.8	12	0.3	11.00	113.3	8.7
LSH	MS1	5	1	1.18	0.45	1.3	0.9	0.8	38.8	<0.05	0.04	3.4	0.032	0.12	2.1	27	0.1	8.92	64.1	2.7
LSH	MS2	0	<1	0.62	0.35	1.0	0.6	0.4	39.4	<0.05	<0.02	3.0	0.029	0.07	1.1	25	0.3	7.31	59.7	1.9
LSH	MS2	10	1	0.90	0.33	0.6	0.9	0.6	37.7	<0.05	0.03	0.4	0.015	0.05	1.5	14	<0.1	5.76	27.7	0.7
LSH	MS3	5	<1	0.09	1.85	1.3	0.1	0.2	10.8	<0.05	0.06	7.0	0.021	0.08	1.0	16	0.1	10.15	124.6	10.9
LSH	MS4	5	<1	0.14	1.81	1.6	0.1	0.2	15.7	<0.05	0.04	9.1	0.025	0.10	1.2	19	0.2	13.65	128.9	16.4
LSH	MS5	5	2	1.98	0.37	0.8	1.4	0.5	59.8	<0.05	0.03	0.7	0.018	0.07	7.3	19	0.1	9.99	43.8	1.0
LSH	T33	5	<1	0.03	2.44	0.9	0.1	0.2	8.5	<0.05	0.06	3.6	0.031	0.06	0.5	12	<0.1	7.57	76.3	4.1
LSH	T33	30	<1	0.20	5.89	0.9	0.1	0.1	42.5	<0.05	0.11	4.4	0.031	0.11	0.6	10	<0.1	9.02	107.0	5.9
LSH	T34	5	<1	0.08	3.00	1.0	0.2	0.2	14.8	<0.05	0.09	4.7	0.032	0.10	0.6	12	0.2	11.02	123.2	5.6
LSH	T34	30	<1	0.12	3.85	1.1	0.1	0.1	46.2	<0.05	0.08	4.1	0.026	0.09	0.6	13	0.1	8.94	104.7	7.8
LSH	T35	5	<1	<0.01	0.71	0.8	0.1	0.1	6.7	<0.05	0.02	4.4	0.029	0.07	0.5	12	<0.1	5.91	52.4	5.8
LSH	T35	20	<1	0.02	3.00	0.8	0.2	0.3	10.6	<0.05	0.10	3.9	0.027	0.08	0.5	12	<0.1	8.79	79.4	3.0
LSH	T35	40	<1	0.17	4.35	0.9	<0.1	0.2	41.2	<0.05	0.11	4.5	0.035	0.11	0.6	12	0.2	10.85	114.7	6.3
LSH	T36	5	<1	0.03	1.52	0.8	0.1	0.1	7.3	<0.05	<0.02	4.4	0.030	0.07	0.5	11	0.3	7.09	62.8	5.8
LSH	T36	25	<1	0.06	2.40	0.9	0.1	0.1	7.1	<0.05	0.06	4.6	0.032	0.09	0.6	12	0.1	7.20	83.4	6.0

Gold District	Sample Site	Tailings Depth (cm)	Re ICP-MS (µg/kg) 1	S ICP-MS (% dry wt.) 0.02	Sb ICP-MS (mg/kg) 0.02	Sc ICP-MS (mg/kg) 0.1	Se ICP-MS (mg/kg) 0.1	Sn ICP-MS (mg/kg) 0.1	Sr ICP-MS (mg/kg) 0.5	Ta ICP-MS (mg/kg) 0.05	Te ICP-MS (mg/kg) 0.02	Th ICP-MS (mg/kg) 0.1	Ti ICP-MS (% dry wt.) 0.001	Tl ICP-MS (mg/kg) 0.02	U ICP-MS (mg/kg) 0.1	V ICP-MS (mg/kg) 2	W ICP-MS (mg/kg) 0.1	Y ICP-MS (mg/kg) 0.01	Zn ICP-MS (mg/kg) 0.1	Zr ICP-MS (mg/kg) 0.1
Montague Gold District (MG)																				
MG	T1	2.5	na	0.11	21.60	1.7	1.0	na	43.4	na	2.79	5.5	0.060	0.29	0.6	26	1.0	na	348.0	na
MG	T1	10	na	0.87	19.10	2.0	0.7	na	23.2	na	1.55	4.4	0.075	0.34	0.9	19	0.9	na	208.3	na
MG	T2	1	na	0.29	21.77	1.8	0.8	na	44.5	na	2.57	4.9	0.077	0.28	0.6	24	1.0	na	270.6	na
MG	T2	5	na	0.83	21.89	1.6	0.8	na	20.6	na	1.73	4.5	0.076	0.30	0.6	17	0.9	na	237.3	na
MG	T3	0	na	0.03	7.09	0.9	0.2	na	10.9	na	0.59	4.3	0.042	0.15	0.4	12	0.1	na	62.7	na
MG	T3	25	na	0.66	14.82	1.2	0.6	na	17.9	na	1.07	3.7	0.050	0.20	0.5	12	0.4	na	217.8	na
MG	T4	7.5	na	0.22	2.85	2.0	4.5	na	18.4	na	0.38	2.3	0.023	0.28	1.4	146	1.1	na	192.2	na
MG	T4	20	na	0.13	3.25	1.1	0.2	na	7.3	na	0.33	4.0	0.061	0.21	0.5	15	0.1	na	80.6	na
MG	T5	1	na	0.56	23.23	1.2	0.8	na	22.2	na	1.77	3.1	0.057	0.22	0.4	14	1.1	na	158.3	na
MG	T5	6	na	0.29	6.29	1.2	0.2	na	17.7	na	0.41	3.6	0.053	0.19	0.4	12	0.1	na	93.3	na
MG	T6	0	na	0.51	23.06	1.2	0.8	na	24.2	na	1.86	3.1	0.054	0.23	0.4	14	0.7	na	162.4	na
MG	T6	4	na	0.68	22.18	1.0	0.8	na	28.9	na	1.54	2.5	0.049	0.20	0.4	11	0.4	na	106.4	na
MG	T6	10	na	0.41	8.20	1.1	0.4	na	16.6	na	0.72	3.5	0.053	0.18	0.4	12	0.3	na	129.2	na
MG	T7	5	na	0.45	16.75	1.2	0.6	na	17.9	na	1.30	3.3	0.054	0.22	0.4	13	0.7	na	134.1	na
MG	T7	15	na	0.09	1.80	1.3	0.1	na	21.5	na	0.15	4.0	0.060	0.19	0.4	14	<0.1	na	83.5	na
MG	T8	2.5	na	0.22	102.10	1.0	3.1	na	4.4	na	6.16	3.0	0.042	0.26	0.3	14	0.7	na	41.1	na
MG	T10	5	na	0.14	37.75	1.3	1.2	na	5.8	na	2.57	3.5	0.051	0.29	0.4	14	0.9	na	54.1	na
MG	T10	15	na	0.12	32.05	1.2	1.0	na	6.2	na	2.16	3.3	0.053	0.25	0.4	14	0.3	na	51.9	na
MG	T11	6	na	0.03	12.38	1.2	0.3	na	8.3	na	0.82	3.9	0.070	0.25	0.4	17	0.4	na	81.5	na
MG	T11	15	na	0.03	3.63	1.5	0.1	na	15.1	na	0.20	5.8	0.072	0.23	0.5	15	0.2	na	193.4	na
MG	T11	25	na	0.03	5.35	2.4	0.3	na	20.0	na	0.36	6.6	0.114	0.38	0.7	23	0.3	na	248.1	na
MG	T12	2.5	na	0.03	2.45	1.1	0.1	na	8.4	na	0.33	5.3	0.066	0.23	0.8	17	<0.1	na	77.0	na
MG	T12	25	na	0.02	2.80	1.5	0.2	na	9.1	na	0.21	6.0	0.077	0.28	0.6	15	0.2	na	83.7	na
MG	T13	0	na	0.01	1.52	1.1	0.1	na	10.7	na	0.14	4.4	0.056	0.19	0.4	13	<0.1	na	75.0	na
MG	T13	15	na	0.01	4.11	1.3	0.2	na	9.1	na	0.37	4.3	0.068	0.24	0.5	16	0.4	na	128.8	na
MG	T14	10	na	<0.01	2.86	1.2	0.2	na	9.3	na	0.33	5.0	0.060	0.24	0.5	16	0.2	na	79.7	na
MG	T15	5	na	0.35	18.23	1.4	0.8	na	31.4	na	1.68	4.6	0.061	0.26	0.5	18	1.1	na	228.4	na
MG	T1	0-6	<1	0.18	60.36	1.2	2.3	0.2	4.2	<0.05	4.31	3.8	0.047	0.30	0.4	13	1.6	1.70	38.0	8.1
MG	T2	0-5	2	0.04	15.61	1.3	0.6	0.2	8.0	<0.05	1.37	3.9	0.063	0.28	0.4	14	0.5	2.84	68.9	7.7
MG	T3	0-15	<1	0.17	17.90	1.5	0.9	0.6	33.9	<0.05	2.35	5.2	0.068	0.27	0.6	21	0.9	4.08	207.5	9.7
MG	T4	15-20	<1	0.20	22.73	0.7	0.3	0.1	6.9	<0.05	0.56	3.5	0.026	0.09	0.3	6	2.1	2.51	39.0	4.1
MG	T1	0-10	<1	0.12	36.50	1.4	1.4	0.9	6.6	<0.05	2.60	6.3	0.051	0.30	0.6	18	3.3	2.74	65.6	10.0
MG	T2	0-10	<1	0.17	24.14	0.8	0.8	0.2	2.2	<0.05	1.88	3.5	0.050	0.24	0.4	13	0.3	1.03	33.4	8.6
MG	T3	0-10	<1	0.08	21.46	1.3	0.7	0.3	5.8	<0.05	1.62	4.3	0.055	0.29	0.5	16	0.1	2.15	59.4	8.8
MG	T4	0-10	<1	0.27	16.69	1.1	0.5	0.4	17.6	<0.05	1.27	4.1	0.048	0.22	0.5	16	0.6	2.48	119.2	8.6
MG	T5	0-10	<1	0.41	22.87	1.6	1.0	0.4	29.8	<0.05	1.99	5.5	0.068	0.32	0.7	21	1.8	3.64	240.7	12.5
MG	T6	0-10	<1	0.10	25.40	2.0	1.9	1.3	33.2	<0.05	3.63	5.2	0.053	0.38	1.1	49	0.8	6.14	396.5	6.0
MG	T7	0-10	<1	0.19	12.34	1.3	0.6	0.2	19.8	<0.05	0.96	4.3	0.055	0.26	0.5	16	0.7	2.70	151.2	9.6
MG	T8	0-10	1	0.24	13.11	1.0	0.4	0.2	13.8	<0.05	0.93	4.2	0.053	0.25	0.5	15	0.9	2.25	109.3	9.3
MG	T9	0-10	<1	0.05	38.36	1.2	1.0	0.2	6.7	<0.05	2.27	5.5	0.060	0.32	0.5	19	2.2	2.39	57.0	9.1
MG	T10	0-10	<1	0.10	21.39	1.1	0.6	0.2	5.8	<0.05	1.37	4.5	0.056	0.27	0.5	17	0.4	1.99	51.9	9.5
MG	T11	0-10	<1	0.04	6.57	1.2	0.3	0.2	9.5	<0.05	0.71	4.9	0.061	0.27	0.5	20	0.3	2.70	89.1	7.6
MG	T12	0-5	<1	0.22	23.67	0.9	0.9	0.5	4.4	<0.05	1.61	4.1	0.034	0.19	0.5	13	1.4	1.59	47.4	8.3
MG	T13	0-5	<1	0.02	2.56	1.1	<0.1	8.7	6.6	<0.05	0.13	5.3	0.051	0.22	0.6	14	0.1	2.61	176.1	12.6
MG	T14	0-5	1	0.02	1.72	0.8	<0.1	0.5	7.7	<0.05	0.10	3.7	0.039	0.15	0.4	12	0.2	2.10	55.7	5.2

Gold District	Sample Site	Tailings Depth (cm)	Re ICP-MS (µg/kg) 1	S ICP-MS (% dry wt.) 0.02	Sb ICP-MS (mg/kg) 0.02	Sc ICP-MS (mg/kg) 0.1	Se ICP-MS (mg/kg) 0.1	Sn ICP-MS (mg/kg) 0.1	Sr ICP-MS (mg/kg) 0.5	Ta ICP-MS (mg/kg) 0.05	Te ICP-MS (mg/kg) 0.02	Th ICP-MS (mg/kg) 0.1	Ti ICP-MS (% dry wt.) 0.001	Tl ICP-MS (mg/kg) 0.02	U ICP-MS (mg/kg) 0.1	V ICP-MS (mg/kg) 2	W ICP-MS (mg/kg) 0.1	Y ICP-MS (mg/kg) 0.01	Zn ICP-MS (mg/kg) 0.1	Zr ICP-MS (mg/kg) 0.1
MG	S28	0-5	na	<0.02	2.00	0.2	1.3	na	2.8	na	0.04	1.3	0.010	0.15	0.1	11	0.5	na	35.6	na
Mooseland Gold District (MSL)																				
MSL	T1	4	na	4.22	315.15	0.9	3.9	na	0.5	na	11.03	1.7	0.021	0.22	0.2	< 2	26.1	na	4.5	na
MSL	T1	12	na	0.05	15.14	0.6	0.3	na	6.5	na	0.58	1.4	0.009	0.04	0.1	6	0.2	na	2.8	na
MSL	T1	34	na	<0.01	1.35	0.7	<0.1	na	3.4	na	0.09	1.1	0.016	0.03	0.1	6	0.3	na	3.1	na
MSL	T1	45	na	0.02	4.25	1.1	0.1	na	3.4	na	0.14	2.1	0.021	0.07	0.2	7	0.5	na	7.7	na
MSL	T2	7	na	<0.01	3.77	1.1	0.1	na	5.3	na	0.15	2.2	0.035	0.12	0.2	12	1.5	na	14.7	na
MSL	T2	20	na	<0.01	3.95	2.5	0.1	na	18.0	na	0.14	4.6	0.053	0.21	0.6	20	3.1	na	62.6	na
MSL	T2	30	na	0.28	5.68	2.1	0.2	na	17.2	na	0.23	4.9	0.034	0.28	0.7	19	0.9	na	56.8	na
MSL	T3	3	na	0.05	53.03	0.8	0.4	na	2.0	na	0.23	1.3	0.008	0.18	0.2	11	1.0	na	8.2	na
MSL	T3	15	na	<0.01	14.02	1.5	0.1	na	2.3	na	0.18	3.1	0.035	0.29	0.3	12	2.5	na	10.2	na
MSL	T3	25	na	0.21	7.54	1.1	0.2	na	1.2	na	0.63	1.6	0.027	0.07	0.2	5	0.6	na	9.0	na
MSL	T4	4	na	0.38	2.37	0.8	1.5	na	8.4	na	0.10	0.1	0.006	0.12	0.6	14	0.7	na	40.7	na
MSL	T4	15	na	0.10	2.43	0.8	0.1	na	3.1	na	0.09	1.4	0.007	0.07	0.1	6	0.3	na	30.3	na
MSL	T4	27	na	0.25	4.39	1.2	0.2	na	7.6	na	0.08	2.5	0.031	0.11	0.2	11	1.2	na	35.8	na
MSL	T5	5	na	0.01	4.51	0.8	0.1	na	14.4	na	0.15	2.0	0.007	0.12	0.2	7	0.4	na	35.2	na
MSL	T5	15	na	0.35	7.36	1.5	0.2	na	13.4	na	0.15	2.9	0.017	0.20	0.4	11	0.7	na	41.9	na
MSL	T5	23	na	0.39	4.66	2.9	0.2	na	15.0	na	0.11	5.2	0.044	0.25	0.7	21	2.0	na	56.9	na
MSL	T6	5	na	<0.01	6.57	1.9	0.3	na	19.4	na	0.23	3.0	0.041	0.26	0.4	15	5.5	na	87.0	na
MSL	T6	16	na	0.23	5.96	2.9	0.3	na	13.4	na	0.15	5.8	0.051	0.30	0.8	23	1.7	na	72.2	na
MSL	T7	20	na	<0.01	3.44	1.0	0.1	na	3.7	na	0.08	2.3	0.031	0.12	0.2	12	0.2	na	10.1	na
MSL	T7	80	na	0.21	9.61	1.8	0.1	na	7.1	na	0.16	3.8	0.050	0.20	0.4	16	3.2	na	42.7	na
Mount Uniacke Gold District (UNI)																				
UNI	T1	5	na	0.07	2.30	0.5	1.1	na	8.1	na	0.69	2.3	0.005	0.10	1.5	9	0.1	na	55.7	na
UNI	T1	10	na	0.08	8.61	0.6	2.7	na	9.5	na	2.17	3.7	<0.001	0.08	0.9	7	0.2	na	37.8	na
UNI	T1	20	na	0.08	2.05	0.3	0.3	na	2.7	na	0.34	3.1	0.004	0.05	0.3	4	<0.1	na	23.3	na
UNI	T2	20	na	<0.01	9.49	0.7	0.6	na	3.4	na	2.12	5.3	0.019	0.16	0.5	10	0.2	na	36.5	na
UNI	T2	25	na	0.85	2.36	0.3	1.5	na	0.9	na	0.49	1.6	0.006	0.12	0.1	2	0.3	na	15.9	na
UNI	T2	70	na	0.38	0.61	0.9	0.2	na	4.3	na	0.14	6.4	0.013	0.12	0.6	9	<0.1	na	75.5	na
UNI	T3	15	na	0.26	0.76	0.9	0.6	na	18.4	na	0.06	4.2	0.004	0.06	1.3	9	0.2	na	55.9	na
UNI	T4	30	na	0.14	0.24	1.1	0.1	na	11.1	na	0.04	6.1	0.008	0.07	0.8	13	<0.1	na	74.4	na
UNI	T5	25	na	0.57	0.96	0.5	0.2	na	9.7	na	0.16	4.1	0.007	0.09	0.4	6	<0.1	na	44.6	na
UNI	T6	20	na	0.01	5.10	0.5	0.4	na	4.7	na	1.07	3.6	0.017	0.11	0.3	6	0.1	na	37.7	na
UNI	T6	40	na	0.15	0.81	1.4	0.3	na	19.7	na	0.23	5.8	0.014	0.12	0.8	16	<0.1	na	84.7	na
UNI	T7	10	na	<0.01	5.24	1.1	0.6	na	2.4	na	1.86	4.7	0.024	0.22	0.6	12	<0.1	na	144.5	na
UNI	T7	25	na	<0.01	1.85	0.6	0.1	na	1.4	na	0.18	1.9	0.012	0.08	0.2	6	<0.1	na	40.0	na
UNI	T8	2.5	na	<0.01	8.61	1.1	2.2	na	2.5	na	2.79	4.4	0.018	0.32	0.4	10	<0.1	na	80.6	na
UNI	T8	10	na	1.09	6.38	0.8	1.0	na	2.4	na	3.55	5.5	0.009	0.33	0.5	8	<0.1	na	674.5	na
UNI	T8	40	na	1.63	12.39	1.2	1.6	na	35.9	na	4.73	5.1	0.036	0.49	0.7	13	0.5	na	524.9	na
UNI	T8	80	na	0.22	1.15	0.8	0.2	na	3.8	na	0.36	3.8	0.018	0.16	0.5	8	<0.1	na	127.4	na
UNI	T9	15	na	0.24	17.28	1.2	0.3	na	5.9	na	0.46	3.9	0.033	0.23	0.5	12	<0.1	na	122.7	na
UNI	T10	10	na	0.35	23.06	0.8	0.3	na	6.7	na	0.63	4.0	0.024	0.17	0.5	12	<0.1	na	103.0	na
UNI	T11	20	na	<0.01	0.66	1.2	0.1	na	2.9	na	0.34	5.3	0.035	0.08	0.6	14	<0.1	na	90.2	na
UNI	T11	40	na	0.11	1.44	1.6	0.2	na	3.4	na	0.20	6.1	0.022	0.17	0.8	17	<0.1	na	202.6	na
UNI	T12	10	na	0.01	18.29	1.0	0.4	na	7.6	na	0.47	3.5	0.017	0.27	0.6	15	<0.1	na	185.5	na
UNI	T13	5	na	0.01	1.72	0.9	0.1	na	2.8	na	0.27	4.2	0.020	0.06	0.4	12	<0.1	na	89.5	na
UNI	T14	15	na	0.16	16.15	0.9	1.1	na	13.8	na	0.27	2.3	0.005	0.33	0.7	14	<0.1	na	152.9	na
UNI	T14	40	na	0.20	3.07	1.1	0.3	na	47.6	na	0.54	5.5	0.030	0.15	0.6	13	<0.1	na	247.8	na
UNI	T15	2	na	0.06	2.76	0.4	0.4	na	5.0	na	0.57	2.2	0.013	0.19	0.3	8	<0.1	na	33.8	na
UNI	T15	10	na	0.02	0.54	0.7	0.2	na	0.8	na	0.10	3.6	0.045	0.21	0.2	9	<0.1	na	36.5	na
UNI	T15	40	na	0.01	3.23	0.3	0.3	na	1.9	na	0.63	2.7	0.017	0.07	0.3	4	<0.1	na	22.5	na
UNI	T15	70	na	0.14	31.95	0.4	1.5	na	1.1	na	4.68	3.3	0.019	0.45	0.3	7	0.3	na	21.6	na
UNI	T15	90	na	0.01	0.47	0.9	0.3	na	2.3	na	0.22	5.3	0.009	0.15	0.9	11	<0.1	na	55.1	na
UNI	T15	100	na	0.31	0.31	1.5	6.6	na	5.7	na	0.05	2.1	0.026	0.51	4.3	29	<0.1	na	100.9	na
UNI	T16	25	na	<0.01	0.13	1.2	0.2	na	7.0	na	0.02	5.3	0.035	0.20	0.6	14	<0.1	na	63.6	na
UNI	T17	0	na	0.16	12.72	1.0	1.1	na	35.8	na	0.40	3.3	0.016	0.15	0.7	15	<0.1	na	232.3	na
UNI	T18	5	na	0.01	4.55	1.0	0.4	na	16.7	na	0.41	4.6	0.018	0.41	0.6	10	<0.1	na	119.9	na
UNI	T18	15	na	<0.01	1.85	1.2	0.2	na	18.0	na	0.31	4.2	0.025	0.17	0.4	10	<0.1	na	104.4	na
UNI	T18	30	na	0.28	1.35	1.5	0.2	na	45.9	na	0.26	9.3	0.052	0.26	1.1	21	<0.1	na	110.3	na

Gold District	Sample Site	Tailings Depth (cm)	Re ICP-MS (µg/kg) 1	S ICP-MS (% dry wt.) 0.02	Sb ICP-MS (mg/kg) 0.02	Sc ICP-MS (mg/kg) 0.1	Se ICP-MS (mg/kg) 0.1	Sn ICP-MS (mg/kg) 0.1	Sr ICP-MS (mg/kg) 0.5	Ta ICP-MS (mg/kg) 0.05	Te ICP-MS (mg/kg) 0.02	Th ICP-MS (mg/kg) 0.1	Ti ICP-MS (% dry wt.) 0.001	Tl ICP-MS (mg/kg) 0.02	U ICP-MS (mg/kg) 0.1	V ICP-MS (mg/kg) 2	W ICP-MS (mg/kg) 0.1	Y ICP-MS (mg/kg) 0.01	Zn ICP-MS (mg/kg) 0.1	Zr ICP-MS (mg/kg) 0.1
UNI	T19	5	na	0.16	10.64	0.4	2.5	na	4.7	na	4.13	3.6	<0.001	0.28	0.4	12	0.1	na	89.1	na
UNI	T19	20	na	0.24	1.59	0.7	0.3	na	3.6	na	0.44	3.3	0.017	0.10	0.3	6	<0.1	na	43.3	na
UNI	T20	20	na	0.03	2.19	0.8	0.5	na	2.1	na	1.02	4.7	0.011	0.12	0.4	9	<0.1	na	76.7	na
North Brookfield Gold District (NB)																				
NB	T1	5	na	0.06	16.06	1.0	0.3	na	12.2	na	0.64	3.2	0.008	0.27	0.3	12	2.1	na	32.9	na
NB	T1	32.5	na	0.14	7.92	1.0	0.2	na	30.0	na	0.43	3.5	0.007	0.37	0.4	9	0.3	na	20.7	na
NB	T1	37.5	na	0.19	17.41	0.6	0.5	na	11.3	na	0.96	2.7	0.004	0.38	0.4	5	1.3	na	18.1	na
NB	T2	0	na	0.03	7.51	1.3	0.4	na	13.2	na	0.86	5.0	0.009	0.13	0.4	9	3.0	na	54.3	na
NB	T3	5	na	0.01	5.85	1.7	0.1	na	32.5	na	0.11	4.5	0.011	0.17	0.5	11	2.5	na	99.1	na
NB	T3	25	na	0.01	2.28	1.7	<0.1	na	44.9	na	0.09	6.4	0.004	0.06	0.6	9	0.3	na	66.3	na
NB	T4	6	na	<0.01	1.67	1.2	<0.1	na	18.8	na	0.05	5.0	0.005	0.06	0.5	9	0.4	na	67.5	na
NB	T4	12	na	0.04	1.72	1.2	0.1	na	55.9	na	0.07	4.2	0.004	0.07	0.6	8	0.7	na	123.5	na
NB	T4	20	na	<0.01	2.13	1.6	<0.1	na	25.6	na	0.10	6.9	0.005	0.05	0.5	11	0.8	na	124.8	na
NB	T5	5	na	0.02	0.36	1.7	<0.1	na	43.7	na	<0.02	6.0	0.004	0.05	0.5	9	0.5	na	66.0	na
NB	T5	15	na	<0.01	0.84	1.4	0.1	na	61.9	na	0.04	6.0	0.004	0.05	0.5	10	0.4	na	51.1	na
NB	T6	2	na	0.01	1.20	1.5	<0.1	na	40.4	na	0.06	7.0	0.005	0.08	0.5	9	0.5	na	59.6	na
NB	T6	10	na	0.02	0.84	1.4	<0.1	na	102.6	na	0.04	5.5	0.004	0.06	0.7	8	0.3	na	49.0	na
NB	T7	7	na	0.01	0.90	1.7	<0.1	na	48.4	na	0.03	6.8	0.005	0.07	0.5	9	0.9	na	41.4	na
NB	T7	15	na	0.26	1.84	2.3	<0.1	na	70.2	na	0.07	6.3	0.006	0.10	0.9	11	0.5	na	62.2	na
NB	T7	19	na	0.04	1.10	1.5	<0.1	na	24.7	na	0.03	5.0	0.004	0.05	0.6	12	0.3	na	45.1	na
NB	T8	2.5	na	0.17	1.61	2.2	<0.1	na	49.2	na	0.09	6.2	0.006	0.10	1.0	14	0.5	na	79.9	na
NB	T8	10	na	0.01	1.05	1.7	<0.1	na	42.3	na	0.02	6.4	0.008	0.06	0.6	10	0.3	na	47.4	na
NB	T10	5	na	0.02	0.78	1.4	0.1	na	18.4	na	0.03	5.7	0.005	0.06	0.5	10	0.3	na	47.9	na
NB	T10	50	na	0.01	1.20	1.6	<0.1	na	31.0	na	0.03	6.4	0.007	0.08	0.5	9	0.2	na	43.9	na
NB	T11	5	na	0.01	0.41	1.3	<0.1	na	25.3	na	<0.02	4.5	0.004	0.03	0.4	9	0.1	na	28.6	na
NB	T11	20	na	<0.01	0.98	1.8	0.1	na	31.4	na	0.05	7.6	0.004	0.05	0.6	12	0.5	na	37.4	na
NB	T12	6	na	0.01	0.69	1.6	<0.1	na	44.7	na	0.02	5.9	0.006	0.05	0.4	9	0.3	na	39.8	na
NB	T12	25	na	0.09	1.05	2.1	<0.1	na	56.9	na	0.04	6.2	0.008	0.09	0.6	12	0.3	na	44.0	na
NB	T12	50	na	<0.01	1.17	1.4	<0.1	na	25.9	na	0.05	5.5	0.003	0.06	0.5	9	0.3	na	48.7	na
NB	T13	5	na	0.01	0.66	1.7	<0.1	na	42.0	na	0.02	5.7	0.005	0.05	0.6	10	0.4	na	45.3	na
NB	T13	25	na	<0.01	0.91	1.8	<0.1	na	44.3	na	0.02	9.2	0.006	0.06	1.1	9	0.8	na	36.2	na
NB	T14	5	na	0.01	0.57	1.6	<0.1	na	30.7	na	0.02	5.4	0.006	0.05	0.5	10	0.1	na	40.1	na
NB	T14	20	na	0.02	0.96	1.7	<0.1	na	39.0	na	0.03	6.8	0.007	0.06	0.7	10	0.4	na	42.8	na
NB	T15	5	na	0.01	0.54	1.5	<0.1	na	31.4	na	<0.02	5.6	0.006	0.04	0.5	10	0.1	na	35.3	na
NB	T15	20	na	<0.01	0.61	1.5	<0.1	na	31.5	na	0.02	5.6	0.005	0.05	0.5	10	0.2	na	36.4	na
NB	T16	0	na	0.11	1.27	2.0	0.1	na	29.8	na	0.04	5.4	<0.001	0.04	0.6	19	0.2	na	42.7	na
NB	T17	10	na	<0.01	2.38	1.9	0.2	na	15.7	na	0.07	6.9	<0.001	0.07	0.9	10	0.9	na	60.6	na
NB	T18	10	na	<0.01	0.61	1.4	<0.1	na	41.9	na	0.02	6.4	<0.001	0.06	0.7	7	0.1	na	38.0	na
NB	T19	35	na	<0.01	2.93	1.3	0.2	na	12.3	na	0.11	5.3	0.010	0.05	0.5	9	0.3	na	38.5	na
NB	T19	55	na	<0.01	1.61	1.3	0.2	na	11.5	na	0.09	5.5	0.009	0.05	0.6	8	0.9	na	39.6	na
NB	T19	67	na	<0.01	4.78	2.2	0.6	na	6.4	na	0.22	4.5	0.009	0.18	1.2	20	5.5	na	57.0	na
NB	T20	25	na	0.01	0.63	1.5	0.1	na	24.9	na	0.03	5.3	0.013	0.05	0.5	9	0.1	na	40.3	na
NB	T20	50	na	0.05	0.84	1.7	0.1	na	41.8	na	<0.02	4.9	0.013	0.07	0.5	10	0.1	na	38.9	na
NB	T20	75	na	0.03	1.18	1.4	0.2	na	42.6	na	0.05	6.0	0.007	0.07	0.6	10	0.5	na	48.2	na
NB	T21	1	na	0.03	2.60	0.7	0.1	na	12.8	na	0.02	3.3	0.003	0.03	0.4	5	0.2	na	13.8	na
NB	T21	15	na	0.04	3.53	0.3	0.1	na	12.0	na	0.03	2.2	0.011	0.02	0.2	3	<0.1	na	6.9	na
NB	T21	40	na	0.05	6.64	0.4	0.2	na	47.6	na	0.04	2.2	0.008	0.03	0.6	3	0.6	na	10.3	na
NB	T22	25	na	0.05	3.00	1.8	0.1	na	14.4	na	0.09	6.4	0.003	0.08	0.8	9	0.4	na	61.3	na
NB	T22	52	na	0.10	2.10	1.9	0.1	na	14.7	na	0.07	7.3	<0.001	0.08	0.9	11	0.4	na	41.8	na
NB	T22	75	na	<0.01	0.73	3.5	0.1	na	18.7	na	0.03	9.6	0.044	0.10	1.9	27	<0.1	na	90.7	na
NB	T1	0-10	1	0.01	0.45	1.8	<0.1	0.2	36.1	<0.05	<0.02	5.6	0.005	0.06	0.6	10	0.1	5.03	42.9	8.2
NB	T3	0-10	1	0.03	0.81	1.6	<0.1	0.2	35.6	<0.05	0.05	5.6	0.006	0.07	0.5	9	0.2	4.45	40.4	8.5
NB	T6	0-15	1	0.02	0.68	1.5	<0.1	0.2	18.8	<0.05	0.03	5.7	0.004	0.08	0.6	11	0.1	4.53	38.1	8.6
NB	T6	15-35	<1	<0.01	1.25	1.5	<0.1	0.1	11.9	<0.05	0.07	6.4	0.003	0.08	0.7	11	0.1	6.66	29.8	9.4
NB	T6	35-65	<1	1.42	5.37	1.4	<0.1	0.1	30.5	<0.05	0.26	3.3	0.004	0.29	0.7	10	<0.1	4.16	57.7	10.7
NB	T7	0-5	<1	0.01	0.57	1.5	<0.1	0.2	31.5	<0.05	0.02	6.2	0.005	0.05	0.7	9	0.2	4.48	39.8	8.4

Gold District	Sample Site	Tailings Depth (cm)	Re ICP-MS (µg/kg) 1	S ICP-MS (% dry wt.) 0.02	Sb ICP-MS (mg/kg) 0.02	Sc ICP-MS (mg/kg) 0.1	Se ICP-MS (mg/kg) 0.1	Sn ICP-MS (mg/kg) 0.1	Sr ICP-MS (mg/kg) 0.5	Ta ICP-MS (mg/kg) 0.05	Te ICP-MS (mg/kg) 0.02	Th ICP-MS (mg/kg) 0.1	Ti ICP-MS (% dry wt.) 0.001	Tl ICP-MS (mg/kg) 0.02	U ICP-MS (mg/kg) 0.1	V ICP-MS (mg/kg) 2	W ICP-MS (mg/kg) 0.1	Y ICP-MS (mg/kg) 0.01	Zn ICP-MS (mg/kg) 0.1	Zr ICP-MS (mg/kg) 0.1
NB	T8	0-10	1	0.11	0.81	1.7	<0.1	0.2	40.4	<0.05	0.02	5.1	0.004	0.06	0.7	10	0.4	4.84	52.2	11.6
NB	T10	0-8	<1	0.01	2.90	1.6	<0.1	0.4	21.0	<0.05	0.09	4.8	0.007	0.10	0.6	9	2.1	4.53	97.9	5.2
NB	T11	0-10	1	0.04	6.76	1.4	<0.1	0.6	15.3	<0.05	0.16	5.9	0.012	0.22	0.6	12	4.7	3.65	66.3	6.0
NB	T11	10-20	<1	0.04	3.25	1.4	0.3	0.1	10.3	<0.05	0.53	6.1	0.004	0.09	0.5	8	0.4	4.66	36.6	9.7
Salmon River (Dufferin) Gold District (SR)																				
SR	T1	25	na	0.04	13.69	1.3	0.4	na	22.1	na	0.20	3.3	0.008	0.02	0.3	4	0.3	na	61.3	na
SR	T2	20	na	<0.01	3.04	0.8	0.1	na	16.8	na	0.03	3.0	0.002	<0.02	0.2	< 2	<0.1	na	58.9	na
SR	T2	35	na	<0.01	3.30	0.7	0.1	na	14.5	na	0.03	3.1	0.001	<0.02	0.2	< 2	0.2	na	39.4	na
SR	T2	60	na	0.13	20.84	1.0	0.3	na	22.5	na	0.07	6.5	0.004	0.05	0.9	2	0.4	na	121.5	na
SR	T3	5	na	0.06	3.29	0.8	0.6	na	70.7	na	0.03	1.1	0.001	<0.02	0.1	< 2	0.4	na	74.8	na
SR	T3	15	na	0.07	4.08	1.0	0.1	na	118.4	na	0.03	5.1	0.002	<0.02	0.4	< 2	0.2	na	50.4	na
SR	T4	15	na	0.01	1.37	0.7	<0.1	na	36.7	na	<0.02	2.9	0.001	<0.02	0.2	< 2	0.1	na	42.7	na
SR	T5	40	na	0.24	6.88	0.9	0.1	na	38.9	na	0.04	2.3	0.001	<0.02	0.2	< 2	<0.1	na	59.4	na
SR	T6	5	na	0.03	0.96	0.3	0.3	na	21.4	na	0.02	1.9	0.002	0.05	0.2	< 2	0.2	na	88.3	na
SR	T7	30	na	0.35	6.56	0.4	0.2	na	63.2	na	0.14	1.3	0.001	0.03	0.1	< 2	<0.1	na	29.2	na
SR	T8	5	na	0.95	252.76	0.9	3.9	na	4.1	na	1.70	5.5	0.004	0.03	0.7	2	8.9	na	92.1	na
SR	T8	20	na	0.02	11.98	1.1	0.2	na	119.2	na	0.13	3.9	0.001	<0.02	0.3	< 2	0.4	na	53.4	na
SR	T8	80	na	0.15	21.53	0.7	0.7	na	104.3	na	0.20	1.9	0.003	0.03	0.2	2	0.6	na	53.2	na
SR	T9	30	na	0.15	10.58	0.7	0.4	na	25.9	na	0.11	2.5	0.003	0.03	0.2	2	0.5	na	35.7	na
SR	T10	10	na	0.26	12.21	0.9	0.2	na	127.0	na	0.09	3.1	0.001	<0.02	0.3	< 2	0.2	na	49.8	na
SR	T11	5	na	0.07	4.94	0.5	0.8	na	6.4	na	0.04	2.3	0.010	0.06	0.4	7	<0.1	na	41.4	na
SR	T12	5	na	0.27	11.94	1.2	2.0	na	15.9	na	0.12	2.5	0.011	0.12	0.6	12	0.2	na	75.2	na
SR	T13	15	na	0.10	14.13	1.0	1.0	na	24.3	na	0.15	3.5	0.014	0.05	0.5	13	0.2	na	65.5	na
SR	T14	10	na	0.05	20.00	0.8	0.3	na	83.5	na	0.17	2.7	0.001	<0.02	0.2	< 2	0.2	na	33.9	na
SR	T14	47.5	na	0.06	25.00	0.7	0.2	na	180.3	na	0.11	2.8	0.002	0.02	0.2	2	0.1	na	45.5	na
SR	T14	60	na	0.13	12.51	0.7	0.2	na	90.8	na	0.08	3.1	0.003	<0.02	0.2	3	0.2	na	33.4	na
SR	T15	5	na	0.19	10.26	0.7	1.0	na	12.8	na	0.14	2.6	0.013	0.17	0.4	8	<0.1	na	30.4	na
SR	T16	10	na	0.01	2.10	1.0	0.1	na	23.7	na	0.03	4.3	<0.001	<0.02	0.3	3	0.2	na	41.3	na
SR	T17	10	na	0.28	26.44	1.0	0.7	na	38.8	na	0.21	3.8	0.005	0.03	0.3	2	0.3	na	65.5	na
Upper Seal Harbour Gold District (USH)																				
USH	T1	5	na	<0.01	8.25	2.7	0.3	na	15.7	na	0.22	8.7	0.115	0.43	1.0	31	2.7	na	46.8	na
USH	T1	15	na	0.21	13.04	2.1	1.2	na	12.5	na	0.36	4.3	0.097	0.41	0.3	26	0.6	na	53.3	na
USH	T2	5	na	1.08	37.52	1.0	1.3	na	20.3	na	1.67	2.2	0.028	0.44	<0.1	12	3.8	na	303.1	na
USH	T2	15	na	1.84	38.61	1.4	2.4	na	4.1	na	2.18	4.6	0.006	0.27	0.5	19	4.3	na	118.2	na
USH	T3	5	na	0.14	9.05	1.9	0.4	na	12.8	na	0.26	5.3	0.075	0.23	0.5	23	1.2	na	34.0	na
USH	T4	5	na	0.06	4.63	2.7	0.4	na	14.7	na	0.20	5.2	0.110	0.41	0.6	29	1.7	na	62.4	na
USH	T4	20	na	0.10	1.04	1.4	0.1	na	7.6	na	0.03	3.6	0.065	0.19	0.3	16	0.4	na	52.4	na
USH	T5	15	na	<0.01	8.09	1.1	0.2	na	1.9	na	0.22	2.9	0.044	0.16	0.2	10	1.2	na	13.7	na
USH	T5	20	na	<0.01	4.02	1.7	0.1	na	3.1	na	0.17	3.5	0.068	0.19	0.3	16	1.2	na	23.0	na
USH	T6	5	na	0.23	5.83	2.4	0.3	na	15.9	na	0.16	5.9	0.108	0.34	0.6	28	2.8	na	88.7	na
USH	T7	5	na	<0.01	2.63	1.9	0.3	na	8.2	na	0.15	4.2	0.091	0.22	0.4	19	1.8	na	29.6	na
USH	T8	10	na	0.07	5.21	1.9	0.2	na	7.2	na	0.23	4.6	0.081	0.23	0.5	21	1.7	na	32.4	na
USH	T8	35	na	0.28	3.20	1.1	0.1	na	7.0	na	0.13	2.4	0.039	0.15	0.3	13	0.9	na	54.7	na
USH	T9	20	na	0.05	6.28	1.8	0.3	na	12.4	na	0.27	4.9	0.084	0.23	0.5	18	1.0	na	31.3	na
USH	T10	5	na	0.03	0.95	1.6	0.1	na	7.3	na	0.03	4.0	0.080	0.19	0.4	18	0.2	na	39.8	na
USH	T11	5	na	0.06	23.00	1.9	0.3	na	3.5	na	0.51	4.8	0.085	0.25	0.4	19	2.9	na	26.8	na
USH	T12	5	na	0.09	11.15	1.6	0.4	na	17.5	na	0.59	3.8	0.055	0.22	0.4	16	2.8	na	57.8	na
USH	T13	5	na	0.63	8.58	1.3	0.3	na	10.2	na	0.35	2.8	0.060	0.21	0.3	15	3.8	na	106.6	na
USH	P3-SHR	5	<1	0.19	0.07	0.1	3.0	0.2	2.4	<0.05	<0.02	<0.1	0.003	0.02	1.0	4	<0.1	4.58	5.2	0.1

Gold District	Sample Site	Tailings Depth (cm)	Re ICP-MS (µg/kg) 1	S ICP-MS (% dry wt.) 0.02	Sb ICP-MS (mg/kg) 0.02	Sc ICP-MS (mg/kg) 0.1	Se ICP-MS (mg/kg) 0.1	Sn ICP-MS (mg/kg) 0.1	Sr ICP-MS (mg/kg) 0.5	Ta ICP-MS (mg/kg) 0.05	Te ICP-MS (mg/kg) 0.02	Th ICP-MS (mg/kg) 0.1	Ti ICP-MS (% dry wt.) 0.001	Tl ICP-MS (mg/kg) 0.02	U ICP-MS (mg/kg) 0.1	V ICP-MS (mg/kg) 2	W ICP-MS (mg/kg) 0.1	Y ICP-MS (mg/kg) 0.01	Zn ICP-MS (mg/kg) 0.1	Zr ICP-MS (mg/kg) 0.1
USH	T2-04	10	<1	0.04	1.30	3.8	0.5	0.9	16.8	<0.05	0.08	5.9	0.180	0.43	0.7	40	2.0	9.32	73.0	8.3
USH	P4-GB	5	<1	0.87	13.86	1.7	0.3	0.8	14.5	<0.05	0.38	4.6	0.080	0.27	0.4	18	0.2	5.62	75.1	6.2
USH	T3-04	14	<1	0.01	16.70	2.0	0.1	1.9	22.8	<0.05	0.17	5.0	0.063	0.59	0.7	25	1.7	33.09	56.0	3.3
USH	T3-04	25	<1	0.11	11.09	2.1	0.3	0.8	15.0	<0.05	0.28	5.3	0.100	0.27	0.5	21	4.5	9.50	75.5	6.6
USH	T39	5	<1	0.02	1.70	2.5	0.1	0.5	12.9	<0.05	0.13	4.9	0.125	0.25	0.6	25	1.6	6.85	50.9	10.0
USH	T40	0	<1	<0.01	1.22	2.1	0.1	0.4	11.7	<0.05	0.06	5.3	0.103	0.25	0.5	20	1.0	7.18	36.1	9.0
USH	T40	15	<1	0.18	2.11	2.2	0.1	0.4	13.1	<0.05	0.05	5.7	0.108	0.29	0.6	22	0.2	8.90	97.2	8.4
USH	T41	0	<1	<0.01	1.91	2.4	0.2	0.6	11.2	<0.05	0.08	5.2	0.116	0.27	0.6	24	1.7	8.06	42.9	8.3
USH	T41	20	<1	0.31	2.97	3.9	<0.1	0.7	15.6	<0.05	0.12	6.6	0.187	0.52	0.8	39	1.1	11.02	126.8	12.6
Whiteburn Gold District (WB)																				
WB	T1	90	na	<0.01	0.17	1.8	0.2	na	6.0	na	<0.02	5.4	0.021	0.06	1.3	15	<0.1	na	63.6	na
WB	T2	100	na	<0.01	0.38	2.7	0.4	na	11.5	na	<0.02	8.1	0.034	0.08	2.2	22	<0.1	na	73.8	na
WB	T3	70	na	0.02	0.36	2.4	0.5	na	17.0	na	0.02	7.8	0.028	0.08	2.3	19	<0.1	na	112.4	na
WB	T4	0	na	0.01	0.05	0.4	<0.1	na	4.8	na	<0.02	2.8	0.015	0.02	0.2	5	0.4	na	28.9	na
WB	T5	0	na	0.06	0.44	0.7	0.1	na	5.8	na	0.10	3.7	0.014	0.04	0.3	8	0.9	na	57.9	na
WB	T6	7	na	<0.01	11.69	0.8	2.3	na	21.6	na	2.57	3.8	0.056	0.13	0.4	9	22.6	na	50.2	na
WB	T6	50	na	0.01	0.66	0.7	0.1	na	7.1	na	0.08	3.6	0.013	0.04	0.3	7	2.5	na	43.2	na
WB	T6	110	na	0.02	7.24	0.5	1.3	na	22.1	na	1.12	2.4	0.018	0.09	0.2	5	226.6	na	34.7	na
WB	T7	10	na	8.49	97.73	0.4	7.5	na	26.9	na	20.11	2.4	0.008	0.48	0.5	2	45.2	na	126.2	na
WB	T8	5	na	<0.01	0.63	1.0	0.1	na	8.1	na	0.06	3.0	0.018	0.02	0.2	7	0.8	na	55.3	na
WB	T8	10	na	<0.01	0.27	1.8	0.3	na	17.2	na	<0.02	4.6	0.025	0.08	0.7	26	0.1	na	67.1	na
WB	T9	20	na	0.01	0.35	1.0	<0.1	na	6.6	na	0.06	3.6	0.026	0.05	0.3	11	11.7	na	54.0	na
WB	T9	45	na	0.03	0.27	1.5	<0.1	na	13.7	na	0.05	6.8	0.013	0.07	0.6	16	17.2	na	88.3	na
WB	T10	65	na	0.01	0.44	3.1	0.4	na	11.5	na	0.03	9.5	0.043	0.07	2.3	25	<0.1	na	119.9	na
WB	T11	10	na	0.02	1.76	1.0	0.3	na	12.9	na	0.35	4.6	0.007	0.16	0.4	10	39.1	na	64.5	na
WB	T12	10	na	0.02	0.39	0.9	0.2	na	17.5	na	0.11	4.9	0.002	0.03	0.5	10	0.8	na	57.7	na
WB	T1	5-10	<1	0.04	14.51	<0.1	0.6	0.1	9.7	0.08	2.28	3.2	0.009	0.09	0.3	<2	19.2	3.58	42.6	4.1
Statistics		**Min.**	<1	<0.01	0.05	<0.1	<0.1	0.1	0.5	<0.05	<0.02	0.1	<0.001	<0.02	<0.1	<2	<0.1	0.46	1.9	0.1
		Max.	2	16.25	1841.98	5.5	22.5	8.7	1448.1	0.08	34.81	9.6	0.187	1.05	7.3	146	226.6	33.09	1005.6	49.9
		Mean	1	0.38	24.37	1.4	0.8	0.4	36.5	0.08	0.94	4.2	0.032	0.16	0.5	14	2.8	5.74	97.2	7.9
		Median	1	0.09	3.23	1.1	0.2	0.2	14.4	0.08	0.14	4.1	0.021	0.10	0.5	11	0.4	4.53	66.3	6.4
		n	20	404	487	484	428	86	487	1	469	486	470	473	484	463	367	87	487	87
		Std Dev	0	1.37	128.29	1.1	2.1	1.0	106.6	0.00	3.51	1.6	0.034	0.13	0.5	12	13.9	4.33	104.2	6.8
		95th pctl	2	1.11	38.97	4.1	3.4	1.2	91.5	0.08	2.71	6.9	0.109	0.38	1.0	41	6.0	11.01	272.6	12.6
		90th pctl	2	0.57	22.92	3.0	1.4	0.8	56.3	0.08	1.68	6.2	0.090	0.32	0.8	33	3.0	10.05	202.7	10.8
		75th pctl	1	0.24	8.61	1.7	0.5	0.4	31.4	0.08	0.41	5.3	0.042	0.23	0.6	16	1.1	8.58	109.4	9.1
		50th pctl	1	0.09	3.23	1.1	0.2	0.2	14.4	0.08	0.14	4.1	0.021	0.10	0.5	11	0.4	4.53	66.3	6.4
		25th pctl	1	0.03	1.27	0.8	0.1	0.1	6.9	0.08	0.06	3.1	0.006	0.07	0.3	7	0.2	2.70	40.6	4.9

Notes: na = not analyzed; DL = detection limit

APPENDIX B

Water sample site descriptions and geochemical data

Gold District	Sample Site	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Field pH	Field Temp (°C)	Field Conductivity (µS/cm)	DOC SHIMADZU mg/L DL = 1.0 <0.45 µm	Alkalinity (as $CaCO_3$) mg/L 1 <0.45 µm	Br Dionex mg/L 0.02 <0.45 µm	Cl Dionex mg/L 0.01 <0.45 µm	F Dionex mg/L 0.01 <0.45 µm	NO_3 Dionex mg/L 0.02 <0.45 µm
Cochrane Hill Gold District (CH)														
CH	W1	McKeen Brook, downstream of Hwy 137	0576749	5012365	4-Nov-03	6.01	6.1	66	4.3	< 1	0.03	13.47	0.02	< 0.02
CH	W2	McKeen Brook, downstream of Hwy 137; high water level	0576772	5012083	4-Nov-03	5.33	5.6	74	5.7	2	0.05	12.95	0.02	0.03
CH	W3	McKeen Brook near site T14; water is clear and cold	0577012	5011273	4-Nov-03	5.41	6.7	96	7.8	3	0.05	14.33	0.02	0.06
CH	W4	Small brook just downstream of possible tails area	0577034	5011162	4-Nov-03	5.60	6.5	44	3.6	2	< 0.02	9.28	0.02	< 0.02
CH	W5	Brook running past toe of old tails, most flow comes from south, but also inflow downhill from old & new tails	0577036	5011250	4-Nov-03	5.47	5.8	123	9.4	4	0.06	16.78	0.02	0.07
CH	W6	Lower end of artificial drainage channel through old tails, no reddish/brown material visible in water	0577114	5011250	4-Nov-03	5.35	5.5	48	5.8	< 1	0.06	7.67	0.01	< 0.02
CH	W6-D	Duplicate of site W6	0577114	5011250	4-Nov-03	5.35	5.5	48	6.0	< 1	0.03	7.79	0.01	< 0.02
CH	W7	Small pond just uphill of cyanidation tails impoundment, full of cattails, receives drainage from forest	0577305	5011234	5-Nov-03	6.06	4.9	64	15.4	< 1	0.05	9.03	0.02	< 0.02
CH	W8	Standing water on cyanide tails, slightly turbid, easy to filter	0577191	5011198	5-Nov-03	3.50	5.4	408	1.5	< 1	0.13	5.58	0.08	0.39
CH	W9	Drainage ditch through old stamp mill tails	0577143	5011247	5-Nov-03	4.88	5.8	51	5.7	2	0.04	8.33	0.01	< 0.02
CH	W10	Pore water in old tails, very murky, difficult to filter	0577138	5011257	5-Nov-03	5.70	6.1	131	5.0	11	0.06	7.87	0.03	0.02
CH	W11	Fe-stained drainage near old stamp mill, runs E > W into old tails area	0577129	5011171	5-Nov-03	5.98	8.9	654	5.8	70	0.54	3.71	0.05	0.08
CH	W12	Pore water in new cyanidation tails, downhill from sodium cyanide drums, relatively clear, good stratigraphy in hole	0577203	5011173	5-Nov-03	5.43	6.5	680	< 1.0	11	< 0.02	3.08	0.07	0.45
East Rawdon Gold District (RAW)														
RAW	W1	In marsh along Gulf Brook, upstream of tailings	0441107	4988244	9-Jul-03	6.25	27.5	61	9.6	27	0.11	0.24	0.03	< 0.02
RAW	W2	Standing water in skidder track across Gulf Brook, downstream of tails, very murky, lots of suspended organics	0440620	4987865	9-Jul-03	6.55	28.0	114	17.6	28	< 0.02	1.31	0.02	< 0.02
RAW	W3	Small pond on south edge of tails, relatively clear water	0440956	4988042	9-Jul-03	6.39	25.9	336	13.3	4	< 0.02	0.70	0.03	< 0.02
RAW	W4	Pond water directly in front (E) of tails, amongst frogs and lily pads	0440959	4988095	9-Jul-03	6.31	24.3	34	12.4	< 1	< 0.02	1.08	0.03	< 0.02
RAW	W5	Water hole near stamp mill inlet / outlet pipe ~ 2 m north of tailings	0440954	4988149	9-Jul-03	6.48	17.5	120	4.8	21	< 0.02	2.04	0.02	0.91
Lake Catcha Gold District (LC)														
LC	W1	Shallow lake water on tailings beach, clear, low DOC	0484315	4953617	9-Sep-03	6.54	18.8	45	6.5	12	< 0.02	4.05	0.02	< 0.02
LC	W2	Running water upstream of east tails area	0484815	4954268	9-Sep-03	6.12	13.5	54	24.6	5	0.06	6.15	0.02	< 0.02
LC	W3	Outlet of east tailings marsh, drains into lake, clear with floating organics	0484836	4953829	9-Sep-03	6.46	17.9	70	10.6	17	0.14	6.16	0.02	< 0.02
LC	W4	Standing water on east tails amongst horsetails	0484705	4953959	9-Sep-03	6.55	17.4	347	15.6	50	0.03	4.26	0.02	< 0.02
LC	W5	Rapidly flowing brook near possible tails site to west, water fairly clear, easy to filter	0483855	4953251	9-Sep-03	5.48	14.6	54	14.0	3	0.05	8.52	0.02	0.08
LC	W6	Downstream of possible tails area; water is clear and flowing	0484291	4953042	9-Sep-03	5.34	16.6	57	18.4	5	0.06	7.99	0.02	0.03
LC	W6-D	Duplicate of site W6	0484291	4953042	9-Sep-03	5.34	16.6	57	18.5	5	0.05	8.00	0.02	0.04
Lower Seal Harbour Gold District (LSH)														
LSH	W1	Brook upstream of cyanide plant; drains around eastern edge of tails N of plant; probably not uncontaminated, tea-colored (W6, Aug. 2003)	0609994	5002852	13-Aug-03	4.76	21.1	47	31.1	< 1	0.10	6.85	0.02	< 0.02
LSH	W2	Small brook upstream of main tailings area; near cyanide plant; in contact w/ rusty hardpan waste on bank (W5, Aug. 2003)	0610016	5002774	13-Aug-03	4.75	19.2	64	31.6	< 1	0.11	5.89	0.02	0.05
LSH	W4	West Brook, upstream of confluence with LSH drainage (W1, Aug. 2003)	0610851	5002299	13-Aug-03	5.14	21.0	28	23.3	< 1	0.03	3.71	0.02	< 0.02
LSH	W6	Drainage from LSH tails,water is tea-colored but not turbid, tailings visible on both banks (W2, Aug. 2003)	0610837	5002274	13-Aug-03	6.55	18.8	64	26.1	13	0.07	5.36	0.03	< 0.02
LSH	W7	Downstream of tails, tea-colored (W3, Aug. 2003)	0610563	5002352	13-Aug-03	6.43	21.6	65	25.8	14	0.06	5.48	0.03	< 0.02
LSH	W8	Main tails area; tea-colored, draws directly off tails into swampy area, oxididation visible, iridescent biofilm (W4, Aug. 2003)	0610172	5002461	13-Aug-03	6.87	25.3	78	27.3	10	0.09	5.45	0.03	< 0.02
Mount Uniacke Gold District (UNI)														
UNI	W1	Standing water in pit in PCF Crusher tails (@ tailings site T5)	0436653	4975526	17-Jul-03	6.45	19.6	395	22.6	111	< 0.02	3.92	0.10	3.01
UNI	W2	Mill Pond; clear, easy to filter, lots of lily pads	0436207	4975200	17-Jul-03	6.42	24.0	33	10.3	8	< 0.02	0.88	0.02	< 0.02
UNI	W3	Standing water in tailings, murky, organic-rich, (@ site T10)	0436292	4975274	17-Jul-03	6.24	21.9	122	12.0	36	0.30	2.30	0.02	0.02

Gold District	Sample Site	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Field pH	Field Temp (°C)	Field Conductivity (µS/cm)	DOC SHIMADZU mg/L DL = 1.0 <0.45 µm	Alkalinity (as $CaCO_3$) mg/L 1 <0.45 µm	Br Dionex mg/L 0.02 <0.45 µm	Cl Dionex mg/L 0.01 <0.45 µm	F Dionex mg/L 0.01 <0.45 µm	NO_3 Dionex mg/L 0.02 <0.45 µm
UNI	W4	Downstream of Foster's Crusher; water clear, runs over rocks	0436224	4975344	17-Jul-03	6.95	17.9	95	8.8	42	0.03	1.42	0.03	0.37
UNI	W5	In wetland downstream of Foster's Crusher, bottom seds orange-red (BIOS), swamp gas	0436121	4975490	17-Jul-03	6.91	23.6	96	8.4	40	0.05	0.97	0.03	< 0.02
North Brookfield Gold District (NB)														
NB	W1	Upstream site on brook running towards tails	0347099	4919654	10-Nov-03	6.20	3.8	32	2.7	4	0.04	3.65	< 0.01	0.22
NB	W2	Stream at point where it enters tails, some ice on surface, easy to filter	0347112	4919502	10-Nov-03	5.45	6.3	275	3.0	121	< 0.02	3.49	0.03	0.15
NB	W3	Stream in middle of tailings, ice on surface, some susp. tails being transported	0347084	4919428	10-Nov-03	7.04	4.9	289	3.0	118	< 0.02	3.61	0.03	0.12
NB	W4	Downstream of main tails, lots of tails still visible	0346927	4919158	10-Nov-03	6.80	3.9	199	6.5	74	0.59	4.55	0.03	0.17
NB	W5	Downstream of main tails, ice on surface, clear & easy to filter	0347034	4919367	10-Nov-03	7.32	3.3	418	3.3	146	0.45	5.25	0.05	0.17
Salmon River (Dufferin) Gold District (SR)														
SR	W1	Upstream of Dufferin tails; water is very clear, filters easy, brown algae present	0547840	4978839	27-Aug-03	6.23	12.0	15	1.3	< 1	0.04	5.73	0.02	0.32
SR	W2	Downstream of Dufferin tails; water is very clear, filters easy, brown algae present	0547835	4978585	27-Aug-03	6.49	13.7	104	3.4	40	0.04	5.56	0.04	0.10
SR	W3	Clear standing water in pool overlying marshy tails, water immediately uphill covered w/ layer of iridescent orange algae	0547781	4978696	27-Aug-03	6.74	17.4	147	2.9	69	0.04	5.74	0.04	< 0.02
SR	W4	Standing water on tails, covered w/ iridescent material (BIOS), sample contains brown suspended matter	0547717	4978713	27-Aug-03	6.57	19.0	233	3.7	99	0.06	3.87	0.03	< 0.02
SR	W5	Groundwater flowing out of drain pipe within tails; clear, cold w/ green & red algae	0547704	4978742	27-Aug-03	6.83	6.9	94	3.5	25	< 0.02	5.09	0.03	< 0.02
SR	W6	Upstream ~ 100 m N of 1890s mill near Salmon River; clear water in alders w/ some algae	0547193	4977939	27-Aug-03	6.83	14.4	61	8.4	11	0.05	5.32	0.04	0.25
SR	W7	Standing water on tails, immed. downstream of 1890s mill, skirts pile of tails & scorodite, clear w/ minor DOC	0547223	4977830	27-Aug-03	6.83	17.6	65	8.1	13	0.07	5.33	0.04	0.30
SR	W8	Algae-filled drainage on bank of Salmon R.	0547212	4977745	27-Aug-03	6.33	19.1	85	5.2	11	0.06	7.19	0.04	< 0.02
SR	W9	Shallow standing water directly on tails, gas bubbles	0547339	4977712	27-Aug-03	4.85	26.0	48	6.7	< 1	0.07	6.88	0.03	< 0.02
Upper Seal Harbour Gold District (USH)														
USH	W4(03)	Bend in brook, (one prominent channel), brown, clear (W4, Sept. 2003)	0607138	5006098	15-Sep-03	4.93	18.8	29	14.8	< 1	0.03	3.56	0.01	0.06
USH	W13	Gold Brook, water is high DOC, banks full of tails (W6, Sept. 2003)	0607020	5005593	15-Sep-03	5.73	17.8	28	14.5	< 1	0.02	3.35	0.01	0.05
USH	W14	Gold Brook, water is filled with algae, difficult to filter (W5, Sept. 2003)	0606937	5005865	15-Sep-03	5.93	19.0	44	15.6	< 1	0.06	4.90	0.03	< 0.02
USH	W18	~ 50 m south of road along Gold Brook, brown water running through horsetails on tail flat (W3, Sept. 2003)	0607066	5006308	15-Sep-03	4.95	18.8	29	14.8	< 1	0.05	3.57	0.01	0.07
USH	W19	Standing water in Richardson Mill foundation, clear but filled with FeOx / algae (W2, Sept. 2003)	0606979	5006428	15-Sep-03	6.45	19.4	74	3.5	10	0.04	4.30	0.02	0.11
USH	W20	West shore of Gold Brook Lake ~ 200 m N of Richardson Mill structure, tea-colored, well mixed (W1, Sept. 2003)	0606952	5006630	15-Sep-03	4.79	17.5	30	15.2	< 1	0.07	3.69	0.01	0.08
Whiteburn Gold District (WB)														
WHI	W1	Upstream site above western edge of Mill Pond	0334359	4908659	23-Jul-03	4.74	18.1	38	13.6	2	0.03	4.82	0.03	< 0.02
WHI	W2	McBride Brook near mill site; water is ~2 ft deep, standing on light grey tails on bottom	0334562	4908613	23-Jul-03	5.64	23.5	22	13.3	< 1	< 0.02	2.70	0.03	< 0.02
WHI	W3	Tailings pore water in open hole, abundant sulfides in tails	0334592	4908596	23-Jul-03	6.65	19.2	207	6.7	59	< 0.02	3.33	0.03	0.06
WHI	W4	Butler Brook water near Crocker Mill (dk brown), abundant lt grey tails in streambank	0334456	4908192	23-Jul-03	6.21	21.1	41	13.4	5	0.05	3.43	0.03	0.05
WHI	W5	McBride Brook just north of meadow, tails not obvious	0334645	4908201	23-Jul-03	6.68	21.2	73	13.3	20	< 0.02	2.15	0.03	0.16
WHI	W6	McBride Brook water with tails in both banks	0334644	4907956	23-Jul-03	6.18	23.2	33	7.9	3	0.05	3.04	0.02	< 0.02
WHI	W6-D	Duplicate of W6	0334644	4907956	23-Jul-03	6.18	23.2	33	8.5	4	0.05	3.34	0.02	< 0.02
Upper / Lower Seal Harbour (SH-S) May 2004														
SH-S	W1	Background site: small brook running into wetland above LSH (enters thin tails below swamp) (W24, May 2004)	0609671	5002897	12-May-04	4.34	5.7	36	9.9	< 1	0.11	8.54	< 0.01	0.22
SH-S	W2	Stream just east of cyanide plant near waste rock (W23, May 2004)	0609987	5002856	12-May-04	4.61	13.6	33	10.0	< 1	< 0.02	7.86	0.01	0.04

Gold District	Sample Site	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Field pH	Field Temp (°C)	Field Conductivity (µS/cm)	DOC SHIMADZU mg/L DL = 1.0 <0.45 µm	Alkalinity (as $CaCO_3$) mg/L 1 <0.45 µm	Br Dionex mg/L 0.02 <0.45 µm	Cl Dionex mg/L 0.01 <0.45 µm	F Dionex mg/L 0.01 <0.45 µm	NO_3 Dionex mg/L 0.02 <0.45 µm
SH-S	W3	LSH drainage, just upstream of log bridge, drainage skirts adjacent amalgamation tailings (W22, May 2004)	0610069	5002620	12-May-04	5.51	12.2	39	9.6	3	0.04	6.90	0.01	< 0.02
SH-S	W4	West Brook ~ 100 m upstream of confluence w/ LSH drainage, lots of flow, no tails evident (W18, May 2004)	0610843	5002325	12-May-04	4.30	12.4	24	9.7	4	< 0.02	4.49	< 0.01	< 0.02
SH-S	W5	West Brook ~ 20 m south of confluence w/ LSH drainage, banks ful of tails (W4, May 2004)	0610830	5002247	10-May-04	4.76	14.0	22	9.9	< 1	< 0.02	4.44	< 0.01	0.02
SH-S	W6	LSH drainage (full of tails) ~ 50 m above confluence w/ West Brook (W19, May 2004)	0610824	5002280	12-May-04	6.43	13.9	51	8.8	10	< 0.02	7.03	0.01	< 0.02
SH-S	W7	LSH drainage @ midpoint (~ 200 m below main tails area) (W20, May 2004)	0610596	5002334	12-May-04	6.17	16.7	55	8.9	9	< 0.02	7.37	0.02	< 0.02
SH-S	W8	LSH drainage, middle of main tails area, sample from deep part of channel eroded in tails (W21, May 2004)	0610177	5002460	12-May-04	5.69	17.2	47	9.9	5	< 0.02	6.92	0.02	< 0.02
SH-S	W9	West Brook at coastal hwy, high water, brownish (W1, May 2004)	0611562	5001741	10-May-04	4.77	15.6	23	9.9	< 1	< 0.02	4.69	< 0.01	< 0.02
SH-S	W9-D1	Site W9 duplicate, day 2 (W25-D1, May 2004)	0611562	5001741	11-May-04	5.10	10.3	23	9.5	1	< 0.02	4.76	< 0.01	0.04
SH-S	W9-D2	Site W9 duplicate, day 3 (W25-D2, May 2004)	0611562	5001741	12-May-04	4.62	14.7	23	9.5	4	< 0.02	4.67	< 0.01	0.03
SH-S	W9-D3	Site W9 duplicate, day 4 (W25-D3, May 2004)	0611562	5001741	13-May-04	5.07	12.7	22	9.4	< 1	< 0.02	4.85	< 0.01	0.03
SH-S	W10	Open tails area on Gold Brook, hardpans in some areas, in others tails are mobile (bedforms visible) (W7, May 2004)	0607694	5004754	11-May-04	4.42	8.9	21	9.4	< 1	< 0.02	4.18	< 0.01	0.03
SH-S	W11	Small brook running through tails into head of Seal Harbour Run or Gold Brook (W8, May 2004)	0607391	5005085	11-May-04	4.52	8.5	21	9.4	< 1	< 0.02	4.18	< 0.01	< 0.02
SH-S	W12	Gold Brook, middle of oxbow lake (W9, May 2004)	0607143	5005121	11-May-04	4.60	8.8	21	9.5	3	< 0.02	4.30	< 0.01	0.02
SH-S	W13	Gold Brook above oxbow lake (W10, May 2004)	0607058	5005452	11-May-04	4.73	8.7	21	9.5	< 1	< 0.02	4.19	< 0.01	0.08
SH-S	W14	Gold Brook ~ 200 m downstream of retention ponds (W11, May 2004)	0606956	5005794	11-May-04	4.11	8.5	22	9.2	< 1	< 0.02	3.99	< 0.01	0.06
SH-S	W15	Pipe draining retention ponds from Boston Richardson shaft (W12, May 2004)	0606948	5005957	11-May-04	5.96	9.8	38	8.0	2	< 0.02	5.02	0.02	< 0.02
SH-S	W16	Stream draining Oat Hill Lake, runs into N shore of Gold Brook Lake, sample ~ 10 m N of dirt road (W16, May 2004)	0606970	5008548	11-May-04	3.85	8.3	23	10.1	< 1	< 0.02	4.13	< 0.01	< 0.02
SH-S	W17	Drainage out of East Gold Brook tails area at USH, lots of oxid visible, green slime in drainage (W25, May 2004)	0607179	5006235	13-May-04	4.58	17.1	27	10.9	< 1	< 0.02	5.29	0.01	< 0.02
SH-S	W17-D	Duplicate of W17 (W25-D, May 2004)	0607179	5006235	13-May-04	4.58	17.1	27	11.0	2	< 0.02	5.35	0.01	< 0.02
SH-S	W18	Gold Brook - first bend just south of Richardson Mill (W13, May 2004)	0607076	5006305	11-May-04	4.12	9.3	22	9.7	4	< 0.02	4.08	< 0.01	0.06
SH-S	W19	Water draining into lake from Richardson stamp mill, abundant BIOS remains visible in mill foundation (W14, May 2004)	0607004	5006415	11-May-04	6.26	9.5	82	2.9	14	< 0.02	5.68	0.02	< 0.02
SH-S	W20	Gold Brook Lake ~ 30 m north of pump station (W15, May 2004)	0606991	5006549	11-May-04	4.22	10.5	23	9.7	< 1	< 0.02	4.19	0.01	< 0.02
SH-S	W21	East Brook ~ 10 m upstream of Hwy, lots of flow, rocky, no tails evident (W6, May 2004)	0612469	5002263	10-May-04	4.20	14.9	23	9.5	< 1	< 0.02	4.81	< 0.01	0.04
SH-S	W22	Background site: overgrown, sample on upstream side of large boulder, not much volume, stream is running (W5, May 2004)	0610763	5002099	10-May-04	4.79	6.5	32	8.7	2	< 0.02	7.42	< 0.01	0.33
SH-S	W23	West Brook at outlet of Second Pond, pond full of tails, water rapidly flowing & brownish (W3, May 2004)	0610983	5001952	10-May-04	4.65	14.8	23	9.7	< 1	< 0.02	4.58	< 0.01	< 0.02
SH-S	W24	West Brook at outlet of First Pond, banks full of tailings, sample site where meandering brook exits First Pond (W2, May 2004)	0611287	5001790	10-May-04	5.01	15.2	23	9.8	< 1	< 0.02	4.89	< 0.01	< 0.02
SH-S	W25	Gold Brook at bridge above Seal Hrbr Lake, lots of flow through boulders (W17, May 2004)	0609171	5003579	12-May-04	4.51	9.6	22	9.4	< 1	< 0.02	4.50	< 0.01	< 0.02
Upper / Lower Seal Harbour (SH-S) August 2004														
SH-S	W1	Background site: small brook running into wetland above LSH (enters thin tails below swamp) (W36, Aug. 2004)	0609671	5002897	12-Aug-04	4.72	13.4	47	20.3	< 1	0.09	8.92	0.02	0.06
SH-S	W1D	Duplicate of site W1 (W36D, Aug. 2004)	0609671	5002897	12-Aug-04	4.72	13.4	47	20.4	3	0.10	8.89	0.01	< 0.02
SH-S	W2	Stream just east of cyanide plant near waste rock (W37, Aug. 2004)	0609987	5002856	12-Aug-04	5.30	19.6	45	23.7	< 1	0.07	7.87	0.02	0.02
SH-S	W3	LSH drainage, just upstream of log bridge, drainage skirts adjacent amalgamation tailings (W38, Aug. 2004)	0610069	5002620	12-Aug-04	5.40	18.2	57	23.9	4	0.06	7.09	0.02	0.02

Gold District	Sample Site	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Field pH	Field Temp (°C)	Field Conductivity (µS/cm)	DOC SHIMADZU mg/L DL = 1.0 <0.45 µm	Alkalinity (as $CaCO_3$) mg/L 1 <0.45 µm	Br Dionex mg/L 0.02 <0.45 µm	Cl Dionex mg/L 0.01 <0.45 µm	F Dionex mg/L 0.01 <0.45 µm	NO_3 Dionex mg/L 0.02 <0.45 µm
SH-S	W4	West Brook ~ 100 m upstream of confluence w/ LSH drainage, lots of flow, no tails evident (W33, Aug. 2004)	0610843	5002325	11-Aug-04	5.40	23.3	29	15.5	< 1	< 0.02	4.89	0.01	0.03
SH-S	W5	West Brook ~ 20 m south of confluence w/ LSH drainage, banks full of tails (W30, Aug. 2004)	0610830	5002247	11-Aug-04	6.18	22.3	31	16.0	1	0.02	5.01	0.01	0.03
SH-S	W6	LSH drainage (full of tails) ~ 50 m above confluence w/ West Brook (W31, Aug. 2004)	0610824	5002280	11-Aug-04	7.15	21.0	71	21.3	17	0.04	6.74	0.02	< 0.02
SH-S	W7	LSH drainage @ midpoint (~ 200 m below main tails area) (W32, Aug. 2004)	0610596	5002334	11-Aug-04	7.11	23.9	72	21.0	14	0.04	6.76	0.02	< 0.02
SH-S	W8	LSH drainage, middle of main tails area, sample from deep part of channel eroded in tails (W39, Aug. 2004)	0610177	5002460	12-Aug-04	6.36	26.7	85	20.5	12	0.06	6.79	0.03	< 0.02
SH-S	W9	West Brook at coastal hwy, high water, brownish (W27, Aug. 2004)	0611562	5001741	11-Aug-04	5.34	21.4	30	15.5	< 1	< 0.02	4.75	0.01	0.03
SH-S	W9D1	Duplicate of site W9 (W27D1, Aug. 2004)	0611562	5001741	12-Aug-04	5.25	21.6	31	15.9	< 1	< 0.02	4.87	0.02	0.03
SH-S	W9D2	Duplicate of site W9 (W27D2, Aug. 2004)	0611562	5001741	13-Aug-04	5.17	22.0	30	15.5	< 1	< 0.02	4.86	0.01	0.04
SH-S	W9D3	Duplicate of site W9 (W27D3, Aug. 2004)	0611562	5001741	14-Aug-04	5.36	22.9	30	15.8	< 1	< 0.02	5.04	0.02	0.04
SH-S	W10	Open tails area on Gold Brook, hardpans in some areas, in others tails are mobile (bedforms visible) (W45, Aug. 2004)	0607694	5004754	13-Aug-04	5.77	22.0	26	11.0	< 1	0.11	4.09	0.01	< 0.02
SH-S	W11	Small brook running through tails into head of Seal Harbour Run or Gold Brook (W46, Aug. 2004)	0607391	5005085	13-Aug-04	5.25	23.0	25	10.8	1	< 0.02	4.34	0.02	< 0.02
SH-S	W12	Gold Brook, middle of oxbow lake (W47, Aug. 2004)	0607143	5005121	13-Aug-04	5.49	26.7	25	10.3	< 1	0.03	4.31	0.02	< 0.02
SH-S	W13	Gold Brook above oxbow lake (W48, Aug. 2004)	0607058	5005452	13-Aug-04	5.70	26.0	25	10.2	< 1	< 0.02	4.35	0.01	< 0.02
SH-S	W14	Gold Brook ~ 200 m downstream of retention ponds (W49, Aug. 2004)	0606956	5005794	13-Aug-04	5.02	26.6	26	10.1	< 1	< 0.02	4.16	0.01	< 0.02
SH-S	W15	Pipe draining retention ponds from Boston Richardson shaft (W50, Aug. 2004)	0606948	5005957	13-Aug-04	6.63	22.2	57	14.0	8	0.02	4.64	0.03	< 0.02
SH-S	W15D	Duplicate of site W15 (W50D, Aug. 2004)	0606948	5005957	13-Aug-04	6.63	22.2	57	13.8	6	0.03	4.71	0.03	< 0.02
SH-S	W16	Stream draining Oat Hill Lake, runs into N shore of Gold Brook Lake, sample ~ 10 m N of dirt road (W40, Aug. 2004)	0606970	5008548	12-Aug-04	4.54	19.4	33	18.4	< 1	< 0.02	4.17	0.02	< 0.02
SH-S	W17	Drainage out of East Gold Brook tails area at USH, lots of oxid visible, green slime in drainage (W44, Aug. 2004)	0607179	5006235	12-Aug-04	5.16	28.2	39	20.8	< 1	0.02	4.92	0.03	< 0.02
SH-S	W18	Gold Brook - first bend just south of Richardson Mill (W43, Aug. 2004)	0607076	5006305	12-Aug-04	4.60	23.1	26	10.2	< 1	0.03	4.16	< 0.01	< 0.02
SH-S	W19	Water draining into lake from Richardson stamp mill, abundant BIOS remains visible in mill foundation (W42, Aug. 2004)	0607004	5006415	12-Aug-04	6.23	29.4	73	4.4	11	0.03	6.10	0.03	< 0.02
SH-S	W20	Gold Brook Lake ~ 30 m north of pump station (W41, Aug. 2004)	0606991	5006549	12-Aug-04	5.08	23.8	26	10.3	< 1	< 0.02	4.03	< 0.01	< 0.02
SH-S	W21	East Brook ~ 10 m upstream of Hwy, lots of flow, rocky, no tails evident (W26, Aug. 2004)	0612469	5002263	11-Aug-04	4.90	19.4	30	17.8	< 1	< 0.02	5.10	0.02	< 0.02
SH-S	W22	Background site: overgrown, sample on upstream side of large boulder, low volume, stream is running (W34, Aug. 2004)	0610763	5002099	11-Aug-04	5.82	14.5	39	15.2	< 1	0.02	7.61	0.01	0.08
SH-S	W23	West Brook at outlet of Second Pond, pond full of tails, water rapidly flowing & brownish (W29, Aug. 2004)	0610983	5001952	11-Aug-04	5.88	22.6	30	15.6	< 1	< 0.02	4.36	0.01	0.02
SH-S	W24	West Brook at outlet of First Pond, banks full of tailings, sample site where meandering brook exits First Pond (W28, Aug. 2004)	0611287	5001790	11-Aug-04	5.73	22.0	30	15.8	< 1	< 0.02	5.14	0.01	0.02
SH-S	W25	Gold Brook at bridge above Seal Hrbr Lake, lots of flow through boulders (W35, Aug. 2004)	0609171	5003579	11-Aug-04	4.79	24.2	28	14.4	2	< 0.02	4.45	0.01	< 0.02
SH-S	W51	Seawater overlying tails near mouth of West Brook, likely fresh surface water (lots of DOC over seawater)	0611650	5001739	14-Aug-04	6.98	22.0	9490	12.6	12	7.93	2665.84	0.18	< 0.2
Upper / Lower Seal Harbour (SH-S) November 2004														
SH-S	W1	Background site: small brook running into wetland above LSH (enters thin tails below swamp) (W60, Nov. 2004)	0609671	5002897	18-Nov-04	3.65	5.6	84	22.4	<1	0.10	13.63	0.01	0.05
SH-S	W2	Stream just east of cyanide plant near waste rock (W61, Nov. 2004)	0609987	5002856	18-Nov-04	4.38	4.3	73	25.2	<1	0.05	11.66	0.02	0.06
SH-S	W3	LSH drainage, just upstream of log bridge, drainage skirts adjacent amalgamation tailings (W62, Nov. 2004)	0610069	5002620	18-Nov-04	5.40	5.0	74	23.1	<1	0.03	11.79	0.02	0.22
SH-S	W3D	Duplicate of site W3 (W62D, Nov. 2004)	0610069	5002620	18-Nov-04	5.40	5.0	74	22.9	<1	0.03	11.90	0.02	0.23
SH-S	W4	West Brook ~ 100 m upstream of confluence w/ LSH drainage, lots of flow, no tails evident (W66, Nov. 2004)	0610843	5002325	18-Nov-04	4.34	3.6	47	17.4	<1	< 0.02	7.47	0.02	0.03
SH-S	W5	West Brook ~ 20 m south of confluence w/ LSH drainage, banks full of tails (W67, Nov. 2004)	0610830	5002247	18-Nov-04	4.94	4.0	51	17.8	<1	< 0.02	8.13	0.02	0.04

Gold District	Sample Site	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Field pH	Field Temp (°C)	Field Conductivity (µS/cm)	DOC SHIMADZU mg/L DL = 1.0 <0.45 µm	Alkalinity (as $CaCO_3$) mg/L 1 <0.45 µm	Br Dionex mg/L 0.02 <0.45 µm	Cl Dionex mg/L 0.01 <0.45 µm	F Dionex mg/L 0.01 <0.45 µm	NO_3 Dionex mg/L 0.02 <0.45 µm
SH-S	W6	LSH drainage (full of tails) ~ 50 m above confluence w/ West Brook (W65, Nov. 2004)	0610824	5002280	18-Nov-04	6.26	5.6	81	19.3	4	0.02	11.69	0.02	0.12
SH-S	W7	LSH drainage @ midpoint (~ 200 m below main tails area) (W64, Nov. 2004)	0610596	5002334	18-Nov-04	5.91	6.1	81	19.9	5	0.02	11.42	0.02	0.11
SH-S	W8	LSH drainage, middle of main tails area, sample from deep part of channel eroded in tails (W63, Nov. 2004)	0610177	5002460	18-Nov-04	6.34	6.7	89	20.5	3	< 0.02	11.32	0.02	0.12
SH-S	W9	West Brook at coastal hwy, high water, brownish (W52, Nov. 2004)	0611562	5001741	17-Nov-04	4.83	3.8	45	17.6	<1	< 0.02	8.15	0.02	0.03
SH-S	W9D1	West Brook at coastal Hwy, high water, brownish (duplicate) (W52D1, Nov. 2004)	0611562	5001741	18-Nov-04	4.85	2.8	50	17.5	<1	< 0.02	8.50	0.02	0.03
SH-S	W9D2	West Brook at coastal Hwy, high water, brownish (duplicate) (W52D2, Nov. 2004)	0611562	5001741	19-Nov-04	4.87	2.8	49	17.4	<1	< 0.02	7.63	0.02	0.03
SH-S	W10	Open tails area on Gold Brook, hardpans in some areas, in others tails are mobile (bedforms visible) (W76, Nov. 2004)	0607694	5004754	19-Nov-04	4.62	4.1	42	15.5	<1	< 0.02	6.28	0.01	0.05
SH-S	W10D	Duplicate of site W10 (W76D, Nov. 2004)	0607694	5004754	19-Nov-04	4.62	4.1	42	15.3	<1	< 0.02	6.43	0.01	0.06
SH-S	W11	Small brook running through tails into head of Seal Harbour Run or Gold Brook (W75, Nov. 2004)	0607391	5005085	19-Nov-04	4.64	4.1	42	15.3	<1	< 0.02	6.29	0.01	0.29
SH-S	W12	Gold Brook, middle of oxbow lake (W74, Nov. 2004)	0607143	5005121	19-Nov-04	4.74	4.1	42	15.4	<1	< 0.02	7.29	0.01	0.09
SH-S	W13	Gold Brook above oxbow lake (W73, Nov. 2004)	0607058	5005452	19-Nov-04	4.96	4.0	41	15.9	<1	< 0.02	6.17	0.02	0.11
SH-S	W14	Gold Brook ~ 200 m downstream of retention ponds (W72, Nov. 2004)	0606956	5005794	19-Nov-04	4.34	3.5	43	16.1	<1	< 0.02	6.97	0.02	0.10
SH-S	W15	Pipe draining retention ponds from Boston Richardson shaft (W71, Nov. 2004)	0606948	5005957	19-Nov-04	4.74	3.3	61	15.6	2	< 0.02	7.95	0.02	< 0.02
SH-S	W16	Stream draining Oat Hill Lake, runs into N shore of Gold Brook Lake, sample ~ 10 m N of dirt road (W55, Nov. 2004)	0606970	5008548	17-Nov-04	4.02	4.1	60	21.9	<1	< 0.02	6.39	0.01	< 0.02
SH-S	W17	Drainage out of East Gold Brook tails area at USH, lots of oxid visible, green slime in drainage (W70, Nov. 2004)	0607179	5006235	18-Nov-04	4.32	5.2	63	23.5	<1	< 0.02	9.18	0.02	0.04
SH-S	W18	Gold Brook - first bend just south of Richardson Mill (W69, Nov. 2004)	0607076	5006305	18-Nov-04	4.06	4.0	43	16.0	<1	< 0.02	5.92	0.01	0.11
SH-S	W19	Water draining into lake from Richardson stamp mill, abundant BIOS remains visible in mill foundation (W57, Nov. 2004)	0607004	5006415	17-Nov-04	5.38	4.6	80	3.1	5	0.02	9.19	0.02	0.94
SH-S	W20	Gold Brook Lake ~ 30 m north of pump station (W56, Nov. 2004)	0606991	5006549	17-Nov-04	4.49	3.8	42	15.9	<1	< 0.02	6.14	0.01	0.11
SH-S	W21	East Brook ~ 10 m upstream of Hwy, lots of flow, rocky, no tails evident (W58, Nov. 2004)	0612469	5002263	18-Nov-04	4.77	2.8	55	18.7	<1	< 0.02	9.23	0.02	0.04
SH-S	W22	Background site: overgrown, sample on upstream side of large boulder, low volume, stream is running (W68, Nov. 2004)	0610763	5002099	18-Nov-04	4.56	5.8	72	15.7	<1	< 0.02	12.03	0.02	0.14
SH-S	W23	West Brook at outlet of Second Pond, pond full of tails, water rapidly flowing & brownish (W54, Nov. 2004)	0610983	5001952	17-Nov-04	5.25	3.6	50	17.5	<1	< 0.02	7.58	0.01	0.03
SH-S	W24	West Brook at outlet of First Pond, banks full of tailings, sample site where meandering brook exits First Pond (W53, Nov. 2004)	0611287	5001790	17-Nov-04	5.41	4.2	48	16.7	<1	< 0.02	8.24	0.02	< 0.02
SH-S	W25	Gold Brook at bridge above Seal Hrbr Lake, lots of flow through boulders (W59, Aug. 2004)	0609171	5003579	18-Nov-04	4.62	2.5	46	16.1	<1	< 0.02	7.04	0.01	< 0.02
Upper / Lower Seal Harbour (SH-S) August 2005														
SH-S	W1	Background site: small brook running into wetland above LSH (enters thin tails below swamp)	0609671	5002897	24-Aug-05	5.67	16.8	59	10.1	7	0.11	9.49	0.05	0.35
SH-S	W2	Stream just east of cyanide plant near waste rock	0609987	5002856	24-Aug-05	6.40	23.8	69	13.8	7	0.31	11.02	0.05	0.26
SH-S	W3	LSH drainage, just upstream of log bridge, drainage skirts adjacent amalgamation tailings	0610069	5002620	24-Aug-05	6.20	18.0	96	9.4	19	0.23	9.59	0.08	0.16
SH-S	W4	West Brook ~ 100 m upstream of confluence w/ LSH drainage, lots of flow, no tails evident	0610843	5002325	24-Aug-05	5.63	23.2	35	11.2	< 1	0.06	6.32	0.05	0.22
SH-S	W5	West Brook ~ 20 m south of confluence w/ LSH drainage, banks ful of tails	0610830	5002247	24-Aug-05	6.19	23.0	39	11.1	< 1	0.06	6.44	0.05	0.22
SH-S	W6	LSH drainage (full of tails) ~ 50 m above confluence w/ West Brook	0610824	5002280	24-Aug-05	7.41	24.0	152	8.6	44	0.18	9.85	0.09	0.07
SH-S	W7	LSH drainage @ midpoint (~ 200 m below main tails area)	0610596	5002334	24-Aug-05	7.12	24.9	161	9.1	56	0.19	9.73	0.09	< 0.02
SH-S	W8	LSH drainage, middle of main tails area, sample from deep part of channel eroded in tails	0610177	5002460	24-Aug-05	6.82	27.0	124	10.7	36	0.22	9.90	0.09	0.03
SH-S	W9	West Brook at coastal hwy, high water, brownish	0611562	5001741	24-Aug-05	6.83	23.1	42	11.1	< 1	0.07	6.61	0.05	0.07
SH-S	W9D1	Duplicate of site W9	0611562	5001741	25-Aug-05	6.06	16.9	48	10.0	7	0.06	6.60	0.05	0.31

Gold District	Sample Site	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Field pH	Field Temp (°C)	Field Conductivity (µS/cm)	DOC SHIMADZU mg/L DL = 1.0 <0.45 µm	Alkalinity (as $CaCO_3$) mg/L 1 <0.45 µm	Br Dionex mg/L 0.02 <0.45 µm	Cl Dionex mg/L 0.01 <0.45 µm	F Dionex mg/L 0.01 <0.45 µm	NO_3 Dionex mg/L 0.02 <0.45 µm
SH-S	W9D2	Duplicate of site W9	0611562	5001741	26-Aug-05	5.61	20.5	39	15.9	2	0.06	7.74	0.05	0.36
SH-S	W10	Open tails area on Gold Brook, hardpans in some areas, in others tails are mobile (bedforms visible)	0607694	5004754	25-Aug-05	5.52	21.2	50	11.4	< 1	0.09	7.39	0.06	< 0.02
SH-S	W10D	Duplicate of site W10	0607694	5004754	25-Aug-05	5.52	21.2	50	12.0	< 1	0.10	7.18	0.05	< 0.02
SH-S	W11	Small brook running through tails into head of Seal Harbour Run or Gold Brook	0607391	5005085	25-Aug-05	5.97	19.9	36	8.5	2	0.03	5.76	0.05	< 0.02
SH-S	W12	Gold Brook, middle of oxbow lake	0607143	5005121	25-Aug-05	5.55	20.3	33	8.2	1	0.02	5.75	0.05	< 0.02
SH-S	W13	Gold Brook above oxbow lake	0607058	5005452	25-Aug-05	6.13	20.1	35	8.1	< 1	0.04	5.34	0.04	0.05
SH-S	W14	Gold Brook ~ 200 m downstream of retention ponds	0606956	5005794	25-Aug-05	5.85	19.3	36	9.4	< 1	0.07	5.45	0.04	0.10
SH-S	W15	Pipe draining retention ponds from Boston Richardson shaft	0606948	5005957	25-Aug-05	6.72	19.0	63	11.2	10	0.06	5.92	0.06	0.21
SH-S	W16	Stream draining Oat Hill Lake, runs into N shore of Gold Brook Lake, sample ~ 10 m N of dirt road	0606970	5008548	25-Aug-05	4.11	16.6	58	47.1	< 1	< 0.02	4.24	0.05	< 0.02
SH-S	W17	Drainage out of East Gold Brook tails area at USH, lots of oxid visible, green slime in drainage	0607179	5006235	25-Aug-05	5.68	17.2	50	19.5	< 1	0.02	6.19	0.07	0.10
SH-S	W18	Gold Brook - first bend just south of Richardson Mill	0607076	5006305	25-Aug-05	5.07	18.4	31	7.4	< 1	0.04	5.23	0.02	0.15
SH-S	W19	Water draining into lake from Richardson stamp mill, abundant BIOS remains visible in mill foundation	0607004	5006415	25-Aug-05	6.06	17.5	57	4.7	10	0.08	6.86	0.06	0.19
SH-S	W20	Gold Brook Lake ~ 30 m north of pump station	0606991	5006549	25-Aug-05	4.87	20.3	32	7.8	< 1	0.03	5.24	0.02	0.12
SH-S	W21	East Brook ~ 10 m upstream of Hwy, lots of flow, rocky, no tails evident	0612469	5002263	26-Aug-05	5.85	18.4	38	14.7	< 1	0.08	7.16	0.05	0.27
SH-S	W22	Background site: overgrown, sample on upstream side of large boulder, low volume, stream is running	0610763	5002099	26-Aug-05	4.68	16.7	65	29.2	< 1	< 0.02	9.16	0.04	0.33
SH-S	W23	West Brook at outlet of Second Pond, pond full of tails, water rapidly flowing & brownish	0610983	5001952	26-Aug-05	5.14	20.6	52	14.4	2	0.04	7.46	0.05	0.42
SH-S	W24	West Brook at outlet of First Pond, banks full of tailings, sample site where meandering brook exits First Pond	0611287	5001790	26-Aug-05	6.46	22.2	50	15.7	3	0.03	7.78	0.05	0.39
SH-S	W25	Gold Brook at bridge above Seal Hrbr Lake, lots of flow through boulders	0609171	5003579	26-Aug-05	4.67	23.1	36	11.3	2	0.06	6.65	0.05	< 0.02
SH-S	W25D	Duplicate of site W25	0609171	5003579	26-Aug-05	4.67	23.1	36	10.9	1	0.07	6.52	0.05	0.02
Statistics	**Min.**					3.50	2.5	15	<1.0	<1	<0.02	0.24	<0.01	<0.02
	Max.					7.41	29.4	9490	47.1	146	7.93	2665.84	0.18	3.01
	Mean					5.53	15.1	125	12.9	19	0.16	20.84	0.03	0.16
	Median					5.45	17.2	47	11.2	8	0.06	5.73	0.02	0.08
	n					181	181	181	180	92	101	181	159	104
	Std Dev					0.87	7.6	704	6.6	29	0.78	197.16	0.02	0.32
	95th pctl					6.87	26.0	275	23.9	85	0.30	11.69	0.07	0.39
	90th pctl					6.68	23.8	123	21.4	55	0.14	9.49	0.05	0.33
	75th pctl					6.24	21.4	72	15.9	18	0.08	7.61	0.03	0.20
	50th pctl					5.45	17.2	47	11.2	8	0.06	5.73	0.02	0.08
	25th pctl					4.77	6.5	32	8.9	3	0.03	4.34	0.02	0.04

Notes: DL = detection limit; Sample sites from USH and LSH have been re-numbered to match the numbers used in Fig. 120 (original sample IDs added to site descriptions).

Gold District	Sample Site	PO_4 Dionex mg/L 0.02 <0.45 µm	SO_4 Dionex mg/L 0.02 <0.45 µm	Ag ICP-MS µg/L 0.005 <0.45 µm	Ag ICP-MS µg/L 0.005 Unfiltered	Al ICP-MS µg/L 2 <0.45 µm	Al ICP-MS µg/L 2 Unfiltered	As ICP-MS µg/L 0.1 <0.45 µm	As ICP-MS µg/L 0.1 Unfiltered	B ICP-MS µg/L 0.5 <0.45 µm	B ICP-MS µg/L 0.5 Unfiltered	Ba ICP-MS µg/L 0.2 <0.45 µm	Ba ICP-MS µg/L 0.2 Unfiltered	Be ICP-MS µg/L 0.005 <0.45 µm	Be ICP-MS µg/L 0.005 Unfiltered	Ca ICP-ES mg/L 0.02 <0.45 µm	Ca ICP-ES mg/L 0.02 Unfiltered	Cd ICP-MS µg/L 0.02 <0.45 µm
Cochrane Hill Gold District (CH)																		
CH	W1	< 0.02	4.62	< 0.005	< 0.005	72	78	15.4	16.5	4.1	4.2	6.5	6.6	0.019	0.014	2.14	2.14	0.02
CH	W2	< 0.02	6.59	< 0.005	< 0.005	89	97	27.3	31.0	4.3	4.0	5.5	5.6	0.015	0.015	3.04	3.04	0.02
CH	W3	< 0.02	12.64	< 0.005	< 0.005	105	124	41.5	55.6	4.6	4.7	5.6	5.7	0.019	0.016	5.56	5.56	0.03
CH	W4	< 0.02	2.27	< 0.005	< 0.005	53	56	0.9	1.3	3.2	3.3	4.7	4.7	0.011	< 0.005	0.95	0.95	< 0.02
CH	W5	< 0.02	17.88	< 0.005	< 0.005	121	152	44.7	75.8	5.5	5.1	6.2	6.0	0.025	0.017	7.82	7.94	0.05
CH	W6	< 0.02	3.69	< 0.005	< 0.005	91	91	45.2	44.4	4.6	4.2	3.7	3.6	0.008	< 0.005	2.25	2.29	< 0.02
CH	W6-D	< 0.02	3.69	< 0.005	< 0.005	91	98	44.5	48.0	4.2	4.6	3.7	3.8	0.009	0.007	2.25	2.27	0.02
CH	W7	0.02	1.92	< 0.005	< 0.005	114	190	13.6	28.0	5.9	6.0	3.3	3.8	0.007	0.007	4.21	4.29	< 0.02
CH	W8	< 0.02	183.65	< 0.005	< 0.005	2746	2822	47.5	80.2	13.8	18.3	7.5	7.8	0.763	0.863	46.74	47.08	4.14
CH	W9	< 0.02	3.98	< 0.005	< 0.005	85	87	23.1	23.8	4.0	4.3	3.6	3.6	0.005	0.007	2.38	2.39	< 0.02
CH	W10	< 0.02	6.22	< 0.005	< 0.005	66	6116	6575.9	6072.4	4.9	5.9	10.7	47.6	0.020	0.572	6.10	7.62	0.02
CH	W11	< 0.02	243.26	< 0.005	< 0.005	12	78	775.6	4286.2	17.1	17.2	28.4	37.4	< 0.005	0.014	95.32	95.94	0.03
CH	W12	< 0.02	313.11	< 0.005	0.005	55	4150	519.7	1051.2	15.4	14.6	19.6	36.5	0.137	0.482	114.79	113.18	2.25
East Rawdon Gold District (RAW)																		
RAW	W1	< 0.02	0.94	< 0.005	< 0.005	21	69	21.9	109.3	4.9	3.3	27.0	28.0	0.011	< 0.005	7.34	7.79	< 0.02
RAW	W2	< 0.02	0.20	< 0.005	< 0.005	53	151	26.0	93.4	3.6	3.9	21.3	32.1	0.014	0.010	8.41	8.96	< 0.02
RAW	W3	< 0.02	0.95	< 0.005	< 0.005	43	57	19.6	22.9	3.3	3.7	9.1	9.8	< 0.005	< 0.005	2.56	2.65	< 0.02
RAW	W4	< 0.02	1.22	< 0.005	0.006	31	61	67.7	109.8	4.0	3.8	23.4	26.7	0.008	0.010	3.83	3.99	< 0.02
RAW	W5	< 0.02	4.02	< 0.005	< 0.005	10	23	19.4	18.9	7.0	6.8	29.6	31.0	0.017	0.012	7.64	7.80	0.03
Lake Catcha Gold District (LC)																		
LC	W1	< 0.02	1.95	< 0.005	< 0.005	7	12	50.2	77.4	4.8	5.1	1.4	1.4	< 0.005	< 0.005	3.23	3.25	< 0.02
LC	W2	< 0.02	1.64	< 0.005	< 0.005	329	346	9.6	10.8	7.0	7.3	18.6	18.7	0.022	0.020	2.22	2.21	< 0.02
LC	W3	< 0.02	0.64	< 0.005	< 0.005	36	51	10.0	13.3	5.4	5.3	9.3	9.7	< 0.005	< 0.005	4.18	4.13	< 0.02
LC	W4	< 0.02	0.34	< 0.005	< 0.005	13	133	376.1	528.1	7.8	11.2	11.8	23.0	< 0.005	0.011	13.60	16.49	< 0.02
LC	W5	< 0.02	3.33	< 0.005	< 0.005	195	228	4.4	5.5	6.9	7.3	3.5	3.9	0.013	0.017	2.49	2.56	< 0.02
LC	W6	< 0.02	4.26	< 0.005	< 0.005	230	260	15.3	19.5	7.4	7.9	4.8	5.3	0.019	0.021	3.13	3.16	< 0.02
LC	W6-D	< 0.02	4.25	< 0.005	< 0.005	226	267	14.6	18.8	7.3	7.6	4.9	5.2	0.018	0.015	3.03	3.06	< 0.02
Lower Seal Harbour Gold District (LSH)																		
LSH	W1	< 0.02	1.69	< 0.005	< 0.005	551	576	26.2	27.4	6.0	6.4	3.8	4.2	0.036	0.036	2.02	1.96	0.03
LSH	W2	< 0.02	5.19	< 0.005	< 0.005	595	613	290.8	314.5	7.3	7.6	4.0	4.3	0.042	0.042	2.96	3.00	0.03
LSH	W4	< 0.02	1.63	< 0.005	< 0.005	421	451	257.1	265.1	5.4	5.3	3.3	3.4	0.021	0.027	1.11	1.11	< 0.02
LSH	W6	< 0.02	2.76	< 0.005	0.008	277	381	426.4	528.0	6.3	6.1	4.1	4.5	0.033	0.041	7.87	7.92	0.03
LSH	W7	< 0.02	2.83	< 0.005	< 0.005	280	342	335.6	452.0	6.9	6.1	4.0	4.4	0.031	0.036	7.80	8.12	< 0.02
LSH	W8	< 0.02	3.04	< 0.005	< 0.005	322	349	428.8	526.0	7.1	7.3	4.2	5.0	0.032	0.032	7.39	8.03	< 0.02
Mount Uniacke Gold District (UNI)																		
UNI	W1	< 0.02	77.01	< 0.005	0.044	5	719	380.1	2240.1	6.1	6.6	13.3	19.1	0.011	0.084	68.19	70.78	< 0.02
UNI	W2	< 0.02	1.74	< 0.005	< 0.005	32	69	47.5	73.4	5.4	5.8	6.1	7.2	< 0.005	0.007	4.15	4.19	< 0.02
UNI	W3	< 0.02	1.74	< 0.005	0.008	15	373	304.6	1649.7	7.0	8.0	42.9	60.1	0.007	0.134	11.60	12.70	0.06

Gold District	Sample Site	PO_4 Dionex mg/L 0.02 <0.45 µm	SO_4 Dionex mg/L 0.02 <0.45 µm	Ag ICP-MS µg/L 0.005 <0.45 µm	Ag ICP-MS µg/L 0.005 Unfiltered	Al ICP-MS µg/L 2 <0.45 µm	Al ICP-MS µg/L 2 Unfiltered	As ICP-MS µg/L 0.1 <0.45 µm	As ICP-MS µg/L 0.1 Unfiltered	B ICP-MS µg/L 0.5 <0.45 µm	B ICP-MS µg/L 0.5 Unfiltered	Ba ICP-MS µg/L 0.2 <0.45 µm	Ba ICP-MS µg/L 0.2 Unfiltered	Be ICP-MS µg/L 0.005 <0.45 µm	Be ICP-MS µg/L 0.005 Unfiltered	Ca ICP-ES mg/L 0.02 <0.45 µm	Ca ICP-ES mg/L 0.02 Unfiltered	Cd ICP-MS µg/L 0.02 <0.45 µm
UNI	W4	< 0.02	1.85	< 0.005	< 0.005	17	25	34.3	57.0	3.9	4.0	8.6	9.3	< 0.005	0.009	14.31	14.23	0.06
UNI	W5	< 0.02	2.15	< 0.005	< 0.005	2	19	23.5	183.0	5.7	6.1	9.7	7.9	< 0.005	< 0.005	14.30	14.79	< 0.02
North Brookfield Gold District (NB)																		
NB	W1	< 0.02	1.76	< 0.005	< 0.005	49	86	1.3	1.6	1.4	1.3	3.3	3.6	< 0.005	< 0.005	1.53	1.55	< 0.02
NB	W2	< 0.02	16.27	< 0.005	< 0.005	3	6	255.5	275.1	5.2	4.0	5.1	5.0	< 0.005	< 0.005	44.62	43.88	< 0.02
NB	W3	< 0.02	22.61	< 0.005	< 0.005	6	241	226.9	339.8	4.0	4.0	3.9	6.2	< 0.005	0.023	44.73	45.76	< 0.02
NB	W4	0.04	16.75	< 0.005	< 0.005	28	40	250.1	306.4	2.9	2.6	3.8	3.8	< 0.005	0.006	29.10	28.61	< 0.02
NB	W5	< 0.02	61.01	< 0.005	< 0.005	5	336	444.5	586.8	4.6	4.5	6.1	8.1	< 0.005	0.029	63.37	64.84	< 0.02
Salmon River (Dufferin) Gold District (SR)																		
SR	W1	< 0.02	3.51	< 0.005	< 0.005	25	30	12.6	13.4	5.2	5.7	7.3	8.0	0.005	< 0.005	2.29	2.28	< 0.02
SR	W2	< 0.02	1.29	< 0.005	< 0.005	11	16	16.2	27.6	3.7	3.7	4.6	5.2	< 0.005	< 0.005	9.96	9.84	< 0.02
SR	W3	< 0.02	0.31	< 0.005	< 0.005	< 2	< 2	307.4	297.8	3.6	3.2	16.8	16.4	< 0.005	< 0.005	16.43	16.20	< 0.02
SR	W4	< 0.02	0.18	< 0.005	< 0.005	< 2	< 2	123.4	168.7	4.7	4.0	45.0	40.7	< 0.005	< 0.005	21.54	21.14	< 0.02
SR	W5	< 0.02	6.40	< 0.005	< 0.005	33	34	145.7	144.2	5.0	4.9	4.0	3.9	0.010	0.018	7.49	7.45	< 0.02
SR	W6	< 0.02	2.18	< 0.005	< 0.005	44	55	5.4	7.6	4.2	3.8	4.4	4.6	0.005	< 0.005	3.72	3.68	< 0.02
SR	W7	< 0.02	2.47	< 0.005	< 0.005	37	50	88.4	153.5	4.1	4.1	2.6	3.3	< 0.005	0.006	3.60	3.60	< 0.02
SR	W8	< 0.02	4.38	< 0.005	< 0.005	12	15	510.7	556.3	3.9	4.2	5.6	6.6	< 0.005	< 0.005	3.12	3.08	< 0.02
SR	W9	< 0.02	1.28	< 0.005	< 0.005	63	117	4918.9	6649.3	6.0	6.6	1.5	1.5	0.005	0.007	0.75	0.79	0.02
Upper Seal Harbour Gold District (USH)																		
USH	W4(03)	< 0.02	1.72	< 0.005	< 0.005	310	335	37.8	51.5	4.5	4.5	2.6	2.7	0.020	0.020	0.56	0.56	< 0.02
USH	W13	< 0.02	1.73	< 0.005	< 0.005	297	313	89.7	95.9	4.4	4.5	2.6	2.7	0.015	0.021	0.96	0.95	< 0.02
USH	W14	0.05	0.82	< 0.005	< 0.005	96	178	6245.2	9484.6	4.3	3.9	0.6	1.5	0.006	0.014	2.38	2.52	< 0.02
USH	W18	< 0.02	1.70	< 0.005	< 0.005	310	343	29.2	41.0	4.5	5.0	2.6	2.8	0.020	0.021	0.55	0.55	< 0.02
USH	W19	< 0.02	11.88	< 0.005	0.007	14	78	327.2	858.4	8.6	9.4	29.8	33.5	0.007	0.019	6.50	6.38	0.05
USH	W20	< 0.02	1.73	< 0.005	< 0.005	300	302	3.1	4.1	4.3	4.9	2.6	2.9	0.024	0.018	0.53	0.55	< 0.02
Whiteburn Gold District (WB)																		
WHI	W1	< 0.02	2.71	< 0.005	< 0.005	181	301	3.7	4.1	3.5	4.0	3.5	4.6	0.012	0.020	1.52	1.53	0.03
WHI	W2	< 0.02	1.14	< 0.005	< 0.005	100	137	34.4	36.3	3.7	4.0	1.6	1.9	0.014	0.017	0.99	1.00	< 0.02
WHI	W3	< 0.02	22.53	< 0.005	0.012	7	1060	2490.2	6354.4	7.5	7.3	21.1	30.1	0.011	0.140	26.40	27.29	< 0.02
WHI	W4	< 0.02	3.40	< 0.005	< 0.005	133	228	52.7	82.2	4.3	4.7	2.0	2.5	0.008	0.014	1.64	1.68	0.03
WHI	W5	< 0.02	5.43	< 0.005	0.011	73	139	208.6	345.1	6.1	6.3	8.4	11.0	0.008	0.008	5.10	5.14	0.03
WHI	W6	< 0.02	2.55	< 0.005	< 0.005	138	208	19.2	26.2	4.7	4.6	4.1	4.9	0.007	0.012	1.55	1.53	0.04
WHI	W6-D	< 0.02	2.89	< 0.005	< 0.005	142	223	19.3	25.9	5.0	4.8	4.4	4.8	0.009	0.012	1.56	1.52	0.04
Upper / Lower Seal Harbour (SH-S) May 2004																		
SH-S	W1	< 0.02	2.67	< 0.005	< 0.005	236	232	1.0	1.0	3.7	3.5	2.1	2.2	0.012	0.006	1.16	1.17	< 0.02
SH-S	W2	< 0.02	2.64	< 0.005	< 0.005	204	206	11.0	11.0	3.9	3.8	2.3	2.4	0.018	0.013	1.63	1.65	< 0.02

Gold District	Sample Site	PO_4 Dionex mg/L 0.02 <0.45 µm	SO_4 Dionex mg/L 0.02 <0.45 µm	Ag ICP-MS µg/L 0.005 <0.45 µm	Ag ICP-MS µg/L 0.005 Unfiltered	Al ICP-MS µg/L 2 <0.45 µm	Al ICP-MS µg/L 2 Unfiltered	As ICP-MS µg/L 0.1 <0.45 µm	As ICP-MS µg/L 0.1 Unfiltered	B ICP-MS µg/L 0.5 <0.45 µm	B ICP-MS µg/L 0.5 Unfiltered	Ba ICP-MS µg/L 0.2 <0.45 µm	Ba ICP-MS µg/L 0.2 Unfiltered	Be ICP-MS µg/L 0.005 <0.45 µm	Be ICP-MS µg/L 0.005 Unfiltered	Ca ICP-ES mg/L 0.02 <0.45 µm	Ca ICP-ES mg/L 0.02 Unfiltered	Cd ICP-MS µg/L 0.02 <0.45 µm
SH-S	W3	< 0.02	4.31	0.007	< 0.005	183	187	97.7	99.7	4.8	5.0	1.7	2.6	0.021	0.017	3.31	3.31	< 0.02
SH-S	W4	< 0.02	2.07	< 0.005	< 0.005	212	213	107.9	110.0	3.4	3.5	2.4	2.4	0.021	0.011	0.76	0.75	< 0.02
SH-S	W5	< 0.02	2.12	< 0.005	< 0.005	209	213	100.2	114.4	3.7	3.7	2.4	2.5	0.014	0.013	0.97	0.99	< 0.02
SH-S	W6	< 0.02	4.53	< 0.005	< 0.005	116	123	225.3	243.2	4.2	4.2	3.3	3.3	0.014	0.008	6.17	6.17	< 0.02
SH-S	W7	< 0.02	4.53	< 0.005	< 0.005	113	120	217.8	237.8	4.3	4.4	3.4	3.3	0.013	0.015	6.29	6.27	< 0.02
SH-S	W8	< 0.02	4.29	< 0.005	< 0.005	129	132	192.8	202.7	5.4	5.3	2.9	3.0	0.020	0.013	4.80	4.81	< 0.02
SH-S	W9	< 0.02	2.14	< 0.005	< 0.005	214	215	103.1	115.1	3.8	3.7	2.6	2.5	0.014	0.015	0.90	0.91	< 0.02
SH-S	W9-D1	< 0.02	2.24	< 0.005	< 0.005	203	206	111.8	114.7	3.5	3.6	2.5	2.5	0.011	0.016	1.00	1.02	< 0.02
SH-S	W9-D2	< 0.02	2.22	< 0.005	< 0.005	202	205	110.3	114.6	3.6	3.7	2.4	2.5	0.020	0.016	0.98	0.98	< 0.02
SH-S	W9-D3	< 0.02	2.23	< 0.005	< 0.005	204	207	111.7	115.0	3.5	3.5	2.4	2.5	0.011	0.013	0.95	0.97	< 0.02
SH-S	W10	< 0.02	2.10	< 0.005	< 0.005	209	212	136.6	152.7	3.4	3.3	2.1	2.1	0.010	0.015	0.74	0.74	< 0.02
SH-S	W11	< 0.02	2.12	< 0.005	< 0.005	199	206	92.5	104.0	3.3	3.4	2.0	2.1	0.016	0.008	0.87	0.87	< 0.02
SH-S	W12	< 0.02	2.15	< 0.005	< 0.005	196	206	86.0	98.0	3.3	3.4	2.0	2.1	0.008	0.012	0.89	0.89	< 0.02
SH-S	W13	< 0.02	2.12	< 0.005	< 0.005	199	210	73.8	89.1	3.4	3.3	2.0	3.0	0.010	0.012	0.95	0.95	< 0.02
SH-S	W14	< 0.02	2.13	< 0.005	< 0.005	204	213	83.6	97.4	3.3	3.2	2.2	2.2	0.012	0.011	0.58	0.58	< 0.02
SH-S	W15	< 0.02	6.65	< 0.005	< 0.005	83	88	67.3	77.9	5.9	5.6	2.4	2.5	0.008	< 0.005	2.65	2.66	< 0.02
SH-S	W16	< 0.02	2.00	< 0.005	< 0.005	173	172	0.2	0.2	3.3	3.2	1.7	1.7	0.013	0.013	0.40	0.41	< 0.02
SH-S	W17	< 0.02	2.70	< 0.005	< 0.005	193	196	861.5	856.4	5.1	4.9	2.2	2.2	0.012	0.007	0.71	0.70	< 0.02
SH-S	W17-D	< 0.02	2.67	< 0.005	< 0.005	195	193	847.1	852.2	4.8	5.0	2.1	2.1	0.012	0.010	0.69	0.70	< 0.02
SH-S	W18	< 0.02	1.85	< 0.005	< 0.005	222	219	9.8	9.0	3.1	3.2	2.1	2.1	0.018	0.017	0.48	0.48	< 0.02
SH-S	W19	< 0.02	13.46	< 0.005	< 0.005	5	9	2165.8	2561.4	7.4	7.1	9.6	11.3	< 0.005	< 0.005	10.89	10.92	< 0.02
SH-S	W20	< 0.02	1.89	< 0.005	< 0.005	221	226	1.8	1.9	3.2	3.1	2.0	2.1	0.032	0.019	0.47	0.47	< 0.02
SH-S	W21	< 0.02	2.12	< 0.005	< 0.005	217	225	37.2	42.0	3.7	3.9	2.3	2.4	0.012	0.019	0.70	0.70	< 0.02
SH-S	W22	< 0.02	3.10	< 0.005	< 0.005	241	248	2.9	3.3	4.4	4.5	2.7	2.7	0.018	0.016	1.01	1.01	< 0.02
SH-S	W23	< 0.02	2.19	< 0.005	< 0.005	206	217	101.0	116.7	3.6	3.7	2.4	2.5	0.012	0.013	0.88	0.89	< 0.02
SH-S	W24	< 0.02	2.23	< 0.005	< 0.005	209	213	102.5	116.3	3.7	3.5	2.5	2.5	0.016	0.013	0.91	0.91	< 0.02
SH-S	W25	< 0.02	2.15	< 0.005	< 0.005	197	201	146.4	152.5	3.2	3.2	2.4	2.3	0.014	0.015	0.79	0.78	< 0.02
Upper / Lower Seal Harbour (SH-S) August 2004																		
SH-S	W1	< 0.02	1.71	< 0.005	< 0.005	465	461	1.7	1.6	4.6	4.6	2.8	2.8	0.020	0.026	1.70	1.70	0.02
SH-S	W1D	< 0.02	1.70	< 0.005	< 0.005	467	455	1.8	1.6	5.0	5.1	2.8	2.8	0.021	0.031	1.71	1.68	< 0.02
SH-S	W2	< 0.02	1.47	< 0.005	< 0.005	448	443	19.8	19.4	4.9	5.4	3.4	3.4	0.028	0.036	2.62	2.62	0.02
SH-S	W3	< 0.02	2.43	< 0.005	0.005	445	451	241.2	261.6	6.6	6.4	5.1	5.1	0.043	0.042	5.30	5.28	0.03

Gold District	Sample Site	PO_4 Dionex mg/L 0.02 <0.45 µm	SO_4 Dionex mg/L 0.02 <0.45 µm	Ag ICP-MS µg/L 0.005 <0.45 µm	Ag ICP-MS µg/L 0.005 Unfiltered	Al ICP-MS µg/L 2 <0.45 µm	Al ICP-MS µg/L 2 Unfiltered	As ICP-MS µg/L 0.1 <0.45 µm	As ICP-MS µg/L 0.1 Unfiltered	B ICP-MS µg/L 0.5 <0.45 µm	B ICP-MS µg/L 0.5 Unfiltered	Ba ICP-MS µg/L 0.2 <0.45 µm	Ba ICP-MS µg/L 0.2 Unfiltered	Be ICP-MS µg/L 0.005 <0.45 µm	Be ICP-MS µg/L 0.005 Unfiltered	Ca ICP-ES mg/L 0.02 <0.45 µm	Ca ICP-ES mg/L 0.02 Unfiltered	Cd ICP-MS µg/L 0.02 <0.45 µm
SH-S	W4	< 0.02	1.59	< 0.005	< 0.005	295	297	477.0	482.4	4.9	4.8	2.6	2.5	0.016	0.032	1.21	1.22	< 0.02
SH-S	W5	< 0.02	1.66	< 0.005	< 0.005	289	300	460.0	486.2	4.4	4.5	2.6	2.7	0.021	0.021	1.53	1.54	< 0.02
SH-S	W6	< 0.02	2.47	< 0.005	< 0.005	189	228	453.4	558.1	5.8	5.9	3.3	3.6	0.035	0.024	9.10	9.24	< 0.02
SH-S	W7	< 0.02	2.33	< 0.005	< 0.005	176	215	377.2	477.5	5.9	5.6	2.8	3.0	0.022	0.028	9.31	9.34	< 0.02
SH-S	W8	0.02	2.38	< 0.005	< 0.005	165	228	347.2	515.3	6.6	6.2	2.8	3.5	0.026	0.021	8.18	8.31	< 0.02
SH-S	W9	< 0.02	1.56	< 0.005	< 0.005	279	299	444.9	478.4	4.9	4.5	2.6	2.6	0.010	0.017	1.42	1.42	< 0.02
SH-S	W9D1	< 0.02	1.58	< 0.005	< 0.005	286	296	463.6	484.3	4.9	4.4	2.6	2.6	0.026	0.021	1.43	1.45	< 0.02
SH-S	W9D2	< 0.02	1.53	< 0.005	< 0.005	286	297	479.3	498.9	5.0	4.8	2.6	2.6	0.016	0.018	1.43	1.44	< 0.02
SH-S	W9D3	< 0.02	1.59	< 0.005	< 0.005	263	289	447.9	495.8	5.0	5.1	2.4	2.7	0.014	0.029	1.44	1.47	< 0.02
SH-S	W10	< 0.02	1.68	< 0.005	< 0.005	248	252	604.2	621.7	4.1	4.4	2.1	2.1	0.024	0.023	0.91	0.89	< 0.02
SH-S	W11	< 0.02	1.76	< 0.005	< 0.005	220	234	361.8	385.0	4.3	4.3	2.0	2.1	0.012	0.011	1.00	1.00	< 0.02
SH-S	W12	< 0.02	1.81	< 0.005	< 0.005	212	228	322.0	348.8	4.2	4.0	2.0	2.3	0.021	0.015	0.97	0.95	< 0.02
SH-S	W13	< 0.02	1.87	< 0.005	< 0.005	245	231	230.4	206.0	4.1	4.3	2.2	2.2	0.014	0.015	1.04	1.04	< 0.02
SH-S	W14	< 0.02	1.79	< 0.005	< 0.005	239	246	314.7	321.7	4.1	4.3	2.3	2.3	0.021	0.018	0.68	0.67	< 0.02
SH-S	W15	< 0.02	4.50	< 0.005	< 0.005	127	150	264.8	290.9	6.9	7.2	2.0	2.2	0.028	0.018	4.08	4.10	< 0.02
SH-S	W15D	< 0.02	4.53	< 0.005	< 0.005	131	150	268.7	292.3	6.8	7.0	2.0	2.3	< 0.005	0.010	4.09	4.11	< 0.02
SH-S	W16	< 0.02	1.39	< 0.005	< 0.005	317	313	0.5	0.4	4.7	4.7	2.3	2.3	0.024	0.015	0.56	0.56	< 0.02
SH-S	W17	< 0.02	1.69	< 0.005	< 0.005	346	352	3441.7	3464.2	7.2	7.1	2.1	2.2	0.031	0.011	1.56	1.57	< 0.02
SH-S	W18	< 0.02	1.77	< 0.005	< 0.005	258	267	23.1	24.0	4.0	4.0	2.2	2.2	0.027	0.021	0.58	0.58	< 0.02
SH-S	W19	< 0.02	7.20	< 0.005	0.011	4	46	1082.0	3357.8	10.1	10.9	17.2	27.7	< 0.005	0.024	6.92	7.05	< 0.02
SH-S	W20	< 0.02	1.69	< 0.005	< 0.005	259	261	3.5	3.1	4.1	4.1	2.2	2.2	0.023	0.022	0.59	0.58	< 0.02
SH-S	W21	< 0.02	1.47	< 0.005	< 0.005	353	357	138.5	144.2	4.6	4.8	2.4	2.4	0.015	0.025	1.08	1.10	< 0.02
SH-S	W22	< 0.02	1.74	< 0.005	< 0.005	382	378	5.5	5.2	5.1	5.2	3.2	3.1	0.027	0.029	1.35	1.36	< 0.02
SH-S	W23	< 0.02	1.44	< 0.005	< 0.005	296	303	473.5	482.6	4.9	4.6	2.6	2.6	0.016	0.023	1.39	1.39	< 0.02
SH-S	W24	< 0.02	1.63	< 0.005	< 0.005	291	300	467.6	481.1	4.7	4.8	2.6	2.7	0.008	0.016	1.41	1.43	< 0.02
SH-S	W25	< 0.02	1.51	< 0.005	< 0.005	229	259	524.2	589.4	4.6	4.7	2.2	2.3	0.010	0.011	1.07	1.07	< 0.02
SH-S	W51	< 0.2	327.97	< 0.05	< 0.05	157	223	314.9	380.0	459.5	431.7	2.9	3.0	< 0.05	0.033	45.71	45.87	< 0.2
Upper / Lower Seal Harbour (SH-S) November 2004																		
SH-S	W1	< 0.02	2.96	< 0.005	< 0.005	444	446	1.6	1.6	3.9	3.8	3.8	3.8	0.037	0.023	1.60	1.61	0.03
SH-S	W2	< 0.02	3.02	< 0.005	< 0.005	416	416	10.5	10.8	3.9	4.0	3.9	3.8	0.034	0.048	2.76	2.77	0.03
SH-S	W3	< 0.02	4.10	< 0.005	< 0.005	386	385	76.9	79.8	5.2	5.0	4.5	4.6	0.056	0.030	4.67	4.72	0.03
SH-S	W3D	< 0.02	4.25	< 0.005	< 0.005	384	388	76.1	78.6	5.1	5.1	4.5	4.6	0.024	0.034	4.69	4.72	0.03
SH-S	W4	< 0.02	2.27	< 0.005	< 0.005	333	330	132.6	138.9	4.5	4.4	3.4	3.4	0.020	0.013	1.48	1.48	0.02
SH-S	W5	< 0.02	2.56	< 0.005	< 0.005	328	331	131.2	140.6	4.5	4.6	3.4	3.5	0.023	0.022	1.91	1.93	< 0.02

Gold District	Sample Site	PO4 Dionex mg/L 0.02 <0.45 µm	SO4 Dionex mg/L 0.02 <0.45 µm	Ag ICP-MS µg/L 0.005 <0.45 µm	Ag ICP-MS µg/L 0.005 Unfiltered	Al ICP-MS µg/L 2 <0.45 µm	Al ICP-MS µg/L 2 Unfiltered	As ICP-MS µg/L 0.1 <0.45 µm	As ICP-MS µg/L 0.1 Unfiltered	B ICP-MS µg/L 0.5 <0.45 µm	B ICP-MS µg/L 0.5 Unfiltered	Ba ICP-MS µg/L 0.2 <0.45 µm	Ba ICP-MS µg/L 0.2 Unfiltered	Be ICP-MS µg/L 0.005 <0.45 µm	Be ICP-MS µg/L 0.005 Unfiltered	Ca ICP-ES mg/L 0.02 <0.45 µm	Ca ICP-ES mg/L 0.02 Unfiltered	Cd ICP-MS µg/L 0.02 <0.45 µm
SH-S	W6	< 0.02	4.87	< 0.005	< 0.005	281	283	121.3	135.9	4.7	4.8	3.8	3.7	0.023	0.035	6.44	6.46	0.02
SH-S	W7	< 0.02	4.67	< 0.005	< 0.005	292	296	117.1	127.3	4.5	4.8	3.9	4.0	0.015	0.030	6.43	6.54	0.02
SH-S	W8	< 0.02	4.74	< 0.005	< 0.005	310	314	131.2	145.6	5.0	4.9	4.0	4.0	0.027	0.035	6.47	6.45	0.02
SH-S	W9	< 0.02	2.46	< 0.005	< 0.005	315	330	138.1	147.3	5.7	4.6	3.4	3.5	0.022	0.030	1.80	1.79	0.24
SH-S	W9D1	< 0.02	2.59	< 0.005	< 0.005	326	336	134.2	142.1	5.0	4.6	3.6	3.5	0.030	0.027	1.70	1.73	< 0.02
SH-S	W9D2	< 0.02	2.33	< 0.005	< 0.005	326	330	134.4	138.4	4.8	4.5	3.5	3.5	0.019	0.038	1.65	1.65	< 0.02
SH-S	W10	< 0.02	2.15	< 0.005	< 0.005	309	318	91.7	117.6	4.5	4.2	2.8	2.9	0.026	0.023	1.12	1.11	< 0.02
SH-S	W10D	< 0.02	2.23	< 0.005	< 0.005	311	320	100.6	108.5	4.2	4.3	2.7	2.9	0.026	0.036	1.12	1.12	< 0.02
SH-S	W11	< 0.02	2.15	< 0.005	< 0.005	324	325	66.5	70.6	4.4	4.3	2.9	3.0	0.010	0.035	1.20	1.17	< 0.02
SH-S	W12	< 0.02	2.51	< 0.005	< 0.005	326	324	64.0	68.5	4.3	4.4	3.1	3.0	0.028	0.020	1.17	1.17	< 0.02
SH-S	W13	< 0.02	2.15	< 0.005	< 0.005	327	335	41.0	49.0	4.6	4.3	3.3	3.1	0.024	0.050	1.17	1.19	< 0.02
SH-S	W14	< 0.02	2.40	< 0.005	< 0.005	331	338	43.1	54.3	4.6	4.4	3.0	3.1	0.019	0.021	0.84	0.83	0.02
SH-S	W15	< 0.02	4.83	< 0.005	< 0.005	150	154	77.4	87.0	6.0	6.0	2.9	3.0	0.015	0.016	3.11	3.17	< 0.02
SH-S	W16	< 0.02	2.08	< 0.005	< 0.005	326	335	0.3	0.3	3.6	3.5	3.2	3.3	0.033	0.024	0.69	0.68	0.06
SH-S	W17	< 0.02	2.61	< 0.005	< 0.005	418	418	363.1	388.6	4.6	4.5	3.9	4.0	0.029	0.024	1.04	1.03	0.03
SH-S	W18	< 0.02	2.00	< 0.005	< 0.005	341	348	9.9	13.0	4.5	4.3	3.0	3.0	0.018	0.017	0.75	0.76	< 0.02
SH-S	W19	< 0.02	11.10	< 0.005	< 0.005	51	78	188.6	291.0	6.9	7.1	34.5	34.6	0.015	0.030	6.07	6.05	1.36
SH-S	W20	< 0.02	2.06	< 0.005	< 0.005	324	342	4.4	8.1	4.3	4.3	2.9	3.0	0.018	0.019	0.81	0.75	0.05
SH-S	W21	< 0.02	2.59	< 0.005	< 0.005	378	381	69.9	74.2	4.4	4.4	4.0	4.1	0.016	0.052	1.40	1.43	0.04
SH-S	W22	< 0.02	3.05	< 0.005	< 0.005	397	392	5.5	5.6	4.4	4.3	3.9	3.9	0.030	0.036	1.44	1.42	0.03
SH-S	W23	< 0.02	2.31	< 0.005	< 0.005	329	332	140.8	147.0	4.7	4.4	3.5	3.6	0.026	0.028	1.77	1.77	0.05
SH-S	W24	< 0.02	2.49	< 0.005	< 0.005	303	306	137.0	138.8	4.8	4.5	3.4	3.4	0.028	0.027	2.00	2.01	0.04
SH-S	W25	< 0.02	2.28	< 0.005	< 0.005	318	327	107.0	111.9	4.3	4.5	2.9	3.0	0.030	0.028	1.18	1.17	0.07
Upper / Lower Seal Harbour (SH-S) August 2005																		
SH-S	W1	< 0.02	2.85	< 0.005	< 0.005	192	197	1.6	1.6	5.3	5.0	1.6	1.6	0.012	< 0.005	3.36	3.40	< 0.02
SH-S	W2	< 0.02	2.59	< 0.005	< 0.005	132	144	23.6	26.1	5.8	5.8	3.1	3.2	0.007	0.018	4.06	4.10	< 0.02
SH-S	W3	< 0.02	6.84	< 0.005	< 0.005	66	118	111.5	277.4	9.7	9.2	5.4	5.5	0.011	0.018	8.21	8.41	< 0.02
SH-S	W4	< 0.02	2.00	< 0.005	< 0.005	127	177	425.7	522.5	4.8	5.1	1.3	1.4	0.014	0.015	0.99	1.01	< 0.02
SH-S	W5	< 0.02	2.17	< 0.005	< 0.005	151	174	450.3	503.8	5.4	4.8	1.5	1.6	0.012	0.013	1.53	1.54	< 0.02
SH-S	W6	< 0.02	8.84	< 0.005	< 0.005	40	65	454.2	719.6	9.1	9.3	3.4	3.7	0.018	0.025	19.06	19.29	< 0.02
SH-S	W7	< 0.02	4.84	< 0.005	< 0.005	17	27	398.1	656.5	9.3	8.9	2.1	2.3	0.010	0.009	21.10	21.27	< 0.02
SH-S	W8	< 0.02	3.47	< 0.005	< 0.005	35	54	509.1	791.1	9.7	10.4	3.7	4.0	0.005	< 0.005	14.09	14.12	< 0.02
SH-S	W9	< 0.02	2.21	< 0.005	< 0.005	128	155	469.0	535.0	5.2	5.2	1.3	1.4	0.016	0.014	1.65	1.69	< 0.02
SH-S	W9D1	0.20	3.09	< 0.005	< 0.005	100	99	346.9	396.8	4.7	4.8	1.0	0.9	0.010	0.006	2.72	2.66	< 0.02

Gold District	Sample Site	PO_4 Dionex mg/L 0.02 <0.45 µm	SO_4 Dionex mg/L 0.02 <0.45 µm	Ag ICP-MS µg/L 0.005 <0.45 µm	Ag ICP-MS µg/L 0.005 Unfiltered	Al ICP-MS µg/L 2 <0.45 µm	Al ICP-MS µg/L 2 Unfiltered	As ICP-MS µg/L 0.1 <0.45 µm	As ICP-MS µg/L 0.1 Unfiltered	B ICP-MS µg/L 0.5 <0.45 µm	B ICP-MS µg/L 0.5 Unfiltered	Ba ICP-MS µg/L 0.2 <0.45 µm	Ba ICP-MS µg/L 0.2 Unfiltered	Be ICP-MS µg/L 0.005 <0.45 µm	Be ICP-MS µg/L 0.005 Unfiltered	Ca ICP-ES mg/L 0.02 <0.45 µm	Ca ICP-ES mg/L 0.02 Unfiltered	Cd ICP-MS µg/L 0.02 <0.45 µm
SH-S	W9D2	< 0.02	4.40	< 0.005	< 0.005	203	231	341.3	392.7	6.3	6.2	2.6	2.8	0.014	0.017	3.13	3.14	< 0.02
SH-S	W10	< 0.02	4.54	< 0.005	< 0.005	105	183	3880.1	4406.0	6.1	5.9	1.2	1.7	0.012	0.023	1.62	1.64	0.03
SH-S	W10D	< 0.02	4.27	< 0.005	< 0.005	111	180	3853.5	4604.0	5.6	6.2	1.3	1.6	0.017	0.025	1.61	1.63	0.03
SH-S	W11	< 0.02	2.49	< 0.005	< 0.005	105	120	617.9	691.7	3.9	4.0	1.7	1.9	0.011	0.008	1.32	1.34	< 0.02
SH-S	W12	< 0.02	2.56	< 0.005	< 0.005	87	137	588.4	750.0	4.4	3.9	1.6	1.9	0.007	< 0.005	1.20	1.22	< 0.02
SH-S	W13	< 0.02	2.42	< 0.005	< 0.005	107	139	550.9	631.8	4.0	4.5	1.5	1.7	0.018	< 0.005	1.22	1.24	< 0.02
SH-S	W14	< 0.02	2.32	< 0.005	< 0.005	122	155	936.9	1284.2	3.9	4.0	2.0	2.4	0.010	0.008	1.23	1.26	< 0.02
SH-S	W15	< 0.02	5.72	< 0.005	< 0.005	53	60	118.5	131.5	8.6	8.5	1.1	1.1	0.009	0.010	4.09	4.09	< 0.02
SH-S	W16	< 0.02	3.24	< 0.005	< 0.005	629	688	0.6	0.7	5.2	5.6	5.7	6.1	0.043	0.042	1.02	1.02	0.04
SH-S	W17	< 0.02	4.19	< 0.005	< 0.005	296	346	3147.2	3188.3	6.2	6.6	1.8	2.1	0.021	0.014	1.04	1.02	< 0.02
SH-S	W18	< 0.02	2.48	< 0.005	< 0.005	149	176	158.7	188.7	3.6	4.0	2.0	2.3	0.014	0.014	0.66	0.67	< 0.02
SH-S	W19	< 0.02	9.40	< 0.005	< 0.005	4	37	787.9	2614.2	11.6	11.4	18.1	26.9	< 0.005	0.010	6.80	6.73	< 0.02
SH-S	W20	< 0.02	2.27	< 0.005	< 0.005	165	178	5.9	6.7	4.1	4.2	2.0	2.0	0.013	0.024	0.49	0.49	< 0.02
SH-S	W21	< 0.02	2.29	< 0.005	< 0.005	218	259	151.0	182.6	5.4	5.9	2.2	2.4	0.012	0.023	1.11	1.11	< 0.02
SH-S	W22	0.03	5.13	< 0.005	< 0.005	659	668	8.1	8.1	8.2	8.1	4.8	5.0	0.049	0.033	1.37	1.35	0.03
SH-S	W23	< 0.02	4.33	< 0.005	< 0.005	188	215	388.3	426.3	6.0	6.3	2.6	2.7	0.022	0.019	3.13	3.14	< 0.02
SH-S	W24	< 0.02	4.45	< 0.005	< 0.005	208	232	342.6	396.8	6.2	6.3	2.7	2.9	0.010	0.016	3.20	3.18	< 0.02
SH-S	W25	< 0.02	2.43	< 0.005	< 0.005	113	156	593.9	794.2	5.2	4.9	1.9	2.3	0.006	0.013	1.17	1.18	< 0.02
SH-S	W25D	< 0.02	2.38	< 0.005	< 0.005	107	152	576.1	799.2	5.5	5.3	1.9	2.2	0.013	0.008	1.17	1.18	< 0.02
Statistics	**Min.**	<0.02	0.18	<0.005	<0.005	<2	<2	0.2	0.2	1.4	1.3	0.6	0.9	<0.005	<0.005	0.40	0.41	<0.02
	Max.	0.20	327.97	0.007	0.044	2746	6116	6575.9	9484.6	459.5	431.7	45.0	60.1	0.763	0.863	114.79	113.18	4.14
	Mean	0.06	10.01	0.007	0.012	210	302	389.2	541.5	7.7	7.6	5.3	6.3	0.023	0.033	6.39	6.46	0.20
	Median	0.03	2.42	0.007	0.008	197	219	117.1	138.4	4.7	4.6	3.0	3.1	0.016	0.018	1.70	1.70	0.03
	n	6	181	1	10	179	179	181	181	181	181	181	181	158	160	181	181	48
	Std Dev	0.06	40.31	0.000	0.011	234	577	929.3	1266.8	33.7	31.7	7.0	9.2	0.060	0.088	14.47	14.54	0.68
	95th pctl	0.16	16.75	0.007	0.029	444	472	1082.0	3188.3	9.1	9.3	21.1	30.1	0.036	0.048	26.40	27.29	0.97
	90th pctl	0.12	6.84	0.007	0.015	358	388	588.4	852.2	7.3	7.3	9.7	11.3	0.031	0.036	11.60	12.70	0.06
	75th pctl	0.04	4.26	0.007	0.011	296	326	376.1	481.1	5.8	5.9	4.4	4.7	0.023	0.027	5.10	5.14	0.04
	50th pctl	0.03	2.42	0.007	0.008	197	219	117.1	138.4	4.7	4.6	3.0	3.1	0.016	0.018	1.70	1.70	0.03
	25th pctl	0.02	1.85	0.007	0.006	88	137	26.0	36.3	4.1	4.0	2.2	2.4	0.011	0.013	1.04	1.04	0.02

Gold District	Sample Site	Cd ICP-MS µg/L 0.02 Unfiltered	Ce ICP-MS µg/L 0.01 <0.45 µm	Ce ICP-MS µg/L 0.01 Unfiltered	Co ICP-MS µg/L 0.05 <0.45 µm	Co ICP-MS µg/L 0.05 Unfiltered	Cr ICP-MS µg/L 0.1 <0.45 µm	Cr ICP-MS µg/L 0.1 Unfiltered	Cs ICP-MS µg/L 0.01 <0.45 µm	Cs ICP-MS µg/L 0.01 Unfiltered	Cu ICP-MS µg/L 0.1 <0.45 µm	Cu ICP-MS µg/L 0.1 Unfiltered	Dy ICP-MS µg/L 0.005 <0.45 µm	Dy ICP-MS µg/L 0.005 Unfiltered	Er ICP-MS µg/L 0.005 <0.45 µm	Er ICP-MS µg/L 0.005 Unfiltered	Eu ICP-MS µg/L 0.005 <0.45 µm	Eu ICP-MS µg/L 0.005 Unfiltered	Fe ICP-ES mg/L 0.005 <0.45 µm
Cochrane Hill Gold District (CH)																			
CH	W1	< 0.02	0.07	0.08	< 0.05	0.06	< 0.1	< 0.1	0.01	0.01	0.3	0.3	0.016	0.015	0.006	0.007	< 0.005	0.005	0.121
CH	W2	0.03	0.09	0.11	0.11	0.12	0.1	0.1	0.02	0.02	0.3	0.5	0.017	0.019	0.012	0.009	< 0.005	0.008	0.232
CH	W3	0.03	0.14	0.17	0.42	0.44	0.1	0.2	0.03	0.03	0.5	0.5	0.016	0.018	0.010	0.012	0.006	0.007	0.542
CH	W4	< 0.02	0.05	0.05	0.06	0.06	< 0.1	< 0.1	< 0.01	< 0.01	0.2	0.2	0.007	0.008	< 0.005	< 0.005	< 0.005	< 0.005	0.147
CH	W5	0.06	0.17	0.22	0.60	0.63	0.2	0.2	0.04	0.04	0.5	0.7	0.020	0.025	0.009	0.014	0.006	0.008	0.566
CH	W6	< 0.02	0.06	0.05	0.26	0.24	< 0.1	0.1	0.01	0.01	0.2	0.2	0.009	0.008	< 0.005	< 0.005	< 0.005	< 0.005	0.287
CH	W6-D	< 0.02	0.05	0.05	0.27	0.27	0.1	0.2	0.01	0.01	0.2	0.2	0.007	0.006	0.009	< 0.005	0.005	< 0.005	0.281
CH	W7	< 0.02	0.06	0.21	0.89	1.04	0.3	0.4	0.03	0.04	0.6	0.4	0.011	0.015	< 0.005	0.007	< 0.005	< 0.005	0.810
CH	W8	4.14	13.26	13.58	74.29	76.86	0.2	0.3	0.03	0.04	15.6	17.1	0.645	0.616	0.244	0.256	0.210	0.215	0.179
CH	W9	< 0.02	0.05	0.05	0.22	0.21	0.1	0.1	0.01	0.01	0.2	0.3	0.010	0.008	< 0.005	< 0.005	< 0.005	< 0.005	0.313
CH	W10	1.51	0.58	23.51	12.20	22.19	0.6	15.8	0.04	0.98	0.3	14.3	0.047	0.860	0.021	0.285	0.017	0.414	21.275
CH	W11	0.05	0.19	1.42	7.20	8.48	0.3	0.5	0.05	0.05	0.3	1.0	0.017	0.069	0.011	0.028	0.006	0.026	5.214
CH	W12	2.80	11.94	23.18	51.87	63.50	< 0.1	5.9	0.11	0.93	0.3	8.0	0.408	0.853	0.151	0.309	0.127	0.280	0.986
East Rawdon Gold District (RAW)																			
RAW	W1	< 0.02	0.04	0.12	1.97	1.50	< 0.1	0.1	< 0.01	< 0.01	0.4	0.4	0.005	0.011	0.007	0.008	< 0.005	< 0.005	0.185
RAW	W2	< 0.02	0.14	0.57	3.75	5.23	0.1	0.4	< 0.01	< 0.01	0.3	0.5	0.015	0.044	0.009	0.023	< 0.005	0.013	0.725
RAW	W3	< 0.02	0.06	0.10	0.10	0.14	0.1	0.2	< 0.01	< 0.01	0.3	0.4	0.009	0.010	< 0.005	< 0.005	< 0.005	< 0.005	0.376
RAW	W4	< 0.02	0.09	0.20	0.51	0.56	< 0.1	0.2	< 0.01	< 0.01	0.9	1.3	0.008	0.015	0.007	0.008	< 0.005	0.006	0.496
RAW	W5	0.03	0.04	0.09	0.20	0.23	< 0.1	0.2	< 0.01	< 0.01	0.5	0.6	0.061	0.088	0.031	0.048	0.015	0.027	0.064
Lake Catcha Gold District (LC)																			
LC	W1	< 0.02	< 0.01	0.02	0.07	0.11	< 0.1	< 0.1	< 0.01	< 0.01	0.3	0.4	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.250
LC	W2	< 0.02	0.25	0.27	2.23	2.33	0.3	0.4	< 0.01	< 0.01	0.4	0.4	0.025	0.027	0.017	0.016	0.007	0.009	2.678
LC	W3	< 0.02	0.03	0.04	1.48	1.54	< 0.1	0.2	< 0.01	< 0.01	< 0.1	< 0.1	0.007	0.008	< 0.005	0.006	< 0.005	< 0.005	2.676
LC	W4	0.05	0.01	0.13	0.67	1.45	< 0.1	0.2	< 0.01	< 0.01	0.1	2.7	< 0.005	0.027	< 0.005	0.018	< 0.005	0.006	19.002
LC	W5	< 0.02	0.23	0.24	0.68	0.73	0.2	0.3	< 0.01	< 0.01	0.4	0.4	0.034	0.029	0.015	0.015	0.006	0.009	0.696
LC	W6	< 0.02	0.24	0.27	0.38	0.42	0.2	0.3	< 0.01	< 0.01	0.7	0.7	0.034	0.031	0.015	0.021	0.010	0.010	0.727
LC	W6-D	< 0.02	0.26	0.26	0.37	0.42	0.2	0.3	< 0.01	< 0.01	0.7	0.8	0.033	0.037	0.019	0.018	0.007	0.011	0.787
Lower Seal Harbour Gold District (LSH)																			
LSH	W1	0.03	2.29	2.47	0.84	0.92	0.6	0.7	0.02	0.03	0.7	0.7	0.144	0.172	0.075	0.078	0.048	0.048	0.959
LSH	W2	0.03	3.54	3.79	2.72	3.18	0.6	0.7	0.03	0.03	1.2	1.4	0.190	0.215	0.096	0.096	0.061	0.065	1.860
LSH	W4	0.02	1.23	1.27	0.43	0.43	0.4	0.5	0.04	0.04	0.5	0.5	0.084	0.077	0.039	0.033	0.029	0.024	0.954
LSH	W6	0.02	3.20	3.79	1.57	1.72	0.5	0.6	0.05	0.07	3.0	3.6	0.257	0.287	0.131	0.152	0.083	0.093	1.308
LSH	W7	0.02	2.37	3.15	1.34	1.47	0.4	0.5	0.05	0.07	2.6	3.2	0.204	0.252	0.095	0.122	0.061	0.076	0.966
LSH	W8	0.02	2.79	3.26	1.91	2.21	0.4	0.5	0.06	0.07	2.8	3.4	0.189	0.239	0.088	0.097	0.063	0.067	1.249
Mount Uniacke Gold District (UNI)																			
UNI	W1	0.80	0.19	10.56	2.99	5.51	< 0.1	1.4	0.08	0.22	1.0	21.4	0.018	0.457	0.009	0.168	< 0.005	0.197	0.069
UNI	W2	< 0.02	0.19	0.37	0.63	0.81	< 0.1	0.1	< 0.01	0.01	0.7	0.9	0.010	0.017	0.006	0.012	< 0.005	0.009	0.725
UNI	W3	0.57	0.40	8.12	5.52	7.70	< 0.1	0.7	0.11	0.14	0.7	12.5	0.039	0.380	0.023	0.180	0.010	0.163	6.642

Gold District	Sample Site	Cd ICP-MS µg/L 0.02 Unfiltered	Ce ICP-MS µg/L 0.01 <0.45 µm	Ce ICP-MS µg/L 0.01 Unfiltered	Co ICP-MS µg/L 0.05 <0.45 µm	Co ICP-MS µg/L 0.05 Unfiltered	Cr ICP-MS µg/L 0.1 <0.45 µm	Cr ICP-MS µg/L 0.1 Unfiltered	Cs ICP-MS µg/L 0.01 <0.45 µm	Cs ICP-MS µg/L 0.01 Unfiltered	Cu ICP-MS µg/L 0.1 <0.45 µm	Cu ICP-MS µg/L 0.1 Unfiltered	Dy ICP-MS µg/L 0.005 <0.45 µm	Dy ICP-MS µg/L 0.005 Unfiltered	Er ICP-MS µg/L 0.005 <0.45 µm	Er ICP-MS µg/L 0.005 Unfiltered	Eu ICP-MS µg/L 0.005 <0.45 µm	Eu ICP-MS µg/L 0.005 Unfiltered	Fe ICP-ES mg/L 0.005 <0.45 µm
UNI	W4	0.07	0.29	0.43	0.93	1.04	< 0.1	0.2	0.05	0.05	1.6	2.0	0.029	0.037	0.015	0.018	0.009	0.014	0.342
UNI	W5	0.03	0.04	0.39	1.54	1.32	< 0.1	0.1	0.03	0.04	0.7	0.9	0.010	0.024	< 0.005	0.014	< 0.005	0.009	0.067
North Brookfield Gold District (NB)																			
NB	W1	< 0.02	0.13	0.16	< 0.05	0.06	0.1	0.1	< 0.01	< 0.01	0.9	0.9	0.010	0.020	0.007	0.006	0.006	0.006	0.062
NB	W2	< 0.02	0.01	0.02	0.78	0.74	0.4	0.3	0.04	0.04	0.9	0.9	< 0.005	0.006	< 0.005	< 0.005	< 0.005	< 0.005	0.401
NB	W3	< 0.02	0.01	0.41	0.73	1.41	0.2	0.6	0.04	0.12	1.2	3.4	< 0.005	0.063	< 0.005	0.029	< 0.005	0.018	0.119
NB	W4	< 0.02	0.03	0.04	0.96	1.00	0.2	0.3	0.01	0.02	1.7	2.1	0.015	0.014	0.006	0.009	< 0.005	< 0.005	0.616
NB	W5	0.02	0.01	0.44	0.98	1.68	0.4	0.7	0.05	0.13	1.9	4.4	< 0.005	0.063	< 0.005	0.031	< 0.005	0.019	0.073
Salmon River (Dufferin) Gold District (SR)																			
SR	W1	0.02	0.04	0.05	0.33	0.36	< 0.1	< 0.1	< 0.01	< 0.01	0.1	0.1	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.081
SR	W2	< 0.02	0.03	0.04	0.96	1.05	< 0.1	< 0.1	0.01	0.01	0.1	< 0.1	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.485
SR	W3	< 0.02	< 0.01	< 0.01	1.30	1.18	< 0.1	< 0.1	0.01	0.01	0.1	0.1	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.117
SR	W4	< 0.02	< 0.01	< 0.01	2.71	2.73	< 0.1	< 0.1	0.02	0.02	< 0.1	< 0.1	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	9.524
SR	W5	< 0.02	0.24	0.24	0.68	0.69	< 0.1	< 0.1	0.05	0.05	0.5	0.7	0.048	0.048	0.034	0.031	0.010	0.012	3.260
SR	W6	< 0.02	0.27	0.33	1.29	1.31	< 0.1	< 0.1	< 0.01	< 0.01	0.1	0.2	0.018	0.022	0.006	0.008	0.007	0.008	0.885
SR	W7	< 0.02	0.20	0.24	0.96	1.16	< 0.1	0.1	< 0.01	< 0.01	0.2	0.3	0.015	0.017	0.006	0.009	0.006	0.006	0.574
SR	W8	< 0.02	0.68	0.75	4.00	4.24	0.1	0.2	0.06	0.06	0.1	0.2	0.032	0.031	0.016	0.016	0.016	0.016	6.923
SR	W9	0.03	0.44	0.71	1.89	2.00	< 0.1	0.2	< 0.01	< 0.01	0.6	0.9	0.019	0.028	0.010	0.016	0.007	0.011	0.360
Upper Seal Harbour Gold District (USH)																			
USH	W4(03)	< 0.02	0.66	0.71	0.20	0.22	0.3	0.3	0.04	0.04	0.3	0.3	0.042	0.038	0.020	0.016	0.012	0.015	0.363
USH	W13	< 0.02	0.65	0.67	0.21	0.24	0.3	0.4	0.03	0.04	0.3	0.3	0.044	0.040	0.020	0.018	0.015	0.017	0.392
USH	W14	0.03	0.28	0.50	0.98	1.12	0.3	0.4	0.05	0.05	0.2	0.3	0.024	0.037	0.012	0.014	0.008	0.012	2.011
USH	W18	< 0.02	0.67	0.72	0.21	0.22	0.3	0.4	0.04	0.04	0.2	0.3	0.043	0.040	0.019	0.022	0.015	0.013	0.366
USH	W19	0.05	0.28	0.89	1.76	1.69	0.1	0.3	0.06	0.06	1.6	4.9	0.022	0.062	0.017	0.038	0.010	0.023	1.143
USH	W20	< 0.02	0.65	0.77	0.19	0.21	0.3	0.4	0.03	0.04	0.3	0.3	0.034	0.045	0.017	0.015	0.013	0.016	0.349
Whiteburn Gold District (WB)																			
WHI	W1	0.04	0.91	1.12	2.44	3.01	0.3	0.6	0.01	0.03	0.4	0.5	0.071	0.080	0.032	0.034	0.026	0.029	0.517
WHI	W2	< 0.02	0.29	0.36	0.68	0.77	0.2	0.4	< 0.01	< 0.01	0.8	1.0	0.022	0.035	0.014	0.016	0.008	0.010	0.603
WHI	W3	0.35	0.12	8.63	57.54	79.88	0.2	5.0	0.25	0.41	0.2	52.0	0.033	1.098	0.024	0.630	0.005	0.369	2.945
WHI	W4	0.03	1.09	1.67	5.89	7.40	0.3	0.6	0.03	0.04	0.9	1.1	0.069	0.083	0.033	0.043	0.026	0.031	1.244
WHI	W5	0.05	0.53	0.82	6.65	8.25	< 0.1	0.3	< 0.01	0.01	0.8	0.9	0.035	0.043	0.019	0.028	0.010	0.015	3.502
WHI	W6	0.04	1.24	1.55	2.91	3.59	0.2	0.4	0.01	0.02	1.0	1.3	0.068	0.071	0.031	0.045	0.028	0.032	0.630
WHI	W6-D	0.04	1.26	1.52	3.15	3.20	0.3	0.4	0.01	0.02	1.0	1.3	0.059	0.080	0.032	0.041	0.023	0.026	0.605
Upper / Lower Seal Harbour (SH-S) May 2004																			
SH-S	W1	< 0.02	0.68	0.69	0.56	0.56	0.3	0.3	0.02	0.02	0.3	0.3	0.042	0.047	0.024	0.024	0.013	0.012	0.183
SH-S	W2	< 0.02	0.68	0.71	0.37	0.38	0.3	0.3	0.01	0.02	0.3	0.4	0.048	0.046	0.022	0.025	0.014	0.013	0.234

Gold District	Sample Site	Cd ICP-MS µg/L 0.02 Unfiltered	Ce ICP-MS µg/L 0.01 <0.45 µm	Ce ICP-MS µg/L 0.01 Unfiltered	Co ICP-MS µg/L 0.05 <0.45 µm	Co ICP-MS µg/L 0.05 Unfiltered	Cr ICP-MS µg/L 0.1 <0.45 µm	Cr ICP-MS µg/L 0.1 Unfiltered	Cs ICP-MS µg/L 0.01 <0.45 µm	Cs ICP-MS µg/L 0.01 Unfiltered	Cu ICP-MS µg/L 0.1 <0.45 µm	Cu ICP-MS µg/L 0.1 Unfiltered	Dy ICP-MS µg/L 0.005 <0.45 µm	Dy ICP-MS µg/L 0.005 Unfiltered	Er ICP-MS µg/L 0.005 <0.45 µm	Er ICP-MS µg/L 0.005 Unfiltered	Eu ICP-MS µg/L 0.005 <0.45 µm	Eu ICP-MS µg/L 0.005 Unfiltered	Fe ICP-ES mg/L 0.005 <0.45 µm
SH-S	W3	< 0.02	1.56	1.61	0.84	0.84	0.3	0.3	0.02	0.02	1.8	1.8	0.082	0.087	0.040	0.038	0.030	0.027	0.466
SH-S	W4	< 0.02	0.48	0.49	0.26	0.26	0.2	0.2	0.03	0.03	0.3	0.3	0.028	0.029	0.014	0.013	0.009	0.009	0.323
SH-S	W5	< 0.02	0.53	0.54	0.29	0.30	0.2	0.2	0.03	0.03	0.4	0.5	0.032	0.032	0.015	0.016	0.011	0.010	0.317
SH-S	W6	< 0.02	1.24	1.31	1.30	1.30	0.3	0.2	0.04	0.04	2.2	2.2	0.098	0.104	0.053	0.051	0.030	0.033	0.609
SH-S	W7	< 0.02	1.06	1.13	0.89	0.89	0.3	0.2	0.04	0.04	1.8	1.9	0.087	0.091	0.047	0.050	0.026	0.025	0.563
SH-S	W8	< 0.02	1.07	1.10	0.26	0.27	0.2	0.2	0.04	0.04	1.9	1.9	0.079	0.085	0.038	0.039	0.025	0.024	0.415
SH-S	W9	< 0.02	0.56	0.58	0.33	0.32	0.2	0.2	0.03	0.03	0.4	0.4	0.035	0.035	0.016	0.016	0.012	0.012	0.317
SH-S	W9-D1	< 0.02	0.56	0.60	0.33	0.34	0.2	0.2	0.03	0.03	0.4	0.5	0.032	0.035	0.018	0.018	0.011	0.013	0.355
SH-S	W9-D2	< 0.02	0.55	0.57	0.30	0.32	0.2	0.3	0.03	0.03	0.4	0.5	0.034	0.034	0.016	0.014	0.011	0.011	0.329
SH-S	W9-D3	< 0.02	0.53	0.59	0.31	0.32	0.2	0.2	0.03	0.03	0.4	0.4	0.030	0.037	0.017	0.017	0.010	0.013	0.339
SH-S	W10	< 0.02	0.40	0.42	0.24	0.24	0.2	0.2	0.03	0.03	0.3	0.3	0.022	0.026	0.010	0.012	0.008	0.008	0.359
SH-S	W11	< 0.02	0.37	0.39	0.20	0.20	0.2	0.3	0.03	0.03	0.2	0.3	0.024	0.024	0.011	0.011	0.008	0.008	0.333
SH-S	W12	< 0.02	0.36	0.39	0.21	0.21	0.2	0.2	0.03	0.03	0.2	0.3	0.020	0.022	0.012	0.011	0.007	0.007	0.324
SH-S	W13	< 0.02	0.37	0.38	0.20	0.20	0.2	0.2	0.03	0.03	0.2	0.2	0.021	0.023	0.012	0.010	0.007	0.008	0.295
SH-S	W14	< 0.02	0.37	0.39	0.20	0.20	0.2	0.2	0.03	0.03	0.2	0.2	0.021	0.021	0.010	0.009	0.007	0.006	0.322
SH-S	W15	< 0.02	0.26	0.30	0.10	0.12	0.2	0.2	0.03	0.04	0.3	0.3	0.021	0.019	0.007	0.009	0.006	< 0.005	0.220
SH-S	W16	< 0.02	0.18	0.17	0.08	0.07	0.2	0.2	0.02	0.03	0.2	0.1	0.013	0.015	0.006	0.006	< 0.005	< 0.005	0.218
SH-S	W17	0.02	0.37	0.38	0.41	0.42	0.3	0.3	0.07	0.07	0.5	0.9	0.021	0.019	0.008	0.009	0.007	0.007	0.621
SH-S	W17-D	< 0.02	0.37	0.38	0.40	0.41	0.3	0.3	0.07	0.07	0.5	0.6	0.018	0.021	0.009	0.010	0.006	0.008	0.631
SH-S	W18	< 0.02	0.39	0.37	0.14	0.14	0.2	0.2	0.02	0.02	0.2	0.2	0.023	0.021	0.010	0.010	0.007	0.008	0.282
SH-S	W19	< 0.02	0.02	0.05	2.98	3.25	0.1	0.1	0.06	0.06	1.5	1.7	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.245
SH-S	W20	< 0.02	0.36	0.38	0.14	0.13	0.2	0.2	0.02	0.02	0.2	0.2	0.023	0.024	0.011	0.009	0.007	0.008	0.261
SH-S	W21	< 0.02	0.51	0.54	0.30	0.31	0.2	0.2	0.02	0.02	0.2	0.3	0.030	0.032	0.015	0.015	0.009	0.011	0.252
SH-S	W22	< 0.02	1.08	1.10	0.53	0.53	0.3	0.3	< 0.01	< 0.01	0.3	0.4	0.058	0.059	0.033	0.032	0.019	0.020	0.242
SH-S	W23	< 0.02	0.52	0.56	0.32	0.33	0.2	0.2	0.03	0.03	0.4	0.4	0.034	0.030	0.017	0.017	0.010	0.011	0.321
SH-S	W24	< 0.02	0.54	0.56	0.33	0.33	0.2	0.2	0.03	0.03	0.4	0.4	0.036	0.032	0.015	0.017	0.011	0.012	0.326
SH-S	W25	< 0.02	0.42	0.43	0.25	0.25	0.2	0.2	0.03	0.03	0.5	0.3	0.026	0.025	0.012	0.014	0.008	0.008	0.486
Upper / Lower Seal Harbour (SH-S) August 2004																			
SH-S	W1	0.03	1.64	1.62	0.85	0.84	0.5	0.5	0.02	0.02	0.4	0.5	0.119	0.092	0.048	0.056	0.036	0.031	0.477
SH-S	W1D	< 0.02	1.64	1.62	0.86	0.87	0.5	0.5	0.02	0.02	0.4	0.4	0.101	0.104	0.055	0.056	0.033	0.028	0.479
SH-S	W2	< 0.02	2.24	2.24	0.73	0.71	0.4	0.4	0.02	0.02	0.5	0.5	0.131	0.139	0.068	0.070	0.042	0.046	0.705
SH-S	W3	0.02	5.38	5.48	3.18	3.12	0.6	0.5	0.05	0.04	3.0	3.1	0.237	0.259	0.110	0.117	0.091	0.086	1.725

Gold District	Sample Site	Cd ICP-MS µg/L 0.02 Unfiltered	Ce ICP-MS µg/L 0.01 <0.45 µm	Ce ICP-MS µg/L 0.01 Unfiltered	Co ICP-MS µg/L 0.05 <0.45 µm	Co ICP-MS µg/L 0.05 Unfiltered	Cr ICP-MS µg/L 0.1 <0.45 µm	Cr ICP-MS µg/L 0.1 Unfiltered	Cs ICP-MS µg/L 0.01 <0.45 µm	Cs ICP-MS µg/L 0.01 Unfiltered	Cu ICP-MS µg/L 0.1 <0.45 µm	Cu ICP-MS µg/L 0.1 Unfiltered	Dy ICP-MS µg/L 0.005 <0.45 µm	Dy ICP-MS µg/L 0.005 Unfiltered	Er ICP-MS µg/L 0.005 <0.45 µm	Er ICP-MS µg/L 0.005 Unfiltered	Eu ICP-MS µg/L 0.005 <0.45 µm	Eu ICP-MS µg/L 0.005 Unfiltered	Fe ICP-ES mg/L 0.005 <0.45 µm
SH-S	W4	< 0.02	0.93	0.96	0.26	0.28	0.3	0.3	0.04	0.05	0.5	0.5	0.057	0.060	0.026	0.026	0.016	0.020	1.156
SH-S	W5	< 0.02	0.99	1.06	0.31	0.33	0.4	0.3	0.05	0.05	0.5	0.6	0.064	0.067	0.027	0.028	0.018	0.019	1.111
SH-S	W6	0.03	2.38	2.97	1.41	1.82	0.4	0.4	0.06	0.06	2.5	2.8	0.213	0.244	0.120	0.127	0.064	0.079	1.084
SH-S	W7	< 0.02	1.51	1.88	0.64	0.72	0.4	0.4	0.05	0.05	2.0	2.2	0.164	0.181	0.084	0.086	0.049	0.056	0.890
SH-S	W8	< 0.02	1.27	1.93	0.99	1.29	0.4	0.4	0.05	0.05	1.8	2.1	0.108	0.151	0.065	0.075	0.037	0.048	0.567
SH-S	W9	< 0.02	1.01	1.09	0.29	0.33	0.3	0.3	0.05	0.05	0.6	0.6	0.066	0.065	0.031	0.030	0.023	0.027	1.084
SH-S	W9D1	< 0.02	1.01	1.06	0.29	0.31	0.3	0.3	0.05	0.05	0.6	0.6	0.060	0.068	0.030	0.027	0.022	0.022	1.159
SH-S	W9D2	< 0.02	0.98	1.02	0.28	0.32	0.3	0.4	0.05	0.05	0.5	0.6	0.066	0.066	0.031	0.030	0.023	0.020	1.169
SH-S	W9D3	< 0.02	0.91	1.07	0.25	0.29	0.3	0.3	0.05	0.05	0.5	0.6	0.058	0.067	0.026	0.031	0.017	0.020	0.979
SH-S	W10	0.02	0.59	0.62	0.28	0.27	0.3	0.3	0.04	0.04	0.3	0.3	0.036	0.037	0.015	0.014	0.013	0.015	0.586
SH-S	W11	< 0.02	0.49	0.53	0.16	0.17	0.3	0.3	0.04	0.04	0.3	0.3	0.027	0.032	0.017	0.015	0.010	0.012	0.557
SH-S	W12	< 0.02	0.43	0.47	0.15	0.15	0.3	0.2	0.04	0.04	0.3	0.3	0.021	0.029	0.014	0.014	0.009	0.009	0.498
SH-S	W13	< 0.02	0.52	0.49	0.22	0.21	0.3	0.2	0.04	0.04	0.3	0.2	0.034	0.028	0.014	0.010	0.011	0.011	0.412
SH-S	W14	< 0.02	0.52	0.53	0.27	0.27	0.3	0.3	0.04	0.04	0.3	0.2	0.032	0.030	0.013	0.013	0.009	0.010	0.415
SH-S	W15	< 0.02	0.60	0.71	2.46	2.40	0.3	0.3	0.05	0.05	0.3	0.4	0.037	0.039	0.016	0.020	0.011	0.012	3.784
SH-S	W15D	< 0.02	0.61	0.72	2.51	2.41	0.3	0.2	0.05	0.05	0.3	0.4	0.034	0.042	0.015	0.018	0.009	0.011	3.954
SH-S	W16	< 0.02	0.35	0.37	0.11	0.11	0.3	0.3	0.03	0.04	0.2	0.2	0.030	0.030	0.014	0.014	0.009	0.011	0.415
SH-S	W17	0.02	0.88	0.90	0.67	0.62	0.5	0.5	0.09	0.09	0.7	0.7	0.047	0.049	0.021	0.020	0.019	0.018	2.598
SH-S	W18	< 0.02	0.52	0.55	0.18	0.18	0.2	0.2	0.04	0.03	0.2	0.2	0.025	0.035	0.012	0.015	0.011	0.012	0.295
SH-S	W19	0.03	0.04	0.60	1.30	1.47	0.1	0.2	0.07	0.08	1.8	3.7	0.005	0.032	< 0.005	0.014	< 0.005	0.011	0.050
SH-S	W20	< 0.02	0.52	0.54	0.17	0.16	0.2	0.2	0.04	0.04	0.2	0.2	0.027	0.031	0.013	0.015	0.009	0.011	0.278
SH-S	W21	< 0.02	1.17	1.18	0.37	0.38	0.4	0.3	0.03	0.03	0.3	0.3	0.067	0.064	0.038	0.032	0.023	0.024	0.925
SH-S	W22	< 0.02	2.20	2.20	0.89	1.00	0.4	0.4	< 0.01	< 0.01	0.5	0.5	0.118	0.118	0.058	0.066	0.038	0.044	0.603
SH-S	W23	< 0.02	1.00	1.06	0.33	0.34	0.4	0.4	0.04	0.05	0.6	0.6	0.068	0.070	0.031	0.031	0.020	0.019	1.221
SH-S	W24	< 0.02	1.02	1.08	0.32	0.34	0.3	0.3	0.05	0.05	0.6	0.5	0.071	0.068	0.025	0.032	0.021	0.017	1.211
SH-S	W25	< 0.02	0.54	0.61	0.30	0.30	0.3	0.3	0.04	0.05	0.3	0.3	0.036	0.033	0.018	0.017	0.012	0.012	0.627
SH-S	W51	< 0.2	0.55	0.86	< 0.5	< 0.5	< 1	< 1	< 0.1	< 0.1	< 1	< 1	< 0.05	0.052	< 0.05	< 0.05	< 0.05	< 0.05	0.530
Upper / Lower Seal Harbour (SH-S) November 2004																			
SH-S	W1	0.03	1.32	1.38	1.04	1.04	0.4	0.5	0.03	0.03	0.4	0.4	0.078	0.084	0.043	0.045	0.027	0.024	0.381
SH-S	W2	0.03	1.62	1.63	0.75	0.76	0.4	0.4	0.02	0.02	0.6	0.6	0.096	0.099	0.047	0.048	0.036	0.030	0.468
SH-S	W3	0.03	2.92	2.94	0.85	0.84	0.3	0.4	0.02	0.02	2.4	2.5	0.160	0.156	0.068	0.073	0.053	0.056	0.649
SH-S	W3D	0.03	2.88	2.95	0.85	0.86	0.4	0.4	0.02	0.02	2.4	2.5	0.149	0.164	0.069	0.069	0.054	0.052	0.650
SH-S	W4	< 0.02	0.89	0.89	0.31	0.30	0.3	0.3	0.04	0.04	0.4	0.4	0.052	0.055	0.025	0.029	0.018	0.019	0.536
SH-S	W5	< 0.02	1.00	1.04	0.39	0.41	0.3	0.3	0.04	0.04	0.5	0.6	0.058	0.071	0.031	0.028	0.022	0.022	0.533

Gold District	Sample Site	Cd ICP-MS µg/L 0.02 Unfiltered	Ce ICP-MS µg/L 0.01 <0.45 µm	Ce ICP-MS µg/L 0.01 Unfiltered	Co ICP-MS µg/L 0.05 <0.45 µm	Co ICP-MS µg/L 0.05 Unfiltered	Cr ICP-MS µg/L 0.1 <0.45 µm	Cr ICP-MS µg/L 0.1 Unfiltered	Cs ICP-MS µg/L 0.01 <0.45 µm	Cs ICP-MS µg/L 0.01 Unfiltered	Cu ICP-MS µg/L 0.1 <0.45 µm	Cu ICP-MS µg/L 0.1 Unfiltered	Dy ICP-MS µg/L 0.005 <0.45 µm	Dy ICP-MS µg/L 0.005 Unfiltered	Er ICP-MS µg/L 0.005 <0.45 µm	Er ICP-MS µg/L 0.005 Unfiltered	Eu ICP-MS µg/L 0.005 <0.45 µm	Eu ICP-MS µg/L 0.005 Unfiltered	Fe ICP-ES mg/L 0.005 <0.45 µm
SH-S	W6	< 0.02	2.15	2.20	1.24	1.25	0.3	0.3	0.03	0.03	2.3	2.4	0.146	0.140	0.065	0.065	0.051	0.049	0.598
SH-S	W7	< 0.02	1.99	2.04	0.99	0.99	0.3	0.3	0.03	0.03	2.1	2.2	0.128	0.138	0.055	0.061	0.043	0.042	0.583
SH-S	W8	< 0.02	2.14	2.23	0.85	0.88	0.3	0.3	0.03	0.03	2.0	2.3	0.132	0.130	0.059	0.063	0.043	0.047	0.530
SH-S	W9	< 0.02	1.02	1.07	0.39	0.40	0.2	0.3	0.04	0.04	0.5	0.6	0.061	0.057	0.026	0.029	0.021	0.023	0.540
SH-S	W9D1	< 0.02	1.01	1.02	0.38	0.39	0.3	0.3	0.04	0.04	0.5	0.5	0.061	0.057	0.029	0.029	0.022	0.020	0.546
SH-S	W9D2	< 0.02	0.94	0.98	0.36	0.37	0.3	0.3	0.04	0.03	0.5	0.4	0.059	0.059	0.027	0.026	0.017	0.019	0.553
SH-S	W10	< 0.02	0.63	0.66	0.25	0.27	0.3	0.3	0.04	0.04	0.3	0.3	0.037	0.040	0.019	0.016	0.013	0.015	0.420
SH-S	W10D	0.02	0.63	0.67	0.26	0.26	0.3	0.3	0.03	0.04	0.3	0.4	0.049	0.047	0.018	0.020	0.012	0.013	0.423
SH-S	W11	< 0.02	0.64	0.67	0.25	0.24	0.3	0.3	0.04	0.04	0.3	0.3	0.040	0.039	0.020	0.022	0.012	0.015	0.397
SH-S	W12	0.02	0.67	0.69	0.25	0.27	0.3	0.3	0.04	0.04	0.2	0.3	0.042	0.039	0.017	0.017	0.014	0.013	0.404
SH-S	W13	< 0.02	0.65	0.70	0.23	0.25	0.3	0.3	0.04	0.04	0.3	0.3	0.041	0.039	0.019	0.019	0.017	0.013	0.387
SH-S	W14	< 0.02	0.62	0.64	0.23	0.25	0.3	0.3	0.03	0.04	0.2	0.2	0.038	0.039	0.015	0.017	0.012	0.014	0.392
SH-S	W15	< 0.02	0.46	0.49	0.10	0.10	0.2	0.2	0.05	0.05	0.4	0.4	0.032	0.032	0.016	0.015	0.009	0.011	0.567
SH-S	W16	0.03	0.39	0.40	0.16	0.16	0.3	0.3	0.04	0.04	0.2	0.2	0.032	0.035	0.012	0.014	0.009	0.008	0.389
SH-S	W17	0.03	0.95	0.95	0.43	0.43	0.4	0.4	0.05	0.05	0.4	0.4	0.047	0.046	0.021	0.018	0.018	0.019	0.654
SH-S	W18	< 0.02	0.63	0.67	0.21	0.23	0.3	0.3	0.03	0.03	0.3	0.3	0.039	0.035	0.018	0.015	0.013	0.013	0.357
SH-S	W19	0.09	0.63	0.74	1.65	1.69	0.1	0.2	0.05	0.05	3.4	4.4	0.048	0.051	0.023	0.029	0.016	0.015	0.769
SH-S	W20	0.02	0.57	0.62	0.21	0.21	0.3	0.3	0.03	0.03	0.2	0.3	0.034	0.034	0.015	0.018	0.012	0.012	0.354
SH-S	W21	0.04	1.14	1.18	0.44	0.45	0.3	0.3	0.04	0.04	0.3	0.3	0.065	0.066	0.031	0.034	0.021	0.023	0.532
SH-S	W22	0.03	1.75	1.73	1.11	1.12	0.4	0.4	0.01	0.01	0.4	0.4	0.093	0.092	0.048	0.048	0.030	0.030	0.471
SH-S	W23	0.06	1.01	1.07	0.37	0.39	0.3	0.3	0.04	0.03	0.5	0.5	0.058	0.062	0.029	0.031	0.021	0.023	0.544
SH-S	W24	0.02	0.96	0.97	0.38	0.35	0.3	0.3	0.04	0.04	0.6	0.7	0.055	0.062	0.026	0.032	0.018	0.022	0.470
SH-S	W25	0.03	0.67	0.68	0.28	0.30	0.3	0.3	0.04	0.04	0.3	0.4	0.042	0.038	0.019	0.017	0.015	0.015	0.518
Upper / Lower Seal Harbour (SH-S) August 2005																			
SH-S	W1	< 0.02	0.73	0.75	0.26	0.30	0.2	0.3	0.03	0.02	0.2	0.2	0.054	0.061	0.028	0.033	0.016	0.014	0.311
SH-S	W2	< 0.02	0.91	0.94	0.46	0.49	0.2	0.2	0.02	0.03	0.3	0.6	0.059	0.061	0.026	0.029	0.014	0.019	0.467
SH-S	W3	< 0.02	0.98	1.66	3.60	3.99	0.1	0.2	0.06	0.06	0.7	1.5	0.062	0.102	0.030	0.046	0.020	0.032	0.646
SH-S	W4	< 0.02	0.40	0.56	0.08	0.12	0.2	0.2	0.05	0.05	0.3	0.4	0.028	0.034	0.012	0.016	0.008	0.010	0.742
SH-S	W5	< 0.02	0.53	0.64	0.14	0.19	0.2	0.2	0.05	0.06	0.4	0.5	0.032	0.044	0.016	0.020	0.011	0.013	1.068
SH-S	W6	0.03	1.34	3.08	0.88	1.29	0.1	0.1	0.15	0.16	2.0	2.6	0.116	0.202	0.055	0.094	0.031	0.057	0.794
SH-S	W7	< 0.02	0.52	0.98	0.68	0.75	0.1	0.1	0.14	0.13	0.9	1.1	0.064	0.098	0.039	0.060	0.017	0.030	0.859
SH-S	W8	< 0.02	0.55	0.84	2.52	2.75	0.1	0.1	0.11	0.11	0.5	0.7	0.052	0.066	0.028	0.036	0.012	0.020	1.502
SH-S	W9	< 0.02	0.47	0.60	0.12	0.20	0.2	0.2	0.06	0.06	0.5	0.5	0.043	0.041	0.020	0.020	0.012	0.013	1.098
SH-S	W9D1	< 0.02	0.55	0.34	0.27	< 0.05	0.2	0.2	0.05	0.06	0.6	0.6	0.044	0.044	0.018	0.019	0.013	0.013	0.976

Gold District	Sample Site	Cd ICP-MS µg/L 0.02 Unfiltered	Ce ICP-MS µg/L 0.01 <0.45 µm	Ce ICP-MS µg/L 0.01 Unfiltered	Co ICP-MS µg/L 0.05 <0.45 µm	Co ICP-MS µg/L 0.05 Unfiltered	Cr ICP-MS µg/L 0.1 <0.45 µm	Cr ICP-MS µg/L 0.1 Unfiltered	Cs ICP-MS µg/L 0.01 <0.45 µm	Cs ICP-MS µg/L 0.01 Unfiltered	Cu ICP-MS µg/L 0.1 <0.45 µm	Cu ICP-MS µg/L 0.1 Unfiltered	Dy ICP-MS µg/L 0.005 <0.45 µm	Dy ICP-MS µg/L 0.005 Unfiltered	Er ICP-MS µg/L 0.005 <0.45 µm	Er ICP-MS µg/L 0.005 Unfiltered	Eu ICP-MS µg/L 0.005 <0.45 µm	Eu ICP-MS µg/L 0.005 Unfiltered	Fe ICP-ES mg/L 0.005 <0.45 µm
SH-S	W9D2	< 0.02	1.19	1.39	0.59	0.68	0.2	0.3	0.05	0.06	1.0	1.1	0.076	0.087	0.036	0.049	0.021	0.025	1.009
SH-S	W10	0.03	0.45	0.92	0.79	0.86	0.2	0.3	0.11	0.12	0.9	1.3	0.032	0.059	0.016	0.025	0.010	0.018	0.234
SH-S	W10D	0.04	0.49	0.92	0.81	0.87	0.2	0.3	0.12	0.12	0.9	1.3	0.039	0.057	0.015	0.027	0.010	0.019	0.351
SH-S	W11	< 0.02	0.29	0.34	0.08	0.09	0.2	0.2	0.05	0.05	0.2	0.2	0.020	0.023	0.009	0.011	0.007	0.006	0.603
SH-S	W12	< 0.02	0.20	0.37	0.09	0.11	0.3	0.4	0.05	0.06	0.2	0.3	0.014	0.025	0.006	0.009	< 0.005	0.006	0.297
SH-S	W13	< 0.02	0.24	0.31	0.13	0.20	0.2	0.2	0.04	0.04	0.2	0.2	0.017	0.021	0.007	0.009	0.005	0.006	0.286
SH-S	W14	< 0.02	0.42	0.54	0.48	0.54	0.2	0.2	0.05	0.05	0.2	0.2	0.026	0.029	0.012	0.016	0.007	0.010	0.649
SH-S	W15	< 0.02	0.29	0.34	0.32	0.39	0.2	0.2	0.05	0.06	0.4	0.4	0.020	0.022	0.008	0.008	< 0.005	0.008	0.803
SH-S	W16	0.03	0.94	0.94	0.25	0.27	0.4	0.4	0.05	0.05	0.4	0.5	0.068	0.069	0.031	0.033	0.021	0.021	0.757
SH-S	W17	< 0.02	0.81	0.88	0.99	1.02	0.4	0.4	0.09	0.10	1.9	2.0	0.042	0.045	0.021	0.020	0.015	0.017	1.620
SH-S	W18	< 0.02	0.30	0.39	0.21	0.22	0.2	0.2	0.04	0.04	0.2	0.2	0.017	0.022	0.008	0.009	0.006	0.008	0.283
SH-S	W19	0.03	0.06	0.66	1.05	1.23	< 0.1	< 0.1	0.09	0.09	1.3	2.8	0.006	0.031	< 0.005	0.015	< 0.005	0.009	0.032
SH-S	W20	< 0.02	0.30	0.31	0.16	0.17	0.2	0.2	0.04	0.04	0.1	0.2	0.017	0.018	0.008	0.010	0.007	0.007	0.208
SH-S	W21	< 0.02	0.88	1.03	0.77	0.88	0.2	0.3	0.03	0.04	0.3	0.3	0.052	0.062	0.025	0.029	0.016	0.017	0.826
SH-S	W22	0.04	3.59	3.76	2.16	2.22	0.6	0.6	0.02	0.02	0.9	0.8	0.183	0.183	0.091	0.091	0.060	0.062	0.888
SH-S	W23	< 0.02	1.15	1.31	0.77	0.89	0.2	0.2	0.05	0.05	1.1	1.0	0.070	0.083	0.030	0.038	0.023	0.026	1.054
SH-S	W24	< 0.02	1.24	1.39	0.79	0.84	0.3	0.3	0.05	0.05	1.0	1.0	0.079	0.086	0.039	0.043	0.025	0.026	1.054
SH-S	W25	< 0.02	0.42	0.59	0.20	0.21	0.2	0.2	0.08	0.08	0.4	0.4	0.025	0.037	0.012	0.018	0.007	0.011	0.681
SH-S	W25D	< 0.02	0.40	0.56	0.19	0.20	0.2	0.2	0.08	0.08	0.3	0.5	0.029	0.039	0.013	0.016	0.006	0.009	0.542
Statistics	Min.	<0.02	<0.01	<0.01	<0.05	<0.05	<0.1	<0.1	<0.01	<0.01	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.032
	Max.	4.14	13.26	23.51	74.29	79.88	0.6	15.8	0.25	0.98	15.6	52.0	0.645	1.098	0.244	0.630	0.210	0.414	21.275
	Mean	0.20	0.90	1.35	1.97	2.33	0.3	0.5	0.04	0.06	0.8	1.5	0.058	0.082	0.029	0.039	0.021	0.030	1.066
	Median	0.03	0.55	0.67	0.42	0.43	0.3	0.3	0.04	0.04	0.4	0.5	0.038	0.042	0.019	0.020	0.013	0.015	0.542
	n	58	178	179	178	179	155	170	157	159	178	177	170	175	161	168	150	162	181
	Std Dev	0.67	1.47	2.86	7.99	9.56	0.1	1.3	0.03	0.11	1.3	4.6	0.070	0.137	0.030	0.064	0.024	0.053	2.335
	95th pctl	0.90	2.44	3.76	3.79	5.26	0.5	0.6	0.09	0.12	2.3	3.9	0.175	0.246	0.088	0.120	0.061	0.079	3.260
	90th pctl	0.17	1.67	2.23	2.58	2.80	0.4	0.5	0.07	0.08	1.8	2.7	0.120	0.154	0.059	0.074	0.043	0.052	1.620
	75th pctl	0.04	1.00	1.10	0.99	1.17	0.3	0.4	0.05	0.05	0.7	1.0	0.065	0.071	0.031	0.038	0.023	0.025	0.888
	50th pctl	0.03	0.55	0.67	0.42	0.43	0.3	0.3	0.04	0.04	0.4	0.5	0.038	0.042	0.019	0.020	0.013	0.015	0.542
	25th pctl	0.03	0.29	0.39	0.25	0.25	0.2	0.2	0.03	0.03	0.3	0.3	0.023	0.029	0.013	0.014	0.009	0.011	0.339

Gold District	Sample Site	Fe ICP-ES mg/L 0.005 Unfiltered	Ga ICP-MS µg/L 0.01 <0.45 µm	Ga ICP-MS µg/L 0.01 Unfiltered	Gd ICP-MS µg/L 0.005 <0.45 µm	Gd ICP-MS µg/L 0.005 Unfiltered	Ge ICP-MS µg/L 0.02 <0.45 µm	Ge ICP-MS µg/L 0.02 Unfiltered	Hf ICP-MS µg/L 0.01 <0.45 µm	Hf ICP-MS µg/L 0.01 Unfiltered	Hg TEKRAN* ppt 0.5 <0.45 µm	Hg TEKRAN* ppt 0.5 Unfiltered	Ho ICP-MS µg/L 0.005 <0.45 µm	Ho ICP-MS µg/L 0.005 Unfiltered	In ICP-MS µg/L 0.01 <0.45 µm	In ICP-MS µg/L 0.01 Unfiltered	K ICP-ES mg/L 0.05 <0.45 µm	K ICP-ES mg/L 0.05 Unfiltered	La ICP-MS µg/L 0.01 <0.45 µm	La ICP-MS µg/L 0.01 Unfiltered
Cochrane Hill Gold District (CH)																				
CH	W1	0.156	< 0.01	< 0.01	0.018	0.019	< 0.02	< 0.02	< 0.01	< 0.01	4.2	4.4	< 0.005	< 0.005	< 0.01	< 0.01	0.40	0.38	0.06	0.06
CH	W2	0.295	< 0.01	< 0.01	0.021	0.018	< 0.02	< 0.02	< 0.01	< 0.01	6.1	7.1	< 0.005	< 0.005	< 0.01	< 0.01	0.54	0.53	0.07	0.08
CH	W3	0.705	< 0.01	< 0.01	0.024	0.026	< 0.02	< 0.02	< 0.01	< 0.01	5.6	8.1	< 0.005	< 0.005	< 0.01	< 0.01	0.66	0.72	0.07	0.08
CH	W4	0.169	< 0.01	< 0.01	0.010	0.009	< 0.02	< 0.02	< 0.01	< 0.01	1.4	1.6	< 0.005	< 0.005	< 0.01	< 0.01	0.27	0.33	0.03	0.03
CH	W5	0.987	< 0.01	0.01	0.027	0.023	< 0.02	< 0.02	< 0.01	< 0.01	6.8	9.5	< 0.005	< 0.005	< 0.01	< 0.01	0.88	0.91	0.09	0.11
CH	W6	0.301	< 0.01	< 0.01	0.013	0.008	< 0.02	< 0.02	< 0.01	< 0.01	3.3	3.3	< 0.005	< 0.005	< 0.01	< 0.01	0.46	0.44	0.03	0.03
CH	W6-D	0.314	< 0.01	< 0.01	0.008	0.010	< 0.02	< 0.02	< 0.01	< 0.01	3.2	3.4	< 0.005	< 0.005	< 0.01	< 0.01	0.47	0.44	0.03	0.03
CH	W7	1.963	0.02	0.03	0.008	0.015	< 0.02	< 0.02	< 0.01	< 0.01	4.9	8.0	< 0.005	< 0.005	< 0.01	< 0.01	1.37	1.34	0.03	0.05
CH	W8	0.263	< 0.01	0.03	0.963	0.956	< 0.02	< 0.02	< 0.01	< 0.01	1.8	2.1	0.106	0.111	< 0.01	< 0.01	5.71	5.76	7.39	7.54
CH	W9	0.331	< 0.01	0.01	0.008	0.010	< 0.02	< 0.02	< 0.01	< 0.01	2.8	2.9	< 0.005	< 0.005	< 0.01	< 0.01	0.45	0.46	0.02	0.02
CH	W10	30.679	0.04	1.46	0.075	1.348	0.05	0.11	< 0.01	0.11	5.4	182.5	0.010	0.131	< 0.01	0.02	2.02	3.84	0.22	8.23
CH	W11	25.939	0.06	0.08	0.021	0.120	0.04	0.08	0.01	< 0.01	14.6	151.5	< 0.005	0.012	< 0.01	< 0.01	8.52	8.51	0.09	0.77
CH	W12	9.354	0.02	0.84	0.669	1.328	0.04	0.07	< 0.01	< 0.01	4.0	9.0	0.073	0.148	< 0.01	< 0.01	9.41	10.92	7.54	10.66
East Rawdon Gold District (RAW)																				
RAW	W1	4.780	0.01	0.02	0.012	0.017	< 0.02	< 0.02	0.01	< 0.01	7.0	15.4	< 0.005	< 0.005	< 0.01	< 0.01	0.08	< 0.05	0.02	0.06
RAW	W2	5.712	0.02	0.07	0.013	0.060	< 0.02	< 0.02	0.01	< 0.01	9.6	21.6	< 0.005	0.009	< 0.01	< 0.01	0.29	0.28	0.07	0.28
RAW	W3	0.726	< 0.01	0.01	0.010	0.012	< 0.02	< 0.02	< 0.01	< 0.01	11.6	8.8	< 0.005	< 0.005	< 0.01	< 0.01	< 0.05	< 0.05	0.05	0.07
RAW	W4	1.900	< 0.01	0.01	0.010	0.026	< 0.02	< 0.02	< 0.01	< 0.01	14.0	32.0	< 0.005	< 0.005	< 0.01	< 0.01	0.07	< 0.05	0.05	0.12
RAW	W5	0.141	< 0.01	< 0.01	0.084	0.122	< 0.02	< 0.02	< 0.01	< 0.01	11.9	34.2	0.012	0.017	< 0.01	< 0.01	0.59	0.54	0.23	0.32
Lake Catcha Gold District (LC)																				
LC	W1	0.410	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.01	< 0.01	4.4	11.6	< 0.005	< 0.005	< 0.01	< 0.01	0.15	0.12	< 0.01	< 0.01
LC	W2	2.855	0.06	0.07	0.036	0.024	< 0.02	< 0.02	< 0.01	< 0.01	9.4	9.7	0.006	0.005	< 0.01	< 0.01	0.63	0.61	0.09	0.10
LC	W3	3.458	0.04	0.06	0.006	0.007	< 0.02	< 0.02	< 0.01	< 0.01	2.1	2.4	< 0.005	< 0.005	< 0.01	< 0.01	0.11	0.08	0.01	0.02
LC	W4	26.466	0.02	0.03	< 0.005	0.031	< 0.02	0.03	< 0.01	< 0.01	8.1	27.4	< 0.005	0.007	< 0.01	< 0.01	< 0.05	0.28	< 0.01	0.12
LC	W5	0.821	0.02	0.02	0.036	0.034	< 0.02	< 0.02	< 0.01	< 0.01	6.4	7.5	0.005	0.005	< 0.01	< 0.01	0.27	0.28	0.11	0.11
LC	W6	0.972	0.02	0.03	0.039	0.046	< 0.02	< 0.02	< 0.01	< 0.01	12.1	14.3	0.008	0.005	< 0.01	< 0.01	0.28	0.23	0.12	0.12
LC	W6-D	0.965	0.02	0.03	0.042	0.039	< 0.02	< 0.02	0.02	< 0.01	12.2	14.4	0.006	0.006	< 0.01	< 0.01	0.27	0.26	0.11	0.13
Lower Seal Harbour Gold District (LSH)																				
LSH	W1	0.964	0.05	0.05	0.184	0.214	< 0.02	< 0.02	< 0.01	0.01	18.8	22.4	0.032	0.028	< 0.01	< 0.01	0.34	0.26	1.21	1.28
LSH	W2	2.012	0.05	0.05	0.246	0.299	< 0.02	< 0.02	< 0.01	< 0.01	24.1	26.7	0.037	0.037	< 0.01	< 0.01	0.37	0.33	1.74	1.85
LSH	W4	1.063	0.03	0.03	0.101	0.104	< 0.02	< 0.02	< 0.01	< 0.01	16.4	18.7	0.013	0.014	< 0.01	< 0.01	0.37	0.34	0.67	0.69
LSH	W6	2.107	0.02	0.02	0.322	0.403	< 0.02	< 0.02	0.03	< 0.01	14.2	19.7	0.048	0.059	< 0.01	< 0.01	0.55	0.55	1.89	2.21
LSH	W7	1.996	0.02	0.02	0.238	0.314	< 0.02	< 0.02	0.01	< 0.01	14.6	19.0	0.039	0.051	< 0.01	< 0.01	0.57	0.57	1.44	1.84
LSH	W8	2.049	0.02	0.02	0.229	0.292	< 0.02	< 0.02	0.01	< 0.01	17.0	20.2	0.036	0.045	< 0.01	< 0.01	0.58	0.61	1.48	1.77
Mount Uniacke Gold District (UNI)																				
UNI	W1	10.623	< 0.01	0.19	0.018	0.706	0.02	0.03	0.02	0.07	33.1	7184.0	< 0.005	0.074	< 0.01	< 0.01	5.30	5.63	0.10	4.93
UNI	W2	1.754	< 0.01	0.02	0.023	0.035	< 0.02	< 0.02	< 0.01	< 0.01	14.9	35.4	< 0.005	< 0.005	< 0.01	< 0.01	0.15	0.10	0.11	0.22
UNI	W3	28.305	0.06	0.08	0.057	0.589	0.03	0.05	< 0.01	0.02	21.2	1742.6	0.008	0.072	< 0.01	< 0.01	2.40	2.71	0.22	4.28

Gold District	Sample Site	Fe ICP-ES mg/L 0.005 Unfiltered	Ga ICP-MS µg/L 0.01 <0.45 µm	Ga ICP-MS µg/L 0.01 Unfiltered	Gd ICP-MS µg/L 0.005 <0.45 µm	Gd ICP-MS µg/L 0.005 Unfiltered	Ge ICP-MS µg/L 0.02 <0.45 µm	Ge ICP-MS µg/L 0.02 Unfiltered	Hf ICP-MS µg/L 0.01 <0.45 µm	Hf ICP-MS µg/L 0.01 Unfiltered	Hg TEKRAN* ppt 0.5 <0.45 µm	Hg TEKRAN* ppt 0.5 Unfiltered	Ho ICP-MS µg/L 0.005 <0.45 µm	Ho ICP-MS µg/L 0.005 Unfiltered	In ICP-MS µg/L 0.01 <0.45 µm	In ICP-MS µg/L 0.01 Unfiltered	K ICP-ES mg/L 0.05 <0.45 µm	K ICP-ES mg/L 0.05 Unfiltered	La ICP-MS µg/L 0.01 <0.45 µm	La ICP-MS µg/L 0.01 Unfiltered
UNI	W4	0.883	0.03	0.02	0.042	0.050	< 0.02	< 0.02	< 0.01	< 0.01	18.7	40.4	0.007	0.009	< 0.01	< 0.01	0.52	0.45	0.16	0.24
UNI	W5	3.893	0.03	0.02	< 0.005	0.031	< 0.02	< 0.02	< 0.01	< 0.01	5.3	15.6	< 0.005	0.005	< 0.01	< 0.01	0.33	0.33	0.02	0.19
North Brookfield Gold District (NB)																				
NB	W1	0.086	< 0.01	0.02	0.015	0.014	< 0.02	< 0.02	< 0.01	0.01	4.4	7.1	< 0.005	< 0.005	< 0.01	< 0.01	0.45	0.47	0.06	0.08
NB	W2	0.462	0.01	0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.01	< 0.01	9.7	11.0	< 0.005	< 0.005	< 0.01	< 0.01	0.83	0.80	< 0.01	0.01
NB	W3	1.558	0.01	0.07	< 0.005	0.062	< 0.02	< 0.02	0.01	0.02	14.0	335.0	< 0.005	0.012	< 0.01	< 0.01	0.94	1.07	< 0.01	0.18
NB	W4	0.891	0.01	0.02	0.007	0.009	< 0.02	< 0.02	0.01	< 0.01	15.1	33.6	< 0.005	< 0.005	< 0.01	< 0.01	0.87	0.88	0.02	0.03
NB	W5	1.826	0.01	0.08	< 0.005	0.075	< 0.02	< 0.02	< 0.01	0.02	13.7	395.1	< 0.005	0.012	< 0.01	< 0.01	1.59	1.76	< 0.01	0.21
Salmon River (Dufferin) Gold District (SR)																				
SR	W1	0.093	< 0.01	< 0.01	< 0.005	0.008	< 0.02	< 0.02	< 0.01	< 0.01	1.2	1.2	< 0.005	< 0.005	< 0.01	< 0.01	0.21	0.15	0.02	0.02
SR	W2	0.961	0.03	0.03	< 0.005	0.007	< 0.02	< 0.02	< 0.01	< 0.01	2.2	2.3	< 0.005	< 0.005	< 0.01	< 0.01	0.40	0.34	0.02	0.03
SR	W3	2.972	0.03	0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.01	< 0.01	2.4	3.0	< 0.005	< 0.005	< 0.01	< 0.01	1.07	1.06	< 0.01	< 0.01
SR	W4	9.823	0.09	0.08	< 0.005	< 0.005	< 0.02	< 0.02	< 0.01	< 0.01	3.5	5.1	< 0.005	< 0.005	< 0.01	< 0.01	0.27	0.18	< 0.01	< 0.01
SR	W5	3.315	< 0.01	< 0.01	0.058	0.050	< 0.02	< 0.02	< 0.01	< 0.01	60.6	70.0	0.011	0.011	< 0.01	< 0.01	0.39	0.36	0.13	0.13
SR	W6	1.408	0.04	0.05	0.024	0.027	< 0.02	< 0.02	< 0.01	< 0.01	4.1	4.1	< 0.005	< 0.005	< 0.01	< 0.01	0.25	0.15	0.17	0.18
SR	W7	1.008	0.03	0.04	0.015	0.016	< 0.02	< 0.02	< 0.01	0.01	7.6	50.4	< 0.005	< 0.005	< 0.01	< 0.01	0.22	0.15	0.11	0.14
SR	W8	7.789	0.08	0.10	0.051	0.074	0.02	0.03	< 0.01	< 0.01	7.4	7.6	0.006	0.007	< 0.01	< 0.01	0.09	0.06	0.40	0.45
SR	W9	2.968	< 0.01	0.02	0.031	0.031	< 0.02	0.03	< 0.01	< 0.01	14.7	32.2	< 0.005	< 0.005	< 0.01	< 0.01	0.18	0.10	0.28	0.48
Upper Seal Harbour Gold District (USH)																				
USH	W4(03)	0.481	0.02	0.03	0.055	0.055	< 0.02	< 0.02	< 0.01	< 0.01	8.4	13.8	0.008	0.007	< 0.01	< 0.01	0.29	0.31	0.36	0.38
USH	W13	0.458	0.02	0.03	0.054	0.064	< 0.02	< 0.02	< 0.01	< 0.01	8.5	10.6	0.007	0.008	< 0.01	< 0.01	0.32	0.35	0.35	0.35
USH	W14	7.876	< 0.01	0.03	0.030	0.062	< 0.02	0.04	< 0.01	< 0.01	13.0	25.6	0.006	0.008	< 0.01	< 0.01	0.56	0.58	0.14	0.28
USH	W18	0.490	0.02	0.03	0.048	0.064	< 0.02	< 0.02	< 0.01	< 0.01	8.1	12.8	0.007	0.006	< 0.01	< 0.01	0.34	0.32	0.36	0.39
USH	W19	3.309	< 0.01	< 0.01	0.036	0.088	0.02	0.03	< 0.01	< 0.01	15.5	120.7	0.005	0.012	< 0.01	< 0.01	1.16	1.18	0.13	0.43
USH	W20	0.436	0.02	0.03	0.059	0.054	< 0.02	< 0.02	< 0.01	< 0.01	7.9	8.7	0.008	0.009	< 0.01	< 0.01	0.27	0.34	0.35	0.42
Whiteburn Gold District (WB)																				
WHI	W1	0.630	0.04	0.07	0.091	0.114	< 0.02	< 0.02	< 0.01	< 0.01	17.4	18.2	0.013	0.014	< 0.01	< 0.01	0.40	0.39	0.53	0.65
WHI	W2	0.902	< 0.01	0.02	0.031	0.041	< 0.02	< 0.02	< 0.01	< 0.01	24.2	92.6	< 0.005	0.005	< 0.01	< 0.01	< 0.05	< 0.05	0.16	0.21
WHI	W3	17.071	0.02	0.19	0.025	1.051	0.05	0.05	< 0.01	0.14	30.1	26267	0.007	0.210	< 0.01	0.01	3.06	2.97	0.06	4.39
WHI	W4	2.742	0.07	0.08	0.086	0.129	< 0.02	< 0.02	< 0.01	0.01	40.2	105.7	0.012	0.016	< 0.01	< 0.01	0.35	0.35	0.43	0.64
WHI	W5	5.824	0.07	0.09	0.047	0.062	< 0.02	< 0.02	< 0.01	0.01	28.6	43.6	0.007	0.009	< 0.01	< 0.01	0.91	0.83	0.23	0.36
WHI	W6	1.004	0.04	0.06	0.093	0.109	< 0.02	< 0.02	< 0.01	< 0.01	54.5	77.8	0.012	0.015	< 0.01	< 0.01	0.31	0.32	0.43	0.54
WHI	W6-D	0.976	0.05	0.05	0.104	0.109	< 0.02	< 0.02	< 0.01	< 0.01	52.8	77.5	0.011	0.014	< 0.01	< 0.01	0.33	0.27	0.43	0.55
Upper / Lower Seal Harbour (SH-S) May 2004																				
SH-S	W1	0.183	0.02	0.02	0.054	0.053	< 0.02	< 0.02	< 0.01	< 0.01	4.4	4.6	0.009	0.009	< 0.01	< 0.01	0.40	0.40	0.29	0.30
SH-S	W2	0.247	0.02	0.01	0.055	0.056	< 0.02	< 0.02	< 0.01	< 0.01	8.0	10.8	0.009	0.010	< 0.01	< 0.01	0.39	0.37	0.37	0.37

Gold District	Sample Site	Fe ICP-ES mg/L 0.005 Unfiltered	Ga ICP-MS µg/L 0.01 <0.45 µm	Ga ICP-MS µg/L 0.01 Unfiltered	Gd ICP-MS µg/L 0.005 <0.45 µm	Gd ICP-MS µg/L 0.005 Unfiltered	Ge ICP-MS µg/L 0.02 <0.45 µm	Ge ICP-MS µg/L 0.02 Unfiltered	Hf ICP-MS µg/L 0.01 <0.45 µm	Hf ICP-MS µg/L 0.01 Unfiltered	Hg TEKRAN* ppt 0.5 <0.45 µm	Hg TEKRAN* ppt 0.5 Unfiltered	Ho ICP-MS µg/L 0.005 <0.45 µm	Ho ICP-MS µg/L 0.005 Unfiltered	In ICP-MS µg/L 0.01 <0.45 µm	In ICP-MS µg/L 0.01 Unfiltered	K ICP-ES mg/L 0.05 <0.45 µm	K ICP-ES mg/L 0.05 Unfiltered	La ICP-MS µg/L 0.01 <0.45 µm	La ICP-MS µg/L 0.01 Unfiltered
SH-S	W3	0.515	< 0.01	< 0.01	0.116	0.123	< 0.02	< 0.02	< 0.01	< 0.01	10.2	12.2	0.016	0.015	< 0.01	< 0.01	0.46	0.47	0.78	0.81
SH-S	W4	0.353	0.01	0.02	0.043	0.039	< 0.02	< 0.02	< 0.01	< 0.01	9.3	11.8	< 0.005	0.005	< 0.01	< 0.01	0.38	0.41	0.25	0.26
SH-S	W5	0.366	0.01	0.01	0.043	0.045	< 0.02	< 0.02	< 0.01	< 0.01	10.0	11.6	0.006	0.006	< 0.01	< 0.01	0.46	0.42	0.27	0.28
SH-S	W6	0.745	< 0.01	< 0.01	0.128	0.129	< 0.02	< 0.02	< 0.01	0.01	8.6	8.8	0.019	0.019	< 0.01	< 0.01	0.60	0.59	0.65	0.68
SH-S	W7	0.708	< 0.01	0.01	0.098	0.108	< 0.02	< 0.02	< 0.01	< 0.01	7.9	8.5	0.016	0.017	< 0.01	< 0.01	0.58	0.57	0.56	0.60
SH-S	W8	0.500	< 0.01	< 0.01	0.095	0.100	< 0.02	< 0.02	< 0.01	< 0.01	10.0	10.6	0.014	0.016	< 0.01	< 0.01	0.53	0.56	0.59	0.62
SH-S	W9	0.361	0.01	0.01	0.047	0.049	< 0.02	< 0.02	< 0.01	< 0.01	10.4	11.8	0.006	0.007	< 0.01	< 0.01	0.44	0.40	0.29	0.29
SH-S	W9-D1	0.416	0.01	0.01	0.051	0.053	< 0.02	< 0.02	< 0.01	< 0.01	9.2	12.5	0.006	0.007	< 0.01	< 0.01	0.35	0.34	0.28	0.31
SH-S	W9-D2	0.376	0.01	0.01	0.048	0.044	< 0.02	< 0.02	< 0.01	< 0.01	9.6	12.5	0.006	0.007	< 0.01	< 0.01	0.43	0.37	0.27	0.30
SH-S	W9-D3	0.399	< 0.01	0.02	0.048	0.048	< 0.02	< 0.02	< 0.01	< 0.01	9.8	12.9	0.006	0.006	< 0.01	< 0.01	0.37	0.37	0.28	0.30
SH-S	W10	0.389	0.01	0.01	0.033	0.032	< 0.02	< 0.02	< 0.01	< 0.01	9.6	12.6	< 0.005	< 0.005	< 0.01	< 0.01	0.38	0.36	0.20	0.21
SH-S	W11	0.381	0.02	0.02	0.031	0.033	< 0.02	< 0.02	< 0.01	< 0.01	10.0	12.1	< 0.005	< 0.005	< 0.01	< 0.01	0.37	0.37	0.19	0.19
SH-S	W12	0.367	0.01	0.01	0.032	0.034	< 0.02	< 0.02	< 0.01	< 0.01	8.4	11.1	< 0.005	< 0.005	< 0.01	< 0.01	0.41	0.39	0.18	0.19
SH-S	W13	0.344	0.01	0.02	0.029	0.032	< 0.02	< 0.02	< 0.01	< 0.01	7.9	12.7	< 0.005	< 0.005	< 0.01	< 0.01	0.37	0.37	0.19	0.20
SH-S	W14	0.356	0.01	0.02	0.031	0.032	< 0.02	< 0.02	< 0.01	< 0.01	8.9	13.0	< 0.005	< 0.005	< 0.01	< 0.01	0.38	0.30	0.19	0.20
SH-S	W15	0.341	< 0.01	< 0.01	0.024	0.025	< 0.02	< 0.02	< 0.01	< 0.01	5.0	6.2	< 0.005	< 0.005	< 0.01	< 0.01	0.76	0.78	0.13	0.15
SH-S	W16	0.223	0.02	0.02	0.019	0.018	< 0.02	< 0.02	< 0.01	0.01	4.4	4.6	< 0.005	< 0.005	< 0.01	< 0.01	0.24	0.26	0.10	0.10
SH-S	W17	0.682	0.02	0.02	0.029	0.027	< 0.02	< 0.02	0.03	< 0.01	21.4	29.1	< 0.005	< 0.005	< 0.01	< 0.01	0.80	0.79	0.18	0.19
SH-S	W17-D	0.688	0.01	0.02	0.025	0.031	< 0.02	< 0.02	0.01	< 0.01	22.2	28.9	< 0.005	< 0.005	< 0.01	< 0.01	0.77	0.81	0.18	0.19
SH-S	W18	0.271	0.02	0.02	0.031	0.032	< 0.02	< 0.02	< 0.01	< 0.01	5.5	6.4	< 0.005	< 0.005	< 0.01	< 0.01	0.32	0.33	0.20	0.20
SH-S	W19	0.807	< 0.01	< 0.01	< 0.005	0.007	< 0.02	< 0.02	< 0.01	< 0.01	20.1	30.0	< 0.005	< 0.005	< 0.01	< 0.01	1.27	1.30	0.01	0.03
SH-S	W20	0.269	0.02	0.02	0.027	0.028	< 0.02	< 0.02	< 0.01	0.02	5.0	5.7	< 0.005	< 0.005	< 0.01	< 0.01	0.31	0.30	0.19	0.20
SH-S	W21	0.278	0.01	0.01	0.042	0.046	< 0.02	< 0.02	0.02	< 0.01	6.2	7.0	0.006	0.006	< 0.01	< 0.01	0.33	0.27	0.27	0.29
SH-S	W22	0.252	0.02	0.02	0.078	0.080	< 0.02	< 0.02	< 0.01	< 0.01	4.2	4.3	0.011	0.011	< 0.01	< 0.01	0.29	0.26	0.47	0.48
SH-S	W23	0.368	0.01	0.01	0.048	0.047	< 0.02	< 0.02	< 0.01	< 0.01	10.4	11.7	0.007	0.006	< 0.01	< 0.01	0.40	0.44	0.26	0.28
SH-S	W24	0.370	0.01	0.01	0.046	0.047	< 0.02	< 0.02	< 0.01	< 0.01	10.6	12.4	0.006	0.006	< 0.01	< 0.01	0.41	0.38	0.28	0.29
SH-S	W25	0.530	0.01	0.01	0.034	0.034	< 0.02	< 0.02	< 0.01	< 0.01	9.9	12.3	< 0.005	< 0.005	< 0.01	< 0.01	0.44	0.42	0.21	0.22
Upper / Lower Seal Harbour (SH-S) August 2004																				
SH-S	W1	0.476	0.03	0.03	0.135	0.122	< 0.02	< 0.02	0.06	< 0.01	7.4	8.3	0.021	0.020	< 0.01	< 0.01	0.24	0.26	0.73	0.71
SH-S	W1D	0.472	0.04	0.03	0.110	0.117	< 0.02	< 0.02	0.03	< 0.01	7.4	8.0	0.019	0.021	< 0.01	< 0.01	0.22	0.24	0.71	0.71
SH-S	W2	0.714	0.05	0.04	0.193	0.176	< 0.02	< 0.02	0.02	< 0.01	20.3	27.5	0.026	0.026	< 0.01	< 0.01	0.27	0.30	1.19	1.21
SH-S	W3	1.988	0.03	0.05	0.352	0.375	< 0.02	0.02	0.02	< 0.01	17.9	27.1	0.042	0.045	< 0.01	< 0.01	0.46	0.47	2.50	2.56

Gold District	Sample Site	Fe ICP-ES mg/L 0.005 Unfiltered	Ga ICP-MS µg/L 0.01 <0.45 µm	Ga ICP-MS µg/L 0.01 Unfiltered	Gd ICP-MS µg/L 0.005 <0.45 µm	Gd ICP-MS µg/L 0.005 Unfiltered	Ge ICP-MS µg/L 0.02 <0.45 µm	Ge ICP-MS µg/L 0.02 Unfiltered	Hf ICP-MS µg/L 0.01 <0.45 µm	Hf ICP-MS µg/L 0.01 Unfiltered	Hg TEKRAN* ppt 0.5 <0.45 µm	Hg TEKRAN* ppt 0.5 Unfiltered	Ho ICP-MS µg/L 0.005 <0.45 µm	Ho ICP-MS µg/L 0.005 Unfiltered	In ICP-MS µg/L 0.01 <0.45 µm	In ICP-MS µg/L 0.01 Unfiltered	K ICP-ES mg/L 0.05 <0.45 µm	K ICP-ES mg/L 0.05 Unfiltered	La ICP-MS µg/L 0.01 <0.45 µm	La ICP-MS µg/L 0.01 Unfiltered
SH-S	W4	1.295	0.02	0.03	0.075	0.084	< 0.02	< 0.02	< 0.01	< 0.01	16.8	19.4	0.011	0.010	< 0.01	< 0.01	0.46	0.42	0.47	0.51
SH-S	W5	1.295	0.02	0.03	0.071	0.093	< 0.02	< 0.02	< 0.01	0.01	16.4	21.3	0.011	0.010	< 0.01	< 0.01	0.46	0.47	0.53	0.56
SH-S	W6	1.808	< 0.01	0.02	0.236	0.310	< 0.02	< 0.02	0.01	0.02	8.7	18.6	0.040	0.048	< 0.01	< 0.01	0.58	0.62	1.46	1.76
SH-S	W7	1.587	0.02	0.01	0.182	0.232	< 0.02	< 0.02	0.01	0.01	12.3	12.8	0.031	0.036	< 0.01	< 0.01	0.56	0.58	1.05	1.27
SH-S	W8	1.707	< 0.01	0.02	0.159	0.187	< 0.02	< 0.02	0.02	< 0.01	12.2	14.7	0.022	0.029	< 0.01	< 0.01	0.54	0.60	0.82	1.18
SH-S	W9	1.304	0.02	0.02	0.086	0.098	< 0.02	< 0.02	< 0.01	0.01	18.3	20.5	0.012	0.011	< 0.01	< 0.01	0.42	0.49	0.53	0.58
SH-S	W9D1	1.328	0.02	0.02	0.091	0.094	< 0.02	< 0.02	< 0.01	< 0.01	17.3	20.0	0.010	0.012	< 0.01	< 0.01	0.47	0.48	0.53	0.57
SH-S	W9D2	1.323	0.02	0.02	0.082	0.088	< 0.02	< 0.02	< 0.01	< 0.01	18.1	19.7	0.012	0.012	< 0.01	< 0.01	0.47	0.45	0.53	0.56
SH-S	W9D3	1.369	0.02	0.02	0.074	0.082	< 0.02	< 0.02	< 0.01	0.02	17.2	19.5	0.012	0.012	< 0.01	< 0.01	0.44	0.48	0.49	0.55
SH-S	W10	0.699	0.03	0.02	0.048	0.045	< 0.02	< 0.02	< 0.01	0.02	11.9	16.3	0.006	0.006	< 0.01	< 0.01	0.36	0.31	0.28	0.31
SH-S	W11	0.756	0.02	0.02	0.040	0.046	< 0.02	< 0.02	< 0.01	0.01	14.0	16.6	0.006	0.006	< 0.01	< 0.01	0.31	0.32	0.24	0.25
SH-S	W12	0.678	0.02	0.02	0.031	0.039	< 0.02	< 0.02	< 0.01	< 0.01	11.6	16.7	< 0.005	< 0.005	< 0.01	< 0.01	0.33	0.32	0.21	0.24
SH-S	W13	0.330	0.01	0.02	0.043	0.033	< 0.02	< 0.02	< 0.01	< 0.01	10.0	12.5	0.006	0.006	< 0.01	< 0.01	0.35	0.32	0.26	0.25
SH-S	W14	0.470	0.03	0.02	0.039	0.045	< 0.02	< 0.02	< 0.01	< 0.01	11.9	13.2	0.006	0.005	< 0.01	< 0.01	0.32	0.33	0.25	0.26
SH-S	W15	4.554	0.01	0.02	0.047	0.058	< 0.02	< 0.02	< 0.01	< 0.01	13.7	14.9	0.007	0.007	< 0.01	< 0.01	0.48	0.46	0.27	0.33
SH-S	W15D	4.657	0.01	0.01	0.051	0.056	< 0.02	< 0.02	< 0.01	0.01	13.3	15.2	0.005	0.008	< 0.01	< 0.01	0.48	0.44	0.27	0.33
SH-S	W16	0.409	0.03	0.02	0.037	0.029	< 0.02	< 0.02	< 0.01	< 0.01	6.4	6.8	0.006	0.006	< 0.01	< 0.01	0.23	0.30	0.19	0.20
SH-S	W17	2.772	0.02	0.04	0.061	0.061	< 0.02	< 0.02	< 0.01	0.04	45.6	59.8	0.008	0.008	< 0.01	< 0.01	0.82	0.83	0.44	0.47
SH-S	W18	0.333	0.02	0.02	0.039	0.042	< 0.02	< 0.02	< 0.01	< 0.01	6.5	8.3	< 0.005	0.006	< 0.01	< 0.01	0.31	0.32	0.26	0.28
SH-S	W19	5.558	< 0.01	< 0.01	0.006	0.039	0.03	0.04	< 0.01	< 0.01	17.5	88.8	< 0.005	0.006	< 0.01	< 0.01	1.49	1.51	0.02	0.26
SH-S	W20	0.302	0.02	0.02	0.042	0.044	< 0.02	< 0.02	< 0.01	< 0.01	5.7	7.3	0.005	0.006	< 0.01	< 0.01	0.34	0.38	0.27	0.29
SH-S	W21	1.014	0.02	0.02	0.091	0.113	< 0.02	< 0.02	0.01	< 0.01	9.3	8.6	0.012	0.013	< 0.01	< 0.01	0.24	0.27	0.61	0.63
SH-S	W22	0.645	0.02	0.03	0.145	0.154	< 0.02	< 0.02	0.02	0.01	6.5	6.6	0.024	0.025	< 0.01	< 0.01	0.07	0.13	0.98	0.98
SH-S	W23	1.291	0.02	0.02	0.084	0.099	< 0.02	< 0.02	< 0.01	0.01	17.0	29.4	0.011	0.013	< 0.01	< 0.01	0.47	0.45	0.53	0.57
SH-S	W24	1.324	0.02	0.02	0.080	0.084	< 0.02	< 0.02	< 0.01	0.01	16.9	20.1	0.012	0.013	< 0.01	< 0.01	0.44	0.39	0.54	0.57
SH-S	W25	1.134	< 0.01	0.02	0.046	0.048	< 0.02	< 0.02	< 0.01	< 0.01	11.8	14.1	0.005	0.006	< 0.01	< 0.01	0.36	0.39	0.26	0.30
SH-S	W51	0.982	< 0.1	< 0.1	< 0.05	0.059	< 0.2	< 0.2	< 0.1	< 0.1	12.0	18.5	< 0.05	< 0.05	< 0.1	< 0.1	43.51	43.49	0.29	0.45
Upper / Lower Seal Harbour (SH-S) November 2004																				
SH-S	W1	0.385	0.03	0.02	0.101	0.108	< 0.02	< 0.02	< 0.01	< 0.01	5.6	6.5	0.016	0.016	< 0.01	< 0.01	0.57	0.57	0.58	0.59
SH-S	W2	0.473	0.02	0.03	0.124	0.140	< 0.02	< 0.02	< 0.01	< 0.01	7.9	9.7	0.019	0.019	< 0.01	< 0.01	0.48	0.51	0.85	0.85
SH-S	W3	0.685	0.01	< 0.01	0.223	0.231	< 0.02	< 0.02	< 0.01	< 0.01	11.8	14.2	0.028	0.028	< 0.01	< 0.01	0.71	0.64	1.53	1.53
SH-S	W3D	0.681	< 0.01	< 0.01	0.219	0.228	< 0.02	< 0.02	< 0.01	< 0.01	11.8	14.4	0.027	0.031	< 0.01	< 0.01	0.64	0.65	1.52	1.57
SH-S	W4	0.587	0.02	0.02	0.078	0.071	< 0.02	< 0.02	< 0.01	0.01	10.8	13.9	0.009	0.010	< 0.01	< 0.01	0.68	0.65	0.48	0.47
SH-S	W5	0.602	0.02	0.01	0.078	0.087	< 0.02	< 0.02	< 0.01	< 0.01	11.1	14.6	0.010	0.011	< 0.01	< 0.01	0.67	0.66	0.54	0.56

Gold District	Sample Site	Fe ICP-ES mg/L 0.005 Unfiltered	Ga ICP-MS µg/L 0.01 <0.45 µm	Ga ICP-MS µg/L 0.01 Unfiltered	Gd ICP-MS µg/L 0.005 <0.45 µm	Gd ICP-MS µg/L 0.005 Unfiltered	Ge ICP-MS µg/L 0.02 <0.45 µm	Ge ICP-MS µg/L 0.02 Unfiltered	Hf ICP-MS µg/L 0.01 <0.45 µm	Hf ICP-MS µg/L 0.01 Unfiltered	Hg TEKRAN* ppt 0.5 <0.45 µm	Hg TEKRAN* ppt 0.5 Unfiltered	Ho ICP-MS µg/L 0.005 <0.45 µm	Ho ICP-MS µg/L 0.005 Unfiltered	In ICP-MS µg/L 0.01 <0.45 µm	In ICP-MS µg/L 0.01 Unfiltered	K ICP-ES mg/L 0.05 <0.45 µm	K ICP-ES mg/L 0.05 Unfiltered	La ICP-MS µg/L 0.01 <0.45 µm	La ICP-MS µg/L 0.01 Unfiltered
SH-S	W6	0.700	< 0.01	< 0.01	0.178	0.199	< 0.02	< 0.02	< 0.01	0.03	9.4	12.1	0.023	0.027	< 0.01	< 0.01	0.70	0.66	1.17	1.20
SH-S	W7	0.650	< 0.01	< 0.01	0.171	0.174	< 0.02	< 0.02	< 0.01	< 0.01	9.5	10.8	0.025	0.025	< 0.01	< 0.01	0.69	0.68	1.09	1.10
SH-S	W8	0.600	< 0.01	< 0.01	0.174	0.190	< 0.02	< 0.02	< 0.01	< 0.01	10.3	12.8	0.024	0.023	< 0.01	< 0.01	0.68	0.68	1.15	1.21
SH-S	W9	0.601	0.01	0.02	0.084	0.093	< 0.02	< 0.02	< 0.01	< 0.01	14.5	14.8	0.011	0.011	< 0.01	< 0.01	0.66	0.69	0.55	0.57
SH-S	W9D1	0.609	0.01	0.01	0.083	0.091	< 0.02	< 0.02	< 0.01	< 0.01	10.4	14.5	0.009	0.011	< 0.01	< 0.01	0.65	0.67	0.52	0.55
SH-S	W9D2	0.605	0.02	0.01	0.089	0.084	< 0.02	< 0.02	< 0.01	< 0.01	10.2	14.3	0.010	0.011	< 0.01	< 0.01	0.64	0.67	0.51	0.52
SH-S	W10	0.471	0.02	0.02	0.062	0.057	< 0.02	< 0.02	0.02	< 0.01	8.5	13.1	0.006	0.008	< 0.01	< 0.01	0.50	0.46	0.32	0.33
SH-S	W10D	0.444	0.02	0.02	0.056	0.059	< 0.02	< 0.02	0.01	< 0.01	8.6	10.0	0.006	0.007	< 0.01	< 0.01	0.53	0.50	0.32	0.34
SH-S	W11	0.411	0.02	0.01	0.056	0.057	< 0.02	< 0.02	< 0.01	< 0.01	8.2	10.2	0.007	0.006	< 0.01	< 0.01	0.51	0.49	0.31	0.33
SH-S	W12	0.428	0.02	0.03	0.058	0.054	< 0.02	< 0.02	< 0.01	< 0.01	8.3	10.2	0.007	0.007	< 0.01	< 0.01	0.51	0.46	0.33	0.35
SH-S	W13	0.435	0.02	0.02	0.053	0.061	< 0.02	< 0.02	< 0.01	< 0.01	7.8	10.1	0.008	0.008	< 0.01	< 0.01	0.51	0.48	0.34	0.36
SH-S	W14	0.439	0.02	0.02	0.046	0.059	< 0.02	< 0.02	< 0.01	< 0.01	7.7	9.4	0.006	0.007	< 0.01	< 0.01	0.45	0.43	0.32	0.34
SH-S	W15	0.705	< 0.01	< 0.01	0.040	0.047	< 0.02	< 0.02	< 0.01	< 0.01	6.5	8.2	0.006	0.006	< 0.01	< 0.01	0.94	0.93	0.28	0.29
SH-S	W16	0.392	0.03	0.03	0.036	0.038	< 0.02	< 0.02	0.02	< 0.01	5.6	6.1	0.006	0.006	< 0.01	< 0.01	0.34	0.36	0.21	0.22
SH-S	W17	0.687	0.03	0.03	0.064	0.067	< 0.02	< 0.02	< 0.01	< 0.01	12.8	15.6	0.008	0.008	< 0.01	< 0.01	0.89	0.88	0.49	0.50
SH-S	W18	0.394	0.03	0.02	0.047	0.047	< 0.02	< 0.02	< 0.01	< 0.01	7.1	10.4	0.006	0.006	< 0.01	< 0.01	0.41	0.42	0.33	0.34
SH-S	W19	1.071	< 0.01	< 0.01	0.065	0.081	< 0.02	< 0.02	< 0.01	< 0.01	54.5	73.9	0.009	0.011	< 0.01	< 0.01	1.28	1.22	0.30	0.36
SH-S	W20	0.394	0.02	0.03	0.051	0.058	< 0.02	< 0.02	< 0.01	< 0.01	6.7	18.8	0.007	0.007	< 0.01	< 0.01	0.43	0.38	0.31	0.32
SH-S	W21	0.567	0.02	0.02	0.090	0.093	< 0.02	< 0.02	< 0.01	< 0.01	8.4	11.3	0.012	0.012	< 0.01	< 0.01	0.63	0.57	0.61	0.64
SH-S	W22	0.473	0.02	0.02	0.123	0.134	< 0.02	< 0.02	< 0.01	0.01	5.0	5.0	0.018	0.016	< 0.01	< 0.01	0.26	0.24	0.77	0.77
SH-S	W23	0.597	0.02	0.02	0.092	0.094	< 0.02	< 0.02	< 0.01	< 0.01	11.6	14.6	0.011	0.010	< 0.01	< 0.01	0.72	0.68	0.54	0.56
SH-S	W24	0.510	0.02	< 0.01	0.086	0.088	< 0.02	< 0.02	< 0.01	< 0.01	10.7	14.0	0.010	0.010	< 0.01	< 0.01	0.71	0.71	0.52	0.52
SH-S	W25	0.540	0.02	0.02	0.058	0.058	< 0.02	< 0.02	< 0.01	< 0.01	8.3	11.1	0.007	0.008	< 0.01	< 0.01	0.55	0.46	0.33	0.35
Upper / Lower Seal Harbour (SH-S) August 2005																				
SH-S	W1	0.329	0.02	0.02	0.068	0.063	< 0.02	< 0.02	0.02	0.01	4.5	5.0	0.012	0.011	< 0.01	< 0.01	0.58	0.57	0.38	0.39
SH-S	W2	0.541	0.01	0.01	0.065	0.072	< 0.02	< 0.02	0.02	0.01	20.8	22.7	0.012	0.010	< 0.01	< 0.01	0.85	0.87	0.50	0.52
SH-S	W3	1.984	< 0.01	0.01	0.088	0.126	< 0.02	< 0.02	0.01	< 0.01	12.5	23.0	0.013	0.020	< 0.01	< 0.01	1.03	1.07	0.48	0.83
SH-S	W4	1.365	< 0.01	0.02	0.036	0.043	< 0.02	< 0.02	< 0.01	< 0.01	18.2	30.6	< 0.005	0.006	< 0.01	< 0.01	0.53	0.55	0.23	0.32
SH-S	W5	1.392	0.01	0.02	0.047	0.051	< 0.02	< 0.02	< 0.01	< 0.01	19.1	29.7	0.007	0.007	< 0.01	< 0.01	0.57	0.56	0.32	0.37
SH-S	W6	2.099	< 0.01	< 0.01	0.119	0.237	< 0.02	< 0.02	0.01	0.01	5.5	7.0	0.021	0.039	< 0.01	< 0.01	1.76	1.79	0.84	1.84
SH-S	W7	2.112	< 0.01	< 0.01	0.056	0.100	< 0.02	< 0.02	0.03	< 0.01	2.9	4.4	0.014	0.021	< 0.01	< 0.01	1.66	1.74	0.24	0.49
SH-S	W8	3.137	< 0.01	< 0.01	0.048	0.074	< 0.02	< 0.02	0.02	< 0.01	3.3	6.4	0.009	0.012	< 0.01	< 0.01	1.44	1.46	0.24	0.38
SH-S	W9	1.489	0.01	0.02	0.057	0.058	< 0.02	< 0.02	0.01	< 0.01	17.8	23.3	0.006	0.008	< 0.01	< 0.01	0.57	0.59	0.30	0.37
SH-S	W9D1	1.358	< 0.01	< 0.01	0.055	0.054	< 0.02	< 0.02	0.02	0.02	10.1	18.0	0.008	0.008	< 0.01	< 0.01	0.85	0.90	0.30	0.28

Gold District	Sample Site	Fe ICP-ES mg/L 0.005 Unfiltered	Ga ICP-MS µg/L 0.01 <0.45 µm	Ga ICP-MS µg/L 0.01 Unfiltered	Gd ICP-MS µg/L 0.005 <0.45 µm	Gd ICP-MS µg/L 0.005 Unfiltered	Ge ICP-MS µg/L 0.02 <0.45 µm	Ge ICP-MS µg/L 0.02 Unfiltered	Hf ICP-MS µg/L 0.01 <0.45 µm	Hf ICP-MS µg/L 0.01 Unfiltered	Hg TEKRAN* ppt 0.5 <0.45 µm	Hg TEKRAN* ppt 0.5 Unfiltered	Ho ICP-MS µg/L 0.005 <0.45 µm	Ho ICP-MS µg/L 0.005 Unfiltered	In ICP-MS µg/L 0.01 <0.45 µm	In ICP-MS µg/L 0.01 Unfiltered	K ICP-ES mg/L 0.05 <0.45 µm	K ICP-ES mg/L 0.05 Unfiltered	La ICP-MS µg/L 0.01 <0.45 µm	La ICP-MS µg/L 0.01 Unfiltered
SH-S	W9D2	1.340	0.01	0.01	0.097	0.113	< 0.02	< 0.02	0.03	0.02	16.3	21.0	0.014	0.017	< 0.01	< 0.01	0.70	0.71	0.66	0.74
SH-S	W10	1.762	< 0.01	0.01	0.047	0.087	< 0.02	< 0.02	0.01	< 0.01	24.3	90.3	0.007	0.010	< 0.01	< 0.01	0.93	0.96	0.21	0.45
SH-S	W10D	1.778	< 0.01	< 0.01	0.053	0.081	< 0.02	< 0.02	0.01	0.02	24.3	91.3	0.006	0.011	< 0.01	< 0.01	0.92	0.93	0.23	0.47
SH-S	W11	0.925	< 0.01	< 0.01	0.027	0.036	< 0.02	< 0.02	< 0.01	0.01	10.4	18.5	< 0.005	< 0.005	< 0.01	< 0.01	0.60	0.63	0.16	0.19
SH-S	W12	0.891	< 0.01	0.02	0.022	0.031	< 0.02	< 0.02	0.01	0.01	14.5	37.5	< 0.005	< 0.005	< 0.01	< 0.01	0.61	0.65	0.11	0.20
SH-S	W13	0.586	< 0.01	0.01	0.022	0.026	< 0.02	< 0.02	< 0.01	< 0.01	14.7	22.1	< 0.005	< 0.005	< 0.01	< 0.01	0.45	0.52	0.12	0.17
SH-S	W14	1.648	< 0.01	0.01	0.037	0.042	< 0.02	< 0.02	< 0.01	< 0.01	19.2	27.7	0.005	< 0.005	< 0.01	< 0.01	0.57	0.64	0.20	0.26
SH-S	W15	1.116	< 0.01	< 0.01	0.027	0.031	< 0.02	< 0.02	< 0.01	0.01	7.9	8.9	< 0.005	< 0.005	< 0.01	< 0.01	0.47	0.49	0.15	0.17
SH-S	W16	0.769	0.06	0.06	0.081	0.085	< 0.02	< 0.02	0.03	0.03	14.2	15.6	0.012	0.012	< 0.01	< 0.01	0.38	0.39	0.53	0.56
SH-S	W17	1.893	0.02	0.03	0.058	0.073	< 0.02	< 0.02	< 0.01	< 0.01	31.9	45.8	0.008	0.008	< 0.01	< 0.01	1.24	1.26	0.41	0.46
SH-S	W18	0.424	< 0.01	0.02	0.025	0.032	< 0.02	< 0.02	< 0.01	< 0.01	7.3	11.8	< 0.005	< 0.005	< 0.01	< 0.01	0.44	0.46	0.16	0.19
SH-S	W19	4.915	< 0.01	< 0.01	0.007	0.042	0.03	0.03	< 0.01	< 0.01	14.7	86.6	< 0.005	< 0.005	< 0.01	< 0.01	2.01	2.01	0.02	0.27
SH-S	W20	0.228	< 0.01	0.01	0.025	0.022	< 0.02	< 0.02	< 0.01	< 0.01	5.2	5.5	< 0.005	< 0.005	< 0.01	< 0.01	0.40	0.41	0.15	0.17
SH-S	W21	1.368	0.02	0.03	0.062	0.074	< 0.02	< 0.02	< 0.01	< 0.01	7.8	11.0	0.009	0.011	< 0.01	< 0.01	0.34	0.33	0.47	0.57
SH-S	W22	0.913	0.04	0.05	0.228	0.252	< 0.02	< 0.02	0.02	0.02	11.2	12.5	0.032	0.034	< 0.01	< 0.01	0.18	0.19	1.53	1.60
SH-S	W23	1.394	0.02	0.02	0.097	0.103	< 0.02	< 0.02	< 0.01	< 0.01	14.3	19.5	0.013	0.015	< 0.01	< 0.01	0.72	0.74	0.61	0.70
SH-S	W24	1.356	0.01	0.02	0.101	0.110	< 0.02	< 0.02	< 0.01	< 0.01	11.9	20.4	0.014	0.016	< 0.01	< 0.01	0.70	0.71	0.68	0.75
SH-S	W25	1.648	< 0.01	0.02	0.039	0.052	< 0.02	< 0.02	< 0.01	< 0.01	12.3	23.6	< 0.005	0.007	< 0.01	< 0.01	1.32	1.31	0.22	0.31
SH-S	W25D	1.623	< 0.01	0.01	0.036	0.049	< 0.02	< 0.02	0.02	< 0.01	11.1	23.5	< 0.005	0.006	< 0.01	< 0.01	1.29	1.31	0.20	0.30
Statistics	Min.	0.086	<0.01	<0.01	<0.005	<0.005	<0.02	<0.02	<0.01	<0.01	1.2	1.2	<0.005	<0.005	-	<0.01	<0.05	<0.05	<0.01	<0.01
	Max.	30.679	0.09	1.46	0.963	1.348	0.05	0.11	0.06	0.14	60.6	26267.0	0.106	0.210	-	0.02	43.51	43.49	7.54	10.66
	Mean	2.038	0.02	0.04	0.078	0.109	0.03	0.05	0.02	0.02	12.4	219.3	0.014	0.018	-	-	0.98	1.00	0.49	0.68
	Median	0.745	0.02	0.02	0.051	0.058	0.03	0.04	0.02	0.01	10.2	13.9	0.010	0.011	-	-	0.47	0.47	0.28	0.34
	n	181	123	147	169	177	10	14	40	40	181	181	120	133	-	2	178	177	174	178
	Std Dev	4.405	0.01	0.14	0.101	0.187	0.01	0.02	0.01	0.03	9.4	2017.0	0.013	0.027	-	-	3.38	3.42	0.85	1.27
	95th pctl	7.789	0.06	0.08	0.226	0.311	0.05	0.09	0.03	0.07	28.6	92.6	0.037	0.054	-	-	1.80	1.84	1.47	1.84
	90th pctl	3.458	0.04	0.06	0.161	0.205	0.05	0.08	0.03	0.03	20.3	59.8	0.027	0.036	-	-	1.28	1.27	0.94	1.23
	75th pctl	1.648	0.03	0.03	0.086	0.100	0.04	0.05	0.02	0.02	14.7	22.7	0.014	0.016	-	-	0.70	0.68	0.53	0.57
	50th pctl	0.745	0.02	0.02	0.051	0.058	0.03	0.04	0.02	0.01	10.2	13.9	0.010	0.011	-	-	0.47	0.47	0.28	0.34
	25th pctl	0.435	0.02	0.02	0.031	0.035	0.02	0.03	0.01	0.01	7.3	8.9	0.006	0.007	-	-	0.35	0.34	0.16	0.20

Gold District	Sample Site	Li ICP-MS µg/L 0.02 <0.45 µm	Li ICP-MS µg/L 0.02 Unfiltered	Lu ICP-MS µg/L 0.005 <0.45 µm	Lu ICP-MS µg/L 0.005 Unfiltered	Mg ICP-ES mg/L 0.005 <0.45 µm	Mg ICP-ES mg/L 0.005 Unfiltered	Mn ICP-MS µg/L 0.1 <0.45 µm	Mn ICP-MS µg/L 0.1 Unfiltered	Mo ICP-MS µg/L 0.05 <0.45 µm	Mo ICP-MS µg/L 0.05 Unfiltered	Na ICP-ES mg/L 0.05 <0.45 µm	Na ICP-ES mg/L 0.05 Unfiltered	Nb ICP-MS µg/L 0.01 <0.45 µm	Nb ICP-MS µg/L 0.01 Unfiltered	Nd ICP-MS µg/L 0.005 <0.45 µm	Nd ICP-MS µg/L 0.005 Unfiltered
Cochrane Hill Gold District (CH)																	
CH	W1	0.55	0.55	< 0.005	< 0.005	0.730	0.734	23.1	31.1	< 0.05	< 0.05	8.18	8.15	< 0.01	< 0.01	0.068	0.075
CH	W2	0.64	0.65	< 0.005	< 0.005	0.763	0.768	40.4	47.0	< 0.05	< 0.05	8.44	8.37	< 0.01	< 0.01	0.083	0.100
CH	W3	0.98	1.01	< 0.005	< 0.005	1.015	1.010	164.4	180.2	< 0.05	< 0.05	9.08	9.14	< 0.01	< 0.01	0.103	0.097
CH	W4	0.32	0.31	< 0.005	< 0.005	0.420	0.426	25.5	28.6	< 0.05	< 0.05	5.62	5.64	< 0.01	< 0.01	0.031	0.044
CH	W5	1.35	1.35	< 0.005	< 0.005	1.311	1.332	241.1	257.2	< 0.05	< 0.05	10.87	10.79	< 0.01	< 0.01	0.111	0.132
CH	W6	0.35	0.36	< 0.005	< 0.005	0.864	0.865	263.6	261.9	< 0.05	< 0.05	3.82	3.88	< 0.01	< 0.01	0.039	0.038
CH	W6-D	0.35	0.37	< 0.005	< 0.005	0.867	0.860	266.0	275.9	< 0.05	< 0.05	3.89	3.84	< 0.01	< 0.01	0.044	0.035
CH	W7	0.60	0.67	< 0.005	< 0.005	1.635	1.646	620.7	631.0	< 0.05	< 0.05	4.07	4.07	< 0.01	0.01	0.039	0.061
CH	W8	18.94	18.52	0.021	0.023	4.693	4.664	4300.1	4389.2	< 0.05	< 0.05	5.75	5.81	< 0.01	< 0.01	5.599	5.719
CH	W9	0.32	0.34	< 0.005	< 0.005	0.905	0.906	259.1	268.3	< 0.05	< 0.05	3.85	3.87	< 0.01	< 0.01	0.033	0.038
CH	W10	2.84	10.89	< 0.005	0.030	0.793	3.597	795.7	1258.7	0.77	0.21	3.79	4.56	< 0.01	0.24	0.343	8.552
CH	W11	1.52	1.62	< 0.005	< 0.005	7.365	7.391	5954.6	5716.5	0.41	0.62	13.12	13.21	< 0.01	< 0.01	0.090	0.579
CH	W12	26.75	36.66	0.012	0.029	8.349	10.381	3649.6	3852.2	0.65	0.55	5.13	5.28	< 0.01	0.11	4.448	7.499
East Rawdon Gold District (RAW)																	
RAW	W1	0.31	0.21	< 0.005	< 0.005	1.642	1.662	1209.8	1299.2	0.43	0.44	2.36	2.37	< 0.01	< 0.01	0.031	0.079
RAW	W2	0.47	0.47	< 0.005	< 0.005	1.592	1.652	3326.6	3472.2	0.26	0.26	2.21	2.21	< 0.01	< 0.01	0.078	0.308
RAW	W3	0.48	0.48	< 0.005	< 0.005	0.679	0.693	32.2	40.7	0.07	0.09	0.95	0.98	< 0.01	< 0.01	0.053	0.072
RAW	W4	0.47	0.47	< 0.005	< 0.005	0.895	0.914	141.0	155.4	0.11	0.11	0.88	0.88	< 0.01	< 0.01	0.059	0.114
RAW	W5	0.10	0.11	< 0.005	0.006	1.220	1.237	15.7	15.6	0.06	0.06	1.88	1.90	< 0.01	< 0.01	0.342	0.520
Lake Catcha Gold District (LC)																	
LC	W1	0.43	0.43	< 0.005	< 0.005	1.598	1.612	21.1	30.8	< 0.05	< 0.05	3.00	3.06	< 0.01	< 0.01	0.005	0.010
LC	W2	0.46	0.47	< 0.005	< 0.005	1.192	1.192	2109.4	2064.6	< 0.05	< 0.05	3.89	3.90	< 0.01	< 0.01	0.123	0.130
LC	W3	0.47	0.46	< 0.005	< 0.005	1.989	1.958	1984.7	1924.4	< 0.05	< 0.05	3.97	4.01	< 0.01	< 0.01	0.015	0.024
LC	W4	1.17	1.26	< 0.005	< 0.005	5.474	6.491	667.4	974.6	< 0.05	< 0.05	2.12	2.27	< 0.01	< 0.01	0.008	0.113
LC	W5	0.57	0.58	< 0.005	< 0.005	0.878	0.912	175.8	182.6	< 0.05	< 0.05	5.78	5.99	< 0.01	< 0.01	0.128	0.145
LC	W6	0.66	0.66	< 0.005	< 0.005	1.143	1.139	140.9	152.3	< 0.05	< 0.05	5.75	5.84	< 0.01	< 0.01	0.155	0.167
LC	W6-D	0.66	0.65	< 0.005	< 0.005	1.109	1.104	142.2	155.2	< 0.05	< 0.05	5.59	5.62	< 0.01	< 0.01	0.153	0.153
Lower Seal Harbour Gold District (LSH)																	
LSH	W1	0.92	1.00	0.008	0.008	0.666	0.647	62.8	65.2	< 0.05	< 0.05	4.54	4.50	0.03	0.04	1.157	1.311
LSH	W2	1.09	1.23	0.009	0.011	0.778	0.777	154.7	163.6	< 0.05	0.06	4.34	4.36	0.03	0.04	1.578	1.680
LSH	W4	0.65	0.69	< 0.005	< 0.005	0.529	0.526	43.7	52.2	< 0.05	< 0.05	3.02	3.03	0.01	0.02	0.611	0.655
LSH	W6	1.22	1.26	0.015	0.016	0.973	0.980	150.2	160.8	0.06	0.07	4.11	4.19	0.03	0.03	1.830	2.223
LSH	W7	1.25	1.26	0.014	0.014	0.934	0.948	174.7	177.4	0.06	0.07	4.10	4.19	0.02	0.03	1.398	1.826
LSH	W8	1.24	1.30	0.010	0.014	0.845	0.849	261.1	294.3	0.07	0.08	4.17	4.22	0.02	0.02	1.378	1.717
Mount Uniacke Gold District (UNI)																	
UNI	W1	5.03	6.24	< 0.005	0.023	2.055	2.359	654.5	826.6	0.13	0.19	4.40	4.56	< 0.01	0.05	0.090	4.331
UNI	W2	0.58	0.60	< 0.005	< 0.005	0.585	0.588	209.8	243.2	< 0.05	< 0.05	0.84	0.83	< 0.01	< 0.01	0.100	0.218
UNI	W3	0.68	0.93	< 0.005	0.023	1.133	1.200	4503.9	5285.0	< 0.05	0.05	2.07	2.15	< 0.01	< 0.01	0.247	4.073

Gold District	Sample Site	Li ICP-MS µg/L 0.02 <0.45 µm	Li ICP-MS µg/L 0.02 Unfiltered	Lu ICP-MS µg/L 0.005 <0.45 µm	Lu ICP-MS µg/L 0.005 Unfiltered	Mg ICP-ES mg/L 0.005 <0.45 µm	Mg ICP-ES mg/L 0.005 Unfiltered	Mn ICP-MS µg/L 0.1 <0.45 µm	Mn ICP-MS µg/L 0.1 Unfiltered	Mo ICP-MS µg/L 0.05 <0.45 µm	Mo ICP-MS µg/L 0.05 Unfiltered	Na ICP-ES mg/L 0.05 <0.45 µm	Na ICP-ES mg/L 0.05 Unfiltered	Nb ICP-MS µg/L 0.01 <0.45 µm	Nb ICP-MS µg/L 0.01 Unfiltered	Nd ICP-MS µg/L 0.005 <0.45 µm	Nd ICP-MS µg/L 0.005 Unfiltered
UNI	W4	0.69	0.78	< 0.005	< 0.005	1.350	1.336	971.1	975.4	< 0.05	< 0.05	2.23	2.24	< 0.01	< 0.01	0.182	0.267
UNI	W5	0.87	1.01	< 0.005	< 0.005	0.834	0.902	1457.0	1338.2	< 0.05	< 0.05	2.25	2.27	< 0.01	< 0.01	0.026	0.204
North Brookfield Gold District (NB)																	
NB	W1	0.35	0.37	< 0.005	< 0.005	0.604	0.617	6.1	7.9	< 0.05	< 0.05	2.62	2.65	< 0.01	< 0.01	0.093	0.103
NB	W2	2.50	2.30	< 0.005	< 0.005	6.234	6.213	665.6	647.4	14.29	14.72	2.72	2.69	< 0.01	< 0.01	0.008	0.015
NB	W3	2.50	3.13	< 0.005	< 0.005	7.153	7.566	596.6	630.6	16.32	16.30	2.86	2.97	< 0.01	< 0.01	0.009	0.232
NB	W4	1.82	1.77	< 0.005	< 0.005	4.727	4.616	488.6	462.8	15.33	13.68	2.61	2.58	< 0.01	< 0.01	0.021	0.030
NB	W5	4.95	5.74	< 0.005	< 0.005	12.360	13.027	588.9	638.1	26.71	24.19	3.62	3.67	< 0.01	< 0.01	0.005	0.249
Salmon River (Dufferin) Gold District (SR)																	
SR	W1	0.37	0.41	< 0.005	< 0.005	1.042	1.027	252.0	257.6	< 0.05	< 0.05	3.97	3.92	< 0.01	< 0.01	0.019	0.029
SR	W2	0.34	0.34	< 0.005	< 0.005	3.363	3.293	2042.7	2050.1	< 0.05	< 0.05	3.53	3.50	< 0.01	< 0.01	0.017	0.026
SR	W3	0.60	0.60	< 0.005	< 0.005	5.068	4.987	2048.6	1966.2	< 0.05	< 0.05	3.52	3.52	< 0.01	< 0.01	< 0.005	< 0.005
SR	W4	0.76	0.74	< 0.005	< 0.005	7.330	7.352	7431.7	< 0.1	< 0.05	< 0.05	3.85	3.74	< 0.01	< 0.01	< 0.005	< 0.005
SR	W5	0.49	0.51	< 0.005	0.005	2.895	2.845	270.4	244.5	< 0.05	< 0.05	3.08	3.07	< 0.01	< 0.01	0.162	0.155
SR	W6	0.95	0.93	< 0.005	< 0.005	1.642	1.614	1991.4	1936.8	< 0.05	< 0.05	3.74	3.74	< 0.01	< 0.01	0.169	0.183
SR	W7	0.98	1.00	< 0.005	< 0.005	1.609	1.600	1586.9	1799.8	< 0.05	< 0.05	3.77	3.75	< 0.01	< 0.01	0.123	0.153
SR	W8	1.55	1.61	< 0.005	< 0.005	1.272	1.244	2692.2	2870.4	< 0.05	< 0.05	3.87	3.86	< 0.01	< 0.01	0.441	0.459
SR	W9	1.17	1.17	< 0.005	< 0.005	0.554	0.552	130.9	126.9	0.16	0.26	3.72	3.79	< 0.01	< 0.01	0.242	0.344
Upper Seal Harbour Gold District (USH)																	
USH	W4(03)	0.50	0.50	< 0.005	< 0.005	0.411	0.414	20.6	19.4	< 0.05	< 0.05	2.80	2.79	< 0.01	0.01	0.310	0.362
USH	W13	0.53	0.51	< 0.005	< 0.005	0.446	0.440	28.4	30.1	< 0.05	< 0.05	2.86	2.87	< 0.01	< 0.01	0.313	0.327
USH	W14	0.68	0.67	< 0.005	< 0.005	0.963	0.973	267.4	278.7	0.30	0.28	3.53	3.54	< 0.01	0.01	0.176	0.278
USH	W18	0.50	0.51	< 0.005	< 0.005	0.411	0.414	20.7	19.2	< 0.05	< 0.05	2.80	2.76	< 0.01	0.01	0.322	0.332
USH	W19	3.12	3.01	< 0.005	< 0.005	0.827	0.811	51.3	48.1	0.08	0.07	3.81	3.81	< 0.01	< 0.01	0.209	0.577
USH	W20	0.49	0.52	< 0.005	< 0.005	0.413	0.412	17.4	18.5	< 0.05	< 0.05	2.81	2.81	< 0.01	0.01	0.343	0.369
Whiteburn Gold District (WB)																	
WHI	W1	1.33	1.66	< 0.005	< 0.005	0.613	0.614	409.8	465.0	0.15	0.20	3.66	3.70	< 0.01	0.05	0.644	0.734
WHI	W2	1.07	1.24	< 0.005	< 0.005	0.403	0.405	65.1	71.9	< 0.05	< 0.05	1.75	1.75	< 0.01	< 0.01	0.191	0.260
WHI	W3	2.34	3.02	0.006	0.115	1.914	2.052	1212.0	1356.7	0.35	0.21	4.27	4.37	< 0.01	0.04	0.078	4.146
WHI	W4	1.46	1.64	< 0.005	0.005	0.751	0.759	1612.5	1883.5	0.06	0.08	2.89	2.89	< 0.01	< 0.01	0.565	0.807
WHI	W5	0.84	0.95	< 0.005	< 0.005	1.286	1.294	4241.7	< 0.1	0.22	0.26	3.33	3.29	< 0.01	< 0.01	0.253	0.384
WHI	W6	1.28	1.40	< 0.005	< 0.005	0.563	0.557	572.0	662.7	< 0.05	< 0.05	2.95	2.97	< 0.01	< 0.01	0.554	0.667
WHI	W6-D	1.38	1.43	0.006	< 0.005	0.567	0.558	631.0	605.6	< 0.05	< 0.05	2.93	2.95	< 0.01	< 0.01	0.572	0.660
Upper / Lower Seal Harbour (SH-S) May 2004																	
SH-S	W1	0.66	0.69	< 0.005	< 0.005	0.648	0.640	57.8	59.8	< 0.05	< 0.05	4.77	4.85	< 0.01	< 0.01	0.314	0.321
SH-S	W2	0.68	0.69	< 0.005	< 0.005	0.566	0.576	35.2	35.9	< 0.05	< 0.05	4.64	4.73	0.01	< 0.01	0.354	0.357

Gold District	Sample Site	Li ICP-MS µg/L 0.02 <0.45 µm	Li ICP-MS µg/L 0.02 Unfiltered	Lu ICP-MS µg/L 0.005 <0.45 µm	Lu ICP-MS µg/L 0.005 Unfiltered	Mg ICP-ES mg/L 0.005 <0.45 µm	Mg ICP-ES mg/L 0.005 Unfiltered	Mn ICP-MS µg/L 0.1 <0.45 µm	Mn ICP-MS µg/L 0.1 Unfiltered	Mo ICP-MS µg/L 0.05 <0.45 µm	Mo ICP-MS µg/L 0.05 Unfiltered	Na ICP-ES mg/L 0.05 <0.45 µm	Na ICP-ES mg/L 0.05 Unfiltered	Nb ICP-MS µg/L 0.01 <0.45 µm	Nb ICP-MS µg/L 0.01 Unfiltered	Nd ICP-MS µg/L 0.005 <0.45 µm	Nd ICP-MS µg/L 0.005 Unfiltered
SH-S	W3	0.83	0.82	< 0.005	< 0.005	0.690	0.680	88.8	87.9	< 0.05	< 0.05	4.54	4.57	< 0.01	< 0.01	0.748	0.755
SH-S	W4	0.45	0.46	< 0.005	< 0.005	0.431	0.428	30.8	31.6	< 0.05	< 0.05	3.16	3.16	< 0.01	< 0.01	0.249	0.258
SH-S	W5	0.48	0.49	< 0.005	< 0.005	0.447	0.451	33.2	34.2	1.02	< 0.05	3.24	3.23	< 0.01	< 0.01	0.253	0.276
SH-S	W6	0.90	0.94	0.007	0.007	0.864	0.863	89.4	88.5	< 0.05	< 0.05	4.55	4.59	< 0.01	< 0.01	0.642	0.692
SH-S	W7	0.91	0.91	0.006	0.006	0.829	0.832	93.4	93.1	< 0.05	< 0.05	4.57	4.61	< 0.01	< 0.01	0.553	0.589
SH-S	W8	0.95	0.96	< 0.005	< 0.005	0.719	0.727	25.5	26.6	< 0.05	< 0.05	4.58	4.56	< 0.01	< 0.01	0.572	0.589
SH-S	W9	0.48	0.47	< 0.005	< 0.005	0.448	0.454	38.4	38.5	< 0.05	< 0.05	3.25	3.22	< 0.01	< 0.01	0.271	0.283
SH-S	W9-D1	0.47	0.47	< 0.005	< 0.005	0.461	0.467	39.9	41.3	< 0.05	< 0.05	3.23	3.31	< 0.01	< 0.01	0.281	0.282
SH-S	W9-D2	0.48	0.49	< 0.005	< 0.005	0.455	0.456	37.2	38.4	< 0.05	< 0.05	3.25	3.29	< 0.01	< 0.01	0.279	0.279
SH-S	W9-D3	0.47	0.47	< 0.005	< 0.005	0.459	0.463	37.9	38.7	< 0.05	< 0.05	3.23	3.33	< 0.01	< 0.01	0.273	0.283
SH-S	W10	0.46	0.45	< 0.005	< 0.005	0.421	0.427	24.6	25.0	< 0.05	< 0.05	2.95	2.96	< 0.01	< 0.01	0.193	0.210
SH-S	W11	0.44	0.45	< 0.005	< 0.005	0.430	0.427	22.3	23.0	< 0.05	< 0.05	2.96	2.97	< 0.01	< 0.01	0.179	0.201
SH-S	W12	0.43	0.45	< 0.005	< 0.005	0.429	0.429	23.0	23.5	< 0.05	< 0.05	2.95	2.92	< 0.01	< 0.01	0.177	0.197
SH-S	W13	0.45	0.43	< 0.005	< 0.005	0.435	0.438	21.0	22.0	< 0.05	< 0.05	2.92	2.95	< 0.01	< 0.01	0.181	0.186
SH-S	W14	0.40	0.41	< 0.005	< 0.005	0.415	0.417	25.5	26.1	< 0.05	< 0.05	2.90	2.91	< 0.01	< 0.01	0.184	0.189
SH-S	W15	0.56	0.56	< 0.005	< 0.005	0.702	0.709	15.5	18.9	< 0.05	< 0.05	4.25	4.32	< 0.01	< 0.01	0.121	0.150
SH-S	W16	0.40	0.41	< 0.005	< 0.005	0.346	0.346	6.3	6.4	< 0.05	< 0.05	2.97	2.99	< 0.01	< 0.01	0.090	0.087
SH-S	W17	0.65	0.66	< 0.005	< 0.005	0.438	0.444	20.9	21.3	0.09	0.08	3.68	3.68	0.01	0.01	0.170	0.178
SH-S	W17-D	0.63	0.64	< 0.005	< 0.005	0.441	0.452	20.5	20.8	0.08	0.08	3.68	3.72	< 0.01	0.01	0.169	0.181
SH-S	W18	0.39	0.37	< 0.005	< 0.005	0.391	0.390	17.5	17.5	< 0.05	< 0.05	2.80	2.84	< 0.01	< 0.01	0.183	0.177
SH-S	W19	1.91	1.85	< 0.005	< 0.005	0.815	0.835	50.2	53.5	0.25	0.25	4.24	4.24	< 0.01	< 0.01	0.019	0.032
SH-S	W20	0.40	0.38	< 0.005	< 0.005	0.387	0.390	16.7	16.9	< 0.05	< 0.05	2.81	2.84	< 0.01	< 0.01	0.177	0.183
SH-S	W21	0.47	0.46	< 0.005	< 0.005	0.421	0.419	30.3	31.6	< 0.05	< 0.05	3.32	3.31	< 0.01	< 0.01	0.252	0.266
SH-S	W22	0.58	0.59	< 0.005	< 0.005	0.696	0.699	73.5	74.4	< 0.05	< 0.05	4.86	4.85	< 0.01	< 0.01	0.485	0.501
SH-S	W23	0.48	0.47	< 0.005	< 0.005	0.442	0.443	37.4	37.3	< 0.05	< 0.05	3.22	3.20	< 0.01	< 0.01	0.256	0.282
SH-S	W24	0.47	0.48	< 0.005	< 0.005	0.445	0.453	39.2	39.1	< 0.05	< 0.05	3.23	3.23	< 0.01	< 0.01	0.273	0.284
SH-S	W25	0.50	0.48	< 0.005	< 0.005	0.438	0.439	30.1	30.3	< 0.05	< 0.05	3.12	3.14	< 0.01	< 0.01	0.212	0.213
Upper / Lower Seal Harbour (SH-S) August 2004																	
SH-S	W1	1.02	1.08	0.006	0.006	0.728	0.729	72.9	71.3	< 0.05	< 0.05	5.81	5.85	0.02	0.02	0.752	0.707
SH-S	W1D	1.03	1.06	0.007	0.005	0.729	0.724	72.8	71.4	< 0.05	< 0.05	5.83	5.85	0.02	0.01	0.753	0.765
SH-S	W2	0.98	0.92	0.007	0.007	0.749	0.757	55.2	54.5	< 0.05	< 0.05	5.56	5.54	0.02	0.02	1.111	1.102
SH-S	W3	1.13	1.14	0.013	0.011	0.964	0.968	298.2	290.7	0.07	0.06	5.44	5.44	0.02	0.02	2.401	2.423

Gold District	Sample Site	Li ICP-MS µg/L 0.02 <0.45 µm	Li ICP-MS µg/L 0.02 Unfiltered	Lu ICP-MS µg/L 0.005 <0.45 µm	Lu ICP-MS µg/L 0.005 Unfiltered	Mg ICP-ES mg/L 0.005 <0.45 µm	Mg ICP-ES mg/L 0.005 Unfiltered	Mn ICP-MS µg/L 0.1 <0.45 µm	Mn ICP-MS µg/L 0.1 Unfiltered	Mo ICP-MS µg/L 0.05 <0.45 µm	Mo ICP-MS µg/L 0.05 Unfiltered	Na ICP-ES mg/L 0.05 <0.45 µm	Na ICP-ES mg/L 0.05 Unfiltered	Nb ICP-MS µg/L 0.01 <0.45 µm	Nb ICP-MS µg/L 0.01 Unfiltered	Nd ICP-MS µg/L 0.005 <0.45 µm	Nd ICP-MS µg/L 0.005 Unfiltered
SH-S	W4	0.66	0.69	< 0.005	< 0.005	0.540	0.550	32.0	33.6	0.05	0.05	3.86	3.83	< 0.01	< 0.01	0.463	0.464
SH-S	W5	0.73	0.70	< 0.005	< 0.005	0.568	0.571	34.4	37.4	0.06	< 0.05	3.90	3.94	0.01	< 0.01	0.526	0.527
SH-S	W6	1.35	1.34	0.013	0.012	1.102	1.127	90.5	111.8	0.07	0.05	5.32	5.31	0.02	0.02	1.432	1.624
SH-S	W7	1.32	1.32	0.011	0.011	1.080	1.079	70.1	74.1	0.06	0.05	5.37	5.39	0.01	0.02	1.096	1.226
SH-S	W8	1.35	1.31	0.007	0.009	0.963	0.974	121.0	146.0	0.06	0.06	5.39	5.39	< 0.01	0.01	0.819	1.106
SH-S	W9	0.72	0.73	< 0.005	< 0.005	0.563	0.569	34.5	37.7	< 0.05	0.06	3.87	3.86	0.01	< 0.01	0.490	0.548
SH-S	W9D1	0.69	0.69	< 0.005	< 0.005	0.571	0.573	34.3	38.0	< 0.05	< 0.05	3.90	3.92	0.01	0.01	0.516	0.557
SH-S	W9D2	0.72	0.67	< 0.005	< 0.005	0.571	0.575	34.0	37.7	0.07	0.05	3.94	3.89	0.01	0.01	0.515	0.568
SH-S	W9D3	0.71	0.68	< 0.005	< 0.005	0.572	0.584	32.5	37.2	0.06	< 0.05	3.90	3.91	0.01	< 0.01	0.486	0.556
SH-S	W10	0.53	0.55	< 0.005	< 0.005	0.480	0.476	27.9	28.1	< 0.05	0.06	3.43	3.36	< 0.01	< 0.01	0.282	0.309
SH-S	W11	0.55	0.54	< 0.005	< 0.005	0.450	0.447	16.9	17.7	< 0.05	< 0.05	3.38	3.35	< 0.01	< 0.01	0.251	0.251
SH-S	W12	0.52	0.52	< 0.005	< 0.005	0.440	0.440	14.5	15.0	< 0.05	< 0.05	3.39	3.33	< 0.01	< 0.01	0.207	0.234
SH-S	W13	0.54	0.57	< 0.005	< 0.005	0.458	0.455	22.9	22.3	< 0.05	< 0.05	3.39	3.35	< 0.01	< 0.01	0.253	0.239
SH-S	W14	0.51	0.53	< 0.005	< 0.005	0.439	0.430	36.7	36.9	< 0.05	< 0.05	3.32	3.31	< 0.01	< 0.01	0.244	0.247
SH-S	W15	0.70	0.65	< 0.005	< 0.005	0.943	0.951	427.8	429.4	0.06	0.06	4.65	4.65	< 0.01	0.01	0.276	0.289
SH-S	W15D	0.66	0.69	< 0.005	< 0.005	0.934	0.948	426.2	428.6	0.06	0.07	4.65	4.62	< 0.01	< 0.01	0.276	0.307
SH-S	W16	0.58	0.59	< 0.005	< 0.005	0.426	0.428	7.8	7.9	< 0.05	< 0.05	3.61	3.56	< 0.01	< 0.01	0.200	0.167
SH-S	W17	0.98	0.98	< 0.005	< 0.005	0.634	0.631	33.2	34.2	0.21	0.23	4.47	4.44	0.02	0.02	0.461	0.423
SH-S	W18	0.47	0.48	< 0.005	< 0.005	0.417	0.414	17.8	17.6	< 0.05	< 0.05	3.23	3.23	< 0.01	< 0.01	0.253	0.243
SH-S	W19	2.98	2.91	< 0.005	< 0.005	0.880	0.895	42.6	44.5	0.19	0.19	4.59	4.58	< 0.01	< 0.01	0.026	0.329
SH-S	W20	0.50	0.45	< 0.005	< 0.005	0.415	0.415	16.5	16.2	< 0.05	< 0.05	3.26	3.24	< 0.01	< 0.01	0.271	0.243
SH-S	W21	0.67	0.67	< 0.005	< 0.005	0.542	0.553	33.4	35.2	< 0.05	< 0.05	4.04	4.02	0.01	0.01	0.593	0.589
SH-S	W22	0.77	0.79	0.007	0.007	0.763	0.769	166.6	171.5	< 0.05	< 0.05	5.52	5.53	0.01	0.01	1.030	0.984
SH-S	W23	0.75	0.66	< 0.005	< 0.005	0.565	0.557	37.1	39.3	0.05	0.05	3.88	3.89	0.01	< 0.01	0.518	0.526
SH-S	W24	0.70	0.71	< 0.005	< 0.005	0.568	0.571	36.8	39.8	0.06	0.06	3.87	3.91	0.01	0.01	0.550	0.558
SH-S	W25	0.60	0.61	< 0.005	< 0.005	0.507	0.514	36.7	36.4	0.05	0.05	3.59	3.62	< 0.01	< 0.01	0.273	0.301
SH-S	W51	19.27	18.55	< 0.05	< 0.05	139.878	140.399	37.3	40.5	1.14	1.18	1191.60	1191.52	< 0.1	< 0.1	0.250	0.495
Upper / Lower Seal Harbour (SH-S) November 2004																	
SH-S	W1	1.12	1.16	< 0.005	< 0.005	1.079	1.084	95.1	96.7	< 0.05	< 0.05	6.51	6.48	0.02	0.02	0.597	0.627
SH-S	W2	0.95	0.99	0.006	0.005	1.079	1.080	55.9	56.0	< 0.05	< 0.05	6.24	6.16	0.02	0.02	0.794	0.787
SH-S	W3	1.03	1.11	0.008	0.008	1.156	1.179	71.3	71.6	< 0.05	< 0.05	6.14	6.16	0.02	0.02	1.390	1.464
SH-S	W3D	1.05	1.12	0.007	0.008	1.161	1.162	72.4	72.3	< 0.05	< 0.05	6.17	6.16	0.02	0.02	1.395	1.478
SH-S	W4	0.71	0.74	< 0.005	< 0.005	0.808	0.810	44.4	43.1	< 0.05	< 0.05	4.70	4.62	0.01	< 0.01	0.463	0.464
SH-S	W5	0.77	0.76	< 0.005	< 0.005	0.833	0.848	47.7	48.8	< 0.05	< 0.05	4.76	4.79	0.01	0.01	0.523	0.550

Gold District	Sample Site	Li ICP-MS µg/L 0.02 <0.45 µm	Li ICP-MS µg/L 0.02 Unfiltered	Lu ICP-MS µg/L 0.005 <0.45 µm	Lu ICP-MS µg/L 0.005 Unfiltered	Mg ICP-ES mg/L 0.005 <0.45 µm	Mg ICP-ES mg/L 0.005 Unfiltered	Mn ICP-MS µg/L 0.1 <0.45 µm	Mn ICP-MS µg/L 0.1 Unfiltered	Mo ICP-MS µg/L 0.05 <0.45 µm	Mo ICP-MS µg/L 0.05 Unfiltered	Na ICP-ES mg/L 0.05 <0.45 µm	Na ICP-ES mg/L 0.05 Unfiltered	Nb ICP-MS µg/L 0.01 <0.45 µm	Nb ICP-MS µg/L 0.01 Unfiltered	Nd ICP-MS µg/L 0.005 <0.45 µm	Nd ICP-MS µg/L 0.005 Unfiltered
SH-S	W6	1.06	1.18	0.007	0.008	1.147	1.159	82.2	84.6	< 0.05	< 0.05	6.03	5.98	0.02	0.02	1.046	1.136
SH-S	W7	1.08	1.14	0.008	0.008	1.153	1.161	89.1	89.7	< 0.05	< 0.05	6.02	5.92	0.01	0.01	1.020	1.102
SH-S	W8	1.07	1.12	0.006	0.007	1.144	1.150	66.1	66.9	< 0.05	< 0.05	6.08	6.02	0.01	0.01	1.067	1.158
SH-S	W9	0.82	0.72	< 0.005	< 0.005	0.844	0.845	48.0	49.2	< 0.05	< 0.05	4.87	4.81	< 0.01	< 0.01	0.512	0.573
SH-S	W9D1	0.73	0.73	< 0.005	< 0.005	0.818	0.841	47.9	48.0	< 0.05	< 0.05	4.81	4.76	0.01	0.01	0.507	0.528
SH-S	W9D2	0.75	0.73	< 0.005	< 0.005	0.817	0.823	47.7	47.9	< 0.05	< 0.05	4.76	4.75	< 0.01	0.01	0.492	0.522
SH-S	W10	0.61	0.64	< 0.005	< 0.005	0.655	0.649	26.9	27.9	< 0.05	< 0.05	4.14	4.11	< 0.01	0.01	0.314	0.339
SH-S	W10D	0.65	0.67	< 0.005	< 0.005	0.657	0.660	27.6	28.1	< 0.05	< 0.05	4.10	4.10	< 0.01	< 0.01	0.311	0.335
SH-S	W11	0.68	0.69	< 0.005	< 0.005	0.664	0.651	28.1	27.9	< 0.05	< 0.05	4.18	4.19	< 0.01	< 0.01	0.352	0.302
SH-S	W12	0.64	0.68	< 0.005	< 0.005	0.657	0.657	28.9	29.1	< 0.05	< 0.05	4.20	4.17	< 0.01	< 0.01	0.337	0.326
SH-S	W13	0.63	0.67	< 0.005	< 0.005	0.644	0.657	27.0	27.1	< 0.05	< 0.05	4.10	4.11	< 0.01	< 0.01	0.341	0.354
SH-S	W14	0.61	0.60	< 0.005	< 0.005	0.617	0.617	26.8	27.2	< 0.05	< 0.05	4.11	4.09	< 0.01	< 0.01	0.308	0.319
SH-S	W15	0.67	0.67	< 0.005	< 0.005	0.954	0.972	11.5	12.4	< 0.05	< 0.05	5.30	5.32	< 0.01	< 0.01	0.255	0.255
SH-S	W16	0.59	0.58	< 0.005	< 0.005	0.730	0.726	13.1	12.8	< 0.05	< 0.05	4.36	4.36	< 0.01	0.01	0.192	0.210
SH-S	W17	0.90	0.89	< 0.005	< 0.005	0.907	0.901	25.8	26.1	< 0.05	< 0.05	4.70	4.66	0.02	0.02	0.439	0.457
SH-S	W18	0.59	0.60	< 0.005	< 0.005	0.596	0.600	25.5	25.2	< 0.05	< 0.05	4.00	3.96	0.01	< 0.01	0.309	0.342
SH-S	W19	1.97	1.98	< 0.005	< 0.005	0.887	0.892	37.0	37.4	< 0.05	< 0.05	5.31	5.16	< 0.01	< 0.01	0.375	0.481
SH-S	W20	0.55	0.56	< 0.005	< 0.005	0.596	0.605	24.0	24.0	< 0.05	< 0.05	4.04	3.95	< 0.01	0.01	0.279	0.302
SH-S	W21	0.70	0.75	< 0.005	< 0.005	0.840	0.857	47.5	47.4	< 0.05	< 0.05	5.02	4.96	0.01	0.01	0.562	0.596
SH-S	W22	0.96	1.00	0.006	0.007	1.136	1.123	127.8	125.5	< 0.05	< 0.05	6.65	6.57	0.02	0.02	0.758	0.769
SH-S	W23	0.74	0.76	< 0.005	< 0.005	0.838	0.842	48.3	47.9	< 0.05	< 0.05	4.77	4.79	< 0.01	0.01	0.515	0.539
SH-S	W24	0.73	0.70	< 0.005	< 0.005	0.821	0.828	46.7	46.5	< 0.05	< 0.05	4.86	4.82	< 0.01	0.01	0.499	0.539
SH-S	W25	0.61	0.68	< 0.005	< 0.005	0.713	0.708	37.3	37.4	< 0.05	< 0.05	4.35	4.36	0.01	0.01	0.343	0.362
Upper / Lower Seal Harbour (SH-S) August 2005																	
SH-S	W1	0.73	0.71	< 0.005	< 0.005	0.741	0.749	14.1	15.1	0.10	0.08	6.11	6.28	< 0.01	< 0.01	0.395	0.402
SH-S	W2	1.08	1.18	< 0.005	< 0.005	0.959	0.969	46.8	50.2	0.08	0.09	6.56	6.62	< 0.01	< 0.01	0.432	0.470
SH-S	W3	1.38	1.41	< 0.005	0.006	1.320	1.344	498.2	529.2	0.08	0.11	6.26	6.27	< 0.01	< 0.01	0.516	0.798
SH-S	W4	0.64	0.66	< 0.005	< 0.005	0.485	0.497	8.0	12.0	0.06	0.06	4.20	4.18	< 0.01	< 0.01	0.219	0.293
SH-S	W5	0.68	0.67	< 0.005	< 0.005	0.534	0.538	16.3	21.6	0.05	0.07	4.24	4.28	< 0.01	< 0.01	0.267	0.327
SH-S	W6	2.05	2.08	0.006	0.010	1.922	1.949	63.1	83.2	0.08	0.08	6.60	6.54	< 0.01	< 0.01	0.586	1.192
SH-S	W7	1.92	1.92	0.006	0.008	1.814	1.830	175.0	182.9	0.06	0.08	6.48	6.55	< 0.01	< 0.01	0.277	0.477
SH-S	W8	1.60	1.61	< 0.005	< 0.005	1.349	1.362	614.4	634.6	0.07	0.07	6.44	6.43	< 0.01	< 0.01	0.257	0.392
SH-S	W9	0.72	0.70	< 0.005	< 0.005	0.552	0.565	15.2	28.4	0.07	0.06	4.29	4.38	< 0.01	< 0.01	0.302	0.329
SH-S	W9D1	0.74	0.74	< 0.005	< 0.005	0.824	0.816	59.8	1.6	0.08	0.09	4.68	4.68	< 0.01	< 0.01	0.289	0.288

Gold District	Sample Site	Li ICP-MS µg/L 0.02 <0.45 µm	Li ICP-MS µg/L 0.02 Unfiltered	Lu ICP-MS µg/L 0.005 <0.45 µm	Lu ICP-MS µg/L 0.005 Unfiltered	Mg ICP-ES mg/L 0.005 <0.45 µm	Mg ICP-ES mg/L 0.005 Unfiltered	Mn ICP-MS µg/L 0.1 <0.45 µm	Mn ICP-MS µg/L 0.1 Unfiltered	Mo ICP-MS µg/L 0.05 <0.45 µm	Mo ICP-MS µg/L 0.05 Unfiltered	Na ICP-ES mg/L 0.05 <0.45 µm	Na ICP-ES mg/L 0.05 Unfiltered	Nb ICP-MS µg/L 0.01 <0.45 µm	Nb ICP-MS µg/L 0.01 Unfiltered	Nd ICP-MS µg/L 0.005 <0.45 µm	Nd ICP-MS µg/L 0.005 Unfiltered
SH-S	W9D2	0.99	1.03	< 0.005	0.005	0.885	0.885	63.0	79.0	< 0.05	< 0.05	5.30	5.21	0.01	< 0.01	0.626	0.681
SH-S	W10	1.11	1.20	< 0.005	< 0.005	0.824	0.835	45.6	49.5	0.13	0.14	4.89	4.88	< 0.01	< 0.01	0.240	0.472
SH-S	W10D	1.13	1.17	< 0.005	< 0.005	0.826	0.821	45.9	49.9	0.13	0.15	4.88	4.83	< 0.01	< 0.01	0.271	0.484
SH-S	W11	0.55	0.60	< 0.005	< 0.005	0.516	0.525	6.7	8.3	< 0.05	0.06	3.74	3.74	< 0.01	< 0.01	0.158	0.169
SH-S	W12	0.53	0.59	< 0.005	< 0.005	0.487	0.499	7.6	10.6	< 0.05	< 0.05	3.61	3.60	< 0.01	< 0.01	0.115	0.192
SH-S	W13	0.54	0.51	< 0.005	< 0.005	0.484	0.490	15.8	23.3	< 0.05	< 0.05	3.49	3.51	< 0.01	< 0.01	0.129	0.164
SH-S	W14	0.50	0.49	< 0.005	< 0.005	0.617	0.622	147.2	155.4	0.05	0.06	3.65	3.70	< 0.01	< 0.01	0.199	0.242
SH-S	W15	0.77	0.76	< 0.005	< 0.005	1.051	1.054	103.7	110.3	0.06	< 0.05	5.84	5.83	< 0.01	< 0.01	0.135	0.174
SH-S	W16	0.69	0.69	< 0.005	< 0.005	0.930	0.933	14.4	14.5	< 0.05	< 0.05	4.32	4.35	0.03	0.02	0.473	0.499
SH-S	W17	1.45	1.55	< 0.005	< 0.005	0.724	0.723	30.3	31.9	0.15	0.16	4.81	4.79	0.02	0.02	0.407	0.414
SH-S	W18	0.47	0.48	< 0.005	< 0.005	0.425	0.426	26.6	28.2	< 0.05	< 0.05	3.32	3.38	< 0.01	< 0.01	0.154	0.194
SH-S	W19	2.20	2.15	< 0.005	< 0.005	0.933	0.925	38.8	43.0	0.11	0.13	4.07	4.10	< 0.01	< 0.01	0.038	0.290
SH-S	W20	0.43	0.43	< 0.005	< 0.005	0.402	0.398	16.2	16.7	< 0.05	< 0.05	3.33	3.29	< 0.01	< 0.01	0.148	0.156
SH-S	W21	0.64	0.68	< 0.005	< 0.005	0.633	0.629	82.2	89.5	< 0.05	< 0.05	4.72	4.77	< 0.01	< 0.01	0.427	0.488
SH-S	W22	1.30	1.33	0.009	0.010	1.117	1.093	214.1	218.8	< 0.05	< 0.05	6.80	6.90	0.03	0.03	1.527	1.526
SH-S	W23	0.96	0.94	< 0.005	< 0.005	0.827	0.828	86.0	92.8	0.05	< 0.05	4.93	5.01	< 0.01	< 0.01	0.568	0.617
SH-S	W24	0.90	0.95	< 0.005	< 0.005	0.883	0.874	90.3	95.5	< 0.05	< 0.05	5.24	5.30	< 0.01	< 0.01	0.612	0.682
SH-S	W25	0.78	0.82	< 0.005	< 0.005	0.547	0.549	33.3	34.4	0.07	0.07	4.34	4.31	< 0.01	< 0.01	0.211	0.281
SH-S	W25D	0.83	0.80	< 0.005	< 0.005	0.547	0.546	32.2	33.6	0.08	0.08	4.31	4.31	< 0.01	< 0.01	0.209	0.272
Statistics	Min.	0.10	0.11	<0.005	<0.005	0.346	0.346	6.1	1.6	<0.05	<0.05	0.84	0.83	<0.01	<0.01	<0.005	<0.005
	Max.	26.75	36.66	0.021	0.115	139.878	140.399	7431.7	5716.5	26.71	24.19	1191.60	1191.52	0.03	0.24	5.599	8.552
	Mean	1.24	1.37	0.009	0.014	1.927	1.973	401.4	358.0	1.33	1.25	10.82	10.83	0.02	0.02	0.440	0.630
	Median	0.70	0.69	0.007	0.008	0.763	0.769	47.7	48.1	0.08	0.08	4.07	4.09	0.01	0.01	0.276	0.329
	n	181	181	29	36	181	181	181	179	62	62	181	181	43	54	179	179
	Std Dev	2.77	3.37	0.004	0.018	10.396	10.449	1019.8	863.4	4.60	4.33	88.02	88.02	0.01	0.03	0.617	1.079
	95th pctl	2.50	2.91	0.014	0.029	4.727	4.664	2048.6	1939.8	13.64	13.05	6.56	6.55	0.03	0.05	1.390	1.728
	90th pctl	1.55	1.64	0.013	0.023	1.642	1.830	971.1	974.7	0.75	0.54	6.08	6.02	0.02	0.04	0.859	1.165
	75th pctl	1.06	1.12	0.010	0.013	1.079	1.080	175.8	181.4	0.20	0.21	4.86	4.83	0.02	0.02	0.516	0.578
	50th pctl	0.70	0.69	0.007	0.008	0.763	0.769	47.7	48.1	0.08	0.08	4.07	4.09	0.01	0.01	0.276	0.329
	25th pctl	0.53	0.53	0.006	0.006	0.547	0.550	27.9	28.5	0.06	0.06	3.32	3.31	0.01	0.01	0.165	0.202

Gold District	Sample Site	Ni ICP-MS µg/L 0.2 <0.45 µm	Ni ICP-MS µg/L 0.2 Unfiltered	P ICP-ES mg/L 0.01 <0.45 µm	P ICP-ES mg/L 0.01 Unfiltered	Pb ICP-MS µg/L 0.01 <0.45 µm	Pb ICP-MS µg/L 0.01 Unfiltered	Pr ICP-MS µg/L 0.005 <0.45 µm	Pr ICP-MS µg/L 0.005 Unfiltered	Rb ICP-MS µg/L 0.05 <0.45 µm	Rb ICP-MS µg/L 0.05 Unfiltered	Re ICP-MS µg/L 0.005 <0.45 µm	Re ICP-MS µg/L 0.005 Unfiltered	S ICP-ES mg/L 0.05 <0.45 µm	S ICP-ES mg/L 0.05 Unfiltered	Sb ICP-MS µg/L 0.01 <0.45 µm	Sb ICP-MS µg/L 0.01 Unfiltered	Sc ICP-ES mg/L 0.001 <0.45 µm	Sc ICP-ES mg/L 0.001 Unfiltered
Cochrane Hill Gold District (CH)																			
CH	W1	0.6	0.6	< 0.01	< 0.01	0.11	0.15	0.016	0.019	1.00	1.07	< 0.005	< 0.005	1.71	1.72	0.02	0.02	< 0.001	< 0.001
CH	W2	0.9	1.0	< 0.01	< 0.01	0.21	0.28	0.020	0.022	1.26	1.36	< 0.005	< 0.005	2.47	2.43	0.04	0.04	< 0.001	< 0.001
CH	W3	1.5	1.7	< 0.01	< 0.01	0.40	0.60	0.023	0.024	1.61	1.78	< 0.005	< 0.005	4.44	4.42	0.05	0.05	< 0.001	< 0.001
CH	W4	0.2	0.3	< 0.01	< 0.01	0.07	0.09	0.008	0.009	0.74	0.81	< 0.005	< 0.005	0.78	0.78	0.01	< 0.01	< 0.001	< 0.001
CH	W5	2.1	2.5	< 0.01	< 0.01	0.29	0.83	0.023	0.033	2.08	2.24	< 0.005	< 0.005	6.29	6.35	0.07	0.07	< 0.001	< 0.001
CH	W6	0.5	0.4	< 0.01	< 0.01	0.15	0.16	0.009	0.010	1.25	1.26	< 0.005	< 0.005	1.39	1.38	0.03	0.03	< 0.001	< 0.001
CH	W6-D	0.4	0.5	< 0.01	< 0.01	0.15	0.18	0.009	0.010	1.29	1.38	< 0.005	< 0.005	1.39	1.37	0.03	0.04	< 0.001	< 0.001
CH	W7	0.5	0.6	< 0.01	< 0.01	0.11	0.27	0.009	0.019	2.47	2.63	< 0.005	< 0.005	0.81	0.81	0.04	0.04	< 0.001	< 0.001
CH	W8	146.5	165.3	< 0.01	< 0.01	0.73	1.58	1.472	1.436	5.09	5.37	< 0.005	< 0.005	57.61	57.08	0.46	0.47	0.001	0.001
CH	W9	0.5	0.4	< 0.01	< 0.01	0.14	0.15	0.011	0.009	1.23	1.29	< 0.005	< 0.005	1.41	1.40	0.02	0.02	< 0.001	< 0.001
CH	W10	70.2	133.6	< 0.01	0.15	3.75	398.75	0.074	2.152	7.46	20.12	< 0.005	< 0.005	2.11	2.41	2.01	1.25	< 0.001	0.001
CH	W11	3.8	4.3	< 0.01	< 0.01	0.40	2.70	0.020	0.145	9.29	9.37	< 0.005	< 0.005	76.59	76.92	0.17	0.32	0.001	0.001
CH	W12	173.6	215.3	< 0.01	0.09	0.28	28.35	1.215	1.958	12.30	20.53	< 0.005	< 0.005	107.25	105.42	0.51	0.55	0.001	0.002
East Rawdon Gold District (RAW)																			
RAW	W1	1.6	1.2	< 0.05	< 0.05	0.01	0.16	0.006	0.018	0.14	0.10	< 0.005	< 0.005	0.50	0.59	0.03	0.02	< 0.001	< 0.001
RAW	W2	1.5	1.9	< 0.05	< 0.05	0.10	1.11	0.017	0.074	0.74	0.84	< 0.005	< 0.005	0.31	0.35	0.03	0.04	< 0.001	< 0.001
RAW	W3	0.6	0.6	< 0.05	< 0.05	0.20	0.46	0.013	0.019	< 0.05	< 0.05	< 0.005	< 0.005	0.52	0.55	0.04	0.04	< 0.001	< 0.001
RAW	W4	1.6	1.6	< 0.05	< 0.05	0.60	2.63	0.014	0.028	0.12	0.14	< 0.005	< 0.005	0.60	0.63	0.14	0.16	< 0.001	< 0.001
RAW	W5	0.8	0.9	< 0.05	< 0.05	0.18	0.43	0.072	0.118	0.93	0.97	< 0.005	< 0.005	1.40	1.43	0.09	0.11	< 0.001	< 0.001
Lake Catcha Gold District (LC)																			
LC	W1	0.4	0.4	< 0.05	< 0.05	0.07	0.44	< 0.005	< 0.005	0.29	0.30	< 0.005	< 0.005	0.71	0.72	0.09	0.11	< 0.001	< 0.001
LC	W2	1.9	2.0	< 0.05	< 0.05	0.36	0.40	0.027	0.032	1.42	1.45	< 0.005	< 0.005	0.81	0.82	0.05	0.06	< 0.001	< 0.001
LC	W3	1.2	1.2	< 0.05	< 0.05	0.12	0.28	< 0.005	0.006	0.21	0.22	< 0.005	< 0.005	0.34	0.34	0.02	0.02	< 0.001	< 0.001
LC	W4	2.6	10.7	< 0.05	< 0.05	0.02	0.71	< 0.005	0.027	< 0.05	0.31	< 0.005	< 0.005	0.50	0.69	0.64	0.53	< 0.001	< 0.001
LC	W5	0.8	0.8	< 0.05	< 0.05	0.29	0.36	0.033	0.034	0.62	0.62	< 0.005	< 0.005	1.18	1.23	0.06	0.06	< 0.001	< 0.001
LC	W6	1.2	1.3	< 0.05	< 0.05	0.38	0.51	0.038	0.039	0.58	0.62	< 0.005	< 0.005	1.58	1.59	0.07	0.06	< 0.001	< 0.001
LC	W6-D	1.2	1.2	< 0.05	< 0.05	0.40	0.50	0.038	0.042	0.56	0.57	< 0.005	< 0.005	1.54	1.54	0.06	0.06	< 0.001	< 0.001
Lower Seal Harbour Gold District (LSH)																			
LSH	W1	0.8	0.9	< 0.05	< 0.05	2.11	1.93	0.288	0.329	0.90	0.99	< 0.005	< 0.005	0.73	0.72	0.10	0.11	< 0.001	< 0.001
LSH	W2	2.1	2.6	< 0.05	< 0.05	2.42	2.64	0.400	0.443	1.19	1.31	< 0.005	< 0.005	1.90	2.10	0.17	0.18	< 0.001	< 0.001
LSH	W4	0.6	0.7	< 0.05	< 0.05	0.63	0.69	0.156	0.169	1.31	1.39	< 0.005	< 0.005	0.66	0.67	0.11	0.11	< 0.001	< 0.001
LSH	W6	3.4	3.8	< 0.05	< 0.05	1.46	2.70	0.455	0.539	2.66	2.86	< 0.005	< 0.005	1.05	1.06	0.75	0.78	< 0.001	< 0.001
LSH	W7	3.0	3.3	< 0.05	< 0.05	0.65	1.81	0.348	0.455	2.61	2.74	< 0.005	< 0.005	1.05	1.08	0.59	0.62	< 0.001	< 0.001
LSH	W8	2.8	3.1	< 0.05	< 0.05	0.78	1.55	0.364	0.422	2.46	2.80	< 0.005	< 0.005	1.17	1.18	0.43	0.48	< 0.001	< 0.001
Mount Uniacke Gold District (UNI)																			
UNI	W1	10.5	18.2	< 0.05	0.10	0.31	57.66	0.020	1.138	16.17	16.84	< 0.005	< 0.005	25.01	25.90	1.49	1.74	< 0.001	0.001
UNI	W2	0.9	1.1	< 0.05	< 0.05	0.53	1.50	0.027	0.053	0.57	0.59	< 0.005	< 0.005	0.78	0.79	0.07	0.08	< 0.001	< 0.001
UNI	W3	4.9	7.6	< 0.05	< 0.05	0.05	42.38	0.058	1.053	10.36	12.53	< 0.005	< 0.005	0.71	0.77	5.04	22.68	< 0.001	< 0.001

Gold District	Sample Site	Ni ICP-MS µg/L 0.2 <0.45 µm	Ni ICP-MS µg/L 0.2 Unfiltered	P ICP-ES mg/L 0.01 <0.45 µm	P ICP-ES mg/L 0.01 Unfiltered	Pb ICP-MS µg/L 0.01 <0.45 µm	Pb ICP-MS µg/L 0.01 Unfiltered	Pr ICP-MS µg/L 0.005 <0.45 µm	Pr ICP-MS µg/L 0.005 Unfiltered	Rb ICP-MS µg/L 0.05 <0.45 µm	Rb ICP-MS µg/L 0.05 Unfiltered	Re ICP-MS µg/L 0.005 <0.45 µm	Re ICP-MS µg/L 0.005 Unfiltered	S ICP-ES mg/L 0.05 <0.45 µm	S ICP-ES mg/L 0.05 Unfiltered	Sb ICP-MS µg/L 0.01 <0.45 µm	Sb ICP-MS µg/L 0.01 Unfiltered	Sc ICP-ES mg/L 0.001 <0.45 µm	Sc ICP-ES mg/L 0.001 Unfiltered
UNI	W4	2.8	3.0	< 0.05	< 0.05	0.27	0.65	0.047	0.066	2.65	2.90	< 0.005	< 0.005	0.70	0.70	1.52	1.75	< 0.001	< 0.001
UNI	W5	2.0	2.3	< 0.05	< 0.05	0.02	0.72	0.006	0.049	1.83	2.02	< 0.005	< 0.005	0.87	0.80	0.40	0.48	< 0.001	< 0.001
North Brookfield Gold District (NB)																			
NB	W1	0.4	0.4	< 0.01	< 0.01	0.13	0.17	0.018	0.022	0.67	0.64	< 0.005	< 0.005	0.63	0.64	0.05	0.04	< 0.001	< 0.001
NB	W2	2.1	2.1	< 0.01	< 0.01	0.02	0.04	< 0.005	< 0.005	1.00	1.00	< 0.005	< 0.005	5.02	5.04	0.59	0.59	0.001	0.001
NB	W3	2.3	3.9	< 0.01	0.02	0.07	1.95	< 0.005	0.055	1.06	1.24	< 0.005	< 0.005	7.63	7.94	0.69	0.72	0.001	0.001
NB	W4	2.6	2.7	< 0.01	< 0.01	0.11	0.23	0.006	0.009	0.75	0.74	< 0.005	< 0.005	5.49	5.44	0.54	0.51	< 0.001	< 0.001
NB	W5	3.9	5.2	< 0.01	0.03	0.08	2.86	< 0.005	0.057	1.50	1.77	< 0.005	< 0.005	19.82	20.47	0.88	0.88	0.001	0.001
Salmon River (Dufferin) Gold District (SR)																			
SR	W1	0.6	0.6	< 0.05	< 0.05	0.05	0.07	0.006	0.005	0.45	0.51	< 0.005	< 0.005	1.07	1.06	0.05	0.06	< 0.001	< 0.001
SR	W2	1.4	1.5	< 0.05	< 0.05	0.03	0.05	0.005	0.007	0.67	0.70	< 0.005	< 0.005	0.48	0.47	0.06	0.05	< 0.001	< 0.001
SR	W3	2.8	2.6	< 0.05	< 0.05	0.02	0.02	< 0.005	< 0.005	1.13	1.14	< 0.005	< 0.005	0.19	0.17	0.09	0.09	< 0.001	< 0.001
SR	W4	2.5	3.0	< 0.05	< 0.05	< 0.01	0.02	< 0.005	< 0.005	0.45	0.41	< 0.005	< 0.005	0.17	0.11	0.08	0.07	< 0.001	< 0.001
SR	W5	1.5	1.5	< 0.05	< 0.05	0.53	0.66	0.033	0.035	0.48	0.46	< 0.005	< 0.005	1.97	1.95	0.16	0.16	< 0.001	< 0.001
SR	W6	1.2	1.3	< 0.05	< 0.05	0.13	0.23	0.038	0.045	0.52	0.54	< 0.005	< 0.005	0.78	0.75	0.04	0.05	< 0.001	< 0.001
SR	W7	1.4	1.5	< 0.05	< 0.05	0.21	0.69	0.028	0.035	0.51	0.53	< 0.005	< 0.005	0.85	0.81	0.15	0.21	< 0.001	< 0.001
SR	W8	2.2	2.5	< 0.05	< 0.05	0.06	0.09	0.100	0.115	0.43	0.45	< 0.005	< 0.005	1.39	1.39	0.11	0.11	< 0.001	< 0.001
SR	W9	2.0	2.2	< 0.05	< 0.05	0.02	0.67	0.058	0.086	0.32	0.31	< 0.005	< 0.005	0.47	0.48	1.36	1.42	< 0.001	< 0.001
Upper Seal Harbour Gold District (USH)																			
USH	W4(03)	0.4	0.3	< 0.05	< 0.05	0.58	0.71	0.086	0.093	0.98	0.97	< 0.005	< 0.005	0.64	0.66	0.04	0.05	< 0.001	< 0.001
USH	W13	0.3	0.4	< 0.05	< 0.05	0.52	0.57	0.083	0.088	1.04	1.04	< 0.005	< 0.005	0.69	0.70	0.06	0.05	< 0.001	< 0.001
USH	W14	2.5	2.9	< 0.05	< 0.05	0.10	0.68	0.038	0.067	1.88	1.84	< 0.005	< 0.005	0.39	0.41	0.74	0.79	< 0.001	< 0.001
USH	W18	0.3	0.3	< 0.05	< 0.05	0.57	0.73	0.085	0.089	1.00	0.99	< 0.005	< 0.005	0.66	0.67	0.05	0.05	< 0.001	< 0.001
USH	W19	3.8	3.7	< 0.05	< 0.05	0.06	1.04	0.043	0.145	4.45	4.41	< 0.005	< 0.005	3.82	3.73	0.97	0.98	< 0.001	< 0.001
USH	W20	0.3	0.3	< 0.05	< 0.05	0.58	0.67	0.085	0.097	0.92	1.00	< 0.005	< 0.005	0.65	0.65	0.03	0.04	< 0.001	< 0.001
Whiteburn Gold District (WB)																			
WHI	W1	1.7	2.0	< 0.05	< 0.05	0.43	0.60	0.153	0.192	1.15	1.40	< 0.005	< 0.005	1.03	1.02	0.04	0.07	< 0.001	< 0.001
WHI	W2	1.7	1.9	< 0.05	< 0.05	1.37	1.73	0.050	0.062	0.15	0.17	< 0.005	< 0.005	0.56	0.56	0.14	0.15	< 0.001	< 0.001
WHI	W3	56.4	96.4	< 0.05	0.17	0.40	282.25	0.017	1.071	12.77	12.99	< 0.005	< 0.005	9.50	9.67	6.99	9.49	< 0.001	0.001
WHI	W4	2.5	2.9	< 0.05	< 0.05	1.06	2.18	0.139	0.193	0.97	1.11	< 0.005	< 0.005	1.16	1.17	0.06	0.07	< 0.001	< 0.001
WHI	W5	3.4	4.0	< 0.05	< 0.05	1.27	1.96	0.064	0.100	3.41	3.76	< 0.005	< 0.005	2.14	2.12	0.05	0.06	< 0.001	< 0.001
WHI	W6	2.2	2.5	< 0.05	< 0.05	0.75	1.22	0.133	0.163	0.88	0.97	< 0.005	< 0.005	0.96	0.97	0.03	0.04	< 0.001	< 0.001
WHI	W6-D	2.4	2.5	< 0.05	< 0.05	0.69	1.20	0.140	0.162	0.92	1.02	< 0.005	< 0.005	0.96	0.99	0.04	0.05	< 0.001	< 0.001
Upper / Lower Seal Harbour (SH-S) May 2004																			
SH-S	W1	0.4	0.4	< 0.01	< 0.01	0.30	0.31	0.080	0.080	0.91	0.93	< 0.005	< 0.005	0.96	0.94	0.02	0.02	< 0.001	< 0.001
SH-S	W2	0.4	0.4	< 0.01	< 0.01	0.50	0.55	0.089	0.094	0.89	0.90	< 0.005	< 0.005	0.99	0.98	0.06	0.06	< 0.001	< 0.001

Gold District	Sample Site	Ni ICP-MS µg/L 0.2 <0.45 µm	Ni ICP-MS µg/L 0.2 Unfiltered	P ICP-ES mg/L 0.01 <0.45 µm	P ICP-ES mg/L 0.01 Unfiltered	Pb ICP-MS µg/L 0.01 <0.45 µm	Pb ICP-MS µg/L 0.01 Unfiltered	Pr ICP-MS µg/L 0.005 <0.45 µm	Pr ICP-MS µg/L 0.005 Unfiltered	Rb ICP-MS µg/L 0.05 <0.45 µm	Rb ICP-MS µg/L 0.05 Unfiltered	Re ICP-MS µg/L 0.005 <0.45 µm	Re ICP-MS µg/L 0.005 Unfiltered	S ICP-ES mg/L 0.05 <0.45 µm	S ICP-ES mg/L 0.05 Unfiltered	Sb ICP-MS µg/L 0.01 <0.45 µm	Sb ICP-MS µg/L 0.01 Unfiltered	Sc ICP-ES mg/L 0.001 <0.45 µm	Sc ICP-ES mg/L 0.001 Unfiltered
SH-S	W3	1.2	1.2	< 0.01	< 0.01	0.70	0.80	0.182	0.192	1.10	1.08	< 0.005	< 0.005	1.53	1.53	0.18	0.19	< 0.001	< 0.001
SH-S	W4	0.3	0.4	< 0.01	< 0.01	0.30	0.33	0.063	0.063	1.07	1.12	< 0.005	< 0.005	0.79	0.77	0.07	0.07	< 0.001	< 0.001
SH-S	W5	0.4	0.4	< 0.01	< 0.01	0.33	0.37	0.065	0.072	1.13	1.16	< 0.005	< 0.005	0.80	0.83	0.15	0.14	< 0.001	< 0.001
SH-S	W6	2.2	2.2	< 0.01	< 0.01	0.92	1.19	0.166	0.170	2.16	2.12	< 0.005	< 0.005	1.69	1.69	1.35	1.33	< 0.001	< 0.001
SH-S	W7	1.7	1.7	< 0.01	< 0.01	0.61	0.82	0.138	0.151	2.15	2.14	< 0.005	< 0.005	1.63	1.61	1.04	1.02	< 0.001	< 0.001
SH-S	W8	1.3	1.3	< 0.01	< 0.01	0.48	0.60	0.143	0.150	1.89	1.93	< 0.005	< 0.005	1.62	1.59	0.81	0.79	< 0.001	< 0.001
SH-S	W9	0.5	0.4	< 0.01	< 0.01	0.38	0.43	0.071	0.073	1.15	1.13	< 0.005	< 0.005	0.82	0.80	0.12	0.12	< 0.001	< 0.001
SH-S	W9-D1	0.4	0.5	< 0.01	< 0.01	0.35	0.44	0.076	0.076	1.13	1.12	< 0.005	< 0.005	0.80	0.81	0.13	0.14	< 0.001	< 0.001
SH-S	W9-D2	0.4	0.4	< 0.01	< 0.01	0.36	0.43	0.068	0.073	1.15	1.16	< 0.005	< 0.005	0.83	0.81	0.14	0.14	< 0.001	< 0.001
SH-S	W9-D3	0.4	0.5	< 0.01	< 0.01	0.36	0.44	0.069	0.078	1.15	1.13	< 0.005	< 0.005	0.82	0.81	0.13	0.13	< 0.001	< 0.001
SH-S	W10	0.3	0.3	< 0.01	< 0.01	0.33	0.36	0.050	0.053	1.00	1.03	< 0.005	< 0.005	0.76	0.76	0.10	0.09	< 0.001	< 0.001
SH-S	W11	0.3	0.3	< 0.01	< 0.01	0.31	0.35	0.047	0.050	1.02	1.05	< 0.005	< 0.005	0.79	0.79	0.08	0.08	< 0.001	< 0.001
SH-S	W12	0.3	0.3	< 0.01	< 0.01	0.30	0.35	0.046	0.050	1.06	1.07	< 0.005	< 0.005	0.78	0.78	0.07	0.07	< 0.001	< 0.001
SH-S	W13	0.3	0.3	< 0.01	< 0.01	0.30	0.38	0.044	0.049	0.99	0.99	< 0.005	< 0.005	0.80	0.81	0.08	0.08	< 0.001	< 0.001
SH-S	W14	0.3	0.3	< 0.01	< 0.01	0.33	0.40	0.045	0.048	0.96	0.97	< 0.005	< 0.005	0.81	0.79	0.08	0.09	< 0.001	< 0.001
SH-S	W15	0.7	0.7	< 0.01	< 0.01	0.12	0.18	0.032	0.036	1.95	1.94	< 0.005	< 0.005	2.36	2.43	0.20	0.18	< 0.001	< 0.001
SH-S	W16	< 0.2	< 0.2	< 0.01	< 0.01	0.31	0.32	0.024	0.024	0.75	0.74	< 0.005	< 0.005	0.76	0.74	0.01	0.01	< 0.001	< 0.001
SH-S	W17	0.6	0.6	< 0.01	< 0.01	0.48	0.56	0.046	0.043	2.26	2.24	< 0.005	< 0.005	0.99	0.99	0.63	0.61	< 0.001	< 0.001
SH-S	W17-D	0.6	0.6	< 0.01	< 0.01	0.48	0.54	0.045	0.046	2.27	2.27	< 0.005	< 0.005	0.99	0.94	0.63	0.61	< 0.001	< 0.001
SH-S	W18	0.2	0.2	< 0.01	< 0.01	0.38	0.36	0.048	0.047	0.85	0.85	< 0.005	< 0.005	0.69	0.67	0.02	0.02	< 0.001	< 0.001
SH-S	W19	3.9	4.0	< 0.01	< 0.01	0.03	0.09	< 0.005	0.008	4.21	4.12	< 0.005	< 0.005	4.85	4.86	1.94	1.94	< 0.001	< 0.001
SH-S	W20	0.2	< 0.2	< 0.01	< 0.01	0.36	0.37	0.045	0.046	0.84	0.84	< 0.005	< 0.005	0.69	0.67	< 0.01	0.02	< 0.001	< 0.001
SH-S	W21	0.3	0.3	< 0.01	< 0.01	0.25	0.27	0.067	0.070	0.77	0.78	< 0.005	< 0.005	0.78	0.76	0.05	0.04	< 0.001	< 0.001
SH-S	W22	0.4	0.4	< 0.01	< 0.01	0.21	0.22	0.121	0.127	0.62	0.64	< 0.005	< 0.005	1.13	1.09	0.03	0.03	< 0.001	< 0.001
SH-S	W23	0.4	0.4	< 0.01	< 0.01	0.35	0.41	0.066	0.071	1.12	1.11	< 0.005	< 0.005	0.80	0.79	0.12	0.12	< 0.001	< 0.001
SH-S	W24	0.5	0.4	< 0.01	< 0.01	0.37	0.42	0.068	0.073	1.14	1.13	< 0.005	< 0.005	0.79	0.81	0.12	0.12	< 0.001	< 0.001
SH-S	W25	0.3	0.3	< 0.01	< 0.01	0.40	0.45	0.053	0.054	1.16	1.18	< 0.005	< 0.005	0.78	0.78	0.10	0.10	< 0.001	< 0.001
Upper / Lower Seal Harbour (SH-S) August 2004																			
SH-S	W1	0.6	0.7	0.01	< 0.01	0.67	0.66	0.189	0.186	0.63	0.61	< 0.005	< 0.005	0.79	0.78	0.04	0.04	< 0.001	< 0.001
SH-S	W1D	0.6	0.7	< 0.01	< 0.01	0.66	0.67	0.188	0.194	0.62	0.59	< 0.005	< 0.005	0.79	0.78	0.04	0.05	< 0.001	< 0.001
SH-S	W2	0.7	0.7	< 0.01	< 0.01	1.61	1.66	0.281	0.284	0.87	0.89	< 0.005	< 0.005	0.76	0.75	0.07	0.09	< 0.001	< 0.001
SH-S	W3	2.3	2.3	< 0.01	< 0.01	2.18	2.52	0.602	0.605	1.68	1.59	< 0.005	< 0.005	1.16	1.13	0.15	0.14	< 0.001	< 0.001

Gold District	Sample Site	Ni ICP-MS µg/L 0.2 <0.45 µm	Ni ICP-MS µg/L 0.2 Unfiltered	P ICP-ES mg/L 0.01 <0.45 µm	P ICP-ES mg/L 0.01 Unfiltered	Pb ICP-MS µg/L 0.01 <0.45 µm	Pb ICP-MS µg/L 0.01 Unfiltered	Pr ICP-MS µg/L 0.005 <0.45 µm	Pr ICP-MS µg/L 0.005 Unfiltered	Rb ICP-MS µg/L 0.05 <0.45 µm	Rb ICP-MS µg/L 0.05 Unfiltered	Re ICP-MS µg/L 0.005 <0.45 µm	Re ICP-MS µg/L 0.005 Unfiltered	S ICP-ES mg/L 0.05 <0.45 µm	S ICP-ES mg/L 0.05 Unfiltered	Sb ICP-MS µg/L 0.01 <0.45 µm	Sb ICP-MS µg/L 0.01 Unfiltered	Sc ICP-ES mg/L 0.001 <0.45 µm	Sc ICP-ES mg/L 0.001 Unfiltered
SH-S	W4	0.7	0.5	0.01	< 0.01	0.53	0.60	0.117	0.127	1.67	1.68	< 0.005	< 0.005	0.72	0.72	0.10	0.12	< 0.001	< 0.001
SH-S	W5	0.7	0.7	< 0.01	< 0.01	0.55	0.68	0.130	0.142	1.72	1.71	< 0.005	< 0.005	0.74	0.73	0.14	0.16	< 0.001	< 0.001
SH-S	W6	3.7	3.8	< 0.01	< 0.01	1.29	2.56	0.350	0.419	2.92	2.88	< 0.005	< 0.005	1.11	1.11	0.67	0.77	< 0.001	< 0.001
SH-S	W7	2.7	2.9	< 0.01	< 0.01	0.53	1.09	0.265	0.308	2.66	2.66	< 0.005	< 0.005	1.06	1.06	0.47	0.53	< 0.001	< 0.001
SH-S	W8	2.4	2.5	< 0.01	< 0.01	0.17	0.99	0.201	0.277	2.51	2.49	< 0.005	< 0.005	1.00	1.00	0.27	0.33	< 0.001	< 0.001
SH-S	W9	0.7	0.7	< 0.01	< 0.01	0.57	0.74	0.128	0.137	1.68	1.69	< 0.005	< 0.005	0.74	0.72	0.13	0.14	< 0.001	< 0.001
SH-S	W9D1	0.7	0.7	0.01	< 0.01	0.60	0.73	0.135	0.142	1.67	1.70	< 0.005	< 0.005	0.74	0.74	0.14	0.18	< 0.001	< 0.001
SH-S	W9D2	0.7	0.7	< 0.01	< 0.01	0.59	0.71	0.122	0.139	1.72	1.66	< 0.005	< 0.005	0.73	0.71	0.14	0.14	< 0.001	< 0.001
SH-S	W9D3	0.6	0.7	< 0.01	< 0.01	0.46	0.70	0.123	0.136	1.71	1.70	< 0.005	< 0.005	0.71	0.72	0.15	0.14	< 0.001	< 0.001
SH-S	W10	0.5	0.5	< 0.01	< 0.01	0.37	0.45	0.075	0.078	1.13	1.10	< 0.005	< 0.005	0.75	0.74	0.10	0.10	< 0.001	< 0.001
SH-S	W11	0.4	0.4	< 0.01	< 0.01	0.33	0.44	0.057	0.061	1.04	1.02	< 0.005	< 0.005	0.74	0.73	0.08	0.08	< 0.001	< 0.001
SH-S	W12	0.4	0.4	< 0.01	< 0.01	0.36	0.49	0.056	0.060	1.04	1.08	< 0.005	< 0.005	0.75	0.75	0.08	0.08	< 0.001	< 0.001
SH-S	W13	0.4	0.3	< 0.01	< 0.01	0.41	0.33	0.066	0.060	1.09	1.08	< 0.005	< 0.005	0.78	0.77	0.08	0.08	< 0.001	< 0.001
SH-S	W14	0.4	0.4	< 0.01	< 0.01	0.34	0.40	0.063	0.062	1.04	1.06	< 0.005	< 0.005	0.76	0.75	0.09	0.09	< 0.001	< 0.001
SH-S	W15	1.5	1.5	< 0.01	< 0.01	0.26	0.45	0.064	0.079	1.67	1.68	< 0.005	< 0.005	1.84	1.78	0.14	0.14	< 0.001	< 0.001
SH-S	W15D	1.4	1.6	< 0.01	< 0.01	0.28	0.45	0.064	0.079	1.67	1.66	< 0.005	< 0.005	1.83	1.81	0.15	0.13	< 0.001	< 0.001
SH-S	W16	0.3	0.3	< 0.01	< 0.01	0.58	0.60	0.051	0.048	0.83	0.81	< 0.005	< 0.005	0.66	0.64	0.02	0.03	< 0.001	< 0.001
SH-S	W17	1.1	1.0	< 0.01	0.02	0.97	1.11	0.106	0.108	2.73	2.65	< 0.005	< 0.005	0.81	0.80	0.54	0.55	< 0.001	< 0.001
SH-S	W18	0.3	0.3	< 0.01	< 0.01	0.43	0.50	0.062	0.071	1.01	1.00	< 0.005	< 0.005	0.75	0.73	0.02	0.03	< 0.001	< 0.001
SH-S	W19	2.9	3.2	< 0.01	< 0.01	0.01	1.17	< 0.005	0.074	5.56	5.53	< 0.005	< 0.005	2.79	2.76	1.16	1.24	< 0.001	< 0.001
SH-S	W20	0.3	0.2	< 0.01	< 0.01	0.42	0.45	0.069	0.065	0.96	0.98	< 0.005	< 0.005	0.74	0.72	0.02	0.02	< 0.001	< 0.001
SH-S	W21	0.5	0.5	< 0.01	< 0.01	0.47	0.53	0.147	0.157	0.83	0.81	< 0.005	< 0.005	0.70	0.70	0.05	0.04	< 0.001	< 0.001
SH-S	W22	0.6	0.6	< 0.01	< 0.01	0.39	0.45	0.248	0.255	0.26	0.26	< 0.005	< 0.005	0.78	0.77	0.05	0.05	< 0.001	< 0.001
SH-S	W23	0.8	0.7	0.01	< 0.01	0.62	0.71	0.135	0.143	1.67	1.68	< 0.005	< 0.005	0.74	0.73	0.14	0.13	< 0.001	< 0.001
SH-S	W24	0.7	0.7	< 0.01	< 0.01	0.65	0.75	0.137	0.142	1.70	1.69	< 0.005	< 0.005	0.75	0.73	0.14	0.14	< 0.001	< 0.001
SH-S	W25	0.5	0.4	< 0.01	< 0.01	0.22	0.39	0.069	0.072	1.44	1.46	< 0.005	< 0.005	0.69	0.68	0.10	0.10	< 0.001	< 0.001
SH-S	W51	< 2	< 2	< 0.01	< 0.01	< 0.1	< 0.1	0.073	0.127	13.08	12.82	< 0.05	< 0.05	101.55	101.90	0.12	0.17	< 0.001	< 0.001
Upper / Lower Seal Harbour (SH-S) November 2004																			
SH-S	W1	0.7	0.7	< 0.05	< 0.05	0.59	0.59	0.159	0.157	1.45	1.46	< 0.005	< 0.005	1.03	1.07	0.03	0.03	< 0.001	< 0.001
SH-S	W2	0.7	0.8	< 0.05	< 0.05	0.83	0.84	0.207	0.218	1.32	1.37	< 0.005	< 0.005	1.15	1.16	0.07	0.07	< 0.001	< 0.001
SH-S	W3	1.5	1.5	< 0.05	< 0.05	1.21	1.30	0.357	0.372	1.71	1.67	< 0.005	< 0.005	1.50	1.55	0.22	0.23	< 0.001	< 0.001
SH-S	W3D	1.5	1.5	< 0.05	< 0.05	1.21	1.28	0.364	0.370	1.69	1.65	< 0.005	< 0.005	1.51	1.54	0.21	0.23	< 0.001	< 0.001
SH-S	W4	0.5	0.5	< 0.05	< 0.05	0.37	0.39	0.117	0.117	1.94	1.90	< 0.005	< 0.005	0.89	0.91	0.06	0.06	< 0.001	< 0.001
SH-S	W5	0.7	0.7	< 0.05	< 0.05	0.44	0.53	0.132	0.134	1.99	1.87	< 0.005	< 0.005	0.98	1.00	0.14	0.14	< 0.001	< 0.001

Gold District	Sample Site	Ni ICP-MS µg/L 0.2 <0.45 µm	Ni ICP-MS µg/L 0.2 Unfiltered	P ICP-ES mg/L 0.01 <0.45 µm	P ICP-ES mg/L 0.01 Unfiltered	Pb ICP-MS µg/L 0.01 <0.45 µm	Pb ICP-MS µg/L 0.01 Unfiltered	Pr ICP-MS µg/L 0.005 <0.45 µm	Pr ICP-MS µg/L 0.005 Unfiltered	Rb ICP-MS µg/L 0.05 <0.45 µm	Rb ICP-MS µg/L 0.05 Unfiltered	Re ICP-MS µg/L 0.005 <0.45 µm	Re ICP-MS µg/L 0.005 Unfiltered	S ICP-ES mg/L 0.05 <0.45 µm	S ICP-ES mg/L 0.05 Unfiltered	Sb ICP-MS µg/L 0.01 <0.45 µm	Sb ICP-MS µg/L 0.01 Unfiltered	Sc ICP-ES mg/L 0.001 <0.45 µm	Sc ICP-ES mg/L 0.001 Unfiltered
SH-S	W6	2.1	2.0	< 0.05	< 0.05	1.09	1.51	0.283	0.291	2.13	2.03	< 0.005	< 0.005	1.71	1.75	0.84	0.88	< 0.001	< 0.001
SH-S	W7	1.7	1.7	< 0.05	< 0.05	0.65	0.77	0.257	0.271	2.03	2.01	< 0.005	< 0.005	1.66	1.71	0.65	0.69	< 0.001	< 0.001
SH-S	W8	1.6	1.8	< 0.05	< 0.05	0.67	0.99	0.277	0.296	1.99	2.00	< 0.005	< 0.005	1.75	1.77	0.58	0.61	< 0.001	< 0.001
SH-S	W9	0.7	0.6	< 0.05	< 0.05	0.46	0.54	0.135	0.142	2.00	2.00	< 0.005	< 0.005	0.97	0.97	0.11	0.10	< 0.001	< 0.001
SH-S	W9D1	0.6	0.6	< 0.05	< 0.05	0.44	0.52	0.131	0.139	1.99	1.94	< 0.005	< 0.005	0.95	0.95	0.10	0.10	< 0.001	< 0.001
SH-S	W9D2	0.6	0.6	< 0.05	< 0.05	0.42	0.49	0.122	0.125	1.93	1.91	< 0.005	< 0.005	0.94	0.94	0.09	0.10	< 0.001	< 0.001
SH-S	W10	0.4	0.4	< 0.05	< 0.05	0.34	0.41	0.082	0.085	1.35	1.40	< 0.005	< 0.005	0.83	0.82	0.06	0.06	< 0.001	< 0.001
SH-S	W10D	0.4	0.4	< 0.05	< 0.05	0.35	0.37	0.084	0.085	1.39	1.37	< 0.005	< 0.005	0.83	0.82	0.06	0.06	< 0.001	< 0.001
SH-S	W11	0.4	0.4	< 0.05	< 0.05	0.34	0.37	0.082	0.085	1.44	1.45	< 0.005	< 0.005	0.85	0.84	0.05	0.04	< 0.001	< 0.001
SH-S	W12	0.4	0.5	< 0.05	< 0.05	0.39	0.42	0.087	0.090	1.45	1.41	< 0.005	< 0.005	0.83	0.84	0.05	0.05	< 0.001	< 0.001
SH-S	W13	0.4	0.4	< 0.05	< 0.05	0.45	0.49	0.086	0.090	1.41	1.39	< 0.005	< 0.005	0.82	0.85	0.04	0.04	< 0.001	< 0.001
SH-S	W14	0.4	0.4	< 0.05	< 0.05	0.44	0.49	0.079	0.083	1.31	1.30	< 0.005	< 0.005	0.80	0.82	0.03	0.04	< 0.001	< 0.001
SH-S	W15	1.1	1.1	< 0.05	< 0.05	0.22	0.27	0.063	0.063	2.83	2.80	< 0.005	< 0.005	1.82	1.85	0.16	0.16	< 0.001	< 0.001
SH-S	W16	0.3	0.3	< 0.05	< 0.05	0.56	0.59	0.055	0.054	1.12	1.15	< 0.005	< 0.005	0.87	0.87	0.02	0.02	< 0.001	< 0.001
SH-S	W17	0.6	0.6	< 0.05	< 0.05	0.69	0.70	0.114	0.119	2.54	2.54	< 0.005	< 0.005	0.92	0.93	0.12	0.15	< 0.001	< 0.001
SH-S	W18	0.3	0.3	< 0.05	< 0.05	0.47	0.52	0.080	0.079	1.26	1.26	< 0.005	< 0.005	0.76	0.77	0.03	0.03	< 0.001	< 0.001
SH-S	W19	3.6	3.5	< 0.05	< 0.05	0.31	0.61	0.101	0.115	4.07	4.02	< 0.005	< 0.005	3.69	3.71	1.16	1.23	< 0.001	< 0.001
SH-S	W20	0.3	0.3	< 0.05	< 0.05	0.45	0.50	0.079	0.079	1.21	1.21	< 0.005	< 0.005	0.76	0.77	0.02	0.02	< 0.001	< 0.001
SH-S	W21	0.5	0.5	< 0.05	< 0.05	0.44	0.48	0.150	0.153	1.66	1.68	< 0.005	< 0.005	0.92	0.94	0.04	0.04	< 0.001	< 0.001
SH-S	W22	0.7	0.8	< 0.05	< 0.05	0.37	0.38	0.200	0.203	0.81	0.80	< 0.005	< 0.005	1.13	1.15	0.05	0.05	< 0.001	< 0.001
SH-S	W23	0.7	0.7	< 0.05	< 0.05	0.46	0.64	0.138	0.133	2.05	2.03	< 0.005	< 0.005	0.95	0.97	0.11	0.10	< 0.001	< 0.001
SH-S	W24	0.8	0.8	< 0.05	< 0.05	0.38	0.43	0.124	0.135	2.17	2.12	< 0.005	< 0.005	0.96	0.96	0.12	0.11	< 0.001	< 0.001
SH-S	W25	0.5	0.5	< 0.05	< 0.05	0.32	0.36	0.084	0.088	1.55	1.54	< 0.005	< 0.005	0.87	0.87	0.06	0.05	< 0.001	< 0.001
Upper / Lower Seal Harbour (SH-S) August 2005																			
SH-S	W1	0.4	0.4	< 0.05	< 0.05	0.29	0.31	0.094	0.094	1.05	1.07	< 0.005	< 0.005	0.99	0.97	0.07	0.04	< 0.001	< 0.001
SH-S	W2	0.4	0.5	< 0.05	< 0.05	0.63	0.72	0.112	0.123	1.86	1.98	< 0.005	< 0.005	0.96	0.89	0.10	0.16	< 0.001	< 0.001
SH-S	W3	1.8	2.0	< 0.05	< 0.05	0.23	1.25	0.118	0.196	2.65	2.71	< 0.005	< 0.005	2.55	2.45	0.22	0.29	< 0.001	< 0.001
SH-S	W4	0.3	0.4	< 0.05	< 0.05	0.34	0.62	0.052	0.077	1.77	1.86	< 0.005	< 0.005	0.66	0.63	0.13	0.14	< 0.001	< 0.001
SH-S	W5	0.4	0.5	< 0.05	< 0.05	0.50	0.65	0.070	0.086	1.91	2.10	< 0.005	< 0.005	0.73	0.70	0.17	0.20	< 0.001	< 0.001
SH-S	W6	4.6	5.1	< 0.05	< 0.05	0.64	1.60	0.154	0.331	7.87	8.23	< 0.005	< 0.005	3.24	2.98	1.70	1.74	< 0.001	< 0.001
SH-S	W7	1.9	1.9	< 0.05	< 0.05	0.28	0.67	0.068	0.123	7.39	7.53	< 0.005	< 0.005	1.87	1.82	0.75	0.74	< 0.001	< 0.001
SH-S	W8	1.5	1.6	< 0.05	< 0.05	0.38	0.74	0.063	0.099	5.87	6.01	< 0.005	< 0.005	1.32	1.29	0.33	0.32	< 0.001	< 0.001
SH-S	W9	0.5	0.5	< 0.05	< 0.05	0.59	0.80	0.075	0.087	2.05	2.10	< 0.005	< 0.005	0.74	0.68	0.20	0.18	< 0.001	< 0.001
SH-S	W9D1	0.6	0.6	< 0.05	< 0.05	0.52	0.46	0.075	0.073	2.58	2.77	< 0.005	< 0.005	1.21	1.18	0.31	0.29	< 0.001	< 0.001

Gold District	Sample Site	Ni ICP-MS µg/L 0.2 <0.45 µm	Ni ICP-MS µg/L 0.2 Unfiltered	P ICP-ES mg/L 0.01 <0.45 µm	P ICP-ES mg/L 0.01 Unfiltered	Pb ICP-MS µg/L 0.01 <0.45 µm	Pb ICP-MS µg/L 0.01 Unfiltered	Pr ICP-MS µg/L 0.005 <0.45 µm	Pr ICP-MS µg/L 0.005 Unfiltered	Rb ICP-MS µg/L 0.05 <0.45 µm	Rb ICP-MS µg/L 0.05 Unfiltered	Re ICP-MS µg/L 0.005 <0.45 µm	Re ICP-MS µg/L 0.005 Unfiltered	S ICP-ES mg/L 0.05 <0.45 µm	S ICP-ES mg/L 0.05 Unfiltered	Sb ICP-MS µg/L 0.01 <0.45 µm	Sb ICP-MS µg/L 0.01 Unfiltered	Sc ICP-ES mg/L 0.001 <0.45 µm	Sc ICP-ES mg/L 0.001 Unfiltered
SH-S	W9D2	1.1	1.1	< 0.05	< 0.05	0.65	0.89	0.158	0.178	2.32	2.44	< 0.005	< 0.005	1.63	1.61	0.40	0.40	< 0.001	< 0.001
SH-S	W10	1.4	1.7	< 0.05	< 0.05	0.10	1.63	0.056	0.109	2.92	3.03	< 0.005	< 0.005	1.53	1.54	0.68	0.70	< 0.001	< 0.001
SH-S	W10D	1.5	1.7	< 0.05	< 0.05	0.21	1.64	0.063	0.113	2.93	3.01	< 0.005	< 0.005	1.53	1.57	0.72	0.72	< 0.001	< 0.001
SH-S	W11	0.4	0.4	< 0.05	< 0.05	0.27	0.36	0.037	0.041	1.78	1.86	< 0.005	< 0.005	0.71	0.72	0.20	0.21	< 0.001	< 0.001
SH-S	W12	0.4	0.5	< 0.05	< 0.05	0.21	0.62	0.028	0.047	1.91	2.00	< 0.005	< 0.005	0.76	0.75	0.21	0.23	< 0.001	< 0.001
SH-S	W13	0.4	0.5	< 0.05	< 0.05	0.15	0.33	0.033	0.043	1.42	1.41	< 0.005	< 0.005	0.76	0.80	0.20	0.20	< 0.001	< 0.001
SH-S	W14	1.0	1.1	< 0.05	< 0.05	0.20	0.39	0.052	0.062	1.84	1.93	< 0.005	< 0.005	0.72	0.79	0.24	0.23	< 0.001	< 0.001
SH-S	W15	0.8	0.8	< 0.05	< 0.05	0.22	0.27	0.034	0.040	2.01	2.07	< 0.005	< 0.005	2.15	2.11	0.31	0.16	< 0.001	< 0.001
SH-S	W16	0.5	0.6	< 0.05	< 0.05	1.29	1.31	0.126	0.132	1.22	1.24	< 0.005	< 0.005	1.25	1.28	0.16	0.05	< 0.001	< 0.001
SH-S	W17	1.5	1.5	< 0.05	< 0.05	0.51	0.67	0.099	0.110	3.83	4.00	< 0.005	< 0.005	1.51	1.55	0.75	0.81	< 0.001	< 0.001
SH-S	W18	0.3	0.4	< 0.05	< 0.05	0.23	0.36	0.037	0.047	1.33	1.43	< 0.005	< 0.005	0.79	0.80	0.11	0.12	< 0.001	< 0.001
SH-S	W19	2.5	2.9	< 0.05	< 0.05	0.01	1.25	0.009	0.069	6.94	6.75	< 0.005	< 0.005	3.35	3.16	1.58	1.62	< 0.001	< 0.001
SH-S	W20	0.2	0.2	< 0.05	< 0.05	0.27	0.28	0.036	0.039	1.22	1.26	< 0.005	< 0.005	0.70	0.70	0.05	0.05	< 0.001	< 0.001
SH-S	W21	0.5	0.5	< 0.05	< 0.05	0.34	0.53	0.114	0.129	1.02	1.08	< 0.005	< 0.005	0.84	0.77	0.05	0.07	< 0.001	< 0.001
SH-S	W22	1.0	1.0	< 0.05	< 0.05	0.83	0.86	0.386	0.397	0.57	0.60	< 0.005	< 0.005	2.02	1.97	0.13	0.13	< 0.001	< 0.001
SH-S	W23	1.1	1.2	< 0.05	< 0.05	0.66	0.90	0.135	0.159	2.36	2.39	< 0.005	< 0.005	1.61	1.57	0.40	0.38	< 0.001	< 0.001
SH-S	W24	1.1	1.2	< 0.05	< 0.05	0.64	0.86	0.153	0.171	2.41	2.37	< 0.005	< 0.005	1.67	1.52	0.41	0.37	< 0.001	< 0.001
SH-S	W25	0.4	0.5	< 0.05	< 0.05	0.27	0.60	0.053	0.071	4.66	4.85	< 0.005	< 0.005	0.82	0.81	0.19	0.20	< 0.001	< 0.001
SH-S	W25D	0.4	0.4	< 0.05	< 0.05	0.21	0.59	0.048	0.072	4.64	4.77	< 0.005	< 0.005	0.82	0.78	0.26	0.20	< 0.001	< 0.001
Statistics	Min.	<0.2	<0.2	<0.05	<0.05	0.01	0.02	<0.005	<0.005	<0.05	<0.05	-	-	0.17	0.11	0.01	0.01	<0.001	<0.001
	Max.	173.6	215.3	0.01	0.17	3.75	398.75	1.472	2.152	16.17	20.53	-	-	107.25	105.42	6.99	22.68	0.001	0.002
	Mean	3.7	4.8	0.01	0.08	0.47	5.20	0.117	0.162	2.06	2.22	-	-	3.39	3.39	0.33	0.45	0.001	0.001
	Median	0.7	0.7	0.01	0.09	0.38	0.58	0.073	0.086	1.39	1.40	-	-	0.87	0.87	0.12	0.12	0.001	0.001
	n	179	178	4	7	179	180	171	177	179	180	-	-	181	181	180	180	6	9
	Std Dev	18.0	23.4	0.00	0.06	0.45	36.51	0.164	0.277	2.35	2.97	-	-	12.98	12.92	0.72	1.84	0.000	0.000
	95th pctl	3.8	4.4	0.01	0.16	1.27	2.63	0.353	0.446	6.99	6.78	-	-	5.49	5.44	1.35	1.25	0.001	0.002
	90th pctl	2.8	3.2	0.01	0.16	0.79	1.67	0.248	0.301	3.88	4.00	-	-	2.55	2.45	0.75	0.79	0.001	0.001
	75th pctl	1.7	1.9	0.01	0.13	0.58	0.85	0.134	0.145	2.06	2.10	-	-	1.53	1.54	0.28	0.29	0.001	0.001
	50th pctl	0.7	0.7	0.01	0.09	0.38	0.58	0.073	0.086	1.39	1.40	-	-	0.87	0.87	0.12	0.12	0.001	0.001
	25th pctl	0.4	0.4	0.01	0.03	0.22	0.39	0.045	0.053	0.98	0.99	-	-	0.75	0.75	0.05	0.05	0.001	0.001

Gold District	Sample Site	Se ICP-MS µg/L 1 <0.45 µm	Se ICP-MS µg/L 1 Unfiltered	Si ICP-ES mg/L 0.02 <0.45 µm	Si ICP-ES mg/L 0.02 Unfiltered	Sm ICP-MS µg/L 0.005 <0.45 µm	Sm ICP-MS µg/L 0.005 Unfiltered	Sn ICP-MS µg/L 0.01 <0.45 µm	Sn ICP-MS µg/L 0.01 Unfiltered	Sr ICP-MS µg/L 0.5 <0.45 µm	Sr ICP-MS µg/L 0.5 Unfiltered	Ta ICP-MS µg/L 0.01 <0.45 µm	Ta ICP-MS µg/L 0.01 Unfiltered	Tb ICP-MS µg/L 0.005 <0.45 µm	Tb ICP-MS µg/L 0.005 Unfiltered	Te ICP-MS µg/L 0.02 <0.45 µm	Te ICP-MS µg/L 0.02 Unfiltered	Ti ICP-MS µg/L 0.5 <0.45 µm	Ti ICP-MS µg/L 0.5 Unfiltered	Tl ICP-MS µg/L 0.005 <0.45 µm
Cochrane Hill Gold District (CH)																				
CH	W1	< 1	< 1	2.14	2.75	0.016	0.019	< 0.01	< 0.01	10.9	11.0	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	0.5	< 0.005
CH	W2	< 1	< 1	2.23	3.10	0.021	0.025	< 0.01	< 0.01	11.8	12.2	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	0.8	0.8	0.005
CH	W3	< 1	< 1	2.36	2.75	0.018	0.026	< 0.01	< 0.01	17.2	18.0	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	1.0	1.4	< 0.005
CH	W4	< 1	< 1	2.12	2.78	0.008	0.011	< 0.01	< 0.01	5.9	6.2	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	< 0.5	< 0.005
CH	W5	< 1	< 1	2.47	3.30	0.031	0.035	< 0.01	< 0.01	25.1	24.4	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	1.1	1.6	0.005
CH	W6	< 1	< 1	1.75	2.14	0.012	0.014	< 0.01	< 0.01	9.0	8.9	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	< 0.5	0.006
CH	W6-D	< 1	< 1	1.76	2.23	0.011	0.007	< 0.01	< 0.01	9.1	9.6	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	0.7	0.008
CH	W7	< 1	< 1	1.58	2.35	0.011	0.016	< 0.01	< 0.01	13.2	13.9	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	1.0	3.7	< 0.005
CH	W8	< 1	< 1	6.94	2.12	0.885	0.935	< 0.01	< 0.01	87.4	91.3	< 0.01	< 0.01	0.121	0.116	< 0.02	< 0.02	2.2	3.8	0.014
CH	W9	< 1	< 1	1.75	2.47	0.007	0.012	< 0.01	< 0.01	9.2	9.7	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	< 0.5	0.005
CH	W10	< 1	< 1	4.07	1.75	0.065	1.687	< 0.01	0.07	16.9	25.2	< 0.01	0.02	0.008	0.178	< 0.02	< 0.02	1.0	173.7	< 0.005
CH	W11	< 1	< 1	6.07	1.75	0.019	0.097	< 0.01	0.01	187.1	192.6	< 0.01	< 0.01	< 0.005	0.012	< 0.02	< 0.02	3.0	2.2	< 0.005
CH	W12	< 1	< 1	11.31	1.65	0.633	1.301	< 0.01	0.05	207.0	204.1	< 0.01	< 0.01	0.081	0.161	< 0.02	< 0.02	4.6	152.0	0.018
East Rawdon Gold District (RAW)																				
RAW	W1	< 1	< 1	2.23	2.39	0.011	0.017	< 0.01	< 0.01	32.0	31.4	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	< 0.5	< 0.005
RAW	W2	< 1	< 1	2.72	2.87	0.012	0.060	< 0.01	0.01	36.6	37.3	< 0.01	< 0.01	< 0.005	0.007	< 0.02	< 0.02	< 0.5	1.9	0.010
RAW	W3	< 1	< 1	0.77	0.83	0.010	0.012	< 0.01	< 0.01	12.0	12.6	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	0.7	< 0.005
RAW	W4	< 1	< 1	1.20	1.26	0.012	0.023	< 0.01	< 0.01	17.9	18.9	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	0.6	< 0.005
RAW	W5	< 1	< 1	1.33	1.39	0.082	0.122	< 0.01	< 0.01	27.8	27.3	< 0.01	< 0.01	0.009	0.014	< 0.02	< 0.02	< 0.5	< 0.5	< 0.005
Lake Catcha Gold District (LC)																				
LC	W1	< 1	< 1	0.78	0.80	< 0.005	< 0.005	< 0.01	< 0.01	27.4	26.9	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	< 0.5	< 0.005
LC	W2	< 1	< 1	1.39	1.41	0.024	0.034	< 0.01	0.01	21.2	21.3	< 0.01	< 0.01	0.005	< 0.005	< 0.02	< 0.02	1.1	1.2	0.008
LC	W3	< 1	< 1	2.04	2.03	0.006	< 0.005	< 0.01	< 0.01	32.5	31.7	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	< 0.5	< 0.005
LC	W4	< 1	< 1	2.08	2.17	< 0.005	0.027	< 0.01	< 0.01	124.6	162.9	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	1.1	< 0.005
LC	W5	< 1	< 1	1.59	1.68	0.030	0.029	< 0.01	< 0.01	12.7	12.8	< 0.01	< 0.01	0.006	< 0.005	< 0.02	< 0.02	1.4	1.4	0.006
LC	W6	< 1	< 1	1.68	1.73	0.040	0.034	< 0.01	< 0.01	19.6	19.6	< 0.01	< 0.01	0.005	0.005	< 0.02	< 0.02	1.3	1.7	< 0.005
LC	W6-D	< 1	< 1	1.63	1.67	0.033	0.045	< 0.01	< 0.01	19.0	19.3	< 0.01	< 0.01	0.005	0.006	< 0.02	< 0.02	1.6	2.1	< 0.005
Lower Seal Harbour Gold District (LSH)																				
LSH	W1	< 1	< 1	2.62	2.67	0.225	0.257	0.02	0.02	18.7	19.9	< 0.01	< 0.01	0.026	0.030	< 0.02	< 0.02	5.7	6.4	0.010
LSH	W2	< 1	< 1	2.52	2.60	0.314	0.304	0.02	0.02	24.3	25.8	< 0.01	< 0.01	0.036	0.039	< 0.02	< 0.02	6.3	6.8	0.014
LSH	W4	< 1	< 1	1.20	1.24	0.118	0.131	< 0.01	0.02	8.9	9.5	0.01	< 0.01	0.013	0.015	< 0.02	< 0.02	3.6	4.2	0.011
LSH	W6	< 1	< 1	2.15	2.24	0.362	0.448	0.02	0.02	60.4	64.7	< 0.01	< 0.01	0.045	0.055	< 0.02	0.03	3.4	4.6	0.015
LSH	W7	< 1	< 1	2.12	2.24	0.300	0.339	0.02	0.02	62.0	64.1	< 0.01	< 0.01	0.033	0.042	< 0.02	< 0.02	2.8	4.3	0.015
LSH	W8	< 1	< 1	2.08	2.11	0.280	0.325	0.01	0.01	56.9	65.0	< 0.01	< 0.01	0.030	0.039	< 0.02	< 0.02	3.0	3.9	0.018
Mount Uniacke Gold District (UNI)																				
UNI	W1	< 1	< 1	9.54	12.15	0.016	0.768	< 0.01	0.05	121.1	118.9	< 0.01	< 0.01	< 0.005	0.087	< 0.02	0.16	0.9	15.1	0.006
UNI	W2	< 1	< 1	0.37	0.39	0.017	0.041	< 0.01	< 0.01	24.3	25.5	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	0.6	< 0.005
UNI	W3	< 1	< 1	1.99	2.20	0.055	0.724	< 0.01	< 0.01	55.7	65.0	< 0.01	< 0.01	0.007	0.075	0.05	0.16	< 0.5	3.3	0.029

Gold District	Sample Site	Se ICP-MS µg/L 1 <0.45 µm	Se ICP-MS µg/L 1 Unfiltered	Si ICP-ES mg/L 0.02 <0.45 µm	Si ICP-ES mg/L 0.02 Unfiltered	Sm ICP-MS µg/L 0.005 <0.45 µm	Sm ICP-MS µg/L 0.005 Unfiltered	Sn ICP-MS µg/L 0.01 <0.45 µm	Sn ICP-MS µg/L 0.01 Unfiltered	Sr ICP-MS µg/L 0.5 <0.45 µm	Sr ICP-MS µg/L 0.5 Unfiltered	Ta ICP-MS µg/L 0.01 <0.45 µm	Ta ICP-MS µg/L 0.01 Unfiltered	Tb ICP-MS µg/L 0.005 <0.45 µm	Tb ICP-MS µg/L 0.005 Unfiltered	Te ICP-MS µg/L 0.02 <0.45 µm	Te ICP-MS µg/L 0.02 Unfiltered	Ti ICP-MS µg/L 0.5 <0.45 µm	Ti ICP-MS µg/L 0.5 Unfiltered	Tl ICP-MS µg/L 0.005 <0.45 µm
UNI	W4	< 1	< 1	2.11	2.17	0.040	0.050	< 0.01	< 0.01	63.9	68.4	< 0.01	< 0.01	0.006	0.007	< 0.02	< 0.02	< 0.5	< 0.5	0.010
UNI	W5	< 1	< 1	2.95	3.04	< 0.005	0.038	< 0.01	< 0.01	66.0	71.2	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	0.02	< 0.5	< 0.5	0.007
North Brookfield Gold District (NB)																				
NB	W1	< 1	< 1	6.95	2.81	0.017	0.022	< 0.01	< 0.01	10.2	9.9	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	0.6	1.1	< 0.005
NB	W2	< 1	< 1	1.75	3.14	< 0.005	< 0.005	< 0.01	< 0.01	141.2	142.7	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	< 0.5	< 0.005
NB	W3	< 1	< 1	13.88	3.32	< 0.005	0.060	< 0.01	< 0.01	152.2	154.3	< 0.01	< 0.01	< 0.005	0.010	< 0.02	< 0.02	< 0.5	1.5	< 0.005
NB	W4	< 1	< 1	6.49	2.76	0.007	0.012	< 0.01	< 0.01	104.9	101.6	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	< 0.5	< 0.005
NB	W5	< 1	< 1	17.46	3.95	< 0.005	0.076	< 0.01	0.01	218.5	242.4	< 0.01	< 0.01	< 0.005	0.013	< 0.02	< 0.02	1.0	2.5	< 0.005
Salmon River (Dufferin) Gold District (SR)																				
SR	W1	< 1	< 1	2.63	2.66	< 0.005	0.006	< 0.01	< 0.01	29.4	31.5	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	< 0.5	0.007
SR	W2	< 1	< 1	2.25	2.25	0.005	< 0.005	< 0.01	< 0.01	101.3	106.0	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	< 0.5	< 0.005
SR	W3	< 1	< 1	2.52	2.52	< 0.005	< 0.005	< 0.01	< 0.01	193.9	182.8	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	< 0.5	< 0.005
SR	W4	< 1	< 1	2.34	2.31	< 0.005	< 0.005	< 0.01	< 0.01	272.1	249.8	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	< 0.5	< 0.005
SR	W5	< 1	< 1	1.82	1.84	0.038	0.034	< 0.01	< 0.01	89.2	88.2	< 0.01	< 0.01	0.007	0.007	< 0.02	< 0.02	0.5	0.6	< 0.005
SR	W6	< 1	< 1	2.23	2.25	0.027	0.036	< 0.01	< 0.01	31.7	31.3	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	0.6	0.7	< 0.005
SR	W7	< 1	< 1	2.05	2.06	0.020	0.020	< 0.01	< 0.01	29.9	31.1	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	0.5	0.9	< 0.005
SR	W8	< 1	< 1	3.17	3.16	0.064	0.081	< 0.01	< 0.01	32.7	33.3	< 0.01	< 0.01	0.006	0.007	< 0.02	< 0.02	< 0.5	< 0.5	0.005
SR	W9	< 1	< 1	1.42	1.44	0.032	0.056	< 0.01	0.02	6.2	6.2	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	1.1	< 0.005
Upper Seal Harbour Gold District (USH)																				
USH	W4(03)	< 1	< 1	1.10	1.16	0.058	0.059	< 0.01	< 0.01	6.0	5.8	< 0.01	< 0.01	0.007	0.008	< 0.02	< 0.02	2.3	3.3	0.010
USH	W13	< 1	< 1	1.18	1.23	0.051	0.066	< 0.01	< 0.01	8.7	8.4	< 0.01	< 0.01	0.007	0.007	< 0.02	< 0.02	2.3	2.6	0.009
USH	W14	< 1	< 1	1.98	2.02	0.035	0.049	< 0.01	< 0.01	18.7	18.8	< 0.01	< 0.01	< 0.005	0.008	< 0.02	< 0.02	0.8	2.2	0.008
USH	W18	< 1	< 1	1.11	1.22	0.058	0.071	< 0.01	0.01	5.8	5.9	< 0.01	< 0.01	0.008	0.008	< 0.02	< 0.02	2.2	3.1	0.009
USH	W19	< 1	< 1	4.26	4.15	0.042	0.122	< 0.01	< 0.01	38.7	38.3	< 0.01	< 0.01	< 0.005	0.010	< 0.02	< 0.02	< 0.5	0.5	0.006
USH	W20	< 1	< 1	1.13	1.18	0.057	0.075	< 0.01	0.01	5.9	5.8	< 0.01	< 0.01	0.006	0.007	< 0.02	< 0.02	2.4	3.3	0.009
Whiteburn Gold District (WB)																				
WHI	W1	< 1	< 1	2.87	3.05	0.112	0.154	< 0.01	< 0.01	11.0	12.3	< 0.01	< 0.01	0.012	0.013	< 0.02	< 0.02	1.4	3.9	0.007
WHI	W2	< 1	< 1	0.10	0.12	0.041	0.047	< 0.01	0.01	8.4	9.2	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	0.7	< 0.005
WHI	W3	< 1	< 1	4.65	5.62	0.025	0.933	0.01	0.06	198.2	207.0	< 0.01	< 0.01	< 0.005	0.177	0.05	0.52	0.6	9.9	0.018
WHI	W4	< 1	< 1	2.38	2.52	0.106	0.172	< 0.01	0.01	9.2	10.3	< 0.01	< 0.01	0.012	0.016	< 0.02	< 0.02	0.9	2.0	0.007
WHI	W5	< 1	< 1	1.16	1.13	0.046	0.075	< 0.01	0.01	33.9	39.4	< 0.01	< 0.01	0.006	0.008	< 0.02	< 0.02	0.7	1.3	< 0.005
WHI	W6	< 1	< 1	1.40	1.48	0.125	0.138	< 0.01	< 0.01	10.2	11.0	< 0.01	< 0.01	0.010	0.015	< 0.02	< 0.02	0.9	1.6	0.008
WHI	W6-D	< 1	< 1	1.44	1.50	0.121	0.124	< 0.01	< 0.01	10.7	11.1	< 0.01	< 0.01	0.013	0.015	< 0.02	< 0.02	1.0	1.6	0.008
Upper / Lower Seal Harbour (SH-S) May 2004																				
SH-S	W1	< 1	< 1	2.86	2.83	0.062	0.068	< 0.01	< 0.01	9.1	9.1	< 0.01	< 0.01	0.008	0.008	< 0.02	< 0.02	1.9	2.1	0.005
SH-S	W2	< 1	< 1	2.05	2.10	0.065	0.062	< 0.01	< 0.01	12.7	12.6	< 0.01	< 0.01	0.008	0.008	< 0.02	< 0.02	1.9	2.2	0.006

Gold District	Sample Site	Se ICP-MS µg/L 1 <0.45 µm	Se ICP-MS µg/L 1 Unfiltered	Si ICP-ES mg/L 0.02 <0.45 µm	Si ICP-ES mg/L 0.02 Unfiltered	Sm ICP-MS µg/L 0.005 <0.45 µm	Sm ICP-MS µg/L 0.005 Unfiltered	Sn ICP-MS µg/L 0.01 <0.45 µm	Sn ICP-MS µg/L 0.01 Unfiltered	Sr ICP-MS µg/L 0.5 <0.45 µm	Sr ICP-MS µg/L 0.5 Unfiltered	Ta ICP-MS µg/L 0.01 <0.45 µm	Ta ICP-MS µg/L 0.01 Unfiltered	Tb ICP-MS µg/L 0.005 <0.45 µm	Tb ICP-MS µg/L 0.005 Unfiltered	Te ICP-MS µg/L 0.02 <0.45 µm	Te ICP-MS µg/L 0.02 Unfiltered	Ti ICP-MS µg/L 0.5 <0.45 µm	Ti ICP-MS µg/L 0.5 Unfiltered	Tl ICP-MS µg/L 0.005 <0.45 µm
SH-S	W3	< 1	< 1	1.90	1.89	0.137	0.139	< 0.01	0.01	26.0	25.5	< 0.01	< 0.01	0.016	0.017	< 0.02	< 0.02	1.5	1.7	0.007
SH-S	W4	< 1	< 1	1.02	1.01	0.043	0.049	< 0.01	< 0.01	6.3	6.3	< 0.01	< 0.01	0.006	0.005	< 0.02	< 0.02	1.5	1.6	0.006
SH-S	W5	< 1	< 1	1.06	1.09	0.053	0.052	< 0.01	< 0.01	7.9	8.0	< 0.01	< 0.01	0.006	0.006	< 0.02	< 0.02	1.4	1.7	0.006
SH-S	W6	< 1	< 1	1.35	1.36	0.139	0.137	< 0.01	< 0.01	47.5	46.4	< 0.01	< 0.01	0.017	0.019	< 0.02	< 0.02	1.1	1.2	0.008
SH-S	W7	< 1	< 1	1.32	1.33	0.111	0.109	< 0.01	< 0.01	47.8	47.2	< 0.01	< 0.01	0.015	0.016	< 0.02	< 0.02	1.1	1.2	0.007
SH-S	W8	< 1	< 1	1.05	1.07	0.111	0.109	< 0.01	< 0.01	39.1	38.4	< 0.01	< 0.01	0.014	0.015	< 0.02	< 0.02	0.9	1.1	0.005
SH-S	W9	< 1	< 1	1.10	1.09	0.055	0.052	< 0.01	< 0.01	7.6	7.4	< 0.01	< 0.01	0.006	0.007	< 0.02	< 0.02	1.5	1.5	0.007
SH-S	W9-D1	< 1	< 1	1.06	1.07	0.052	0.057	< 0.01	< 0.01	8.1	8.0	< 0.01	< 0.01	0.006	0.007	< 0.02	< 0.02	1.4	1.7	0.007
SH-S	W9-D2	< 1	< 1	1.08	1.07	0.050	0.056	< 0.01	< 0.01	7.8	7.9	< 0.01	< 0.01	0.006	0.007	< 0.02	< 0.02	1.4	1.6	0.007
SH-S	W9-D3	< 1	< 1	1.03	1.05	0.048	0.058	< 0.01	< 0.01	7.8	7.8	< 0.01	< 0.01	0.006	0.008	< 0.02	< 0.02	1.4	1.7	0.006
SH-S	W10	< 1	< 1	1.32	1.32	0.038	0.039	< 0.01	0.01	6.5	6.5	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	1.8	1.9	0.006
SH-S	W11	< 1	< 1	1.18	1.20	0.037	0.035	< 0.01	< 0.01	7.2	7.3	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	1.7	1.9	0.006
SH-S	W12	< 1	< 1	1.27	1.30	0.033	0.035	< 0.01	< 0.01	7.5	7.5	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	1.5	1.9	0.006
SH-S	W13	< 1	< 1	1.36	1.39	0.039	0.039	< 0.01	< 0.01	7.9	8.0	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	1.7	2.1	0.005
SH-S	W14	< 1	< 1	1.35	1.37	0.032	0.035	< 0.01	< 0.01	5.5	5.6	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	1.7	1.9	0.007
SH-S	W15	< 1	< 1	0.53	0.53	0.023	0.027	< 0.01	< 0.01	18.4	18.3	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	0.5	0.8	< 0.005
SH-S	W16	< 1	< 1	1.31	1.32	0.018	0.018	< 0.01	< 0.01	4.6	4.5	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	1.6	1.5	< 0.005
SH-S	W17	< 1	< 1	1.77	1.80	0.035	0.031	< 0.01	0.01	6.7	6.6	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	2.2	2.5	0.012
SH-S	W17-D	< 1	< 1	1.78	1.81	0.030	0.034	< 0.01	0.01	6.5	6.5	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	2.2	2.7	0.011
SH-S	W18	< 1	< 1	1.37	1.35	0.033	0.033	< 0.01	< 0.01	4.9	4.9	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	2.1	1.8	0.005
SH-S	W19	< 1	< 1	4.29	4.33	< 0.005	0.006	< 0.01	< 0.01	33.7	33.9	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	< 0.5	< 0.5	0.006
SH-S	W20	< 1	< 1	1.37	1.39	0.034	0.033	< 0.01	< 0.01	5.0	4.9	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	1.9	2.1	0.005
SH-S	W21	< 1	< 1	0.70	0.70	0.045	0.045	< 0.01	< 0.01	5.9	5.9	< 0.01	< 0.01	0.005	0.006	< 0.02	< 0.02	1.3	1.4	0.006
SH-S	W22	< 1	< 1	2.10	2.11	0.086	0.091	< 0.01	< 0.01	8.1	8.3	< 0.01	< 0.01	0.011	0.012	< 0.02	< 0.02	1.7	1.6	0.005
SH-S	W23	< 1	< 1	1.07	1.09	0.050	0.050	< 0.01	< 0.01	7.2	7.2	< 0.01	< 0.01	0.006	0.006	< 0.02	< 0.02	1.4	1.7	0.007
SH-S	W24	< 1	< 1	1.09	1.09	0.049	0.053	< 0.01	< 0.01	7.4	7.4	< 0.01	< 0.01	0.006	0.006	< 0.02	< 0.02	1.4	1.6	0.007
SH-S	W25	< 1	< 1	0.92	0.94	0.038	0.040	< 0.01	< 0.01	6.5	6.4	< 0.01	< 0.01	< 0.005	0.005	< 0.02	< 0.02	1.7	1.9	0.007
Upper / Lower Seal Harbour (SH-S) August 2004																				
SH-S	W1	< 1	< 1	4.04	4.05	0.143	0.153	0.02	< 0.01	12.9	12.5	< 0.01	< 0.01	0.018	0.019	< 0.02	< 0.02	5.1	4.7	0.006
SH-S	W1D	< 1	< 1	4.08	4.03	0.152	0.149	0.01	< 0.01	12.9	12.5	< 0.01	< 0.01	0.019	0.019	< 0.02	< 0.02	4.8	4.8	0.006
SH-S	W2	< 1	< 1	2.93	2.94	0.202	0.214	0.02	0.01	19.7	19.4	< 0.01	< 0.01	0.024	0.025	< 0.02	< 0.02	6.2	5.5	0.008
SH-S	W3	< 1	< 1	3.08	3.08	0.428	0.476	0.04	0.03	40.7	40.1	< 0.01	< 0.01	0.048	0.052	< 0.02	< 0.02	4.7	4.6	0.018

Gold District	Sample Site	Se ICP-MS µg/L 1 <0.45 µm	Se ICP-MS µg/L 1 Unfiltered	Si ICP-ES mg/L 0.02 <0.45 µm	Si ICP-ES mg/L 0.02 Unfiltered	Sm ICP-MS µg/L 0.005 <0.45 µm	Sm ICP-MS µg/L 0.005 Unfiltered	Sn ICP-MS µg/L 0.01 <0.45 µm	Sn ICP-MS µg/L 0.01 Unfiltered	Sr ICP-MS µg/L 0.5 <0.45 µm	Sr ICP-MS µg/L 0.5 Unfiltered	Ta ICP-MS µg/L 0.01 <0.45 µm	Ta ICP-MS µg/L 0.01 Unfiltered	Tb ICP-MS µg/L 0.005 <0.45 µm	Tb ICP-MS µg/L 0.005 Unfiltered	Te ICP-MS µg/L 0.02 <0.45 µm	Te ICP-MS µg/L 0.02 Unfiltered	Ti ICP-MS µg/L 0.5 <0.45 µm	Ti ICP-MS µg/L 0.5 Unfiltered	Tl ICP-MS µg/L 0.005 <0.45 µm
SH-S	W4	< 1	< 1	1.21	1.21	0.091	0.081	< 0.01	< 0.01	8.8	8.6	< 0.01	< 0.01	0.011	0.011	< 0.02	< 0.02	3.0	3.3	0.011
SH-S	W5	< 1	< 1	1.27	1.27	0.101	0.112	< 0.01	0.01	11.2	11.2	< 0.01	< 0.01	0.010	0.013	< 0.02	< 0.02	2.9	3.3	0.009
SH-S	W6	< 1	< 1	2.57	2.62	0.265	0.346	0.01	< 0.01	68.7	68.6	< 0.01	< 0.01	0.035	0.043	< 0.02	0.03	2.4	3.0	0.013
SH-S	W7	< 1	< 1	2.57	2.57	0.215	0.270	0.01	0.01	69.5	69.8	< 0.01	< 0.01	0.029	0.032	< 0.02	< 0.02	2.3	2.8	0.014
SH-S	W8	< 1	< 1	2.53	2.54	0.153	0.238	< 0.01	< 0.01	62.5	63.1	< 0.01	< 0.01	0.024	0.027	< 0.02	< 0.02	1.6	2.7	0.016
SH-S	W9	< 1	< 1	1.24	1.24	0.084	0.106	0.01	< 0.01	10.5	10.5	< 0.01	< 0.01	0.013	0.013	< 0.02	< 0.02	3.0	3.3	0.010
SH-S	W9D1	< 1	< 1	1.26	1.26	0.103	0.106	< 0.01	0.01	10.6	10.6	< 0.01	< 0.01	0.013	0.012	< 0.02	< 0.02	2.8	3.2	0.010
SH-S	W9D2	< 1	< 1	1.25	1.25	0.095	0.096	0.01	< 0.01	10.8	10.7	< 0.01	< 0.01	0.012	0.011	< 0.02	< 0.02	2.7	3.3	0.009
SH-S	W9D3	< 1	< 1	1.27	1.28	0.078	0.098	0.02	0.02	10.8	10.7	< 0.01	< 0.01	0.011	0.013	< 0.02	< 0.02	2.5	3.2	0.008
SH-S	W10	< 1	< 1	0.88	0.88	0.051	0.066	< 0.01	0.02	7.7	7.6	< 0.01	< 0.01	0.008	0.007	< 0.02	< 0.02	2.3	2.4	0.009
SH-S	W11	< 1	< 1	0.80	0.82	0.052	0.054	< 0.01	0.01	8.2	8.1	< 0.01	< 0.01	0.005	0.006	< 0.02	< 0.02	2.3	2.3	0.009
SH-S	W12	< 1	< 1	0.78	0.79	0.041	0.041	< 0.01	< 0.01	8.0	7.7	< 0.01	< 0.01	< 0.005	0.006	< 0.02	< 0.02	2.1	2.6	0.009
SH-S	W13	< 1	< 1	0.80	0.73	0.045	0.054	< 0.01	< 0.01	8.8	8.5	< 0.01	< 0.01	0.006	0.006	< 0.02	< 0.02	2.0	1.7	0.009
SH-S	W14	< 1	< 1	0.68	0.68	0.044	0.048	< 0.01	< 0.01	6.4	6.2	< 0.01	< 0.01	0.006	0.006	< 0.02	< 0.02	2.2	2.1	0.011
SH-S	W15	< 1	< 1	0.66	0.66	0.053	0.059	0.02	0.02	27.2	26.9	< 0.01	< 0.01	0.007	0.008	< 0.02	< 0.02	1.7	2.0	0.007
SH-S	W15D	< 1	< 1	0.66	0.66	0.043	0.061	0.02	0.02	26.8	27.8	< 0.01	< 0.01	0.007	0.007	< 0.02	< 0.02	1.5	2.1	< 0.005
SH-S	W16	< 1	< 1	1.42	1.42	0.032	0.033	< 0.01	< 0.01	6.4	6.2	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	3.1	3.0	0.009
SH-S	W17	< 1	< 1	2.30	2.31	0.082	0.077	0.03	0.02	12.3	12.1	< 0.01	< 0.01	0.008	0.010	< 0.02	< 0.02	5.8	5.5	0.010
SH-S	W18	< 1	< 1	0.60	0.61	0.048	0.050	< 0.01	< 0.01	5.8	5.6	< 0.01	< 0.01	0.007	0.006	< 0.02	< 0.02	2.1	2.4	0.007
SH-S	W19	< 1	< 1	3.15	3.23	0.006	0.047	< 0.01	< 0.01	35.3	35.7	< 0.01	< 0.01	< 0.005	0.006	< 0.02	< 0.02	< 0.5	< 0.5	0.007
SH-S	W20	< 1	< 1	0.59	0.58	0.041	0.047	< 0.01	< 0.01	5.7	5.7	< 0.01	< 0.01	0.006	0.005	< 0.02	< 0.02	2.1	2.2	0.009
SH-S	W21	< 1	< 1	1.34	1.36	0.106	0.115	0.01	0.01	8.4	8.3	< 0.01	< 0.01	0.013	0.012	< 0.02	< 0.02	3.2	3.2	0.008
SH-S	W22	< 1	< 1	2.55	2.56	0.195	0.185	< 0.01	< 0.01	10.1	9.9	< 0.01	< 0.01	0.021	0.023	< 0.02	< 0.02	3.2	3.3	0.005
SH-S	W23	< 1	< 1	1.25	1.23	0.091	0.110	0.01	0.01	10.1	10.0	< 0.01	< 0.01	0.012	0.014	< 0.02	< 0.02	3.0	3.4	0.010
SH-S	W24	< 1	< 1	1.26	1.25	0.086	0.100	0.02	0.02	10.4	10.3	< 0.01	< 0.01	0.012	0.013	< 0.02	< 0.02	3.3	3.3	0.009
SH-S	W25	< 1	< 1	1.04	1.05	0.047	0.060	< 0.01	< 0.01	8.1	8.1	< 0.01	< 0.01	0.005	0.009	< 0.02	< 0.02	1.6	2.6	0.008
SH-S	W51	12	15	1.07	1.11	< 0.05	0.120	< 0.1	< 0.1	775.6	802.1	< 0.1	< 0.1	< 0.05	< 0.05	< 0.2	< 0.2	< 5	< 5	< 0.05
Upper / Lower Seal Harbour (SH-S) November 2004																				
SH-S	W1	< 1	< 1	2.92	2.95	0.110	0.114	< 0.01	< 0.01	14.6	14.8	< 0.01	< 0.01	0.015	0.015	< 0.02	0.03	3.4	3.6	0.009
SH-S	W2	< 1	< 1	2.49	2.50	0.144	0.148	0.02	0.01	22.8	22.9	< 0.01	< 0.01	0.018	0.019	< 0.02	0.03	3.7	3.7	0.010
SH-S	W3	< 1	< 1	2.42	2.49	0.259	0.250	0.01	0.02	36.3	36.1	< 0.01	< 0.01	0.027	0.032	< 0.02	< 0.02	3.2	3.1	0.008
SH-S	W3D	< 1	< 1	2.43	2.46	0.262	0.254	0.02	0.01	35.6	36.1	< 0.01	< 0.01	0.031	0.030	< 0.02	< 0.02	3.3	3.2	0.008
SH-S	W4	< 1	< 1	1.72	1.73	0.088	0.088	0.01	< 0.01	11.4	11.2	< 0.01	< 0.01	0.011	0.011	< 0.02	< 0.02	2.4	2.9	0.007
SH-S	W5	< 1	< 1	1.76	1.81	0.096	0.097	0.01	< 0.01	14.6	14.5	< 0.01	< 0.01	0.014	0.012	< 0.02	< 0.02	2.5	2.8	0.006

Gold District	Sample Site	Se ICP-MS µg/L 1 <0.45 µm	Se ICP-MS µg/L 1 Unfiltered	Si ICP-ES mg/L 0.02 <0.45 µm	Si ICP-ES mg/L 0.02 Unfiltered	Sm ICP-MS µg/L 0.005 <0.45 µm	Sm ICP-MS µg/L 0.005 Unfiltered	Sn ICP-MS µg/L 0.01 <0.45 µm	Sn ICP-MS µg/L 0.01 Unfiltered	Sr ICP-MS µg/L 0.5 <0.45 µm	Sr ICP-MS µg/L 0.5 Unfiltered	Ta ICP-MS µg/L 0.01 <0.45 µm	Ta ICP-MS µg/L 0.01 Unfiltered	Tb ICP-MS µg/L 0.005 <0.45 µm	Tb ICP-MS µg/L 0.005 Unfiltered	Te ICP-MS µg/L 0.02 <0.45 µm	Te ICP-MS µg/L 0.02 Unfiltered	Ti ICP-MS µg/L 0.5 <0.45 µm	Ti ICP-MS µg/L 0.5 Unfiltered	Tl ICP-MS µg/L 0.005 <0.45 µm
SH-S	W6	< 1	< 1	2.31	2.36	0.193	0.217	0.01	0.12	45.7	45.5	< 0.01	< 0.01	0.025	0.027	< 0.02	< 0.02	2.4	2.9	0.008
SH-S	W7	< 1	< 1	2.32	2.37	0.196	0.200	0.01	0.01	46.6	46.7	< 0.01	< 0.01	0.024	0.025	< 0.02	< 0.02	2.5	2.4	0.008
SH-S	W8	< 1	< 1	2.33	2.37	0.202	0.218	< 0.01	0.01	45.7	46.6	< 0.01	< 0.01	0.024	0.029	< 0.02	< 0.02	2.7	3.0	0.007
SH-S	W9	< 1	< 1	1.80	1.79	0.099	0.110	< 0.01	0.02	13.7	13.5	< 0.01	< 0.01	0.012	0.014	< 0.02	< 0.02	3.0	2.9	0.007
SH-S	W9D1	< 1	< 1	1.75	1.78	0.103	0.114	0.01	0.01	13.3	13.3	< 0.01	< 0.01	0.011	0.012	< 0.02	< 0.02	2.8	2.8	0.006
SH-S	W9D2	< 1	< 1	1.77	1.77	0.093	0.080	0.20	< 0.01	13.0	12.9	< 0.01	< 0.01	0.010	0.011	< 0.02	< 0.02	2.9	2.7	0.007
SH-S	W10	< 1	< 1	1.75	1.74	0.061	0.077	< 0.01	< 0.01	9.5	9.8	< 0.01	< 0.01	0.007	0.008	< 0.02	< 0.02	2.4	2.4	0.007
SH-S	W10D	< 1	< 1	1.75	1.77	0.070	0.068	< 0.01	< 0.01	9.7	9.8	< 0.01	< 0.01	0.007	0.008	< 0.02	< 0.02	2.5	2.3	0.007
SH-S	W11	< 1	< 1	1.78	1.76	0.069	0.067	< 0.01	< 0.01	10.7	10.6	< 0.01	< 0.01	0.007	0.008	< 0.02	< 0.02	2.7	2.3	0.006
SH-S	W12	< 1	< 1	1.73	1.75	0.071	0.064	< 0.01	< 0.01	10.6	10.5	< 0.01	< 0.01	0.009	0.008	< 0.02	< 0.02	2.6	2.4	0.006
SH-S	W13	< 1	< 1	1.72	1.77	0.071	0.069	< 0.01	< 0.01	10.6	10.6	< 0.01	< 0.01	0.008	0.009	< 0.02	0.05	2.7	2.7	0.007
SH-S	W14	< 1	< 1	1.61	1.63	0.059	0.060	< 0.01	0.01	8.4	8.3	< 0.01	< 0.01	0.006	0.007	< 0.02	< 0.02	2.6	2.5	0.007
SH-S	W15	< 1	< 1	1.22	1.26	0.048	0.049	< 0.01	< 0.01	22.8	22.6	< 0.01	< 0.01	< 0.005	0.006	< 0.02	< 0.02	1.4	1.5	< 0.005
SH-S	W16	< 1	< 1	1.77	1.76	0.046	0.046	0.01	0.02	8.6	8.7	< 0.01	< 0.01	0.006	< 0.005	< 0.02	< 0.02	2.8	2.5	0.007
SH-S	W17	< 1	< 1	2.26	2.26	0.082	0.077	0.02	0.01	10.7	10.7	< 0.01	< 0.01	0.009	0.009	< 0.02	< 0.02	4.1	4.3	0.009
SH-S	W18	< 1	< 1	1.57	1.60	0.059	0.053	0.02	< 0.01	7.9	7.9	< 0.01	< 0.01	0.007	0.007	< 0.02	< 0.02	2.6	2.9	0.009
SH-S	W19	< 1	< 1	3.54	3.57	0.072	0.108	< 0.01	< 0.01	35.6	36.2	< 0.01	< 0.01	0.009	0.011	< 0.02	< 0.02	< 0.5	< 0.5	0.007
SH-S	W20	< 1	< 1	1.58	1.60	0.054	0.058	0.01	0.01	7.6	7.6	< 0.01	< 0.01	0.006	0.008	< 0.02	< 0.02	2.5	2.6	0.007
SH-S	W21	< 1	< 1	1.71	1.75	0.105	0.105	< 0.01	< 0.01	11.6	11.6	< 0.01	< 0.01	0.013	0.012	< 0.02	< 0.02	2.8	2.8	0.008
SH-S	W22	< 1	< 1	2.56	2.54	0.135	0.155	< 0.01	< 0.01	12.9	12.7	< 0.01	< 0.01	0.018	0.018	< 0.02	0.04	2.5	2.7	0.005
SH-S	W23	< 1	< 1	1.77	1.77	0.094	0.099	< 0.01	0.01	13.9	13.6	< 0.01	< 0.01	0.012	0.012	< 0.02	< 0.02	2.7	2.6	0.007
SH-S	W24	< 1	< 1	1.75	1.75	0.104	0.094	< 0.01	< 0.01	15.8	15.6	< 0.01	< 0.01	0.012	0.012	< 0.02	< 0.02	2.4	2.4	0.006
SH-S	W25	< 1	< 1	1.69	1.69	0.068	0.065	0.01	< 0.01	9.9	9.8	< 0.01	< 0.01	0.007	0.007	< 0.02	0.02	2.5	2.5	0.009
Upper / Lower Seal Harbour (SH-S) August 2005																				
SH-S	W1	< 1	< 1	4.68	4.79	0.072	0.070	< 0.01	< 0.01	20.4	21.0	< 0.01	< 0.01	0.010	0.010	< 0.02	< 0.02	2.4	2.5	< 0.005
SH-S	W2	< 1	< 1	3.14	3.20	0.077	0.083	< 0.01	< 0.01	30.8	32.6	< 0.01	< 0.01	0.010	0.010	< 0.02	< 0.02	2.5	2.7	< 0.005
SH-S	W3	< 1	< 1	4.15	4.24	0.089	0.137	< 0.01	< 0.01	57.6	61.1	< 0.01	< 0.01	0.011	0.017	< 0.02	< 0.02	1.1	2.3	0.009
SH-S	W4	< 1	< 1	0.56	0.55	0.044	0.044	< 0.01	< 0.01	6.7	7.2	< 0.01	< 0.01	< 0.005	0.006	< 0.02	< 0.02	1.4	2.6	0.007
SH-S	W5	< 1	< 1	0.61	0.63	0.046	0.064	< 0.01	< 0.01	10.5	11.0	< 0.01	< 0.01	0.006	0.008	< 0.02	< 0.02	2.1	2.7	0.007
SH-S	W6	< 1	< 1	3.49	3.53	0.106	0.214	< 0.01	< 0.01	142.0	147.7	< 0.01	< 0.01	0.019	0.037	< 0.02	< 0.02	0.5	0.8	0.019
SH-S	W7	< 1	< 1	3.62	3.68	0.062	0.107	< 0.01	< 0.01	159.0	160.0	< 0.01	< 0.01	0.009	0.016	< 0.02	< 0.02	< 0.5	0.7	0.011
SH-S	W8	< 1	< 1	3.56	3.59	0.055	0.075	< 0.01	< 0.01	110.3	110.1	< 0.01	< 0.01	0.008	0.010	0.03	< 0.02	0.7	1.1	0.007
SH-S	W9	< 1	< 1	0.66	0.69	0.051	0.068	< 0.01	< 0.01	11.7	11.9	< 0.01	< 0.01	0.007	0.008	< 0.02	< 0.02	1.9	2.5	0.006
SH-S	W9D1	< 1	< 1	1.22	1.25	0.053	0.054	< 0.01	< 0.01	13.3	13.5	0.02	< 0.01	0.009	0.008	< 0.02	< 0.02	1.6	1.7	0.005

Gold District	Sample Site	Se ICP-MS µg/L 1 <0.45 µm	Se ICP-MS µg/L 1 Unfiltered	Si ICP-ES mg/L 0.02 <0.45 µm	Si ICP-ES mg/L 0.02 Unfiltered	Sm ICP-MS µg/L 0.005 <0.45 µm	Sm ICP-MS µg/L 0.005 Unfiltered	Sn ICP-MS µg/L 0.01 <0.45 µm	Sn ICP-MS µg/L 0.01 Unfiltered	Sr ICP-MS µg/L 0.5 <0.45 µm	Sr ICP-MS µg/L 0.5 Unfiltered	Ta ICP-MS µg/L 0.01 <0.45 µm	Ta ICP-MS µg/L 0.01 Unfiltered	Tb ICP-MS µg/L 0.005 <0.45 µm	Tb ICP-MS µg/L 0.005 Unfiltered	Te ICP-MS µg/L 0.02 <0.45 µm	Te ICP-MS µg/L 0.02 Unfiltered	Ti ICP-MS µg/L 0.5 <0.45 µm	Ti ICP-MS µg/L 0.5 Unfiltered	Tl ICP-MS µg/L 0.005 <0.45 µm
SH-S	W9D2	< 1	< 1	1.73	1.75	0.117	0.134	0.02	0.01	23.1	23.9	< 0.01	< 0.01	0.015	0.018	< 0.02	< 0.02	2.5	3.1	0.008
SH-S	W10	< 1	< 1	1.89	1.89	0.053	0.102	< 0.01	< 0.01	9.3	9.9	< 0.01	< 0.01	0.005	0.011	< 0.02	< 0.02	< 0.5	3.1	0.010
SH-S	W10D	< 1	< 1	1.89	1.91	0.054	0.097	< 0.01	0.01	9.5	10.0	< 0.01	< 0.01	0.006	0.011	< 0.02	0.02	0.6	2.9	0.012
SH-S	W11	< 1	< 1	1.45	1.47	0.036	0.028	< 0.01	< 0.01	9.8	10.4	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	1.3	1.8	< 0.005
SH-S	W12	< 1	< 1	1.26	1.29	0.024	0.031	< 0.01	< 0.01	8.8	9.4	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	0.9	3.4	0.006
SH-S	W13	< 1	< 1	1.06	1.08	0.024	0.029	< 0.01	< 0.01	9.1	9.4	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	0.9	1.5	0.006
SH-S	W14	< 1	< 1	1.31	1.31	0.041	0.047	< 0.01	< 0.01	9.4	9.9	< 0.01	< 0.01	< 0.005	0.005	< 0.02	< 0.02	1.6	1.9	0.007
SH-S	W15	< 1	< 1	0.35	0.35	0.026	0.029	< 0.01	< 0.01	28.2	27.9	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	0.8	0.9	< 0.005
SH-S	W16	< 1	< 1	1.88	1.90	0.088	0.090	0.04	0.04	12.5	12.9	< 0.01	< 0.01	0.012	0.012	< 0.02	< 0.02	5.8	5.8	0.015
SH-S	W17	< 1	< 1	3.68	3.70	0.075	0.083	0.01	0.01	8.4	8.8	< 0.01	< 0.01	0.008	0.008	< 0.02	< 0.02	5.5	6.5	0.006
SH-S	W18	< 1	< 1	0.81	0.86	0.032	0.031	< 0.01	< 0.01	5.4	5.6	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	1.1	2.0	0.008
SH-S	W19	< 1	< 1	2.77	2.84	0.008	0.056	< 0.01	< 0.01	33.9	34.7	< 0.01	< 0.01	< 0.005	0.006	< 0.02	< 0.02	< 0.5	< 0.5	0.005
SH-S	W20	< 1	< 1	0.75	0.77	0.027	0.033	< 0.01	< 0.01	4.9	4.8	< 0.01	< 0.01	< 0.005	< 0.005	< 0.02	< 0.02	1.1	1.2	0.007
SH-S	W21	< 1	< 1	0.77	0.78	0.074	0.088	< 0.01	< 0.01	8.4	8.7	< 0.01	< 0.01	0.010	0.012	< 0.02	< 0.02	2.2	3.6	0.009
SH-S	W22	< 1	< 1	3.09	3.12	0.284	0.281	< 0.01	0.01	12.5	12.8	< 0.01	< 0.01	0.032	0.036	< 0.02	< 0.02	5.4	5.5	0.012
SH-S	W23	< 1	< 1	1.53	1.56	0.101	0.113	< 0.01	< 0.01	23.3	23.5	< 0.01	< 0.01	0.013	0.016	< 0.02	< 0.02	2.4	2.8	0.008
SH-S	W24	< 1	< 1	1.68	1.71	0.131	0.128	< 0.01	< 0.01	23.8	24.3	< 0.01	< 0.01	0.014	0.016	< 0.02	< 0.02	2.5	2.8	0.008
SH-S	W25	< 1	< 1	1.31	1.33	0.034	0.050	< 0.01	< 0.01	7.3	7.8	< 0.01	< 0.01	< 0.005	0.006	< 0.02	< 0.02	1.5	2.5	0.007
SH-S	W25D	< 1	< 1	1.29	1.31	0.038	0.051	< 0.01	< 0.01	7.5	7.7	< 0.01	< 0.01	< 0.005	0.007	< 0.02	< 0.02	1.2	2.7	0.008
Statistics	Min.	<1	<1	0.10	0.12	<0.005	<0.005	<0.01	<0.01	4.6	4.5	<0.01	<0.01	<0.005	<0.005	<0.02	<0.02	<0.5	<0.5	<0.005
	Max.	12	15	17.46	12.15	0.885	1.687	0.20	0.12	775.6	802.1	0.02	0.02	0.121	0.178	0.05	0.52	6.3	173.7	0.029
	Mean	12	15	2.18	1.97	0.086	0.123	0.02	0.02	35.3	36.1	0.01	0.02	0.014	0.019	0.04	0.09	2.2	4.6	0.008
	Median	12	15	1.75	1.75	0.054	0.066	0.01	0.01	12.5	12.6	0.01	0.02	0.010	0.011	0.05	0.03	2.1	2.5	0.007
	n	1	1	181	181	170	175	38	56	181	181	2	1	116	130	3	12	146	160	142
	Std Dev	0	0	2.04	1.21	0.103	0.202	0.03	0.02	71.1	73.0	0.00	0.00	0.015	0.028	0.01	0.14	1.2	17.9	0.003
	95th pctl	12	15	4.65	3.70	0.264	0.341	0.04	0.06	142.0	154.3	0.02	0.02	0.033	0.054	0.05	0.32	5.0	5.5	0.015
	90th pctl	12	15	3.56	3.16	0.194	0.230	0.03	0.04	69.5	71.2	0.02	0.02	0.027	0.036	0.05	0.16	3.4	4.3	0.012
	75th pctl	12	15	2.42	2.50	0.101	0.113	0.02	0.02	32.5	32.6	0.02	0.02	0.014	0.016	0.05	0.07	2.7	3.2	0.009
	50th pctl	12	15	1.75	1.75	0.054	0.066	0.01	0.01	12.5	12.6	0.01	0.02	0.010	0.011	0.05	0.03	2.1	2.5	0.007
	25th pctl	12	15	1.22	1.25	0.035	0.041	0.01	0.01	8.4	8.6	0.01	0.02	0.007	0.007	0.04	0.03	1.4	1.6	0.006

Gold District	Sample Site	Tl ICP-MS µg/L 0.005 Unfiltered	Tm ICP-MS µg/L 0.005 <0.45 µm	Tm ICP-MS µg/L 0.005 Unfiltered	U ICP-MS µg/L 0.005 <0.45 µm	U ICP-MS µg/L 0.005 Unfiltered	V ICP-MS µg/L 0.1 <0.45 µm	V ICP-MS µg/L 0.1 Unfiltered	W ICP-MS µg/L 0.02 <0.45 µm	W ICP-MS µg/L 0.02 Unfiltered	Y ICP-MS µg/L 0.01 <0.45 µm	Y ICP-MS µg/L 0.01 Unfiltered	Yb ICP-MS µg/L 0.005 <0.45 µm	Yb ICP-MS µg/L 0.005 Unfiltered	Zn ICP-MS µg/L 0.5 <0.45 µm	Zn ICP-MS µg/L 0.5 Unfiltered	Zr ICP-MS µg/L 0.05 <0.45 µm	Zr ICP-MS µg/L 0.05 Unfiltered
Cochrane Hill Gold District (CH)																		
CH	W1	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.1	< 0.1	< 0.02	< 0.02	0.07	0.08	< 0.005	0.006	9.4	9.3	< 0.05	< 0.05
CH	W2	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.1	< 0.1	< 0.02	< 0.02	0.10	0.10	0.006	0.008	15.6	16.0	< 0.05	< 0.05
CH	W3	< 0.005	< 0.005	< 0.005	0.008	0.010	0.1	0.1	< 0.02	< 0.02	0.09	0.10	0.006	0.006	32.9	34.0	< 0.05	< 0.05
CH	W4	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.1	< 0.1	< 0.02	< 0.02	0.05	0.06	< 0.005	< 0.005	2.2	2.3	< 0.05	< 0.05
CH	W5	0.006	< 0.005	< 0.005	0.006	0.009	0.1	0.2	< 0.02	< 0.02	0.11	0.13	0.009	0.012	52.4	53.1	< 0.05	0.07
CH	W6	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.1	< 0.1	< 0.02	< 0.02	0.04	0.04	< 0.005	< 0.005	4.7	4.4	< 0.05	< 0.05
CH	W6-D	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.1	0.1	< 0.02	< 0.02	0.04	0.05	< 0.005	< 0.005	4.8	4.8	< 0.05	< 0.05
CH	W7	0.006	< 0.005	< 0.005	< 0.005	0.007	0.2	0.4	< 0.02	< 0.02	0.06	0.07	0.007	0.006	2.4	3.8	0.06	0.14
CH	W8	0.010	0.029	0.031	0.079	0.079	< 0.1	< 0.1	< 0.02	< 0.02	3.49	3.63	0.163	0.164	1623.9	1663.8	< 0.05	< 0.05
CH	W9	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.1	0.1	< 0.02	< 0.02	0.04	0.05	< 0.005	0.006	4.5	4.7	< 0.05	< 0.05
CH	W10	0.118	< 0.005	0.038	0.021	0.389	0.4	10.5	< 0.02	< 0.02	0.25	3.16	0.018	0.212	37.6	375.1	0.09	2.11
CH	W11	< 0.005	< 0.005	< 0.005	0.024	0.059	0.2	0.5	< 0.02	0.03	0.11	0.43	0.008	0.023	9.2	14.2	< 0.05	0.13
CH	W12	0.065	0.017	0.039	0.020	0.190	< 0.1	6.4	< 0.02	0.05	2.60	4.24	0.074	0.201	967.5	1254.8	< 0.05	0.15
East Rawdon Gold District (RAW)																		
RAW	W1	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.1	0.2	< 0.02	< 0.02	0.05	0.07	0.006	0.006	1.9	1.6	0.06	0.07
RAW	W2	0.013	< 0.005	< 0.005	< 0.005	0.013	0.2	1.0	< 0.02	< 0.02	0.09	0.19	0.006	0.020	2.4	4.3	0.07	0.09
RAW	W3	< 0.005	< 0.005	< 0.005	0.007	0.005	0.2	0.3	< 0.02	< 0.02	0.04	0.05	0.005	0.006	0.5	0.6	< 0.05	< 0.05
RAW	W4	< 0.005	< 0.005	< 0.005	0.005	0.007	< 0.1	0.3	< 0.02	< 0.02	0.05	0.08	0.005	0.009	2.3	2.8	< 0.05	0.05
RAW	W5	< 0.005	0.005	0.006	0.008	0.010	< 0.1	0.2	< 0.02	< 0.02	0.35	0.52	0.033	0.043	2.1	2.1	< 0.05	< 0.05
Lake Catcha Gold District (LC)																		
LC	W1	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.1	< 0.1	< 0.02	< 0.02	0.01	0.02	< 0.005	< 0.005	< 0.5	0.7	< 0.05	< 0.05
LC	W2	0.012	< 0.005	< 0.005	0.008	0.006	0.5	0.5	< 0.02	< 0.02	0.15	0.15	0.014	0.019	3.7	3.3	0.12	0.13
LC	W3	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.1	0.2	< 0.02	< 0.02	0.04	0.05	0.005	0.008	1.1	1.1	< 0.05	< 0.05
LC	W4	< 0.005	< 0.005	< 0.005	< 0.005	0.025	< 0.1	0.4	< 0.02	< 0.02	0.02	0.16	< 0.005	0.020	4.5	28.4	0.08	0.17
LC	W5	< 0.005	< 0.005	< 0.005	0.020	0.015	0.3	0.3	< 0.02	< 0.02	0.14	0.15	0.016	0.016	1.3	1.3	0.16	0.17
LC	W6	0.005	< 0.005	< 0.005	0.016	0.021	0.3	0.4	< 0.02	< 0.02	0.16	0.17	0.020	0.018	2.9	2.4	0.19	0.19
LC	W6-D	< 0.005	< 0.005	< 0.005	0.022	0.024	0.3	0.4	< 0.02	< 0.02	0.17	0.16	0.019	0.021	3.9	2.9	0.18	0.21
Lower Seal Harbour Gold District (LSH)																		
LSH	W1	0.012	0.009	0.011	0.033	0.041	0.6	0.7	< 0.02	0.02	0.71	0.74	0.061	0.058	19.8	4.3	0.18	0.21
LSH	W2	0.013	0.012	0.013	0.040	0.049	0.6	0.7	< 0.02	0.02	0.90	0.96	0.071	0.077	7.1	7.0	0.19	0.20
LSH	W4	0.013	< 0.005	0.005	0.012	0.017	0.5	0.6	< 0.02	< 0.02	0.34	0.36	0.027	0.032	2.6	2.8	0.08	0.10
LSH	W6	0.014	0.018	0.020	0.058	0.067	0.3	0.5	< 0.02	< 0.02	1.28	1.51	0.111	0.117	5.7	6.7	0.24	0.25
LSH	W7	0.014	0.012	0.016	0.047	0.065	0.3	0.4	< 0.02	< 0.02	1.01	1.20	0.079	0.086	4.5	5.4	0.20	0.23
LSH	W8	0.015	0.011	0.013	0.047	0.057	0.4	0.5	< 0.02	< 0.02	0.92	1.06	0.076	0.079	4.3	5.0	0.19	0.21
Mount Uniacke Gold District (UNI)																		
UNI	W1	0.029	< 0.005	0.022	0.051	0.175	0.1	1.5	0.03	0.09	0.10	1.78	0.010	0.159	3.2	14.8	0.06	1.28
UNI	W2	< 0.005	< 0.005	< 0.005	0.006	0.009	0.1	0.2	< 0.02	< 0.02	0.06	0.10	< 0.005	0.010	1.6	1.8	< 0.05	< 0.05
UNI	W3	0.047	< 0.005	0.023	0.010	0.108	< 0.1	1.0	< 0.02	< 0.02	0.24	1.85	0.021	0.166	9.9	24.9	0.05	0.22

Gold District	Sample Site	Tl ICP-MS µg/L 0.005 Unfiltered	Tm ICP-MS µg/L 0.005 <0.45 µm	Tm ICP-MS µg/L 0.005 Unfiltered	U ICP-MS µg/L 0.005 <0.45 µm	U ICP-MS µg/L 0.005 Unfiltered	V ICP-MS µg/L 0.1 <0.45 µm	V ICP-MS µg/L 0.1 Unfiltered	W ICP-MS µg/L 0.02 <0.45 µm	W ICP-MS µg/L 0.02 Unfiltered	Y ICP-MS µg/L 0.01 <0.45 µm	Y ICP-MS µg/L 0.01 Unfiltered	Yb ICP-MS µg/L 0.005 <0.45 µm	Yb ICP-MS µg/L 0.005 Unfiltered	Zn ICP-MS µg/L 0.5 <0.45 µm	Zn ICP-MS µg/L 0.5 Unfiltered	Zr ICP-MS µg/L 0.05 <0.45 µm	Zr ICP-MS µg/L 0.05 Unfiltered
UNI	W4	0.008	< 0.005	< 0.005	0.010	0.014	< 0.1	0.1	< 0.02	< 0.02	0.18	0.21	0.014	0.018	4.7	5.6	0.06	0.07
UNI	W5	0.007	< 0.005	< 0.005	0.005	0.009	< 0.1	0.1	< 0.02	< 0.02	0.05	0.14	< 0.005	0.015	1.1	2.9	< 0.05	< 0.05
North Brookfield Gold District (NB)																		
NB	W1	< 0.005	< 0.005	< 0.005	0.011	0.013	< 0.1	0.1	< 0.02	< 0.02	0.05	0.06	0.005	0.008	6.4	6.0	0.08	0.12
NB	W2	< 0.005	< 0.005	< 0.005	0.406	0.400	0.1	< 0.1	0.06	0.05	0.04	0.04	< 0.005	< 0.005	5.7	5.7	0.09	0.09
NB	W3	0.007	< 0.005	< 0.005	0.625	0.659	< 0.1	0.3	0.05	0.07	0.03	0.27	< 0.005	0.024	3.2	6.5	0.09	0.36
NB	W4	< 0.005	< 0.005	< 0.005	0.373	0.382	0.1	0.2	0.02	0.03	0.06	0.07	0.005	0.007	6.6	6.1	0.14	0.16
NB	W5	0.011	< 0.005	0.006	1.020	1.120	0.2	0.3	0.05	0.09	0.03	0.31	< 0.005	0.028	3.9	13.9	0.08	0.41
Salmon River (Dufferin) Gold District (SR)																		
SR	W1	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.1	< 0.1	< 0.02	< 0.02	0.02	0.03	< 0.005	< 0.005	1.7	1.9	< 0.05	< 0.05
SR	W2	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.1	< 0.1	< 0.02	< 0.02	0.02	0.03	< 0.005	< 0.005	0.8	1.0	< 0.05	< 0.05
SR	W3	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.1	< 0.1	< 0.02	< 0.02	< 0.01	< 0.01	< 0.005	< 0.005	1.7	1.6	< 0.05	< 0.05
SR	W4	< 0.005	< 0.005	< 0.005	0.006	< 0.005	< 0.1	< 0.1	< 0.02	< 0.02	< 0.01	< 0.01	< 0.005	< 0.005	0.5	4.0	< 0.05	< 0.05
SR	W5	< 0.005	< 0.005	< 0.005	0.017	0.011	< 0.1	< 0.1	< 0.02	< 0.02	0.28	0.25	0.034	0.025	1.9	1.7	0.09	0.08
SR	W6	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.1	0.1	< 0.02	< 0.02	0.10	0.10	0.006	0.007	2.2	2.3	< 0.05	< 0.05
SR	W7	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.1	0.1	< 0.02	< 0.02	0.08	0.09	0.006	0.008	1.4	1.6	< 0.05	< 0.05
SR	W8	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.1	< 0.1	< 0.02	< 0.02	0.15	0.18	0.013	0.009	2.3	2.3	< 0.05	< 0.05
SR	W9	0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.1	0.3	< 0.02	< 0.02	0.11	0.16	0.010	0.014	20.5	4.1	< 0.05	< 0.05
Upper Seal Harbour Gold District (USH)																		
USH	W4(03)	0.013	< 0.005	< 0.005	0.007	0.012	0.3	0.4	< 0.02	< 0.02	0.17	0.19	0.014	0.017	1.9	2.2	< 0.05	< 0.05
USH	W13	0.008	< 0.005	< 0.005	0.013	0.010	0.3	0.4	< 0.02	< 0.02	0.18	0.17	0.014	0.012	3.1	1.6	< 0.05	< 0.05
USH	W14	0.010	< 0.005	< 0.005	0.017	0.026	0.4	0.6	0.07	0.11	0.13	0.19	0.013	0.014	5.1	5.8	< 0.05	0.06
USH	W18	0.013	< 0.005	< 0.005	0.012	0.011	0.3	0.4	< 0.02	< 0.02	0.17	0.19	0.010	0.013	2.0	1.7	< 0.05	< 0.05
USH	W19	0.008	< 0.005	< 0.005	< 0.005	0.008	< 0.1	0.1	< 0.02	< 0.02	0.14	0.30	0.018	0.030	30.2	27.5	< 0.05	< 0.05
USH	W20	0.012	< 0.005	< 0.005	0.010	0.011	0.3	0.5	< 0.02	< 0.02	0.18	0.19	0.014	0.016	1.8	12.7	< 0.05	< 0.05
Whiteburn Gold District (WB)																		
WHI	W1	0.005	< 0.005	0.006	0.040	0.049	0.3	0.4	< 0.02	< 0.02	0.29	0.35	0.028	0.035	4.0	4.7	0.13	0.21
WHI	W2	< 0.005	< 0.005	< 0.005	0.014	0.009	0.2	0.3	< 0.02	< 0.02	0.11	0.13	0.013	0.016	3.1	3.3	0.08	0.10
WHI	W3	0.139	< 0.005	0.101	0.030	0.287	< 0.1	2.1	< 0.02	0.06	0.19	5.05	0.032	0.748	6.6	29.2	0.11	2.25
WHI	W4	0.008	0.005	0.005	0.032	0.043	0.2	0.6	< 0.02	0.02	0.28	0.38	0.030	0.034	3.7	4.5	0.16	0.23
WHI	W5	< 0.005	< 0.005	< 0.005	0.018	0.023	0.3	0.6	0.27	0.39	0.15	0.23	0.015	0.024	8.2	4.1	0.13	0.19
WHI	W6	0.008	0.005	0.006	0.023	0.025	0.2	0.4	< 0.02	0.03	0.29	0.35	0.035	0.038	6.0	6.3	0.13	0.19
WHI	W6-D	0.007	0.006	0.007	0.021	0.030	0.2	0.4	< 0.02	0.03	0.30	0.35	0.038	0.037	6.7	6.4	0.15	0.20
Upper / Lower Seal Harbour (SH-S) May 2004																		
SH-S	W1	< 0.005	< 0.005	< 0.005	0.013	0.013	0.3	0.3	< 0.02	< 0.02	0.22	0.22	0.018	0.023	1.3	1.3	0.12	0.11
SH-S	W2	0.006	< 0.005	< 0.005	0.015	0.017	0.3	0.3	< 0.02	< 0.02	0.24	0.24	0.019	0.019	1.8	1.5	0.09	0.09

Gold District	Sample Site	Tl ICP-MS µg/L 0.005 Unfiltered	Tm ICP-MS µg/L 0.005 <0.45 µm	Tm ICP-MS µg/L 0.005 Unfiltered	U ICP-MS µg/L 0.005 <0.45 µm	U ICP-MS µg/L 0.005 Unfiltered	V ICP-MS µg/L 0.1 <0.45 µm	V ICP-MS µg/L 0.1 Unfiltered	W ICP-MS µg/L 0.02 <0.45 µm	W ICP-MS µg/L 0.02 Unfiltered	Y ICP-MS µg/L 0.01 <0.45 µm	Y ICP-MS µg/L 0.01 Unfiltered	Yb ICP-MS µg/L 0.005 <0.45 µm	Yb ICP-MS µg/L 0.005 Unfiltered	Zn ICP-MS µg/L 0.5 <0.45 µm	Zn ICP-MS µg/L 0.5 Unfiltered	Zr ICP-MS µg/L 0.05 <0.45 µm	Zr ICP-MS µg/L 0.05 Unfiltered
SH-S	W3	0.007	< 0.005	0.005	0.021	0.022	0.2	0.3	< 0.02	< 0.02	0.41	0.42	0.029	0.033	3.9	3.9	0.11	0.11
SH-S	W4	0.006	< 0.005	< 0.005	0.006	0.007	0.3	0.3	< 0.02	< 0.02	0.14	0.14	0.011	0.011	1.6	1.8	< 0.05	< 0.05
SH-S	W5	0.007	< 0.005	< 0.005	0.007	0.007	0.3	0.3	< 0.02	< 0.02	0.16	0.17	0.012	0.013	2.1	2.9	< 0.05	< 0.05
SH-S	W6	0.009	0.007	0.007	0.022	0.022	0.2	0.2	< 0.02	< 0.02	0.53	0.55	0.045	0.049	5.8	6.0	0.11	0.11
SH-S	W7	0.007	0.006	0.006	0.021	0.022	0.2	0.2	< 0.02	< 0.02	0.45	0.48	0.040	0.042	3.8	3.9	0.10	0.11
SH-S	W8	0.006	< 0.005	< 0.005	0.019	0.018	0.2	0.2	< 0.02	< 0.02	0.41	0.41	0.030	0.032	3.1	2.9	0.10	0.10
SH-S	W9	0.008	< 0.005	< 0.005	0.007	0.008	0.3	0.3	< 0.02	< 0.02	0.17	0.17	0.014	0.012	2.1	1.9	< 0.05	< 0.05
SH-S	W9-D1	0.007	< 0.005	< 0.005	0.007	0.008	0.3	0.3	< 0.02	< 0.02	0.17	0.18	0.013	0.013	2.0	2.0	0.05	< 0.05
SH-S	W9-D2	0.007	< 0.005	< 0.005	0.007	0.008	0.3	0.3	< 0.02	< 0.02	0.16	0.17	0.013	0.014	1.9	1.9	0.05	< 0.05
SH-S	W9-D3	0.008	< 0.005	< 0.005	0.007	0.007	0.3	0.3	< 0.02	< 0.02	0.17	0.17	0.012	0.013	2.0	1.9	0.05	< 0.05
SH-S	W10	0.006	< 0.005	< 0.005	0.006	0.007	0.3	0.3	< 0.02	< 0.02	0.11	0.11	0.009	0.008	2.7	1.6	< 0.05	< 0.05
SH-S	W11	0.007	< 0.005	< 0.005	0.006	0.006	0.3	0.3	< 0.02	< 0.02	0.11	0.12	0.008	0.009	2.2	1.5	< 0.05	< 0.05
SH-S	W12	0.006	< 0.005	< 0.005	0.006	0.006	0.3	0.3	< 0.02	< 0.02	0.11	0.11	0.008	0.008	1.8	1.4	< 0.05	< 0.05
SH-S	W13	0.005	< 0.005	< 0.005	0.006	0.006	0.3	0.3	< 0.02	< 0.02	0.10	0.11	0.007	0.007	1.5	1.4	< 0.05	< 0.05
SH-S	W14	0.006	< 0.005	< 0.005	0.006	0.007	0.3	0.3	< 0.02	< 0.02	0.10	0.11	0.008	0.008	1.5	1.6	< 0.05	< 0.05
SH-S	W15	< 0.005	< 0.005	< 0.005	0.011	0.011	0.2	0.2	0.04	0.04	0.09	0.10	< 0.005	0.007	5.1	5.3	< 0.05	< 0.05
SH-S	W16	< 0.005	< 0.005	< 0.005	0.006	0.006	0.3	0.3	< 0.02	< 0.02	0.07	0.07	0.005	< 0.005	1.0	0.9	< 0.05	< 0.05
SH-S	W17	0.010	< 0.005	< 0.005	< 0.005	0.005	0.4	0.4	< 0.02	< 0.02	0.09	0.09	0.006	0.007	3.8	3.5	0.06	< 0.05
SH-S	W17-D	0.011	< 0.005	< 0.005	< 0.005	0.006	0.4	0.4	< 0.02	< 0.02	0.09	0.09	0.007	0.008	3.3	3.2	< 0.05	< 0.05
SH-S	W18	< 0.005	< 0.005	< 0.005	0.006	0.005	0.3	0.3	< 0.02	< 0.02	0.10	0.10	0.007	0.008	1.4	1.3	< 0.05	< 0.05
SH-S	W19	0.007	< 0.005	< 0.005	< 0.005	< 0.005	0.1	0.1	< 0.02	< 0.02	0.02	0.03	< 0.005	< 0.005	11.6	14.3	< 0.05	< 0.05
SH-S	W20	0.006	< 0.005	< 0.005	0.006	0.006	0.3	0.3	< 0.02	< 0.02	0.10	0.10	0.007	0.007	1.4	1.3	< 0.05	< 0.05
SH-S	W21	0.006	< 0.005	< 0.005	0.007	0.006	0.3	0.3	< 0.02	< 0.02	0.15	0.16	0.012	0.013	1.9	1.5	< 0.05	< 0.05
SH-S	W22	< 0.005	< 0.005	< 0.005	0.013	0.013	0.3	0.3	< 0.02	< 0.02	0.30	0.32	0.029	0.028	1.6	1.5	0.14	0.13
SH-S	W23	0.007	< 0.005	< 0.005	0.007	0.007	0.3	0.3	< 0.02	< 0.02	0.16	0.16	0.012	0.011	2.0	1.8	< 0.05	< 0.05
SH-S	W24	0.008	< 0.005	< 0.005	0.007	0.007	0.3	0.3	< 0.02	< 0.02	0.16	0.16	0.012	0.012	2.1	1.9	< 0.05	< 0.05
SH-S	W25	0.007	< 0.005	< 0.005	0.006	0.006	0.3	0.3	< 0.02	< 0.02	0.11	0.12	0.008	0.009	1.8	1.6	< 0.05	< 0.05
Upper / Lower Seal Harbour (SH-S) August 2004																		
SH-S	W1	0.007	0.008	0.007	0.034	0.028	0.4	0.4	< 0.02	< 0.02	0.53	0.51	0.043	0.045	1.6	1.6	0.26	0.22
SH-S	W1D	0.008	0.008	0.008	0.032	0.030	0.4	0.4	< 0.02	< 0.02	0.53	0.51	0.046	0.044	1.9	1.4	0.25	0.23
SH-S	W2	0.007	0.009	0.008	0.034	0.039	0.4	0.4	< 0.02	< 0.02	0.73	0.68	0.058	0.053	3.0	2.3	0.18	0.14
SH-S	W3	0.014	0.014	0.013	0.054	0.053	0.5	0.5	< 0.02	< 0.02	1.22	1.19	0.083	0.082	7.0	5.9	0.25	0.22

Gold District	Sample Site	Tl ICP-MS µg/L 0.005 Unfiltered	Tm ICP-MS µg/L 0.005 <0.45 µm	Tm ICP-MS µg/L 0.005 Unfiltered	U ICP-MS µg/L 0.005 <0.45 µm	U ICP-MS µg/L 0.005 Unfiltered	V ICP-MS µg/L 0.1 <0.45 µm	V ICP-MS µg/L 0.1 Unfiltered	W ICP-MS µg/L 0.02 <0.45 µm	W ICP-MS µg/L 0.02 Unfiltered	Y ICP-MS µg/L 0.01 <0.45 µm	Y ICP-MS µg/L 0.01 Unfiltered	Yb ICP-MS µg/L 0.005 <0.45 µm	Yb ICP-MS µg/L 0.005 Unfiltered	Zn ICP-MS µg/L 0.5 <0.45 µm	Zn ICP-MS µg/L 0.5 Unfiltered	Zr ICP-MS µg/L 0.05 <0.45 µm	Zr ICP-MS µg/L 0.05 Unfiltered
SH-S	W4	0.009	< 0.005	< 0.005	0.008	0.010	0.4	0.5	< 0.02	< 0.02	0.29	0.26	0.017	0.021	4.8	2.6	0.07	0.07
SH-S	W5	0.012	< 0.005	< 0.005	0.012	0.011	0.4	0.4	< 0.02	< 0.02	0.31	0.33	0.022	0.022	2.3	2.1	0.08	0.07
SH-S	W6	0.013	0.014	0.015	0.042	0.049	0.3	0.4	< 0.02	< 0.02	1.20	1.30	0.087	0.102	5.6	6.4	0.20	0.22
SH-S	W7	0.011	0.013	0.011	0.037	0.039	0.3	0.3	< 0.02	< 0.02	0.88	0.99	0.071	0.082	4.9	3.6	0.20	0.19
SH-S	W8	0.013	0.008	0.009	0.031	0.037	0.3	0.4	< 0.02	< 0.02	0.64	0.81	0.050	0.059	5.0	5.7	0.18	0.18
SH-S	W9	0.010	< 0.005	< 0.005	0.011	0.011	0.4	0.5	< 0.02	< 0.02	0.30	0.33	0.024	0.024	2.4	2.0	0.08	0.08
SH-S	W9D1	0.009	< 0.005	< 0.005	0.009	0.012	0.4	0.4	< 0.02	< 0.02	0.31	0.32	0.025	0.026	4.1	2.0	0.07	0.08
SH-S	W9D2	0.008	< 0.005	< 0.005	0.010	0.011	0.4	0.5	< 0.02	< 0.02	0.31	0.34	0.021	0.020	2.3	1.9	0.07	0.07
SH-S	W9D3	0.010	< 0.005	< 0.005	0.010	0.013	0.4	0.4	< 0.02	< 0.02	0.29	0.32	0.024	0.020	2.8	1.9	0.07	0.09
SH-S	W10	0.008	< 0.005	< 0.005	0.008	0.010	0.3	0.4	< 0.02	< 0.02	0.17	0.17	0.012	0.012	2.0	1.7	< 0.05	0.06
SH-S	W11	0.006	< 0.005	< 0.005	0.009	0.008	0.3	0.4	< 0.02	< 0.02	0.14	0.15	0.010	0.010	2.5	1.4	< 0.05	< 0.05
SH-S	W12	0.009	< 0.005	< 0.005	0.008	0.007	0.3	0.4	< 0.02	< 0.02	0.13	0.14	0.009	0.010	2.8	2.9	< 0.05	< 0.05
SH-S	W13	0.009	< 0.005	< 0.005	0.007	0.009	0.3	0.3	< 0.02	< 0.02	0.14	0.14	0.009	0.008	1.3	1.7	< 0.05	< 0.05
SH-S	W14	0.009	< 0.005	< 0.005	0.011	0.009	0.3	0.4	< 0.02	< 0.02	0.13	0.15	0.011	0.013	3.7	1.5	< 0.05	< 0.05
SH-S	W15	< 0.005	< 0.005	< 0.005	0.028	0.030	0.4	0.4	0.38	0.41	0.19	0.21	0.010	0.013	11.1	10.7	0.06	0.07
SH-S	W15D	< 0.005	< 0.005	< 0.005	0.028	0.035	0.4	0.4	0.40	0.42	0.19	0.21	0.011	0.011	11.5	9.6	0.06	0.06
SH-S	W16	0.007	< 0.005	< 0.005	0.009	0.009	0.4	0.4	< 0.02	< 0.02	0.15	0.13	0.011	0.011	2.5	1.3	< 0.05	< 0.05
SH-S	W17	0.008	< 0.005	< 0.005	0.012	0.013	0.6	0.6	0.05	0.05	0.21	0.22	0.016	0.014	3.7	3.5	0.09	0.11
SH-S	W18	0.008	< 0.005	< 0.005	0.008	0.009	0.3	0.3	< 0.02	< 0.02	0.14	0.14	0.007	0.012	1.4	1.5	< 0.05	< 0.05
SH-S	W19	0.011	< 0.005	< 0.005	< 0.005	< 0.005	< 0.1	< 0.1	< 0.02	< 0.02	0.03	0.17	< 0.005	0.012	6.1	13.0	< 0.05	< 0.05
SH-S	W20	0.007	< 0.005	< 0.005	0.009	0.009	0.3	0.3	< 0.02	< 0.02	0.14	0.15	0.009	0.010	2.4	1.4	< 0.05	< 0.05
SH-S	W21	0.008	< 0.005	< 0.005	0.012	0.012	0.4	0.4	< 0.02	< 0.02	0.34	0.36	0.028	0.024	1.8	1.7	0.08	0.07
SH-S	W22	0.006	0.009	0.007	0.023	0.024	0.3	0.4	< 0.02	< 0.02	0.64	0.61	0.060	0.050	2.2	1.6	0.26	0.25
SH-S	W23	0.011	0.005	< 0.005	0.011	0.012	0.5	0.4	< 0.02	< 0.02	0.30	0.33	0.018	0.022	2.2	2.0	0.08	0.08
SH-S	W24	0.011	< 0.005	< 0.005	0.011	0.011	0.4	0.4	< 0.02	< 0.02	0.31	0.33	0.021	0.022	2.3	2.2	0.08	0.07
SH-S	W25	0.010	< 0.005	< 0.005	0.006	0.007	0.3	0.4	< 0.02	< 0.02	0.16	0.17	0.010	0.014	2.1	1.7	< 0.05	0.06
SH-S	W51	< 0.05	< 0.05	< 0.05	0.282	0.338	<1	<1	< 0.2	< 0.2	0.18	0.33	< 0.05	< 0.05	< 5	< 5	< 0.5	< 0.5
Upper / Lower Seal Harbour (SH-S) November 2004																		
SH-S	W1	0.009	0.005	0.006	0.014	0.014	0.4	0.4	< 0.02	< 0.02	0.43	0.42	0.035	0.034	2.5	2.5	0.15	0.14
SH-S	W2	0.009	0.007	0.007	0.019	0.020	0.4	0.4	< 0.02	< 0.02	0.54	0.52	0.040	0.039	3.1	2.9	0.11	0.12
SH-S	W3	0.008	0.008	0.009	0.029	0.028	0.3	0.4	< 0.02	< 0.02	0.79	0.79	0.050	0.053	6.4	6.2	0.13	0.12
SH-S	W3D	0.009	0.010	0.009	0.027	0.028	0.4	0.4	< 0.02	< 0.02	0.77	0.79	0.051	0.051	6.4	6.2	0.13	0.12
SH-S	W4	0.007	< 0.005	< 0.005	0.008	0.008	0.3	0.4	< 0.02	< 0.02	0.27	0.26	0.019	0.018	3.2	3.1	0.05	0.06
SH-S	W5	0.007	< 0.005	< 0.005	0.009	0.010	0.3	0.3	< 0.02	< 0.02	0.32	0.32	0.020	0.022	3.3	3.3	0.06	0.06

Gold District	Sample Site	Tl ICP-MS µg/L 0.005 Unfiltered	Tm ICP-MS µg/L 0.005 <0.45 µm	Tm ICP-MS µg/L 0.005 Unfiltered	U ICP-MS µg/L 0.005 <0.45 µm	U ICP-MS µg/L 0.005 Unfiltered	V ICP-MS µg/L 0.1 <0.45 µm	V ICP-MS µg/L 0.1 Unfiltered	W ICP-MS µg/L 0.02 <0.45 µm	W ICP-MS µg/L 0.02 Unfiltered	Y ICP-MS µg/L 0.01 <0.45 µm	Y ICP-MS µg/L 0.01 Unfiltered	Yb ICP-MS µg/L 0.005 <0.45 µm	Yb ICP-MS µg/L 0.005 Unfiltered	Zn ICP-MS µg/L 0.5 <0.45 µm	Zn ICP-MS µg/L 0.5 Unfiltered	Zr ICP-MS µg/L 0.05 <0.45 µm	Zr ICP-MS µg/L 0.05 Unfiltered
SH-S	W6	0.009	0.010	0.008	0.028	0.032	0.3	0.3	< 0.02	< 0.02	0.76	0.76	0.055	0.053	7.3	6.9	0.11	0.13
SH-S	W7	0.009	0.007	0.008	0.027	0.031	0.3	0.3	< 0.02	< 0.02	0.69	0.69	0.050	0.053	6.2	5.7	0.13	0.12
SH-S	W8	0.008	0.007	0.008	0.033	0.035	0.3	0.3	< 0.02	< 0.02	0.69	0.70	0.050	0.045	5.3	5.3	0.13	0.12
SH-S	W9	0.007	< 0.005	< 0.005	0.009	0.010	0.3	0.3	< 0.02	< 0.02	0.32	0.33	0.021	0.023	3.8	3.3	0.06	0.06
SH-S	W9D1	0.009	< 0.005	< 0.005	0.008	0.009	0.3	0.3	< 0.02	< 0.02	0.31	0.32	0.022	0.023	3.5	3.4	0.06	0.06
SH-S	W9D2	0.007	< 0.005	< 0.005	0.008	0.009	0.3	0.3	< 0.02	< 0.02	0.30	0.29	0.019	0.017	3.4	3.2	0.06	0.06
SH-S	W10	0.007	< 0.005	< 0.005	0.009	0.009	0.3	0.3	< 0.02	< 0.02	0.19	0.20	0.012	0.017	3.0	3.2	0.06	< 0.05
SH-S	W10D	0.007	< 0.005	< 0.005	0.008	0.009	0.3	0.3	< 0.02	< 0.02	0.19	0.20	0.015	0.015	3.1	2.7	0.06	< 0.05
SH-S	W11	0.007	< 0.005	< 0.005	0.008	0.009	0.3	0.3	< 0.02	< 0.02	0.19	0.21	0.015	0.014	3.0	2.9	0.05	< 0.05
SH-S	W12	0.006	< 0.005	< 0.005	0.010	0.009	0.3	0.3	< 0.02	< 0.02	0.21	0.21	0.015	0.014	3.7	2.9	< 0.05	< 0.05
SH-S	W13	0.006	< 0.005	< 0.005	0.009	0.009	0.3	0.4	< 0.02	< 0.02	0.20	0.21	0.015	0.015	3.0	2.9	< 0.05	< 0.05
SH-S	W14	0.008	< 0.005	< 0.005	0.008	0.009	0.3	0.3	< 0.02	< 0.02	0.17	0.18	0.015	0.013	3.6	2.7	< 0.05	< 0.05
SH-S	W15	< 0.005	< 0.005	< 0.005	0.017	0.019	0.2	0.2	0.05	0.06	0.17	0.18	0.011	0.010	5.2	5.4	< 0.05	< 0.05
SH-S	W16	0.008	< 0.005	< 0.005	0.006	0.007	0.4	0.4	< 0.02	< 0.02	0.15	0.15	0.012	0.010	2.4	1.9	< 0.05	< 0.05
SH-S	W17	0.009	< 0.005	< 0.005	0.007	0.007	0.5	0.5	< 0.02	< 0.02	0.21	0.22	0.013	0.015	5.5	5.5	0.06	0.06
SH-S	W18	0.007	< 0.005	< 0.005	0.008	0.009	0.3	0.3	< 0.02	< 0.02	0.17	0.19	0.013	0.013	3.0	2.8	< 0.05	< 0.05
SH-S	W19	0.008	< 0.005	< 0.005	< 0.005	0.006	< 0.1	< 0.1	< 0.02	< 0.02	0.24	0.27	0.021	0.022	43.9	45.2	< 0.05	< 0.05
SH-S	W20	0.008	< 0.005	< 0.005	0.008	0.009	0.3	0.3	< 0.02	< 0.02	0.16	0.17	0.011	0.013	3.0	2.2	< 0.05	< 0.05
SH-S	W21	0.009	< 0.005	< 0.005	0.009	0.009	0.4	0.4	< 0.02	< 0.02	0.35	0.35	0.024	0.027	3.0	2.9	0.07	0.07
SH-S	W22	0.006	0.006	0.007	0.015	0.016	0.3	0.4	< 0.02	< 0.02	0.52	0.50	0.042	0.043	3.1	2.7	0.18	0.18
SH-S	W23	0.008	< 0.005	< 0.005	0.009	0.010	0.3	0.3	< 0.02	< 0.02	0.32	0.32	0.022	0.019	4.1	3.3	0.07	0.06
SH-S	W24	0.006	< 0.005	< 0.005	0.009	0.009	0.3	0.3	< 0.02	< 0.02	0.31	0.32	0.022	0.024	4.0	3.8	0.05	0.07
SH-S	W25	0.008	< 0.005	< 0.005	0.009	0.008	0.3	0.3	< 0.02	< 0.02	0.19	0.20	0.014	0.014	3.3	3.1	0.05	< 0.05
Upper / Lower Seal Harbour (SH-S) August 2005																		
SH-S	W1	< 0.005	< 0.005	< 0.005	0.029	0.030	0.3	0.3	< 0.02	< 0.02	0.28	0.29	0.026	0.025	1.3	1.3	0.12	0.12
SH-S	W2	< 0.005	< 0.005	< 0.005	0.019	0.020	0.2	0.2	< 0.02	< 0.02	0.27	0.29	0.023	0.022	1.4	1.5	0.05	0.06
SH-S	W3	0.009	< 0.005	0.005	0.020	0.029	0.1	0.3	< 0.02	< 0.02	0.34	0.51	0.026	0.038	4.5	3.9	0.10	0.13
SH-S	W4	0.007	< 0.005	< 0.005	0.006	0.007	0.2	0.3	< 0.02	< 0.02	0.12	0.17	0.008	0.011	1.1	1.0	< 0.05	< 0.05
SH-S	W5	0.008	< 0.005	< 0.005	0.009	0.008	0.3	0.4	< 0.02	< 0.02	0.17	0.20	0.012	0.014	1.3	1.4	< 0.05	< 0.05
SH-S	W6	0.019	0.007	0.012	0.020	0.022	< 0.1	0.1	< 0.02	< 0.02	0.60	1.13	0.042	0.076	5.2	10.2	0.05	0.08
SH-S	W7	0.011	0.005	0.008	0.018	0.020	< 0.1	0.1	< 0.02	< 0.02	0.37	0.54	0.042	0.057	1.4	1.9	0.07	0.08
SH-S	W8	0.007	< 0.005	0.005	0.013	0.015	0.1	0.2	< 0.02	< 0.02	0.25	0.34	0.023	0.027	0.9	1.0	0.06	0.07
SH-S	W9	0.007	< 0.005	< 0.005	0.010	0.008	0.3	0.4	< 0.02	< 0.02	0.18	0.22	0.014	0.017	0.9	0.9	< 0.05	< 0.05
SH-S	W9D1	< 0.005	< 0.005	< 0.005	0.009	0.008	0.2	0.2	0.02	< 0.02	0.21	0.22	0.018	0.020	1.0	0.7	0.09	0.08

Gold District	Sample Site	Tl ICP-MS µg/L 0.005 Unfiltered	Tm ICP-MS µg/L 0.005 <0.45 µm	Tm ICP-MS µg/L 0.005 Unfiltered	U ICP-MS µg/L 0.005 <0.45 µm	U ICP-MS µg/L 0.005 Unfiltered	V ICP-MS µg/L 0.1 <0.45 µm	V ICP-MS µg/L 0.1 Unfiltered	W ICP-MS µg/L 0.02 <0.45 µm	W ICP-MS µg/L 0.02 Unfiltered	Y ICP-MS µg/L 0.01 <0.45 µm	Y ICP-MS µg/L 0.01 Unfiltered	Yb ICP-MS µg/L 0.005 <0.45 µm	Yb ICP-MS µg/L 0.005 Unfiltered	Zn ICP-MS µg/L 0.5 <0.45 µm	Zn ICP-MS µg/L 0.5 Unfiltered	Zr ICP-MS µg/L 0.05 <0.45 µm	Zr ICP-MS µg/L 0.05 Unfiltered
SH-S	W9D2	0.009	< 0.005	0.006	0.016	0.015	0.3	0.4	< 0.02	< 0.02	0.42	0.46	0.033	0.033	2.7	2.8	0.10	0.08
SH-S	W10	0.012	< 0.005	< 0.005	0.007	0.014	0.3	0.5	< 0.02	< 0.02	0.16	0.27	0.012	0.018	4.6	4.6	< 0.05	< 0.05
SH-S	W10D	0.011	< 0.005	< 0.005	0.008	0.012	0.3	0.5	< 0.02	< 0.02	0.16	0.27	0.014	0.018	4.7	5.0	< 0.05	< 0.05
SH-S	W11	< 0.005	< 0.005	< 0.005	< 0.005	0.006	0.2	0.3	< 0.02	< 0.02	0.10	0.11	0.009	0.006	1.2	1.1	< 0.05	< 0.05
SH-S	W12	0.008	< 0.005	< 0.005	< 0.005	0.006	0.3	0.4	< 0.02	< 0.02	0.07	0.11	0.006	0.008	1.2	1.2	< 0.05	< 0.05
SH-S	W13	0.006	< 0.005	< 0.005	< 0.005	0.006	0.2	0.3	< 0.02	< 0.02	0.08	0.11	0.006	0.007	1.2	1.2	< 0.05	< 0.05
SH-S	W14	< 0.005	< 0.005	< 0.005	0.009	0.011	0.3	0.3	0.02	0.02	0.13	0.16	0.008	0.011	1.8	1.8	< 0.05	< 0.05
SH-S	W15	< 0.005	< 0.005	< 0.005	0.018	0.021	0.2	0.2	0.11	0.10	0.09	0.11	0.006	0.006	9.9	10.3	< 0.05	< 0.05
SH-S	W16	0.015	< 0.005	< 0.005	0.013	0.014	0.8	0.8	< 0.02	< 0.02	0.34	0.35	0.025	0.026	2.9	2.8	0.07	0.07
SH-S	W17	0.008	< 0.005	< 0.005	0.009	0.009	0.5	0.6	0.03	0.04	0.20	0.23	0.017	0.017	4.7	4.9	0.05	0.06
SH-S	W18	0.007	< 0.005	< 0.005	0.006	0.006	0.2	0.3	< 0.02	< 0.02	0.09	0.11	0.008	0.008	2.2	2.2	< 0.05	< 0.05
SH-S	W19	0.007	< 0.005	< 0.005	< 0.005	< 0.005	< 0.1	0.1	< 0.02	< 0.02	0.04	0.16	< 0.005	0.010	7.2	13.2	< 0.05	< 0.05
SH-S	W20	0.006	< 0.005	< 0.005	0.006	< 0.005	0.2	0.3	< 0.02	< 0.02	0.08	0.10	0.006	0.006	1.7	1.5	< 0.05	< 0.05
SH-S	W21	0.011	< 0.005	< 0.005	0.010	0.012	0.3	0.4	< 0.02	< 0.02	0.26	0.32	0.018	0.019	1.5	1.6	< 0.05	0.05
SH-S	W22	0.010	0.012	0.012	0.033	0.032	0.7	0.7	< 0.02	< 0.02	0.92	0.96	0.081	0.077	3.1	3.0	0.25	0.26
SH-S	W23	0.007	0.005	< 0.005	0.011	0.013	0.3	0.4	< 0.02	< 0.02	0.39	0.44	0.028	0.032	3.2	3.4	0.08	0.07
SH-S	W24	0.008	0.005	0.005	0.013	0.015	0.3	0.4	< 0.02	< 0.02	0.43	0.46	0.032	0.033	3.0	3.1	0.08	0.07
SH-S	W25	0.007	< 0.005	< 0.005	< 0.005	0.007	0.2	0.4	< 0.02	< 0.02	0.13	0.17	0.010	0.012	1.4	1.4	< 0.05	< 0.05
SH-S	W25D	0.008	< 0.005	< 0.005	< 0.005	0.007	0.2	0.4	< 0.02	< 0.02	0.13	0.17	0.009	0.013	1.5	1.5	< 0.05	< 0.05
Statistics	Min.	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.02	<0.02	<0.01	<0.01	<0.005	<0.005	<0.5	0.6	<0.05	<0.05
	Max.	0.139	0.029	0.101	1.020	1.120	0.8	10.5	0.40	0.42	3.49	5.05	0.163	0.748	1623.9	1663.8	0.26	2.25
	Mean	0.011	0.009	0.013	0.033	0.041	0.3	0.5	0.10	0.10	0.29	0.39	0.023	0.032	19.1	23.1	0.11	0.18
	Median	0.008	0.008	0.008	0.011	0.011	0.3	0.3	0.05	0.05	0.17	0.21	0.015	0.017	3.0	2.9	0.09	0.11
	n	137	35	44	150	160	148	165	16	23	179	179	160	169	179	180	96	96
	Std Dev	0.016	0.005	0.016	0.107	0.118	0.1	0.9	0.12	0.12	0.38	0.64	0.022	0.064	140.2	156.4	0.06	0.32
	95th pctl	0.015	0.017	0.036	0.053	0.175	0.5	0.7	0.39	0.41	0.88	1.19	0.071	0.084	16.0	25.0	0.24	0.29
	90th pctl	0.013	0.014	0.023	0.034	0.050	0.4	0.5	0.33	0.33	0.64	0.76	0.050	0.057	7.5	10.9	0.19	0.23
	75th pctl	0.010	0.011	0.013	0.021	0.024	0.3	0.4	0.08	0.09	0.31	0.35	0.028	0.032	4.7	5.3	0.13	0.19
	50th pctl	0.008	0.008	0.008	0.011	0.011	0.3	0.3	0.05	0.05	0.17	0.21	0.015	0.017	3.0	2.9	0.09	0.11
	25th pctl	0.007	0.006	0.006	0.008	0.008	0.2	0.3	0.03	0.03	0.11	0.14	0.010	0.011	1.9	1.7	0.06	0.07

APPENDIX C

Arsenic speciation data for surface waters from the Seal Harbour Gold Districts

Gold District	Sample Site	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	As(III) ICP-MS Dionex AS7 µg/L DL = 0.5 <0.45 µm	As(V) ICP-MS Dionex AS7 µg/L 0.5 <0.45 µm	Total As ICP-MS Dionex AS7 µg/L 1.0 <0.45 µm	% As(III) (calculated)
Upper / Lower Seal Harbour (SH-S) August 2004									
SH-S	W1	Background site: small brook running into wetland above LSH (enters thin tails below swamp) (W36, Aug. 2004)	0609671	5002897	12-Aug-04	< 0.5	0.7	< 1.0	-
SH-S	W1D	Duplicate of site W1 (W36D, Aug. 2004)	0609671	5002897	12-Aug-04	< 0.5	0.6	< 1.0	-
SH-S	W2	Stream just east of cyanide plant near waste rock (W37, Aug. 2004)	0609987	5002856	12-Aug-04	2.8	16.8	19.7	14%
SH-S	W3	LSH drainage, just upstream of log bridge, drainage skirts adjacent amalgamation tailings (W38, Aug. 2004)	0610069	5002620	12-Aug-04	97.6	163.8	261.3	37%
SH-S	W4	West Brook ~ 100 m upstream of confluence w/ LSH drainage, lots of flow, no tails evident (W33, Aug. 2004)	0610843	5002325	11-Aug-04	1.6	475.6	477.1	0.3%
SH-S	W5	West Brook ~ 20 m south of confluence w/ LSH drainage, banks ful of tails (W30, Aug. 2004)	0610830	5002247	11-Aug-04	0.8	500.8	501.6	0.2%
SH-S	W6	LSH drainage (full of tails) ~ 50 m above confluence w/ West Brook (W31, Aug. 2004)	0610824	5002280	11-Aug-04	19.7	405.2	424.9	4.6%
SH-S	W7	LSH drainage @ midpoint (~ 200 m below main tails area) (W32, Aug. 2004)	0610596	5002334	11-Aug-04	17.6	409.8	427.4	4.1%
SH-S	W8	LSH drainage, middle of main tails area, sample from deep part of channel eroded in tails (W39, Aug. 2004)	0610177	5002460	12-Aug-04	36.0	384.0	420.1	8.6%
SH-S	W9	West Brook at coastal hwy, high water, brownish (W27, Aug. 2004)	0611562	5001741	11-Aug-04	3.0	473.0	476.0	0.6%
SH-S	W9D1	Duplicate of site W9 (W27D1, Aug. 2004)	0611562	5001741	12-Aug-04	3.4	485.5	488.9	0.7%
SH-S	W9D2	Duplicate of site W9 (W27D2, Aug. 2004)	0611562	5001741	13-Aug-04	4.4	497.4	501.8	0.9%
SH-S	W9D3	Duplicate of site W9 (W27D3, Aug. 2004)	0611562	5001741	14-Aug-04	6.1	500.1	506.2	1.2%
SH-S	W10	Open tails area on Gold Brook, hardpans in some areas, in others tails are mobile (bedforms visible) (W45, Aug. 2004)	0607694	5004754	13-Aug-04	36.3	590.3	626.6	5.8%
SH-S	W11	Small brook running through tails into head of Seal Harbour Run or Gold Brook (W46, Aug. 2004)	0607391	5005085	13-Aug-04	14.2	345.7	359.8	3.9%
SH-S	W12	Gold Brook, middle of oxbow lake (W47, Aug. 2004)	0607143	5005121	13-Aug-04	9.6	301.1	310.7	3.1%
SH-S	W13	Gold Brook above oxbow lake (W48, Aug. 2004)	0607058	5005452	13-Aug-04	9.0	204.0	213.0	4.2%
SH-S	W14	Gold Brook ~ 200 m downstream of retention ponds (W49, Aug. 2004)	0606956	5005794	13-Aug-04	28.1	281.8	310.0	9.1%
SH-S	W15	Pipe draining retention ponds from Boston Richardson shaft (W50, Aug. 2004)	0606948	5005957	13-Aug-04	167.8	90.4	258.2	65%
SH-S	W15D	Duplicate of site W15 (W50D, Aug. 2004)	0606948	5005957	13-Aug-04	166.1	104.1	270.1	61%
SH-S	W16	Stream draining Oat Hill Lake, runs into N shore of Gold Brook Lake, sample ~ 10 m N of dirt road (W40, Aug. 2004)	0606970	5008548	12-Aug-04	< 0.5	< 0.5	< 1.0	-
SH-S	W17	Drainage out of East Gold Brook tails area at USH, lots of oxid visible, green slime in drainage (W44, Aug. 2004)	0607179	5006235	12-Aug-04	951.7	2820	3772	25%
SH-S	W18	Gold Brook - first bend just south of Richardson Mill (W43, Aug. 2004)	0607076	5006305	12-Aug-04	1.0	22.3	23.3	4.2%
SH-S	W19	Water draining into lake from Richardson stamp mill, abundant BIOS remains visible in mill foundation (W42, Aug. 2004)	0607004	5006415	12-Aug-04	5.9	1087	1093	0.5%
SH-S	W20	Gold Brook Lake ~ 30 m north of pump station (W41, Aug. 2004)	0606991	5006549	12-Aug-04	< 0.5	2.8	2.8	-
SH-S	W21	East Brook ~ 10 m upstream of Hwy, lots of flow, rocky, no tails evident (W26, Aug. 2004)	0612469	5002263	11-Aug-04	1.7	145.0	146.7	1.1%
SH-S	W22	Background site: overgrown, sample on upstream side of large boulder, low volume, stream is running (W34, Aug. 2004)	0610763	5002099	11-Aug-04	1.0	2.1	3.1	31%
SH-S	W23	West Brook at outlet of Second Pond, pond full of tails, water rapidly flowing & brownish (W29, Aug. 2004)	0610983	5001952	11-Aug-04	5.8	431.6	437.4	1.3%
SH-S	W24	West Brook at outlet of First Pond, banks full of tailings, sample site where meandering brook exits First Pond (W28, Aug. 2004)	0611287	5001790	11-Aug-04	4.0	481.6	485.6	0.8%
SH-S	W25	Gold Brook at bridge above Seal Hrbr Lake, lots of flow through boulders (W35, Aug. 2004)	0609171	5003579	11-Aug-04	9.6	575.3	584.9	1.6%
SH-S	W51	Seawater overlying tails near mouth of West Brook, likely fresh surface water (lots of DOC over seawater)	0611650	5001739	14-Aug-04	4.5	307.7	312.2	1.5%
Statistics	**Min.**					<0.5	<0.5	<1.0	0.2%
	Max.					951.7	2820	3772	65%
	Mean					59.6	403.6	489.8	10.9%
	Median					6.1	364.8	422.5	3.9%
	n					27	30	28	27
	Std Dev					180.5	508.4	669.6	18%
	95th pctl					167.3	863.7	930.0	54%
	90th pctl					125.0	576.8	597.4	34%
	75th pctl					23.9	484.5	492.1	9%
	50th pctl					6.1	364.8	422.5	3.9%
	25th pctl					3.2	114.3	260.5	1.0%

Gold District	Sample Site	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	As(III) ICP-MS Dionex AS7 µg/L DL = 0.5 <0.45 µm	As(V) ICP-MS Dionex AS7 µg/L 0.5 <0.45 µm	Total As ICP-MS Dionex AS7 µg/L 1.0 <0.45 µm	% As(III) (calculated)
Upper / Lower Seal Harbour (SH-S) November 2004									
SH-S	W1	Background site: small brook running into wetland above LSH (enters thin tails below swamp) (W60, Nov. 2004)	0609671	5002897	18-Nov-04	< 0.5	< 0.5	< 1.0	-
SH-S	W2	Stream just east of cyanide plant near waste rock (W61, Nov. 2004)	0609987	5002856	18-Nov-04	0.5	8.5	9.0	6.0%
SH-S	W3	LSH drainage, just upstream of log bridge, drainage skirts adjacent amalgamation tailings (W62, Nov. 2004)	0610069	5002620	18-Nov-04	17.5	57.9	75.4	23%
SH-S	W3D	Duplicate of site W3 (W62D, Nov. 2004)	0610069	5002620	18-Nov-04	17.5	57.1	74.5	23%
SH-S	W4	West Brook ~ 100 m upstream of confluence w/ LSH drainage, lots of flow, no tails evident (W66, Nov. 2004)	0610843	5002325	18-Nov-04	1.2	124.7	125.9	1.0%
SH-S	W5	West Brook ~ 20 m south of confluence w/ LSH drainage, banks ful of tails (W67, Nov. 2004)	0610830	5002247	18-Nov-04	1.8	121.8	123.5	1.4%
SH-S	W6	LSH drainage (full of tails) ~ 50 m above confluence w/ West Brook (W65, Nov. 2004)	0610824	5002280	18-Nov-04	7.8	111.0	118.8	6.5%
SH-S	W7	LSH drainage @ midpoint (~ 200 m below main tails area) (W64, Nov. 2004)	0610596	5002334	18-Nov-04	8.7	104.8	113.5	7.6%
SH-S	W8	LSH drainage, middle of main tails area, sample from deep part of channel eroded in tails (W63, Nov. 2004)	0610177	5002460	18-Nov-04	11.8	114.4	126.2	9.3%
SH-S	W9	West Brook at coastal hwy, high water, brownish (W52, Nov. 2004)	0611562	5001741	17-Nov-04	1.4	128.6	130.0	1.1%
SH-S	W9D1	West Brook at coastal Hwy, high water, brownish (duplicate) (W52D1, Nov. 2004)	0611562	5001741	18-Nov-04	1.7	126.4	128.1	1.3%
SH-S	W9D2	West Brook at coastal Hwy, high water, brownish (duplicate) (W52D2, Nov. 2004)	0611562	5001741	19-Nov-04	1.7	125.5	127.1	1.3%
SH-S	W10	Open tails area on Gold Brook, hardpans in some areas, in others tails are mobile (bedforms visible) (W76, Nov. 2004)	0607694	5004754	19-Nov-04	8.2	84.7	92.8	8.8%
SH-S	W10D	Duplicate of site W10 (W76D, Nov. 2004)	0607694	5004754	19-Nov-04	10.0	90.6	100.6	10%
SH-S	W11	Small brook running through tails into head of Seal Harbour Run or Gold Brook (W75, Nov. 2004)	0607391	5005085	19-Nov-04	1.2	62.1	63.2	1.8%
SH-S	W12	Gold Brook, middle of oxbow lake (W74, Nov. 2004)	0607143	5005121	19-Nov-04	2.5	59.1	61.6	4.1%
SH-S	W13	Gold Brook above oxbow lake (W73, Nov. 2004)	0607058	5005452	19-Nov-04	1.2	62.1	63.2	1.8%
SH-S	W14	Gold Brook ~ 200 m downstream of retention ponds (W72, Nov. 2004)	0606956	5005794	19-Nov-04	4.7	36.9	41.6	11%
SH-S	W15	Pipe draining retention ponds from Boston Richardson shaft (W71, Nov. 2004)	0606948	5005957	19-Nov-04	1.1	68.3	69.4	1.6%
SH-S	W16	Stream draining Oat Hill Lake, runs into N shore of Gold Brook Lake, sample ~ 10 m N of dirt road (W55, Nov. 2004)	0606970	5008548	17-Nov-04	< 0.5	< 0.5	< 1.0	-
SH-S	W17	Drainage out of East Gold Brook tails area at USH, lots of oxid visible, green slime in drainage (W70, Nov. 2004)	0607179	5006235	18-Nov-04	88.4	281.0	369.4	24%
SH-S	W18	Gold Brook - first bend just south of Richardson Mill (W69, Nov. 2004)	0607076	5006305	18-Nov-04	1.5	7.8	9.3	16%
SH-S	W19	Water draining into lake from Richardson stamp mill, abundant BIOS remains visible in mill foundation (W57, Nov. 2004)	0607004	5006415	17-Nov-04	92.3	94.4	186.7	49%
SH-S	W20	Gold Brook Lake ~ 30 m north of pump station (W56, Nov. 2004)	0606991	5006549	17-Nov-04	< 0.5	3.6	3.8	-
SH-S	W21	East Brook ~ 10 m upstream of Hwy, lots of flow, rocky, no tails evident (W58, Nov. 2004)	0612469	5002263	18-Nov-04	1.8	66.0	67.8	2.7%
SH-S	W22	Background site: overgrown, sample on upstream side of large boulder, low volume, stream is running (W68, Nov. 2004)	0610763	5002099	18-Nov-04	< 0.5	1.9	2.2	-
SH-S	W23	West Brook at outlet of Second Pond, pond full of tails, water rapidly flowing & brownish (W54, Nov. 2004)	0610983	5001952	17-Nov-04	1.6	130.8	132.4	1.2%
SH-S	W24	West Brook at outlet of First Pond, banks full of tailings, sample site where meandering brook exits First Pond (W53, Nov. 2004)	0611287	5001790	17-Nov-04	1.6	125.8	127.4	1.3%
SH-S	W25	Gold Brook at bridge above Seal Hrbr Lake, lots of flow through boulders (W59, Aug. 2004)	0609171	5003579	18-Nov-04	0.9	98.3	99.2	0.9%
Statistics	**Min.**					<0.5	<0.5	<1.0	0.9%
	Max.					92.3	281.0	369.4	49%
	Mean					11.5	87.2	97.9	8.7%
	Median					1.8	90.6	99.2	4.1%
	n					25	27	27	25
	Std Dev					23.8	55.8	70.1	11%
	95th pctl					74.2	130.1	170.4	24%
	90th pctl					17.5	127.3	131.0	23%
	75th pctl					8.7	123.2	126.7	10%
	50th pctl					1.8	90.6	99.2	4.1%
	25th pctl					1.4	58.5	63.2	1.3%

Gold District	Sample Site	Site description	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	As(III) ICP-MS Dionex AS7 µg/L DL = 0.5 <0.45 µm	As(V) ICP-MS Dionex AS7 µg/L 0.5 <0.45 µm	Total As ICP-MS Dionex AS7 µg/L 1.0 <0.45 µm	% As(III) (calculated)
Upper / Lower Seal Harbour (SH-S) August 2005									
SH-S	W1	Background site: small brook running into wetland above LSH (enters thin tails below swamp)	0609671	5002897	24-Aug-05	< 0.5	1.2	1.3	-
SH-S	W2	Stream just east of cyanide plant near waste rock	0609987	5002856	24-Aug-05	2.8	22.4	25.2	11%
SH-S	W3	LSH drainage, just upstream of log bridge, drainage skirts adjacent amalgamation tailings	0610069	5002620	24-Aug-05	50.7	109.8	160.5	32%
SH-S	W4	West Brook ~ 100 m upstream of confluence w/ LSH drainage, lots of flow, no tails evident	0610843	5002325	24-Aug-05	2.4	529.3	531.7	0.5%
SH-S	W5	West Brook ~ 20 m south of confluence w/ LSH drainage, banks full of tails	0610830	5002247	24-Aug-05	8.0	487.0	495.0	1.6%
SH-S	W6	LSH drainage (full of tails) ~ 50 m above confluence w/ West Brook	0610824	5002280	24-Aug-05	14.5	540.2	554.7	2.6%
SH-S	W7	LSH drainage @ midpoint (~ 200 m below main tails area)	0610596	5002334	24-Aug-05	28.5	279.9	308.4	9.2%
SH-S	W8	LSH drainage, middle of main tails area, sample from deep part of channel eroded in tails	0610177	5002460	24-Aug-05	130.8	212.6	343.5	38%
SH-S	W9	West Brook at coastal hwy, high water, brownish	0611562	5001741	24-Aug-05	6.0	471.8	477.7	1.3%
SH-S	W9D1	Duplicate of site W9	0611562	5001741	25-Aug-05	< 0.5	219.5	219.8	-
SH-S	W9D2	Duplicate of site W9	0611562	5001741	26-Aug-05	6.6	319.3	325.9	2.0%
SH-S	W10	Open tails area on Gold Brook, hardpans in some areas, in others tails are mobile (bedforms visible)	0607694	5004754	25-Aug-05	< 5	4450	4450	-
SH-S	W10D	Duplicate of site W10	0607694	5004754	25-Aug-05	< 5	4440	4440	-
SH-S	W11	Small brook running through tails into head of Seal Harbour Run or Gold Brook	0607391	5005085	25-Aug-05	16.2	635.7	651.9	2.5%
SH-S	W12	Gold Brook, middle of oxbow lake	0607143	5005121	25-Aug-05	5.5	611.3	616.9	0.9%
SH-S	W13	Gold Brook above oxbow lake	0607058	5005452	25-Aug-05	25.6	606.1	631.6	4.1%
SH-S	W14	Gold Brook ~ 200 m downstream of retention ponds	0606956	5005794	25-Aug-05	85.1	867.9	953.0	8.9%
SH-S	W15	Pipe draining retention ponds from Boston Richardson shaft	0606948	5005957	25-Aug-05	15.3	91.5	106.8	14%
SH-S	W16	Stream draining Oat Hill Lake, runs into N shore of Gold Brook Lake, sample ~ 10 m N of dirt road	0606970	5008548	25-Aug-05	< 0.5	< 0.5	< 1.0	-
SH-S	W17	Drainage out of East Gold Brook tails area at USH, lots of oxid visible, green slime in drainage	0607179	5006235	25-Aug-05	860.0	2670	3530	24%
SH-S	W18	Gold Brook - first bend just south of Richardson Mill	0607076	5006305	25-Aug-05	23.0	152.0	175.0	13%
SH-S	W19	Water draining into lake from Richardson stamp mill, abundant BIOS remains visible in mill foundation	0607004	5006415	25-Aug-05	6.6	899.2	905.8	0.7%
SH-S	W20	Gold Brook Lake ~ 30 m north of pump station	0606991	5006549	25-Aug-05	< 0.5	5.9	6.3	-
SH-S	W21	East Brook ~ 10 m upstream of Hwy, lots of flow, rocky, no tails evident	0612469	5002263	26-Aug-05	< 0.5	158.9	159.0	-
SH-S	W22	Background site: overgrown, sample on upstream side of large boulder, low volume, stream is running	0610763	5002099	26-Aug-05	< 0.5	3.3	3.7	-
SH-S	W23	West Brook at outlet of Second Pond, pond full of tails, water rapidly flowing & brownish	0610983	5001952	26-Aug-05	12.8	327.8	340.6	3.8%
SH-S	W24	West Brook at outlet of First Pond, banks full of tailings, sample site where meandering brook exits First Pond	0611287	5001790	26-Aug-05	10.0	340.5	350.5	2.9%
SH-S	W25	Gold Brook at bridge above Seal Hrbr Lake, lots of flow through boulders	0609171	5003579	26-Aug-05	4.5	576.9	581.4	0.8%
SH-S	W25D	Duplicate of site W25	0609171	5003579	26-Aug-05	5.0	584.4	589.4	0.8%
Statistics	**Min.**					<0.5	<0.5	<1.0	0.5%
	Max.					860.0	4450	4450	38%
	Mean					62.9	736.2	783.4	8.3%
	Median					12.8	406.2	414.1	2.9%
	n					21	28	28	21
	Std Dev					180.8	1141	1198	10%
	95th pctl					130.8	3821	4122	32%
	90th pctl					85.1	1430	1726	24%
	75th pctl					25.6	607.4	620.6	11%
	50th pctl					12.8	406.2	414.1	2.9%
	25th pctl					6.0	157.2	171.4	1.3%

Note: Sample sites from USH and LSH have been re-numbered to match the numbers used in Fig. 120 (original sample IDs added to site descriptions).

APPENDIX D

Sequential extraction data for tailings from the Seal Harbour Gold Districts:
Selected results from As-optimized extraction scheme

Gold District	Sample Site	Tailings Depth (cm)	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Subsample ID	Tailings description	Al ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg DL = 4	Al ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 5
Lower Seal Harbour Gold District, cyanidation tailings (Site T6)									
LSH	T6	3	0610019	5002639	11-Aug-04	LSH-04 T6A	Light-brown sandy tailings with mm-scale rusty horizons	< 4	na
LSH	T6	40	0610019	5002639	11-Aug-04	LSH-04 T6B	Sandy tailings, cm-thick rusty horizon	< 4	na
LSH	T6	48	0610019	5002639	11-Aug-04	LSH-04 T6C	Light-grey, clay rich tailings	< 4	na
LSH	T6	55	0610019	5002639	11-Aug-04	LSH-04 T6D	Olive-grey, silty tailings	< 4	na
LSH	T6	75	0610019	5002639	11-Aug-04	LSH-04 T6E	Light grey sandy tailings	< 4	na
Lower Seal Harbour Gold District, amalgamation tailings (Site T13)									
LSH	T13	8	0610144	5002665	12-Aug-04	LSH-04 T13A	Yellowish-green hardpan layer	< 4	na
LSH	T13	20	0610144	5002665	12-Aug-04	LSH-04 T13B	Dark-grey / mauve sandy tailings	< 4	na
LSH	T13	28	0610144	5002665	12-Aug-04	LSH-04 T13C	Rusty / dark-brown sandy tailings with organic mottles	< 4	na
LSH	T13	40	0610144	5002665	12-Aug-04	LSH-04 T13D	Light-grey tailings with organic mottles and mm-scale rusty lenses	< 4	na
LSH	T13	45	0610144	5002665	12-Aug-04	LSH-04 T13E	Grey tailings with black, organic mottles	< 4	na
LSH	T13	90	0610144	5002665	12-Aug-04	LSH-04 T13F	Light grey tailings / sediments	< 4	na
Lower Seal Harbour Gold District, oxidized concentrate near cyanide plant (Site T3)									
LSH	T3	2	0609977	5002769	12-Aug-03	LSH-03 T3A	Rusty-brown hardpan layer (contains scorodite)	< 4	na
LSH	T3	45	0609977	5002769	12-Aug-03	LSH-03 T3D	Dark-grey, sulfide-rich layer (contains arsenopyrite)	14	na
Upper / Lower Seal Harbour Gold Districts, tailings-impacted sediments									
USH	T3	0-5	0607049	5006309	26-Aug-05	SH-05 T3A	Arsenopyrite-rich tailings at head of Gold Brook	101	na
USH	T42	0-5	0607107	5005121	25-Aug-05	SH-04 T42A	Muddy tailings from shallow oxbow lake along Gold Brook	6	151
USH	T40	0-5	0607543	5004870	25-Aug-05	SH-04 T40A	Dark-brown sandy tailings from Gold Brook / Seal Hbr Run	< 4	na
LSH	T1	0-5	0611130	5001798	26-Aug-05	SH-05 T1A	Sandy tailings with visible sulfides from First Pond	< 4	na
LSH	T2	0-5	0611653	5001787	26-Aug-05	SH-05 T2A	Light-grey tailings from clam flats in Seal Harbour	7	540
Caribou Gold District, tailings from community walking trail									
CAR	T2	0-4	0504794	4989253	28-Oct-05	CAR-05 T2	Sulfide-rich tailings	165	na
CAR	T1	0-5	0504741	4989277	28-Oct-05	CAR-05 T1	Scorodite-rich tailings	< 4	na
Goldenville Gold District, scorodite-rich mill residue									
GD	T1	0-5	0577345	4997052	9-Dec-05	GD05-T01	Mint-green residue on surface immediately NW of the Stuart Shaft between stamp mill foundation and race track.	4	na
GD	T1-D	0-5	0577345	4997052	9-Dec-05	GD05-T01	Duplicate of sample T1	8	na

Notes: na = not analyzed; DL = detection limit

Subsample ID	Al ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 9	Al ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 3	Al ICP-ES 1M NH_2OH 25% HOAc mg/kg 10	Al ICP-ES 4M HCl 2 hr mg/kg 10	Al ICP-ES Aqua Regia mg/kg 5	Al ICP-ES HF-$HClO_4$-HNO_3-HCl mg/kg 10	Al ICP-ES Sum mg/kg 56	As ICP-MS 1M NH_4OAc 2 hr pH 7.0 mg/kg 0.04	As ICP-MS 0.1M $Na_4P_2O_7$ 1 hr mg/kg 0.2	As ICP-MS 1M NH_4OAc 2 hr pH 5.0 mg/kg 0.1	As ICP-MS 0.25M NH_2OH 0.25M HCl mg/kg 0.1	As ICP-MS 1M NH_2OH 25% HOAc mg/kg 0.2	As ICP-MS 4M HCl 2 hr mg/kg 0.2
LSH-04 T6A	10	481	762	6791	359	41454	49858	10.46	na	35.2	2694.4	67.1	1.9
LSH-04 T6B	< 9	397	762	6980	386	42421	50948	43.20	na	172.9	1526.4	20.2	2.0
LSH-04 T6C	28	1643	2447	11070	689	67531	83407	61.51	na	225.5	1345.0	32.0	2.9
LSH-04 T6D	< 9	573	1077	7242	398	40964	50260	34.25	na	129.6	1060.5	83.1	2.6
LSH-04 T6E	9	631	1132	10694	528	49595	62589	0.72	na	13.9	54.4	3.1	1.4
LSH-04 T13A	< 9	89	633	3712	252	34103	38791	25.27	na	113.2	11609.0	1422.7	98.5
LSH-04 T13B	< 9	428	1327	12976	535	53885	69152	11.30	na	110.5	2361.1	29.0	12.9
LSH-04 T13C	< 9	348	1132	10541	382	45654	58062	1.74	na	21.8	464.0	109.0	9.2
LSH-04 T13D	30	747	683	4244	213	30905	36820	7.74	na	40.5	541.9	10.3	1.2
LSH-04 T13E	25	638	636	3874	225	32369	37767	7.61	na	27.8	553.1	6.6	3.1
LSH-04 T13F	< 9	375	661	3590	207	30580	35422	1.70	na	2.2	4.1	2.9	0.4
LSH-03 T3A	< 9	26	42	856	185	11148	12263	38.06	na	268.8	15516.6	26448.5	124665.6
LSH-03 T3D	11	206	578	5214	462	28801	35287	104.42	na	315.4	9093.6	2909.3	10.3
SH-05 T3A	32	604	605	4306	295	26096	32038	116.19	na	310.2	2974.5	160.7	86.8
SH-04 T42A	12	987	1193	7843	442	42423	53057	21.77	406.3	129.6	84.7	120.2	30.0
SH-04 T40A	39	906	1021	8617	495	44373	55451	76.35	na	318.1	3689.3	493.7	77.0
SH-05 T1A	< 9	480	747	8048	517	46114	55911	8.08	na	18.8	160.2	10.0	0.6
SH-05 T2A	75	1830	2317	9735	762	63891	79157	9.54	109.9	38.3	27.1	42.3	6.1
CAR-05 T2	51	207	173	591	83	5228	6498	236.09	na	292.6	3568.6	74.1	61.0
CAR-05 T1	< 9	8	< 10	100	101	15736	15952	211.42	na	603.5	12894.7	21654.0	95624.0
GD05-T01	10	53	17	205	95	11636	12021	8.94	na	93.0	4986.9	24099.4	174347.8
GD05-T01	14	55	19	208	95	11695	12093	9.69	na	93.9	4838.9	22245.5	182278.0

Subsample ID	As ICP-MS Aqua Regia mg/kg 0.3	As ICP-MS HF-$HClO_4$-HNO_3-HCl mg/kg 0.2	As ICP-MS Sum mg/kg 1.3	Ca ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg 4	Ca ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 5	Ca ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 9	Ca ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 3	Ca ICP-ES 1M NH_2OH 25% HOAc mg/kg 10	Ca ICP-ES 4M HCl 2 hr mg/kg 10	Ca ICP-ES Aqua Regia mg/kg 5	Ca ICP-ES HF-$HClO_4$-HNO_3-HCl mg/kg 10	Ca ICP-ES Sum mg/kg 56	Cu ICP-MS 1M NH_4OAc 2 hr pH 7.0 mg/kg 0.04
LSH-04 T6A	10.5	0.4	2820	< 4	na	< 9	937	11	31	8	496	1488	1.41
LSH-04 T6B	60.2	0.3	1825	602	na	170	1435	17	37	8	521	2790	6.42
LSH-04 T6C	58.9	1.7	1728	1150	na	251	1468	21	45	6	676	3619	2.44
LSH-04 T6D	522.1	2.9	1835	1219	na	241	1274	11	28	< 5	438	3215	1.16
LSH-04 T6E	4056.5	4.0	4134	4096	na	2160	1390	16	46	< 5	560	8273	0.51
LSH-04 T13A	< 0.3	0.3	13269	21	na	< 9	147	18	24	8	306	527	< 0.04
LSH-04 T13B	1.0	< 0.2	2526	14	na	< 9	1091	< 10	43	16	270	1444	< 0.04
LSH-04 T13C	50.6	0.4	657	< 4	na	< 9	113	< 10	33	10	281	442	0.05
LSH-04 T13D	47.9	1.0	651	< 4	na	< 9	739	< 10	17	< 5	321	1089	1.03
LSH-04 T13E	277.8	1.6	877	< 4	na	< 9	928	< 10	16	< 5	358	1317	1.38
LSH-04 T13F	1.0	< 0.2	12	10	na	< 9	665	< 10	14	< 5	317	1017	7.80
LSH-03 T3A	187.3	3.0	167128	< 4	na	< 9	9	33	60	16	218	339	0.21
LSH-03 T3D	123416.4	51.5	135901	1291	na	53	826	100	102	5	416	2794	0.05
SH-05 T3A	110129.2	48.0	113826	107	na	< 9	710	34	190	47	2408	3501	0.23
SH-04 T42A	1108.6	2.7	1904	60	18	< 9	870	39	273	108	4073	5442	0.39
SH-04 T40A	4.6	1.0	4660	941	na	203	1065	87	334	174	4163	6965	0.16
SH-05 T1A	1437.5	2.0	1637	646	na	160	1151	23	53	31	649	2712	0.59
SH-05 T2A	161.1	4.1	399	232	38	< 9	1655	29	74	38	1016	3085	0.32
CAR-05 T2	285544.1	44.0	289821	51	na	< 9	218	< 10	11	30	37	359	19.15
CAR-05 T1	14800.0	14.2	145802	< 4	na	< 9	< 3	< 10	14	10	75	104	0.17
GD05-T01	549.9	13.7	204100	21	na	< 9	< 3	< 10	< 10	< 5	79	110	0.23
GD05-T01	438.4	14.2	209918	19	na	< 9	< 3	< 10	< 10	< 5	83	113	0.25

Subsample ID	Cu ICP-MS $0.1M\ Na_4P_2O_7$ 1 hr mg/kg 0.2	Cu ICP-MS $1M\ NH_4OAc$ 2 hr pH 5.0 mg/kg 0.1	Cu ICP-MS $0.25M\ NH_2OH$ 0.25M HCl mg/kg 0.05	Cu ICP-MS $1M\ NH_2OH$ 25% HOAc mg/kg 0.2	Cu ICP-MS 4M HCl 2 hr mg/kg 0.2	Cu ICP-MS Aqua Regia mg/kg 0.3	Cu ICP-MS $HF\text{-}HClO_4\text{-}HNO_3\text{-}HCl$ mg/kg 0.2	Cu ICP-MS Sum mg/kg 1.3	Fe ICP-ES $1M\ NH_4OAc$ 2 hr pH 7.0 mg/kg 1	Fe ICP-ES $0.1M\ Na_4P_2O_7$ 1 hr mg/kg 1	Fe ICP-ES $1M\ NH_4OAc$ 2 hr pH 5.0 mg/kg 2	Fe ICP-ES $0.25M\ NH_2OH$ 0.25M HCl mg/kg 1
LSH-04 T6A	na	1.3	15.85	0.7	0.2	0.8	1.2	21.4	< 1	na	39	6388
LSH-04 T6B	na	14.1	15.21	0.6	3.2	16.3	1.3	57.1	1	na	150	5186
LSH-04 T6C	na	5.9	11.54	0.6	1.4	6.9	0.7	29.6	< 1	na	147	6277
LSH-04 T6D	na	2.6	4.37	0.8	1.4	6.4	1.0	17.7	< 1	na	42	2872
LSH-04 T6E	na	0.5	1.10	0.4	6.0	34.4	1.2	44.1	1	na	255	1767
LSH-04 T13A	na	< 0.1	1.03	0.5	< 0.2	< 0.3	0.8	2.7	3	na	36	12990
LSH-04 T13B	na	< 0.1	1.95	0.4	0.3	< 0.3	1.0	3.9	1	na	140	4874
LSH-04 T13C	na	0.1	2.05	2.0	0.4	< 0.3	1.0	5.8	2	na	94	5928
LSH-04 T13D	na	1.4	29.31	0.6	1.0	2.2	0.8	36.3	< 1	na	37	2797
LSH-04 T13E	na	1.8	26.30	0.4	0.6	1.9	0.8	33.2	< 1	na	34	2199
LSH-04 T13F	na	1.8	4.75	0.8	0.4	1.4	0.7	17.6	< 1	na	3	603
LSH-03 T3A	na	0.2	3.99	3.2	7.0	49.8	0.5	64.9	4	na	137	32448
LSH-03 T3D	na	0.7	6.39	3.0	2.6	74.8	0.9	88.3	544	na	480	18419
SH-05 T3A	na	0.8	2.57	0.5	4.3	33.9	0.6	42.9	67	na	176	4607
SH-04 T42A	1.6	< 0.1	1.65	0.4	0.9	13.2	0.6	18.7	3	663	82	1555
SH-04 T40A	na	0.6	2.02	1.0	0.7	1.7	0.5	6.6	4	na	110	5641
SH-05 T1A	na	0.9	3.08	0.5	1.2	23.1	1.3	30.5	2	na	54	2172
SH-05 T2A	3.2	0.3	4.34	0.6	3.3	13.7	0.9	26.6	2	642	78	2909
CAR-05 T2	na	5.9	24.07	4.0	4.5	36.8	0.3	94.6	44	na	88	3897
CAR-05 T1	na	< 0.1	0.41	2.1	6.8	11.7	0.6	21.8	97	na	561	12288
GD05-T01	na	0.2	3.46	12.3	38.8	108.4	1.6	165.1	27	na	163	6028
GD05-T01	na	0.3	3.64	12.1	39.9	104.1	1.5	161.7	38	na	201	5854

Subsample ID	Fe ICP-ES 1M NH_2OH 25% HOAc mg/kg 3	Fe ICP-ES 4M HCl 2 hr mg/kg 3	Fe ICP-ES Aqua Regia mg/kg 1	Fe ICP-ES HF-$HClO_4$-HNO_3-HCl mg/kg 3	Fe ICP-ES Sum mg/kg 15	K ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg 10	K ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 10	K ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 23	K ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 6	K ICP-ES 1M NH_2OH 25% HOAc mg/kg 25	K ICP-ES 4M HCl 2 hr mg/kg 25	K ICP-ES Aqua Regia mg/kg 13	K ICP-ES HF-$HClO_4$-HNO_3-HCl mg/kg 25
LSH-04 T6A	2131	13010	726	6040	28334	< 10	na	< 23	34	93	837	156	13514
LSH-04 T6B	1879	13369	861	7232	28677	12	na	< 23	39	75	902	152	13730
LSH-04 T6C	5117	20273	761	7901	40476	44	na	< 23	183	319	1198	561	28168
LSH-04 T6D	3393	13768	1023	5763	26861	21	na	< 23	47	122	1023	225	14181
LSH-04 T6E	2489	22539	5102	8272	40425	13	na	< 23	96	134	1922	217	18951
LSH-04 T13A	2915	7113	463	4260	27780	10	na	< 23	10	126	317	153	10679
LSH-04 T13B	2975	25876	1044	9772	44682	< 10	na	< 23	25	92	1904	225	24023
LSH-04 T13C	3784	20401	727	8439	39374	11	na	30	14	92	1664	185	20190
LSH-04 T13D	1485	8174	416	4531	17440	< 10	na	26	28	75	561	144	9027
LSH-04 T13E	1308	7465	608	4611	16226	12	na	< 23	21	67	373	150	8202
LSH-04 T13F	1302	6899	405	3398	12611	< 10	na	< 23	35	103	336	158	8067
LSH-03 T3A	38869	108530	791	2863	183642	< 10	na	< 23	< 6	< 25	70	83	4012
LSH-03 T3D	7157	14478	116747	5059	162883	11	na	< 23	32	95	814	165	9977
SH-05 T3A	1460	7170	91271	2372	107123	40	na	< 23	52	264	2643	136	10179
SH-04 T42A	2033	12282	1429	3122	21169	12	< 10	< 23	81	565	4789	169	15890
SH-04 T40A	2768	13061	285	2925	24793	60	na	< 23	49	303	5072	150	17202
SH-05 T1A	1721	15810	2568	6760	29088	19	na	< 23	33	95	1112	157	15506
SH-05 T2A	4821	17740	2344	7957	36494	176	35	< 23	196	316	1212	629	24942
CAR-05 T2	624	1941	253983	837	261414	< 10	na	< 23	< 6	< 25	59	88	1865
CAR-05 T1	18728	75076	14704	2168	123621	13	na	< 23	< 6	< 25	92	148	5769
GD05-T01	20753	129715	2619	15943	175248	26	na	< 23	23	59	49	87	4904
GD05-T01	19446	131858	3006	15804	176206	35	na	< 23	24	38	79	78	4930

Subsample ID	K ICP-ES Sum mg/kg 137	Mg ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg 1	Mg ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 1	Mg ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 2	Mg ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 0.6	Mg ICP-ES 1M NH_2OH 25% HOAc mg/kg 3	Mg ICP-ES 4M HCl 2 hr mg/kg 3	Mg ICP-ES Aqua Regia mg/kg 1	Mg ICP-ES HF-$HClO_4$-HNO_3-HCl mg/kg 3	Mg ICP-ES Sum mg/kg 14.6	Mn ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg 0.2	Mn ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 0.2
LSH-04 T6A	14631	1	na	< 2	210.0	478	4440	184	1610	6923	0.6	na
LSH-04 T6B	14886	39	na	30	307.8	479	4561	204	1656	7276	2.0	na
LSH-04 T6C	30463	47	na	35	844.1	1511	6906	177	3269	12789	8.1	na
LSH-04 T6D	15594	22	na	38	424.6	661	4678	172	1660	7656	16.1	na
LSH-04 T6E	21335	25	na	26	456.4	702	6775	258	2218	10459	92.8	na
LSH-04 T13A	11297	1	na	< 2	26.7	379	2389	92	1287	4176	< 0.2	na
LSH-04 T13B	26279	< 1	na	< 2	220.0	828	8183	264	2884	12379	0.3	na
LSH-04 T13C	22185	2	na	< 2	145.4	711	6710	178	2292	10038	0.4	na
LSH-04 T13D	9869	< 1	na	< 2	148.5	424	2712	79	1077	4441	0.4	na
LSH-04 T13E	8830	< 1	na	< 2	164.8	410	2565	95	1027	4263	0.5	na
LSH-04 T13F	8701	2	na	< 2	184.6	416	2349	83	985	4020	0.3	na
LSH-03 T3A	4179	1	na	< 2	1.1	41	343	83	487	955	< 0.2	na
LSH-03 T3D	11100	107	na	< 2	84.0	363	3419	249	1207	5432	367.0	na
SH-05 T3A	13314	95	na	< 2	301.5	410	2718	77	1010	4613	6.9	na
SH-04 T42A	21509	40	6	< 2	502.5	780	5008	124	1612	8073	1.9	0.5
SH-04 T40A	22818	25	na	3	333.3	662	5453	107	1626	8209	6.4	na
SH-05 T1A	16921	8	na	11	272.5	472	5296	279	1813	8151	14.2	na
SH-05 T2A	27521	363	33	4	871.9	1455	6193	168	3084	12172	25.3	9.6
CAR-05 T2	2034	25	na	< 2	23.7	78	347	21	242	736	2.8	na
CAR-05 T1	6034	1	na	< 2	< 0.6	< 3	9	6	736	754	< 0.2	na
												na
GD05-T01	5159	49	na	< 2	3.3	20	67	29	626	795	1.9	na
GD05-T01	5191	55	na	< 2	3.6	21	66	29	631	806	1.1	na

Subsample ID	Mn ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 0.5	Mn ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 0.1	Mn ICP-ES 1M NH_2OH 25% HOAc mg/kg 0.5	Mn ICP-ES 4M HCl 2 hr mg/kg 0.5	Mn ICP-ES Aqua Regia mg/kg 0.3	Mn ICP-ES HF-$HClO_4$-HNO_3-HCl mg/kg 0.5	Mn ICP-ES Sum mg/kg 2.8	Na ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg 10	Na ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 10	Na ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 23	Na ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 6	Na ICP-ES 1M NH_2OH 25% HOAc mg/kg 25	Na ICP-ES 4M HCl 2 hr mg/kg 25
LSH-04 T6A	1.3	225.7	16.3	147.9	24.2	204.7	620.7	< 10	na	< 23	< 6	< 25	< 25
LSH-04 T6B	17.6	177.9	16.4	154.1	23.7	277.2	669.0	< 10	na	< 23	< 6	< 25	< 25
LSH-04 T6C	24.2	207.4	49.3	235.8	22.0	131.1	677.7	< 10	na	< 23	24	31	27
LSH-04 T6D	23.7	200.2	23.3	158.8	12.0	186.3	620.4	< 10	na	< 23	8	< 25	< 25
LSH-04 T6E	70.6	46.3	24.3	239.8	13.1	289.6	776.4	< 10	na	< 23	9	< 25	< 25
LSH-04 T13A	< 0.5	1.5	11.5	76.7	20.2	117.0	227.1	< 10	na	< 23	6	< 25	< 25
LSH-04 T13B	< 0.5	10.8	27.5	279.1	36.1	287.8	641.7	< 10	na	< 23	< 6	< 25	< 25
LSH-04 T13C	0.9	179.2	23.5	225.9	21.9	273.7	725.4	< 10	na	< 23	7	< 25	< 25
LSH-04 T13D	1.9	338.8	13.4	91.5	14.4	160.1	620.5	< 10	na	< 23	7	< 25	< 25
LSH-04 T13E	3.6	302.2	12.7	86.7	10.6	172.5	588.7	< 10	na	< 23	8	< 25	< 25
LSH-04 T13F	< 0.5	6.8	11.7	77.0	16.0	93.5	205.2	< 10	na	< 23	8	< 25	< 25
LSH-03 T3A	< 0.5	0.2	19.8	74.9	12.6	139.3	247.0	< 10	na	< 23	< 6	< 25	< 25
LSH-03 T3D	27.8	91.7	19.2	127.3	10.9	188.6	832.4	< 10	na	< 23	< 6	< 25	< 25
SH-05 T3A	0.8	15.2	21.0	122.4	5.5	148.4	320.1	11	na	< 23	11	< 25	40
SH-04 T42A	< 0.5	24.1	37.5	218.5	11.7	161.7	455.9	< 10	na	na	na	na	na
SH-04 T40A	10.6	54.0	32.6	229.3	25.0	140.7	498.5	15	na	< 23	25	< 25	84
SH-05 T1A	11.4	55.3	16.4	181.5	15.7	231.6	526.2	< 10	na	< 23	8	< 25	< 25
SH-05 T2A	1.4	33.6	50.3	209.5	40.8	235.1	605.6	2461	na	na	na	na	na
CAR-05 T2	< 0.5	17.2	1.6	6.5	0.5	9.9	38.7	< 10	na	< 23	< 6	< 25	< 25
CAR-05 T1	< 0.5	0.3	1.0	1.8	0.3	25.5	29.1	< 10	na	< 23	< 6	< 25	< 25
GD05-T01	< 0.5	0.9	2.9	6.3	13.2	964.7	990.1	< 10	na	< 23	< 6	< 25	< 25
GD05-T01	< 0.5	0.9	2.9	6.1	13.1	957.2	981.3	< 10	na	< 23	< 6	< 25	< 25

Subsample ID	Na ICP-ES Aqua Regia mg/kg 13	Na ICP-ES $HF-HClO_4-HNO_3-HCl$ mg/kg 25	Na ICP-ES Sum mg/kg 137	P ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg 10	P ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 10	P ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 23	P ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 6	P ICP-ES 1M NH_2OH 25% HOAc mg/kg 25	P ICP-ES 4M HCl 2 hr mg/kg 25	P ICP-ES Aqua Regia mg/kg 13	P ICP-ES $HF-HClO_4-HNO_3-HCl$ mg/kg 25	P ICP-ES Sum mg/kg 137	Pb ICP-MS 1M NH_4OAc 2 hr pH 7.0 mg/kg 0.004
LSH-04 T6A	< 13	13947	13962	< 10	na	< 23	439	< 25	< 25	< 13	< 25	449	0.21
LSH-04 T6B	< 13	13799	13832	< 10	na	< 23	559	< 25	< 25	< 13	< 25	569	0.12
LSH-04 T6C	18	12026	12138	< 10	na	< 23	579	< 25	< 25	< 13	< 25	584	0.17
LSH-04 T6D	14	12858	12904	< 10	na	< 23	400	< 25	< 25	< 13	< 25	417	0.17
LSH-04 T6E	< 13	12920	12958	< 10	na	< 23	536	< 25	< 25	< 13	< 25	539	12.05
LSH-04 T13A	< 13	11875	11918	< 10	na	< 23	191	42	< 25	< 13	< 25	233	0.32
LSH-04 T13B	< 13	6219	6236	< 10	na	< 23	549	< 25	< 25	< 13	< 25	546	0.14
LSH-04 T13C	< 13	7340	7370	< 10	na	31	355	47	< 25	< 13	< 25	418	< 0.004
LSH-04 T13D	< 13	12143	12181	< 10	na	< 23	370	< 25	< 25	< 13	< 25	385	1.15
LSH-04 T13E	< 13	14237	14281	< 10	na	< 23	427	< 25	< 25	< 13	< 25	442	1.15
LSH-04 T13F	< 13	13026	13069	< 10	na	< 23	303	< 25	< 25	< 13	< 25	312	15.05
LSH-03 T3A	< 13	2976	3014	< 10	na	< 23	12	< 25	240	< 13	< 25	281	1.61
LSH-03 T3D	< 13	8344	8380	< 10	na	< 23	250	112	31	< 13	< 25	378	33.69
SH-05 T3A	23	4594	4709	< 10	na	< 23	335	29	< 25	< 13	< 25	363	1.11
SH-04 T42A	na	na	na	< 10	na	na	na	na	na	na	na	na	1.53
SH-04 T40A	50	7785	7982	< 10	na	< 23	364	47	< 25	< 13	< 25	421	0.02
SH-05 T1A	< 13	14468	14506	< 10	na	< 23	480	< 25	< 25	< 13	< 25	491	0.90
SH-05 T2A	na	na	na	< 10	na	na	na	na	na	na	na	na	20.24
CAR-05 T2	< 13	1462	1490	< 10	na	< 23	123	< 25	< 25	< 13	< 25	< 137	46.75
CAR-05 T1	15	4233	4270	< 10	na	< 23	9	< 25	48	< 13	< 25	< 137	51.32
GD05-T01	< 13	2256	2267	< 10	na	< 23	20	57	289	< 13	< 25	384	231.63
GD05-T01	< 13	2286	2314	< 10	na	< 23	17	51	290	< 13	< 25	374	225.35

Subsample ID	Pb ICP-MS $0.1M\ Na_4P_2O_7$ 1 hr mg/kg 0.02	Pb ICP-MS $1M\ NH_4OAc$ 2 hr pH 5.0 mg/kg 0.01	Pb ICP-MS $0.25M\ NH_2OH$ 0.25M HCl mg/kg 0.005	Pb ICP-MS $1M\ NH_2OH$ 25% HOAc mg/kg 0.02	Pb ICP-MS 4M HCl 2 hr mg/kg 0.02	Pb ICP-MS Aqua Regia mg/kg 0.03	Pb ICP-MS $HF\text{-}HClO_4\text{-}HNO_3\text{-}HCl$ mg/kg 0.02	Pb ICP-MS Sum mg/kg 0.13	S ICP-ES $1M\ NH_4OAc$ 2 hr pH 7.0 mg/kg 10	S ICP-ES $0.1M\ Na_4P_2O_7$ 1 hr mg/kg 10	S ICP-ES $1M\ NH_4OAc$ 2 hr pH 5.0 mg/kg 23	S ICP-ES $0.25M\ NH_2OH$ 0.25M HCl mg/kg 6
LSH-04 T6A	na	2.77	50.65	0.80	0.12	< 0.03	1.57	56.15	< 10	na	< 23	18
LSH-04 T6B	na	3.19	72.04	1.86	3.25	0.20	1.88	82.54	< 10	na	< 23	14
LSH-04 T6C	na	1.93	63.65	0.72	0.13	0.06	2.70	69.36	< 10	na	< 23	9
LSH-04 T6D	na	0.31	41.06	3.71	0.19	0.12	1.65	47.21	< 10	na	< 23	< 6
LSH-04 T6E	na	26.23	23.73	9.51	15.99	1.47	2.33	91.32	114	na	< 23	16
LSH-04 T13A	na	2.48	84.71	8.40	0.44	< 0.03	1.08	97.42	376	na	< 23	16
LSH-04 T13B	na	3.77	30.01	2.27	0.25	0.05	1.98	38.46	151	na	< 23	12
LSH-04 T13C	na	0.75	15.78	3.06	0.21	0.05	1.59	21.43	174	na	< 23	35
LSH-04 T13D	na	8.42	61.51	2.76	0.13	< 0.03	1.13	75.12	61	na	< 23	7
LSH-04 T13E	na	6.06	59.38	0.37	0.09	0.03	1.14	68.23	< 10	na	< 23	< 6
LSH-04 T13F	na	3.70	3.72	0.25	0.12	< 0.03	1.04	23.90	21	na	< 23	< 6
LSH-03 T3A	na	19.48	799.16	2696.50	1564.47	0.99	0.76	5082.98	4947	na	2642	260
LSH-03 T3D	na	137.56	1003.65	129.44	78.04	45.24	1.33	1428.95	4224	na	230	164
SH-05 T3A	na	8.10	73.54	8.27	30.02	12.25	4.29	137.57	918	na	62	44
SH-04 T42A	6.29	3.14	3.80	0.70	1.23	0.24	6.80	23.72	164	36	34	10
SH-04 T40A	na	0.08	18.68	3.75	0.44	0.14	6.89	30.00	< 10	na	< 23	10
SH-05 T1A	na	5.91	22.24	1.00	0.52	0.44	2.00	33.02	37	na	< 23	8
SH-05 T2A	23.20	7.54	12.07	1.52	0.85	0.13	2.80	68.36	419	141	91	42
CAR-05 T2	na	75.54	614.72	68.07	316.67	12.91	0.36	1135.02	954	na	65	73
CAR-05 T1	na	118.41	202.46	99.92	100.43	0.98	0.83	574.35	3118	na	282	90
GD05-T01	na	261.40	537.19	409.67	334.29	1.08	0.85	1776.12	2234	na	74	173
GD05-T01	na	312.78	510.25	414.07	338.81	14.37	1.19	1816.81	2314	na	77	173

Subsample ID	S ICP-ES 1M NH_2OH 25% HOAc mg/kg 25	S ICP-ES 4M HCl 2 hr mg/kg 25	S ICP-ES Aqua Regia mg/kg 13	S ICP-ES $HF-HClO_4-HNO_3-HCl$ mg/kg 25	S ICP-ES Sum mg/kg 137	Sb ICP-MS 1M NH_4OAc 2 hr pH 7.0 mg/kg 0.004	Sb ICP-MS 0.1M $Na_4P_2O_7$ 1 hr mg/kg 0.02	Sb ICP-MS 1M NH_4OAc 2 hr pH 5.0 mg/kg 0.01	Sb ICP-MS 0.25M NH_2OH 0.25M HCl mg/kg 0.005	Sb ICP-MS 1M NH_2OH 25% HOAc mg/kg 0.02	Sb ICP-MS 4M HCl 2 hr mg/kg 0.02	Sb ICP-MS Aqua Regia mg/kg 0.03	Sb ICP-MS $HF-HClO_4-HNO_3-HCl$ mg/kg 0.02
LSH-04 T6A	< 25	< 25	< 13	< 25	< 137	0.07	na	0.07	6.50	2.70	1.01	0.08	1.26
LSH-04 T6B	< 25	< 25	88	< 25	< 137	0.30	na	0.36	3.73	1.03	0.41	0.28	0.58
LSH-04 T6C	< 25	< 25	66	< 25	< 137	0.34	na	0.44	1.31	1.07	1.11	0.31	1.19
LSH-04 T6D	< 25	< 25	294	< 25	307	0.34	na	0.18	0.92	0.83	0.40	2.02	0.71
LSH-04 T6E	< 25	397	3253	< 25	3808	0.10	na	0.34	0.58	0.24	0.18	16.46	0.90
LSH-04 T13A	< 25	< 25	< 13	< 25	439	0.30	na	0.26	3.15	1.76	1.19	< 0.03	0.68
LSH-04 T13B	< 25	< 25	< 13	< 25	189	0.05	na	0.01	0.42	0.22	0.24	< 0.03	0.49
LSH-04 T13C	< 25	< 25	32	< 25	264	0.01	na	< 0.01	0.69	0.56	0.29	0.19	0.68
LSH-04 T13D	< 25	< 25	31	< 25	< 137	0.05	na	0.02	1.16	0.34	0.20	0.20	0.40
LSH-04 T13E	< 25	< 25	157	< 25	171	0.03	na	< 0.01	1.38	0.30	0.16	1.08	0.36
LSH-04 T13F	< 25	< 25	18	< 25	< 137	0.01	na	< 0.01	0.13	0.07	0.12	< 0.03	0.19
LSH-03 T3A	778	306	10198	26	19157	5.76	na	7.45	64.59	181.75	1594.31	9.44	3.10
LSH-03 T3D	238	364	77118	< 25	82354	3.21	na	2.42	16.81	15.21	3.92	502.01	7.89
SH-05 T3A	28	< 25	55696	< 25	56784	0.40	na	0.28	1.09	0.79	0.93	76.53	1.37
SH-04 T42A	45	34	962	< 25	1297	0.10	0.21	0.07	0.10	0.10	0.17	0.79	0.22
SH-04 T40A	< 25	< 25	22	< 25	< 137	0.01	na	< 0.01	0.20	0.28	0.41	0.03	0.39
SH-05 T1A	< 25	76	1325	< 25	1462	0.02	na	< 0.01	0.27	0.17	0.12	5.96	0.58
SH-05 T2A	65	65	2038	28	2889	0.35	0.76	0.33	0.19	0.16	0.36	0.70	0.36
CAR-05 T2	31	57	167058	109	168347	0.66	na	0.74	6.54	1.92	1.03	513.47	0.66
CAR-05 T1	474	401	20360	< 25	24734	9.75	na	9.88	4.96	47.85	245.75	29.17	2.78
GD05-T01	1016	2725	7479	< 25	13719	7.62	na	5.67	1.48	21.67	214.99	3.21	6.18
GD05-T01	992	2720	7905	< 25	14199	6.53	na	6.68	1.33	19.39	218.65	3.15	6.61

Subsample ID	Sb ICP-MS Sum mg/kg 0.13	Si ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg 4	Si ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 5	Si ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 9	Si ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 3	Si ICP-ES 1M NH_2OH 25% HOAc mg/kg 10	Si ICP-ES 4M HCl 2 hr mg/kg 10	Si ICP-ES Aqua Regia mg/kg 5	Ti ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg 0.4	Ti ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 0.5	Ti ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 1	Ti ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 0.3
LSH-04 T6A	11.68	< 4	na	< 9	476	541	1969	112	< 0.4	na	< 1	14.6
LSH-04 T6B	6.69	10	na	12	487	543	1992	116	< 0.4	na	< 1	10.2
LSH-04 T6C	5.77	12	na	21	1676	1823	3504	222	< 0.4	na	< 1	24.2
LSH-04 T6D	5.40	5	na	< 9	665	830	2414	224	0.4	na	< 1	11.6
LSH-04 T6E	18.79	< 4	na	< 9	671	808	3084	204	< 0.4	na	< 1	11.7
LSH-04 T13A	7.36	< 4	na	< 9	88	519	1448	159	< 0.4	na	< 1	16.6
LSH-04 T13B	1.45	< 4	na	< 9	461	857	3200	217	< 0.4	na	< 1	8.6
LSH-04 T13C	2.41	< 4	na	< 9	311	752	2868	173	< 0.4	na	< 1	11.1
LSH-04 T13D	2.37	< 4	na	< 9	424	492	1622	173	< 0.4	na	< 1	7.1
LSH-04 T13E	3.32	< 4	na	< 9	409	470	1589	164	< 0.4	na	< 1	10.3
LSH-04 T13F	0.54	< 4	na	< 9	363	491	1547	141	< 0.4	na	< 1	10.5
LSH-03 T3A	1866.39	7	na	12	16	98	523	119	< 0.4	na	< 1	3.1
LSH-03 T3D	551.48	21	na	14	336	486	1727	137	< 0.4	na	< 1	4.2
SH-05 T3A	81.39	53	na	21	610	494	1067	169	< 0.4	na	< 1	31.3
SH-04 T42A	1.75	12	34	< 9	932	961	1552	166	< 0.4	8.6	1	36.2
SH-04 T40A	1.31	< 4	na	< 9	632	773	1360	155	< 0.4	na	< 1	21.5
SH-05 T1A	7.11	< 4	na	< 9	496	510	2281	139	< 0.4	na	< 1	17.3
SH-05 T2A	3.21	8	268	24	1565	1641	3121	237	< 0.4	13.3	2	17.2
CAR-05 T2	525.00	27	na	14	89	119	406	89	< 0.4	na	< 1	1.3
CAR-05 T1	350.13	14	na	37	30	41	241	103	< 0.4	na	< 1	0.4
GD05-T01	260.82	27	na	35	60	56	306	160	< 0.4	na	< 1	1.7
GD05-T01	262.35	24	na	37	65	60	302	109	< 0.4	na	< 1	1.5

Subsample ID	Ti ICP-ES 1M NH_2OH 25% HOAc mg/kg 1	Ti ICP-ES 4M HCl 2 hr mg/kg 1	Ti ICP-ES Aqua Regia mg/kg 0.5	Ti ICP-ES HF-$HClO_4$-HNO_3-HCl mg/kg 1	Ti ICP-ES Sum mg/kg 5.7	Zn ICP-MS 1M NH_4OAc 2 hr pH 7.0 mg/kg 0.2	Zn ICP-MS 0.1M $Na_4P_2O_7$ 1 hr mg/kg 1	Zn ICP-MS 1M NH_4OAc 2 hr pH 5.0 mg/kg 0.5	Zn ICP-MS 0.25M NH_2OH 0.25M HCl mg/kg 0.2	Zn ICP-MS 1M NH_2OH 25% HOAc mg/kg 1	Zn ICP-MS 4M HCl 2 hr mg/kg 1	Zn ICP-MS Aqua Regia mg/kg 1	Zn ICP-MS HF-$HClO_4$-HNO_3-HCl mg/kg 1	Zn ICP-MS Sum mg/kg 6
LSH-04 T6A	16	238	169.3	3182	3619	0.2	na	< 0.5	10.3	4	27	2	5	48
LSH-04 T6B	15	270	154.6	4122	4572	13.0	na	37.0	38.1	3	27	2	5	125
LSH-04 T6C	45	349	153.6	2393	2965	6.4	na	23.6	53.8	9	42	2	9	145
LSH-04 T6D	27	278	52.9	2872	3241	5.2	na	19.0	25.8	5	29	2	5	91
LSH-04 T6E	18	470	35.3	4215	4750	2.8	na	3.2	8.8	4	96	21	6	142
LSH-04 T13A	17	109	174.6	2010	2327	< 0.2	na	< 0.5	0.9	3	15	< 1	4	24
LSH-04 T13B	16	443	252.1	4453	5172	< 0.2	na	< 0.5	2.4	5	53	3	11	75
LSH-04 T13C	15	400	145.1	4161	4733	< 0.2	na	< 0.5	3.4	4	43	2	9	61
LSH-04 T13D	9	212	121.8	2537	2888	< 0.2	na	< 0.5	22.2	2	17	1	4	46
LSH-04 T13E	10	198	74.3	2686	2979	< 0.2	na	< 0.5	29.2	2	16	1	4	52
LSH-04 T13F	10	141	146.8	1592	1901	17.9	na	0.7	7.8	2	17	3	3	51
LSH-03 T3A	2	90	71.9	2125	2292	< 0.2	na	< 0.5	0.5	3	14	3	2	23
LSH-03 T3D	9	302	15.9	2866	3198	61.3	na	20.5	20.6	7	63	144	4	320
SH-05 T3A	30	552	22.7	1539	2175	2.1	na	1.1	3.2	2	21	26	3	58
SH-04 T42A	58	967	85.7	1916	3072	2.2	< 1	< 0.5	6.3	3	37	5	5	59
SH-04 T40A	38	984	176.7	1576	2796	< 0.2	na	< 0.5	3.8	4	25	< 1	4	38
SH-05 T1A	15	304	46.8	3539	3922	1.9	na	2.4	19.2	3	63	4	6	99
SH-05 T2A	30	292	210.0	2900	3464	3.4	8	1.3	15.5	8	64	3	9	112
CAR-05 T2	< 1	32	3.7	660	698	1.0	na	< 0.5	2.0	< 1	21	28	1	54
CAR-05 T1	< 1	9	4.0	1449	1463	< 0.2	na	< 0.5	0.2	< 1	1	1	3	6
GD05-T01	< 1	103	113.6	14086	14305	0.2	na	< 0.5	0.6	4	19	< 1	4	27
GD05-T01	< 1	102	112.8	14284	14500	< 0.2	na	< 0.5	0.5	3	21	< 1	4	28

APPENDIX E

Sequential extraction data for tailings from the Seal Harbour Gold Districts:
Selected results from Hg-optimized extraction scheme

Gold District	Sample Site	Tailings Depth (cm)	Easting (20T, NAD 83)	Northing (20T, NAD 83)	Date	Subsample ID	Tailings description	Al ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg DL = 7	Al ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 7
Lower Seal Harbour Gold District, cyanidation tailings (Site T6)									
LSH	T6	3	0610019	5002639	11-Aug-04	LSH-04 T6A	Light-brown sandy tailings with mm-scale rusty horizons	< 7	na
LSH	T6	40	0610019	5002639	11-Aug-04	LSH-04 T6B	Sandy tailings, cm-thick rusty horizon	< 7	na
LSH	T6	48	0610019	5002639	11-Aug-04	LSH-04 T6C	Light-grey, clay rich tailings	< 7	na
LSH	T6	55	0610019	5002639	11-Aug-04	LSH-04 T6D	Olive-grey, silty tailings	< 7	na
LSH	T6	75	0610019	5002639	11-Aug-04	LSH-04 T6E	Light grey sandy tailings	< 7	na
Lower Seal Harbour Gold District, amalgamation tailings (Site T13)									
LSH	T13	8	0610144	5002665	12-Aug-04	LSH-04 T13A	Yellowish-green hardpan layer	< 7	na
LSH	T13	20	0610144	5002665	12-Aug-04	LSH-04 T13B	Dark-grey / mauve sandy tailings	< 7	na
LSH	T13	28	0610144	5002665	12-Aug-04	LSH-04 T13C	Rusty / dark-brown sandy tailings with organic mottles	< 7	na
LSH	T13	40	0610144	5002665	12-Aug-04	LSH-04 T13D	Light-grey tailings with organic mottles and mm-scale rusty lenses	< 7	na
LSH	T13	45	0610144	5002665	12-Aug-04	LSH-04 T13E	Grey tailings with black, organic mottles	< 7	na
LSH	T13	90	0610144	5002665	12-Aug-04	LSH-04 T13F	Light grey tailings / sediments	< 7	na
Lower Seal Harbour Gold District, oxidized concentrate near cyanide plant (Site T3)									
LSH	T3	2	0609977	5002769	12-Aug-03	LSH-03 T3A	Rusty-brown hardpan layer (contains scorodite)	< 7	na
LSH	T3	45	0609977	5002769	12-Aug-03	LSH-03 T3D	Dark-grey, sulfide-rich layer (contains arsenopyrite)	7	na
Upper / Lower Seal Harbour Gold Districts, tailings-impacted sediments									
USH	T3	0-5	0607049	5006309	26-Aug-05	SH-05 T3A	Arsenopyrite-rich tailings at head of Gold Brook	114	na
USH	T42	0-5	0607107	5005121	25-Aug-05	SH-04 T42A	Muddy tailings from shallow oxbow lake along Gold Brook	< 7	121
USH	T40	0-5	0607543	5004870	25-Aug-05	SH-04 T40A	Dark-brown sandy tailings from Gold Brook / Seal Hbr Run	< 7	na
LSH	T1	0-5	0611130	5001798	26-Aug-05	SH-05 T1A	Sandy tailings with visible sulfides from First Pond	< 7	na
LSH	T2	0-5	0611653	5001787	26-Aug-05	SH-05 T2A	Light-grey tailings from clam flats in Seal Harbour	< 7	381
Caribou Gold District, tailings from community walking trail									
CAR	T2	0-4	0504794	4989253	28-Oct-05	CAR-05 T2	Sulfide-rich tailings	139	na
CAR	T1	0-5	0504741	4989277	28-Oct-05	CAR-05 T1	Scorodite-rich tailings	< 7	na
End-member phases from GSC-Ottawa mineral collection									
-	-	-	-	-	-	GG + HgS	Ground granite + cinnabar (median [Hg] = 537 µg/kg)	< 7	na
-	-	-	-	-	-	HgS	Cinnabar ([Hg] = 86.2 dry wt.%)	na	na

Notes: na = not analyzed; DL = detection limit

Subsample ID	Al ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 14	Al ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 9	Al ICP-ES 1M NH_2OH 25% HOAc mg/kg 20	Al ICP-ES 40% HNO_3 mg/kg 36	Al ICP-ES Aqua Regia mg/kg 10	Al ICP-ES Sum mg/kg 103	As ICP-MS 1M NH_4OAc 2 hr pH 7.0 mg/kg 2	As ICP-MS 0.1M $Na_4P_2O_7$ 1 hr mg/kg 2	As ICP-MS 1M NH_4OAc 2 hr pH 5.0 mg/kg 4	As ICP-MS 0.25M NH_2OH 0.25M HCl mg/kg 2	As ICP-MS 1M NH_2OH 25% HOAc mg/kg 5	As ICP-MS 40% HNO_3 mg/kg 9
LSH-04 T6A	< 14	462	3196	226	3774	7667	16	na	32	3081	43	22
LSH-04 T6B	< 14	381	3288	245	4397	8311	53	na	103	866	6	31
LSH-04 T6C	18	1701	7679	279	5335	15015	71	na	168	1368	24	64
LSH-04 T6D	< 14	615	4173	200	4117	9109	43	na	108	1237	88	520
LSH-04 T6E	< 14	592	4538	344	6869	12347	< 2	na	10	95	< 5	3857
LSH-04 T13A	< 14	78	2300	81	1514	3973	35	na	115	12375	2402	< 9
LSH-04 T13B	< 14	364	5926	446	7800	14540	23	na	82	2072	23	< 9
LSH-04 T13C	< 14	323	5030	375	5633	11365	5	na	19	449	119	< 9
LSH-04 T13D	21	775	2691	125	1967	5581	14	na	32	597	12	72
LSH-04 T13E	< 14	621	2430	103	1942	5111	12	na	16	624	< 5	242
LSH-04 T13F	< 14	350	2470	84	1788	4703	4	na	< 4	6	6	< 9
LSH-03 T3A	< 14	23	335	42	667	1066	70	na	248	30472	50178	4102
LSH-03 T3D	< 14	239	3134	108	3340	6839	251	na	465	11439	1981	107793
SH-05 T3A	23	509	2014	434	2664	5756	151	na	226	4654	336	101582
SH-04 T42A	< 14	1025	3460	1020	4181	9821	34	365	85	74	170	498
SH-04 T40A	20	1007	3195	1306	5275	10804	89	na	191	4350	311	< 9
SH-05 T1A	< 14	415	2994	179	4385	7978	10	na	10	163	10	2087
SH-05 T2A	100	1606	7215	250	4494	14052	13	162	40	37	47	177
CAR-05 T2	56	202	546	43	415	1401	650	na	422	6713	255	285215
CAR-05 T1	< 14	< 9	51	36	152	247	359	na	651	26122	55089	4565
GG + HgS	187	3633	5509	359	3347	13036	< 2	na	< 4	< 2	< 5	< 9
HgS	na	na	na	na	na	na	na	na	na	na	na	na

Subsample ID	As ICP-MS Aqua Regia mg/kg 3	As ICP-MS Sum mg/kg 27	Ca ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg 7	Ca ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 7	Ca ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 14	Ca ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 9	Ca ICP-ES 1M NH_2OH 25% HOAc mg/kg 20	Ca ICP-ES 40% HNO_3 mg/kg 36	Ca ICP-ES Aqua Regia mg/kg 10	Ca ICP-ES Sum mg/kg 103	Cu ICP-MS 1M NH_4OAc 2 hr pH 7.0 mg/kg 0.7	Cu ICP-MS 0.1M $Na_4P_2O_7$ 1 hr mg/kg 0.7
LSH-04 T6A	< 3	3194	< 7	na	< 14	1059	21	< 36	23	1116	1.8	na
LSH-04 T6B	3	1062	554	na	121	1394	31	< 36	28	2139	7.0	na
LSH-04 T6C	5	1701	1079	na	181	1547	39	< 36	33	2890	2.9	na
LSH-04 T6D	24	2021	1279	na	212	1353	< 20	47	23	2934	1.2	na
LSH-04 T6E	143	4108	4395	na	1514	1307	31	45	31	7323	< 0.7	na
LSH-04 T13A	< 3	14924	< 7	na	< 14	136	< 20	< 36	17	181	< 0.7	na
LSH-04 T13B	9	2214	37	na	< 14	1036	< 20	< 36	47	1143	< 0.7	na
LSH-04 T13C	< 3	602	< 7	na	< 14	142	< 20	< 36	34	196	< 0.7	na
LSH-04 T13D	< 3	729	< 7	na	< 14	807	< 20	< 36	12	842	1.5	na
LSH-04 T13E	14	912	< 7	na	< 14	987	< 20	< 36	11	1017	1.7	na
LSH-04 T13F	< 3	< 27	11	na	< 14	683	< 20	< 36	< 10	725	12.7	na
LSH-03 T3A	81893	166964	< 7	na	< 14	16	85	< 36	16	129	< 0.7	na
LSH-03 T3D	360	122288	1001	na	15	847	108	< 36	143	2126	< 0.7	na
SH-05 T3A	1379	108327	90	na	< 14	561	90	< 36	189	952	< 0.7	na
SH-04 T42A	165	1392	74	< 7	< 14	894	129	< 36	312	1435	< 0.7	1.0
SH-04 T40A	14	4961	910	na	133	1136	162	< 36	384	2737	< 0.7	na
SH-05 T1A	34	2314	633	na	121	1090	32	< 36	39	1922	1.0	na
SH-05 T2A	17	493	234	21	< 14	1799	40	< 36	62	2165	< 0.7	2.8
CAR-05 T2	1845	295101	57	na	< 14	212	31	< 36	11	335	24.0	na
CAR-05 T1	53391	140175	< 7	na	< 14	< 9	< 20	< 36	14	< 103	< 0.7	na
GG + HgS	< 3	< 27	7562	na	361	1169	344	48	372	9857	< 0.7	na
HgS	na	na	na	na	na	na	na	na	na	na	na	na

Subsample ID	Cu ICP-MS 1M NH_4OAc 2 hr pH 5.0 mg/kg 1	Cu ICP-MS 0.25M NH_2OH 0.25M HCl mg/kg 0.9	Cu ICP-MS 1M NH_2OH 25% HOAc mg/kg 2	Cu ICP-MS 40% HNO_3 mg/kg 4	Cu ICP-MS Aqua Regia mg/kg 1	Cu ICP-MS Sum mg/kg 10.3	Fe ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg 2	Fe ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 2	Fe ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 4	Fe ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 2	Fe ICP-ES 1M NH_2OH 25% HOAc mg/kg 5	Fe ICP-ES 40% HNO_3 mg/kg 9	Fe ICP-ES Aqua Regia mg/kg 3
LSH-04 T6A	< 1	18.0	< 2	< 4	1	20.7	< 2	na	34	6575	7008	386	7606
LSH-04 T6B	6	9.8	< 2	< 4	9	32.7	5	na	104	3485	6920	434	8845
LSH-04 T6C	4	13.8	< 2	< 4	5	26.7	4	na	119	6229	15413	368	9872
LSH-04 T6D	2	5.5	< 2	< 4	8	15.9	4	na	41	3075	9794	732	8134
LSH-04 T6E	< 1	1.1	< 2	< 4	39	42.8	2	na	161	1804	9500	4489	14803
LSH-04 T13A	< 1	1.2	< 2	< 4	< 1	< 10	< 2	na	22	12902	6887	76	3032
LSH-04 T13B	< 1	2.5	< 2	< 4	< 1	< 10	5	na	98	4187	12730	782	15731
LSH-04 T13C	< 1	2.3	< 2	< 4	< 1	< 10	4	na	58	5301	12144	618	11437
LSH-04 T13D	1	32.6	< 2	< 4	4	39.0	< 2	na	26	2752	5693	235	4022
LSH-04 T13E	2	27.0	< 2	< 4	3	34.4	2	na	19	2202	5117	328	4009
LSH-04 T13F	2	4.8	< 2	< 4	2	22.7	< 2	na	< 4	575	5103	117	3638
LSH-03 T3A	< 1	4.4	5	< 4	75	86.0	3	na	76	43878	65841	3046	64402
LSH-03 T3D	1	5.7	6	4	79	95.8	411	na	635	19521	10356	90336	9928
SH-05 T3A	< 1	2.8	< 2	< 4	18	24.7	64	na	93	5672	4060	82165	4899
SH-04 T42A	< 1	1.1	< 2	< 4	16	17.7	4	610	109	1669	5975	2284	6583
SH-04 T40A	< 1	2.3	< 2	< 4	2	< 10	4	na	69	6106	6057	1938	8012
SH-05 T1A	< 1	2.6	< 2	< 4	26	30.7	3	na	34	2038	6372	2466	9215
SH-05 T2A	< 1	3.9	< 2	< 4	18	26.7	3	736	168	2868	14463	1978	8276
CAR-05 T2	6	23.9	9	< 4	40	105.6	64	na	102	6423	1916	241952	2533
CAR-05 T1	< 1	< 0.9	4	< 4	17	21.5	77	na	605	21249	40977	5472	39618
GG + HgS	< 1	< 0.9	< 2	< 4	< 1	< 10	< 2	na	240	4513	10161	544	4005
HgS	na	na	na	na	na	na	na	na	na	na	na	na	na

Subsample ID	Fe ICP-ES Sum mg/kg 27	Hg VG-ICP-MS 1M NH_4OAc 2 hr pH 7.0 µg/kg 1	Hg VG-ICP-MS 0.1M $Na_4P_2O_7$ 1 hr µg/kg 2	Hg VG-ICP-MS 1M NH_4OAc 2 hr pH 5.0 µg/kg 3	Hg VG-ICP-MS 0.25M NH_2OH 0.25M HCl µg/kg 1	Hg VG-ICP-MS 1M NH_2OH 25% HOAc µg/kg 3	Hg VG-ICP-MS 40% HNO_3 µg/kg 3	Hg VG-ICP-MS Aqua Regia µg/kg 3	Hg VG-ICP-MS Sum µg/kg 14	K ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg 18	K ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 18	K ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 35
LSH-04 T6A	21610	< 1	na	< 3	18	99	101	33	252	< 18	na	< 35
LSH-04 T6B	19794	< 1	na	< 3	7	9	15	11	40	< 18	na	< 35
LSH-04 T6C	32004	< 1	na	< 3	35	138	44	13	229	27	na	< 35
LSH-04 T6D	21780	< 1	na	< 3	171	774	96	153	1196	28	na	< 35
LSH-04 T6E	30759	< 1	na	< 3	59	121	146	58	384	< 18	na	< 35
LSH-04 T13A	22921	37	na	6	939	2327	346	480	4135	18	na	< 35
LSH-04 T13B	33534	29	na	5	512	625	124	196	1490	< 18	na	46
LSH-04 T13C	29562	10	na	3	285	742	52	62	1153	< 18	na	< 35
LSH-04 T13D	12730	22	na	5	516	1276	207	416	2443	< 18	na	< 35
LSH-04 T13E	11677	38	na	6	570	1214	513	711	3051	< 18	na	< 35
LSH-04 T13F	9437	5	na	4	238	1147	637	1698	3730	< 18	na	< 35
LSH-03 T3A	177246	< 1	na	< 3	402	8705	3608	10218	22934	< 18	na	< 35
LSH-03 T3D	131186	10	na	8	518	3408	2673	1415	8032	< 18	na	103
SH-05 T3A	96951	16	na	7	539	3369	1362	204	5497	30	na	43
SH-04 T42A	17233	< 1	230	3	4	343	471	143	1195	21	< 18	< 35
SH-04 T40A	22186	< 1	na	3	46	369	46	26	491	56	na	< 35
SH-05 T1A	20128	< 1	na	< 3	12	20	17	10	59	< 18	na	< 35
SH-05 T2A	28494	< 1	71	4	6	95	328	14	515	157	52	< 35
CAR-05 T2	252990	29	na	30	593	5479	760	537	7428	< 18	na	< 35
CAR-05 T1	107997	14	na	14	394	1570	2007	1101	5099	< 18	na	46
GG + HgS	19463	< 1	na	< 3	4	15	15	1169	1200	446	na	49
HgS	na	9957	na	20180	813	1244	21622	797079408	797133224	na	na	na

Subsample ID	K ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 23	K ICP-ES 1M NH_2OH 25% HOAc mg/kg 50	K ICP-ES 40% HNO_3 mg/kg 90	K ICP-ES Aqua Regia mg/kg 25	K ICP-ES Sum mg/kg 259	Mg ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg 2	Mg ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 2	Mg ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 4	Mg ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 2	Mg ICP-ES 1M NH_2OH 25% HOAc mg/kg 5	Mg ICP-ES 40% HNO_3 mg/kg 9	Mg ICP-ES Aqua Regia mg/kg 3
LSH-04 T6A	43	302	170	516	1017	< 2	na	< 4	201	2139	109	2588
LSH-04 T6B	47	270	129	594	993	31	na	18	307	2214	115	3036
LSH-04 T6C	226	662	471	840	2209	45	na	23	894	5051	95	3346
LSH-04 T6D	66	432	300	630	1436	24	na	26	465	2770	84	2770
LSH-04 T6E	126	552	367	1219	2247	25	na	15	395	2966	146	4567
LSH-04 T13A	< 23	264	< 90	253	551	< 2	na	< 4	25	1555	25	978
LSH-04 T13B	40	457	494	1178	2220	3	na	< 4	186	3982	212	5208
LSH-04 T13C	37	526	290	1024	1920	< 2	na	< 4	136	3382	169	3762
LSH-04 T13D	26	334	< 90	388	871	< 2	na	< 4	139	1818	51	1296
LSH-04 T13E	36	232	< 90	324	648	< 2	na	< 4	159	1703	40	1328
LSH-04 T13F	32	214	< 90	295	576	3	na	< 4	168	1680	34	1201
LSH-03 T3A	< 23	69	< 90	133	314	< 2	na	< 4	< 2	245	< 9	268
LSH-03 T3D	77	421	94	593	1301	98	na	< 4	103	2148	38	2257
SH-05 T3A	52	969	501	1582	3177	122	na	< 4	237	1400	187	1730
SH-04 T42A	141	1814	1156	2316	5453	51	4	< 4	546	2344	539	2718
SH-04 T40A	87	1383	1286	2864	5678	24	na	< 4	398	2157	667	3425
SH-05 T1A	45	271	249	658	1189	9	na	6	249	2019	83	3008
SH-05 T2A	232	814	372	841	2481	373	21	< 4	819	4825	87	2783
CAR-05 T2	< 23	< 50	< 90	131	< 259	29	na	< 4	14	320	< 9	248
CAR-05 T1	< 23	< 50	< 90	234	371	2	na	< 4	< 2	10	< 9	12
GG + HgS	899	1073	504	1472	4442	96	na	198	2440	6073	191	1879
HgS	na	na	na	na	na	na	na	na	na	na	na	na

Subsample ID	Mg ICP-ES Sum mg/kg 27	Mn ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg 0.4	Mn ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 0.4	Mn ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 0.7	Mn ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 0.5	Mn ICP-ES 1M NH_2OH 25% HOAc mg/kg 1	Mn ICP-ES 40% HNO_3 mg/kg 2	Mn ICP-ES Aqua Regia mg/kg 0.5	Mn ICP-ES Sum mg/kg 6	Na ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg 18	Na ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 18	Na ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 35
LSH-04 T6A	5038	0.7	na	1.0	235.8	67.8	4.4	98.7	408	< 18	na	< 35
LSH-04 T6B	5722	4.8	na	13.6	173.2	68.6	4.5	114.7	379	< 18	na	< 35
LSH-04 T6C	9452	9.6	na	16.1	199.1	161.0	3.4	136.9	526	< 18	na	< 35
LSH-04 T6D	6138	21.0	na	17.0	175.3	89.3	3.7	104.6	411	< 18	na	< 35
LSH-04 T6E	8114	97.7	na	47.1	35.4	99.1	7.3	163.9	451	< 18	na	< 35
LSH-04 T13A	2583	< 0.4	na	< 0.7	1.5	47.0	< 2	46.8	96	< 18	na	< 35
LSH-04 T13B	9589	< 0.4	na	< 0.7	9.8	129.7	9.7	197.6	347	< 18	na	< 35
LSH-04 T13C	7450	0.5	na	< 0.7	213.9	108.3	7.6	147.8	478	< 18	na	< 35
LSH-04 T13D	3304	0.6	na	1.5	361.1	54.1	< 2	60.4	479	< 18	na	< 35
LSH-04 T13E	3230	1.0	na	2.0	354.2	50.1	< 2	61.2	470	< 18	na	< 35
LSH-04 T13F	3086	< 0.4	na	< 0.7	6.6	48.3	< 2	52.5	109	< 18	na	< 35
LSH-03 T3A	521	< 0.4	na	< 0.7	< 0.5	93.6	< 2	24.6	119	< 18	na	< 35
LSH-03 T3D	4644	361.0	na	17.4	47.4	71.0	< 2	85.7	584	< 18	na	< 35
SH-05 T3A	3676	7.4	na	0.7	12.8	63.8	16.2	72.8	174	< 18	na	< 35
SH-04 T42A	6200	2.7	< 0.4	< 0.7	26.1	105.4	40.7	115.2	290	< 18	na	na
SH-04 T40A	6673	5.7	na	6.5	61.0	94.6	51.2	139.1	358	21	na	< 35
SH-05 T1A	5373	12.5	na	7.2	53.9	64.1	3.9	113.7	255	< 18	na	< 35
SH-05 T2A	8910	24.5	6.5	1.0	31.6	153.8	9.3	132.8	360	2510	na	na
CAR-05 T2	612	3.8	na	< 0.7	25.7	5.6	< 2	3.9	39	< 18	na	< 35
CAR-05 T1	< 27	0.4	na	< 0.7	< 0.5	1.6	< 2	0.8	< 6	< 18	na	< 35
GG + HgS	10877	40.6	na	15.3	55.3	79.9	5.5	27.8	224	137	na	< 35
HgS	na	na	na	na	na	na	na	na	na	na	na	na

Subsample ID	Na ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 23	Na ICP-ES 1M NH_2OH 25% HOAc mg/kg 50	Na ICP-ES 40% HNO_3 mg/kg 90	Na ICP-ES Aqua Regia mg/kg 25	Na ICP-ES Sum mg/kg 259	P ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg 18	P ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 18	P ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 35	P ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 23	P ICP-ES 1M NH_2OH 25% HOAc mg/kg 50	P ICP-ES 40% HNO_3 mg/kg 90	P ICP-ES Aqua Regia mg/kg 25
LSH-04 T6A	< 23	< 50	< 90	< 25	< 259	< 18	na	< 35	475	62	< 90	< 25
LSH-04 T6B	< 23	< 50	< 90	< 25	< 259	< 18	na	< 35	526	65	< 90	< 25
LSH-04 T6C	< 23	< 50	< 90	39	< 259	< 18	na	< 35	601	60	< 90	< 25
LSH-04 T6D	< 23	< 50	< 90	< 25	< 259	< 18	na	< 35	407	68	< 90	< 25
LSH-04 T6E	< 23	< 50	< 90	< 25	< 259	< 18	na	< 35	510	67	< 90	< 25
LSH-04 T13A	< 23	< 50	< 90	26	< 259	< 18	na	< 35	181	93	< 90	< 25
LSH-04 T13B	< 23	< 50	< 90	< 25	< 259	< 18	na	< 35	498	82	< 90	< 25
LSH-04 T13C	< 23	< 50	< 90	< 25	< 259	< 18	na	< 35	322	123	< 90	< 25
LSH-04 T13D	< 23	< 50	< 90	< 25	< 259	< 18	na	< 35	389	89	< 90	< 25
LSH-04 T13E	< 23	< 50	< 90	< 25	< 259	< 18	na	< 35	449	86	< 90	< 25
LSH-04 T13F	< 23	< 50	< 90	< 25	< 259	< 18	na	< 35	314	71	< 90	< 25
LSH-03 T3A	< 23	< 50	< 90	< 25	< 259	< 18	na	< 35	41	115	< 90	179
LSH-03 T3D	< 23	< 50	< 90	27	< 259	< 18	na	< 35	322	170	< 90	< 25
SH-05 T3A	< 23	< 50	< 90	64	< 259	< 18	na	< 35	267	91	< 90	< 25
SH-04 T42A	na	na	na	na	na	< 18	na	na	na	na	na	na
SH-04 T40A	27	< 50	< 90	122	< 259	< 18	na	< 35	388	67	< 90	< 25
SH-05 T1A	< 23	< 50	< 90	29	< 259	< 18	na	< 35	426	62	< 90	< 25
SH-05 T2A	na	na	na	na	na	< 18	na	na	na	na	na	na
CAR-05 T2	< 23	< 50	< 90	< 25	< 259	< 18	na	< 35	130	71	< 90	< 25
CAR-05 T1	< 23	< 50	< 90	< 25	< 259	< 18	na	< 35	< 23	90	< 90	58
GG + HgS	344	373	< 90	460	1383	< 18	na	< 35	328	75	< 90	< 25
HgS	na	na	na	na	na	na	na	na	na	na	na	na

Subsample ID	P ICP-ES Sum mg/kg 259	Pb ICP-MS 1M NH_4OAc 2 hr pH 7.0 mg/kg 4	Pb ICP-MS 0.1M $Na_4P_2O_7$ 1 hr mg/kg 4	Pb ICP-MS 1M NH_4OAc 2 hr pH 5.0 mg/kg 7	Pb ICP-MS 0.25M NH_2OH 0.25M HCl mg/kg 5	Pb ICP-MS 1M NH_2OH 25% HOAc mg/kg 10	Pb ICP-MS 40% HNO_3 mg/kg 18	Pb ICP-MS Aqua Regia mg/kg 5	Pb ICP-MS Sum mg/kg 53	S ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg 18	S ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 18	S ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 35
LSH-04 T6A	541	< 4	na	< 7	53	< 10	< 18	< 5	62	< 18	na	< 35
LSH-04 T6B	593	< 4	na	< 7	49	< 10	< 18	< 5	59	< 18	na	< 35
LSH-04 T6C	666	< 4	na	< 7	68	< 10	< 18	< 5	68	< 18	na	< 35
LSH-04 T6D	472	< 4	na	< 7	44	< 10	< 18	< 5	< 53	< 18	na	< 35
LSH-04 T6E	573	15	na	16	25	20	< 18	< 5	94	102	na	< 35
LSH-04 T13A	268	< 4	na	< 7	91	17	< 18	< 5	118	358	na	< 35
LSH-04 T13B	578	< 4	na	< 7	26	< 10	< 18	< 5	< 53	142	na	< 35
LSH-04 T13C	467	< 4	na	< 7	15	< 10	< 18	< 5	< 53	144	na	< 35
LSH-04 T13D	482	< 4	na	10	63	< 10	< 18	< 5	78	61	na	< 35
LSH-04 T13E	523	< 4	na	7	63	< 10	< 18	< 5	79	< 18	na	< 35
LSH-04 T13F	383	26	na	< 7	< 5	< 10	< 18	< 5	< 53	24	na	< 35
LSH-03 T3A	329	< 4	na	17	1250	3181	< 18	150	4616	5095	na	1662
LSH-03 T3D	474	38	na	102	904	105	101	6	1257	4066	na	131
SH-05 T3A	349	< 4	na	< 7	86	31	21	< 5	141	1045	na	< 35
SH-04 T42A	na	< 4	7	< 7	< 5	< 10	< 18	< 5	< 53	223	38	< 35
SH-04 T40A	466	< 4	na	< 7	20	< 10	< 18	< 5	< 53	< 18	na	< 35
SH-05 T1A	480	< 4	na	< 7	19	< 10	< 18	< 5	< 53	53	na	< 35
SH-05 T2A	na	23	23	< 7	11	< 10	< 18	< 5	66	559	120	61
CAR-05 T2	< 259	66	na	76	861	251	228	< 5	1487	1284	na	69
CAR-05 T1	< 259	80	na	136	334	144	19	31	742	4452	na	92
GG + HgS	403	< 4	na	< 7	< 5	< 10	< 18	< 5	< 53	19	na	< 35
HgS	na	na	na	na	na	na	na	na	na	na	na	na

Subsample ID	S ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 23	S ICP-ES 1M NH_2OH 25% HOAc mg/kg 50	S ICP-ES 40% HNO_3 mg/kg 90	S ICP-ES Aqua Regia mg/kg 25	S ICP-ES Sum mg/kg 259	Sb ICP-MS 1M NH_4OAc 2 hr pH 7.0 mg/kg 2	Sb ICP-MS 0.1M $Na_4P_2O_7$ 1 hr mg/kg 2	Sb ICP-MS 1M NH_4OAc 2 hr pH 5.0 mg/kg 4	Sb ICP-MS 0.25M NH_2OH 0.25M HCl mg/kg 2	Sb ICP-MS 1M NH_2OH 25% HOAc mg/kg 5	Sb ICP-MS 40% HNO_3 mg/kg 9	Sb ICP-MS Aqua Regia mg/kg 3
LSH-04 T6A	< 23	< 50	< 90	< 25	< 259	< 2	na	< 4	8.50	< 5	< 9	< 3
LSH-04 T6B	< 23	< 50	< 90	< 25	< 259	< 2	na	< 4	2.70	< 5	< 9	< 3
LSH-04 T6C	< 23	< 50	< 90	29	< 259	< 2	na	< 4	3.50	< 5	< 9	< 3
LSH-04 T6D	< 23	< 50	209	90	312	< 2	na	< 4	< 2	< 5	< 9	< 3
LSH-04 T6E	33	< 50	2063	1447	3664	< 2	na	< 4	< 2	< 5	< 9	< 3
LSH-04 T13A	< 23	< 50	< 90	< 25	412	< 2	na	4.80	4.00	< 5	< 9	< 3
LSH-04 T13B	< 23	< 50	< 90	< 25	< 259	< 2	na	< 4	< 2	< 5	< 9	< 3
LSH-04 T13C	24	< 50	< 90	< 25	< 259	< 2	na	< 4	< 2	< 5	< 9	< 3
LSH-04 T13D	< 23	< 50	< 90	< 25	< 259	< 2	na	6.00	< 2	< 5	< 9	< 3
LSH-04 T13E	< 23	< 50	< 90	47	< 259	< 2	na	5.00	< 2	< 5	< 9	3.00
LSH-04 T13F	< 23	< 50	< 90	< 25	< 259	< 2	na	< 4	< 2	< 5	< 9	< 3
LSH-03 T3A	280	833	210	4619	12699	9.00	na	6.80	153.30	410.20	168.90	959.50
LSH-03 T3D	343	493	43856	19031	67919	3.20	na	5.20	28.10	14.20	385.60	21.50
SH-05 T3A	65	68	38026	13854	53084	< 2	na	< 4	< 2	< 5	55.90	6.90
SH-04 T42A	< 23	75	487	240	1077	< 2	< 2	< 4	< 2	< 5	< 9	< 3
SH-04 T40A	< 23	< 50	< 90	< 25	< 259	< 2	na	< 4	< 2	< 5	< 9	< 3
SH-05 T1A	< 23	< 50	1237	644	1956	< 2	na	< 4	< 2	< 5	< 9	< 3
SH-05 T2A	51	131	1717	302	2941	< 2	< 2	< 4	< 2	< 5	< 9	< 3
CAR-05 T2	120	87	114735	43599	159895	< 2	na	< 4	9.70	6.20	453.00	26.50
CAR-05 T1	154	859	2842	8794	17193	11.90	na	10.90	27.40	94.30	44.30	128.60
GG + HgS	< 23	< 50	211	93	329	< 2	na	< 4	< 2	< 5	< 9	< 3
HgS	na	na	na	na	na	na	na	na	na	na	na	na

Subsample ID	Sb ICP-MS Sum mg/kg 27	Si ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg 7	Si ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 7	Si ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 14	Si ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 9	Si ICP-ES 1M NH_2OH 25% HOAc mg/kg 20	Si ICP-ES 40% HNO_3 mg/kg 36	Si ICP-ES Aqua Regia mg/kg 10	Si ICP-ES Sum mg/kg 103	Ti ICP-ES 1M NH_4OAc 2 hr pH 7.0 mg/kg 0.7	Ti ICP-ES 0.1M $Na_4P_2O_7$ 1 hr mg/kg 0.7	Ti ICP-ES 1M NH_4OAc 2 hr pH 5.0 mg/kg 1
LSH-04 T6A	< 27	< 7	na	< 14	471	2463	187	216	3336	< 0.7	na	< 1
LSH-04 T6B	< 27	< 7	na	< 14	465	2514	208	247	3443	< 0.7	na	< 1
LSH-04 T6C	< 27	21	na	< 14	1854	5842	309	275	8311	< 0.7	na	< 1
LSH-04 T6D	< 27	9	na	< 14	733	3538	180	253	4713	< 0.7	na	< 1
LSH-04 T6E	< 27	< 7	na	< 14	651	3538	250	247	4692	< 0.7	na	< 1
LSH-04 T13A	< 27	< 7	na	< 14	91	2058	113	274	2539	< 0.7	na	< 1
LSH-04 T13B	< 27	8	na	< 14	408	4202	309	286	5211	< 0.7	na	< 1
LSH-04 T13C	< 27	< 7	na	< 14	305	3755	297	296	4649	< 0.7	na	< 1
LSH-04 T13D	< 27	< 7	na	< 14	452	2269	144	264	3132	< 0.7	na	< 1
LSH-04 T13E	< 27	< 7	na	< 14	427	2054	130	254	2867	< 0.7	na	< 1
LSH-04 T13F	< 27	< 7	na	< 14	344	2055	115	255	2771	< 0.7	na	< 1
LSH-03 T3A	1707.70	< 7	na	< 14	24	497	< 36	213	778	< 0.7	na	< 1
LSH-03 T3D	457.80	21	na	< 14	391	2644	136	255	3454	< 0.7	na	< 1
SH-05 T3A	70.70	56	na	20	522	2076	239	245	3157	< 0.7	na	< 1
SH-04 T42A	< 27	16	22	< 14	1073	3569	465	271	5416	< 0.7	7.1	< 1
SH-04 T40A	< 27	< 7	na	< 14	758	2957	556	272	4548	< 0.7	na	< 1
SH-05 T1A	< 27	< 7	na	< 14	438	2291	139	261	3130	< 0.7	na	< 1
SH-05 T2A	< 27	14	192	26	1551	5569	297	262	7910	< 0.7	10.9	2
CAR-05 T2	497.80	26	na	< 14	70	482	57	168	813	< 0.7	na	< 1
CAR-05 T1	317.40	20	na	40	53	125	48	141	426	< 0.7	na	< 1
GG + HgS	< 27	16	na	153	3272	3623	389	292	7745	< 0.7	na	3
HgS	na	na	na	na	na	na	na	na	na	na	na	na

Subsample ID	Ti ICP-ES 0.25M NH_2OH 0.25M HCl mg/kg 0.9	Ti ICP-ES 1M NH_2OH 25% HOAc mg/kg 2	Ti ICP-ES 40% HNO_3 mg/kg 4	Ti ICP-ES Aqua Regia mg/kg 1	Ti ICP-ES Sum mg/kg 10	Zn ICP-MS 1M NH_4OAc 2 hr pH 7.0 mg/kg 2	Zn ICP-MS 0.1M $Na_4P_2O_7$ 1 hr mg/kg 2	Zn ICP-MS 1M NH_4OAc 2 hr pH 5.0 mg/kg 4	Zn ICP-MS 0.25M NH_2OH 0.25M HCl mg/kg 2	Zn ICP-MS 1M NH_2OH 25% HOAc mg/kg 5	Zn ICP-MS 40% HNO_3 mg/kg 9	Zn ICP-MS Aqua Regia mg/kg 3	Zn ICP-MS Sum mg/kg 27
LSH-04 T6A	16.0	51	13	266	346	< 2	na	< 4	9	13	< 9	15	38
LSH-04 T6B	12.6	55	14	302	382	15	na	15	29	14	< 9	18	97
LSH-04 T6C	37.9	105	28	347	518	7	na	13	58	32	< 9	20	132
LSH-04 T6D	19.0	87	13	268	387	8	na	11	27	17	< 9	15	79
LSH-04 T6E	16.7	87	18	365	486	4	na	< 4	8	22	49	39	122
LSH-04 T13A	16.9	46	< 4	178	245	< 2	na	< 4	< 2	10	< 9	6	< 27
LSH-04 T13B	8.6	79	25	514	626	< 2	na	< 4	< 2	24	< 9	34	61
LSH-04 T13C	12.1	84	24	466	587	< 2	na	< 4	< 2	23	< 9	25	52
LSH-04 T13D	7.8	42	7	269	325	< 2	na	< 4	24	12	< 9	8	44
LSH-04 T13E	12.2	37	5	259	313	< 2	na	< 4	32	10	< 9	8	52
LSH-04 T13F	10.5	35	5	201	251	19	na	< 4	6	9	< 9	9	43
LSH-03 T3A	7.1	11	21	70	110	< 2	na	< 4	< 2	16	< 9	4	< 27
LSH-03 T3D	5.4	69	9	187	270	65	na	12	19	18	92	24	229
SH-05 T3A	29.8	141	32	403	605	3	na	< 4	< 2	5	30	8	47
SH-04 T42A	45.7	264	91	732	1141	3	< 2	< 4	6	10	18	13	50
SH-04 T40A	28.1	193	88	875	1184	< 2	na	< 4	3	8	< 9	11	27
SH-05 T1A	17.9	56	11	272	358	3	na	< 4	15	12	28	32	89
SH-05 T2A	30.4	87	36	426	592	6	7	< 4	11	29	28	18	98
CAR-05 T2	1.2	3	< 4	11	15	< 2	na	< 4	< 2	7	82	18	108
CAR-05 T1	1.4	< 2	< 4	8	13	< 2	na	< 4	< 2	< 5	< 9	< 3	< 27
GG + HgS	128.7	174	95	412	813	< 2	na	< 4	7	15	22	6	50
HgS	na	na	na	na	na	na	na	na	na	na	na	na	na

APPENDIX F

QA/QC analyses of certified reference materials

Replicate analyses of CANMET Certified Reference Materials at ACME Analytical Laboratories

CRM	Analysis date	GSC-A Lab ID	Ag (µg/kg) DL = 2	Al (% dry wt.) 0.01	As (mg/kg) 0.1	Au (µg/kg) 0.2	B (mg/kg) 1	Ba (mg/kg) 0.5	Be (mg/kg) 0.1	Bi (mg/kg) 0.02	Ca (% dry wt.) 0.01	Cd (mg/kg) 0.01	Ce (mg/kg) 0.1	Co (mg/kg) 0.1	Cr (mg/kg) 0.5	Cs (mg/kg) 0.02	Cu (mg/kg) 0.01
STSD-1		**Certified Values:**	**300**	**1.28**	**17**			**261**			**1.64**	**0.80**		**14.0**	**28.0**		**36**
STSD-1	December 2003	196936	322	1.06	21	3.0	10	271	na	0.52	1.58	0.97	na	13.7	28.2	na	37
STSD-1	December 2003	196940	292	1.02	18	*215*	8	256	na	0.51	1.57	0.92	na	14.3	27.8	na	37
STSD-1	December 2003	196944	294	1.05	20	4.1	8	278	na	0.58	1.61	1.00	na	14.5	31.5	na	37
STSD-1	December 2003	20030197	277	0.85	18	3.0	5	245	na	0.43	1.38	0.88	na	13.3	25.8	na	34
STSD-1	December 2004	20040677	279	1.08	19	3.7	9	266	0.5	0.44	1.56	0.91	35.2	13.8	30.2	1.08	35
STSD-1	September 2006	20060011	304	1.02	16	5.0	6	243	0.6	0.44	1.52	0.92	34.7	15.4	24.2	1.06	37
STSD-1	January 2007	20060100	239	1.01	17	4.0	7	224	0.4	0.48	1.43	0.91	32.2	13.4	25.0	1.07	34
STSD-1	January 2007	20060142	296	1.09	19	4.0	8	253	0.4	0.47	1.61	1.01	35.1	14.1	27.3	1.12	38
Summary Statistics		**Min.**	**239**	**0.85**	**16**	**3.0**	**5**	**224**	**0.4**	**0.43**	**1.38**	**0.88**	**32.2**	**13.3**	**24.2**	**1.06**	**34**
		Max.	**322**	**1.09**	**21**	**215**	**10**	**278**	**0.6**	**0.58**	**1.61**	**1.01**	**35.2**	**15.4**	**31.5**	**1.12**	**38**
		Mean	**288**	**1.02**	**18**	**30.2**	**8**	**254**	**0.5**	**0.48**	**1.53**	**0.94**	**34.3**	**14.1**	**27.5**	**1.08**	**36**
		Median	**293**	**1.04**	**18**	**4.0**	**8**	**254**	**0.5**	**0.48**	**1.57**	**0.92**	**34.9**	**14.0**	**27.6**	**1.08**	**37**
		%RSD	**8%**	**7%**	**8%**	**247%**	**21%**	**7%**	**20%**	**11%**	**6%**	**5%**	**4%**	**5%**	**9%**	**2%**	**4%**
		Percent error of mean	**-4.1%**	**-20%**	**+8%**			**-3%**			**-7%**	**+18%**		**+0%**	**-2%**		**+0%**
		n	**8**	**8**	**8**	**8**	**8**	**8**	**4**	**8**	**8**	**8**	**4**	**8**	**8**	**4**	**8**

CRM	Analysis date	GSC-A Lab ID	Ag (µg/kg) DL = 2	Al (% dry wt.) 0.01	As (mg/kg) 0.1	Au (µg/kg) 0.2	B (mg/kg) 1	Ba (mg/kg) 0.5	Be (mg/kg) 0.1	Bi (mg/kg) 0.02	Ca (% dry wt.) 0.01	Cd (mg/kg) 0.01	Ce (mg/kg) 0.1	Co (mg/kg) 0.1	Cr (mg/kg) 0.5	Cs (mg/kg) 0.02	Cu (mg/kg) 0.01
STSD-2		**Certified Values:**	**500**	**3.78**	**32**			**110**			**1.37**	**0.80**		**17.0**	**50.0**		**43**
STSD-2	December 2003	196937	488	2.83	34	1.9	3	101	na	3.81	1.05	0.83	na	16.0	48.0	na	40
STSD-2	December 2003	196941	507	3.00	34	0.4	3	100	na	4.00	1.10	0.83	na	17.8	53.1	na	43
STSD-2	December 2003	196945	497	2.79	33	1.4	3	103	na	4.19	1.08	0.84	na	17.9	50.5	na	44
STSD-2	December 2003	20030198	487	3.03	36	2.7	2	101	na	3.81	1.10	0.84	na	17.6	55.2	na	45
STSD-2	December 2004	20040678	480	3.07	33	0.9	2	98	3.3	3.76	1.10	0.80	49.6	16.9	54.7	6.54	44
STSD-2	September 2006	20060012	566	3.05	32	2.6	<1	102	2.7	4.31	1.11	0.97	54.4	18.9	45.9	7.37	49
STSD-2	January 2007	20060101	441	2.91	33	1.6	<1	89	2.3	3.72	1.02	0.83	47.8	16.4	48.0	6.85	42
STSD-2	January 2007	20060143	465	3.04	33	1.4	2	91	2.7	3.96	1.11	0.92	49.9	17.5	50.7	6.68	45
Summary Statistics		**Min.**	**441**	**2.79**	**32**	**0.4**	**<1**	**89**	**2.3**	**3.72**	**1.02**	**0.80**	**47.8**	**16.0**	**45.9**	**6.54**	**40**
		Max.	**566**	**3.07**	**36**	**2.7**	**3**	**103**	**3.3**	**4.31**	**1.11**	**0.97**	**54.4**	**18.9**	**55.2**	**7.37**	**49**
		Mean	**491**	**2.97**	**33**	**1.6**	**3**	**98**	**2.8**	**3.95**	**1.08**	**0.86**	**50.4**	**17.4**	**50.8**	**6.86**	**44**
		Median	**488**	**3.02**	**33**	**1.5**	**3**	**100**	**2.7**	**3.89**	**1.10**	**0.84**	**49.8**	**17.6**	**50.6**	**6.77**	**44**
		%RSD	**7%**	**4%**	**3%**	**49%**	**22%**	**6%**	**15%**	**5%**	**3%**	**7%**	**6%**	**5%**	**7%**	**5%**	**6%**
		Percent error of mean	**-2.1%**	**-22%**	**+4%**			**-11%**			**-21%**	**+7%**		**+2%**	**+2%**		**+2%**
		n	**8**	**8**	**8**	**8**	**6**	**8**	**4**	**8**	**8**	**8**	**4**	**8**	**8**	**4**	**8**

Notes: na = not analyzed; DL = detection limit; shaded results in italics likely represent carry-over from gold mine tailings with high As, Au and Hg concentrations; CRM values from Lynch (1990, 1999).

Replicate analyses of CANMET Certified Reference Materials at ACME Analytical Laboratories

CRM	Analysis date	GSC-A Lab ID	Ag (µg/kg) DL = 2	Al (% dry wt.) 0.01	As (mg/kg) 0.1	Au (µg/kg) 0.2	B (mg/kg) 1	Ba (mg/kg) 0.5	Be (mg/kg) 0.1	Bi (mg/kg) 0.02	Ca (% dry wt.) 0.01	Cd (mg/kg) 0.01	Ce (mg/kg) 0.1	Co (mg/kg) 0.1	Cr (mg/kg) 0.5	Cs (mg/kg) 0.02	Cu (mg/kg) 0.01
STSD-3		**Certified Values:**	**400**	**1.98**	**22**			**692**			**1.33**	**1.00**		**14.0**	**34.0**		**38**
STSD-3	December 2003	196938	387	1.53	25	2.3	7	604	na	1.47	1.23	1.15	na	15.0	32.9	na	38
STSD-3	December 2003	196942	411	1.47	25	2.6	7	571	na	1.41	1.23	1.21	na	15.6	31.4	na	42
STSD-3	December 2003	196946	392	1.49	25	2.2	5	585	na	1.40	1.24	1.14	na	14.6	34.4	na	40
STSD-3	December 2003	20030199	378	1.45	24	5.8	5	575	na	1.32	1.15	1.08	na	14.2	32.8	na	38
STSD-3	December 2004	20040679	377	1.53	23	*18.5*	7	545	1.3	1.30	1.20	1.06	38.0	13.8	34.4	2.73	37
STSD-3	September 2006	20060013	408	1.52	21	2.2	2	576	1.3	1.30	1.17	1.18	40.2	14.4	29.6	2.69	38
STSD-3	January 2007	20060102	340	1.48	23	2.7	3	560	1.2	1.47	1.15	1.14	38.6	13.4	30.7	2.98	37
STSD-3	January 2007	20060144	350	1.51	22	2.7	8	585	1.1	1.30	1.20	1.17	36.2	13.4	30.7	2.80	38
STSD-3	January 2007	20060172	373	1.48	*140*	1.8	7	578	0.9	1.30	1.14	1.20	37.3	14.1	30.0	2.80	35
Summary Statistics		**Min.**	**340**	**1.45**	**21**	**1.8**	**2**	**545**	**0.9**	**1.30**	**1.14**	**1.06**	**36.2**	**13.4**	**29.6**	**2.69**	**35**
		Max.	**411**	**1.53**	**140**	**18.5**	**8**	**604**	**1.3**	**1.47**	**1.24**	**1.21**	**40.2**	**15.6**	**34.4**	**2.98**	**42**
		Mean	**380**	**1.50**	**36**	**4.5**	**6**	**575**	**1.2**	**1.36**	**1.19**	**1.15**	**38.1**	**14.3**	**31.9**	**2.80**	**38**
		Median	**378**	**1.49**	**24**	**2.6**	**7**	**576**	**1.2**	**1.32**	**1.20**	**1.15**	**38.0**	**14.2**	**31.4**	**2.80**	**38**
		%RSD	**6%**	**2%**	**107%**	**118%**	**36%**	**3%**	**14%**	**5%**	**3%**	**4%**	**4%**	**5%**	**6%**	**4%**	**5%**
		Percent error of mean	**-5%**	**-24%**	**+65%**			**-17%**			**-11%**	**+15%**		**+2%**	**-6%**		**-0%**
		n	**9**	**9**	**9**	**9**	**9**	**9**	**5**	**9**	**9**	**9**	**5**	**9**	**9**	**5**	**9**

CRM	Analysis date	GSC-A Lab ID	Ag (µg/kg) DL = 2	Al (% dry wt.) 0.01	As (mg/kg) 0.1	Au (µg/kg) 0.2	B (mg/kg) 1	Ba (mg/kg) 0.5	Be (mg/kg) 0.1	Bi (mg/kg) 0.02	Ca (% dry wt.) 0.01	Cd (mg/kg) 0.01	Ce (mg/kg) 0.1	Co (mg/kg) 0.1	Cr (mg/kg) 0.5	Cs (mg/kg) 0.02	Cu (mg/kg) 0.01
STSD-4		**Certified Values:**	**300**	**1.37**	**11**			**1280**			**1.23**	**0.60**		**11.0**	**30.0**		**66**
STSD-4	December 2003	196939	298	1.02	11	2.3	4	940	na	0.22	1.06	0.38	na	10.1	33.2	na	61
STSD-4	December 2003	196943	309	0.88	12	1.4	4	854	na	0.20	1.06	0.38	na	10.6	30.0	na	66
STSD-4	December 2003	196947	301	0.86	11	2.1	4	789	na	0.19	1.02	0.39	na	10.4	28.6	na	69
STSD-4	December 2003	20030200	308	1.07	12	2.7	9	1171	na	0.26	1.08	0.39	na	10.8	33.5	na	71
STSD-4	December 2004	20040680	273	1.01	10	1.9	3	758	0.4	0.18	1.04	0.35	23.5	9.6	31.6	0.78	62
STSD-4	September 2006	20060014	351	1.01	10	1.3	1	756	0.4	0.20	1.05	0.37	24.9	10.5	28.3	0.77	64
STSD-4	January 2007	20060103	285	1.00	11	1.9	2	880	0.2	0.21	1.02	0.40	25.7	9.8	28.8	0.90	65
STSD-4	January 2007	20060145	281	1.04	11	1.7	4	975	0.4	0.19	1.08	0.42	24.9	10.5	29.4	0.84	66
STSD-4	January 2007	20060173	286	0.99	12	<0.2	4	886	0.3	0.18	1.02	0.37	23.4	10.3	26.8	0.80	62
Summary Statistics		**Min.**	**273**	**0.86**	**10**	**<0.2**	**1**	**756**	**0.2**	**0.18**	**1.02**	**0.35**	**23.4**	**9.6**	**26.8**	**0.77**	**61**
		Max.	**351**	**1.07**	**12**	**2.7**	**9**	**1171**	**0.4**	**0.26**	**1.08**	**0.42**	**25.7**	**10.8**	**33.5**	**0.90**	**71**
		Mean	**299**	**0.99**	**11**	**1.9**	**4**	**890**	**0.3**	**0.20**	**1.05**	**0.38**	**24.5**	**10.3**	**30.0**	**0.82**	**65**
		Median	**298**	**1.01**	**11**	**1.9**	**4**	**880**	**0.4**	**0.20**	**1.05**	**0.38**	**24.9**	**10.4**	**29.4**	**0.80**	**65**
		%RSD	**8%**	**7%**	**6%**	**24%**	**57%**	**15%**	**26%**	**12%**	**2%**	**5%**	**4%**	**4%**	**8%**	**6%**	**5%**
		Percent error of mean	**-0%**	**-28%**	**+0%**			**-30%**			**-15%**	**-36%**		**-6%**	**+0%**		**-1%**
		n	**9**	**9**	**9**	**8**	**9**	**9**	**5**	**9**	**9**	**9**	**5**	**9**	**9**	**5**	**9**

Notes: na = not analyzed; DL = detection limit; shaded results in italics likely represent carry-over from gold mine tailings with high As, Au and Hg concentrations; CRM values from Lynch (1990, 1999).

Replicate analyses of CANMET Certified Reference Materials at ACME Analytical Laboratories

CRM	Analysis date	GSC-A Lab ID	Fe (% dry wt.) 0.01	Ga (mg/kg) 0.1	Ge (mg/kg) 0.1	Hf (mg/kg) 0.02	Hg (µg/kg) 5	In (mg/kg) 0.02	K (% dry wt.) 0.01	La (mg/kg) 0.5	Li (mg/kg) 0.1	Mg (% dry wt.) 0.01	Mn (mg/kg) 1	Mo (mg/kg) 0.01	Na (% dry wt.) 0.001	Nb (mg/kg) 0.02
STSD-1		**Certified Values:**	**3.50**				**110**					**0.82**	**3740**	**2.00**		
STSD-1	December 2003	196936	3.27	3.5	na	na	90	na	0.07	22.6	na	0.75	3509	1.07	0.021	na
STSD-1	December 2003	196940	3.20	3.4	na	na	112	na	0.06	22.8	na	0.74	3499	1.04	0.019	na
STSD-1	December 2003	196944	3.30	3.7	na	na	111	na	0.07	24.2	na	0.76	3597	1.06	0.020	na
STSD-1	December 2003	20030197	2.93	3.3	na	na	97	na	0.06	20.6	na	0.66	3191	1.00	0.017	na
STSD-1	December 2004	20040677	3.33	3.7	0.1	0.03	105	0.04	0.08	23.5	9.3	0.76	3577	1.04	0.025	0.86
STSD-1	September 2006	20060011	3.27	3.6	<0.1	0.04	111	0.04	0.07	20.5	8.0	0.74	3427	1.02	0.022	0.84
STSD-1	January 2007	20060100	3.10	3.4	0.1	<0.02	89	0.04	0.07	18.6	8.7	0.73	3378	0.94	0.019	0.62
STSD-1	January 2007	20060142	3.44	3.7	0.1	<0.02	116	0.05	0.07	20.9	8.7	0.80	3902	1.01	0.026	0.64
Summary Statistics		**Min.**	**2.93**	**3.3**	**<0.1**	**<0.02**	**89**	**0.04**	**0.06**	**18.6**	**8.0**	**0.66**	**3191**	**0.94**	**0.017**	**0.62**
		Max.	**3.44**	**3.7**	**0.1**	**0.04**	**116**	**0.05**	**0.08**	**24.2**	**9.3**	**0.80**	**3902**	**1.07**	**0.026**	**0.86**
		Mean	**3.23**	**3.5**	**0.1**	**0.04**	**104**	**0.04**	**0.07**	**21.7**	**8.7**	**0.74**	**3510**	**1.02**	**0.021**	**0.74**
		Median	**3.27**	**3.6**	**0.1**	**0.04**	**108**	**0.04**	**0.07**	**21.8**	**8.7**	**0.75**	**3504**	**1.03**	**0.021**	**0.74**
		%RSD	**5%**	**5%**	**0%**	**20%**	**10%**	**12%**	**9%**	**9%**	**6%**	**5%**	**6%**	**4%**	**15%**	**17%**
		Percent error of mean	**-8%**				**-6%**					**-9%**	**-6%**	**-49%**		
		n	**8**	**8**	**3**	**2**	**8**	**4**	**8**	**8**	**4**	**8**	**8**	**8**	**8**	**4**

CRM	Analysis date	GSC-A Lab ID	Fe (% dry wt.) 0.01	Ga (mg/kg) 0.1	Ge (mg/kg) 0.1	Hf (mg/kg) 0.02	Hg (µg/kg) 5	In (mg/kg) 0.02	K (% dry wt.) 0.01	La (mg/kg) 0.5	Li (mg/kg) 0.1	Mg (% dry wt.) 0.01	Mn (mg/kg) 1	Mo (mg/kg) 0.01	Na (% dry wt.) 0.001	Nb (mg/kg) 0.02
STSD-2		**Certified Values:**	**4.10**				**46**					**1.42**	**720**	**13.00**		
STSD-2	December 2003	196937	3.87	9.2	na	na	33	na	0.19	31.3	na	1.25	780	11.35	0.052	na
STSD-2	December 2003	196941	3.96	9.2	na	na	31	na	0.17	32.8	na	1.29	829	11.43	0.054	na
STSD-2	December 2003	196945	3.88	9.1	na	na	28	na	0.17	33.9	na	1.26	813	11.19	0.052	na
STSD-2	December 2003	20030198	3.99	10.1	na	na	*78*	na	0.19	33.1	na	1.29	806	12.68	0.050	na
STSD-2	December 2004	20040678	4.03	9.7	0.1	0.06	40	0.10	0.19	34.8	53.4	1.32	791	11.71	0.062	1.56
STSD-2	September 2006	20060012	4.20	10.3	<0.1	0.07	39	0.08	0.19	32.9	49.1	1.29	750	12.63	0.056	*2.56*
STSD-2	January 2007	20060101	3.76	9.1	0.1	0.03	28	0.09	0.18	29.2	50.5	1.24	714	10.55	0.049	1.31
STSD-2	January 2007	20060143	4.06	9.9	0.1	0.03	37	0.08	0.19	29.3	50.0	1.32	755	11.60	0.063	1.21
Summary Statistics		**Min.**	**3.76**	**9.1**	**<0.1**	**0.03**	**28**	**0.08**	**0.17**	**29.2**	**49.1**	**1.24**	**714**	**10.55**	**0.049**	**1.21**
		Max.	**4.20**	**10.3**	**0.1**	**0.07**	**78**	**0.10**	**0.19**	**34.8**	**53.4**	**1.32**	**829**	**12.68**	**0.063**	**2.56**
		Mean	**3.97**	**9.6**	**0.1**	**0.05**	**39**	**0.09**	**0.18**	**32.2**	**50.8**	**1.28**	**780**	**11.64**	**0.055**	**1.66**
		Median	**3.98**	**9.5**	**0.1**	**0.05**	**35**	**0.09**	**0.19**	**32.9**	**50.3**	**1.29**	**785.5**	**11.52**	**0.053**	**1.44**
		%RSD	**3%**	**5%**	**0%**	**43%**	**42%**	**11%**	**5%**	**6%**	**4%**	**2%**	**5%**	**6%**	**10%**	**37%**
		Percent error of mean	**-3%**				**-15%**					**-10%**	**+8%**	**-10%**		
		n	**8**	**8**	**3**	**4**	**8**	**4**	**8**	**8**	**4**	**8**	**8**	**8**	**8**	**4**

Notes: na = not analyzed; DL = detection limit;

Replicate analyses of CANMET Certified Reference Materials at ACME Analytical Laboratories

CRM	Analysis date	GSC-A Lab ID	Fe (% dry wt.) 0.01	Ga (mg/kg) 0.1	Ge (mg/kg) 0.1	Hf (mg/kg) 0.02	Hg (µg/kg) 5	In (mg/kg) 0.02	K (% dry wt.) 0.01	La (mg/kg) 0.5	Li (mg/kg) 0.1	Mg (% dry wt.) 0.01	Mn (mg/kg) 1	Mo (mg/kg) 0.01	Na (% dry wt.) 0.001	Nb (mg/kg) 0.02
STSD-3		**Certified Values:**	**3.40**				**90**					**0.87**	**2630**	**7.00**		
STSD-3	December 2003	196938	3.23	5.2	na	na	80	na	0.12	24.9	na	0.78	2478	6.00	0.029	na
STSD-3	December 2003	196942	3.19	5.5	na	na	88	na	0.11	25.9	na	0.78	2491	6.32	0.027	na
STSD-3	December 2003	196946	3.24	5.1	na	na	81	na	0.13	24.7	na	0.79	2528	6.03	0.031	na
STSD-3	December 2003	20030199	3.06	5.1	na	na	83	na	0.12	22.8	na	0.74	2320	6.26	0.028	na
STSD-3	December 2004	20040679	3.17	5.2	0.1	<0.02	84	0.05	0.13	24.8	20.7	0.77	2313	6.10	0.034	1.44
STSD-3	September 2006	20060013	3.10	5.2	0.1	0.04	83	0.03	0.12	22.5	19.2	0.76	2336	5.89	0.029	1.64
STSD-3	January 2007	20060102	3.10	5.0	0.1	0.02	71	0.05	0.13	22.4	19.8	0.75	2359	5.54	0.029	1.12
STSD-3	January 2007	20060144	3.22	5.1	0.1	<0.02	86	0.05	0.14	21.2	19.4	0.78	2426	5.71	0.034	1.02
STSD-3	January 2007	20060172	3.06	5.1	<0.1	0.02	78	0.05	0.12	21.1	20.1	0.76	2321	5.58	0.033	1.50
Summary Statistics		**Min.**	**3.06**	**5.0**	**<0.1**	**<0.02**	**71**	**0.03**	**0.11**	**21.1**	**19.2**	**0.74**	**2313**	**5.54**	**0.027**	**1.02**
		Max.	**3.24**	**5.5**	**0.1**	**0.04**	**88**	**0.05**	**0.14**	**25.9**	**20.7**	**0.79**	**2528**	**6.32**	**0.034**	**1.64**
		Mean	**3.15**	**5.2**	**0.1**	**0.03**	**82**	**0.05**	**0.12**	**23.4**	**19.8**	**0.77**	**2397**	**5.94**	**0.030**	**1.34**
		Median	**3.17**	**5.1**	**0.1**	**0.02**	**83**	**0.05**	**0.12**	**22.8**	**19.8**	**0.77**	**2359**	**6.00**	**0.029**	**1.44**
		%RSD	**2%**	**3%**	**0%**	**43%**	**6%**	**19%**	**7%**	**7%**	**3%**	**2%**	**4%**	**5%**	**9%**	**20%**
		Percent error of mean	**-7%**				**-9%**					**-12%**	**-9%**	**-15%**		
		n	**9**	**9**	**4**	**3**	**9**	**5**	**9**	**9**	**5**	**9**	**9**	**9**	**9**	**5**

CRM	Analysis date	GSC-A Lab ID	Fe (% dry wt.) 0.01	Ga (mg/kg) 0.1	Ge (mg/kg) 0.1	Hf (mg/kg) 0.02	Hg (µg/kg) 5	In (mg/kg) 0.02	K (% dry wt.) 0.01	La (mg/kg) 0.5	Li (mg/kg) 0.1	Mg (% dry wt.) 0.01	Mn (mg/kg) 1	Mo (mg/kg) 0.01	Na (% dry wt.) 0.001	Nb (mg/kg) 0.02
STSD-4		**Certified Values:**	**2.60**				**930**					**0.75**	**1200**	**2.00**		
STSD-4	December 2003	196939	2.59	3.5	na	na	804	na	0.09	13.7	na	0.64	1177	1.22	0.033	na
STSD-4	December 2003	196943	2.57	3.3	na	na	1062	na	0.08	14.4	na	0.65	1221	1.22	0.032	na
STSD-4	December 2003	196947	2.45	3.3	na	na	777	na	0.09	13.9	na	0.62	1171	1.21	0.030	na
STSD-4	December 2003	20030200	2.64	3.9	na	na	904	na	0.09	14.7	na	0.68	1190	1.40	0.036	na
STSD-4	December 2004	20040680	2.54	3.3	<0.1	0.02	734	0.03	0.09	13.6	8.5	0.64	1062	1.14	0.036	0.79
STSD-4	September 2006	20060014	2.57	3.4	<0.1	0.06	842	0.03	0.09	12.0	9.0	0.66	1126	1.16	0.032	1.00
STSD-4	January 2007	20060103	2.49	3.6	<0.1	<0.02	790	0.03	0.09	12.7	9.0	0.66	1145	1.14	0.032	0.75
STSD-4	January 2007	20060145	2.61	3.5	0.1	<0.02	767	0.03	0.10	12.7	8.3	0.68	1176	1.21	0.037	0.71
STSD-4	January 2007	20060173	2.49	3.4	<0.1	0.05	762	0.03	0.09	11.2	9.0	0.65	1115	1.07	0.038	1.08
Summary Statistics		**Min.**	**2.45**	**3.3**	**<0.1**	**<0.02**	**734**	**0.03**	**0.08**	**11.2**	**8.3**	**0.62**	**1062**	**1.07**	**0.030**	**0.71**
		Max.	**2.64**	**3.9**	**0.1**	**0.06**	**1062**	**0.03**	**0.10**	**14.7**	**9.0**	**0.68**	**1221**	**1.40**	**0.038**	**1.08**
		Mean	**2.55**	**3.5**	**-**	**0.04**	**827**	**0.03**	**0.09**	**13.2**	**8.8**	**0.65**	**1154**	**1.20**	**0.034**	**0.87**
		Median	**2.57**	**3.4**	**-**	**0.05**	**790**	**0.03**	**0.09**	**13.6**	**9.0**	**0.65**	**1171**	**1.21**	**0.033**	**0.79**
		%RSD	**2%**	**6%**	**-**	**48%**	**12%**	**0%**	**6%**	**9%**	**4%**	**3%**	**4%**	**8%**	**8%**	**19%**
		Percent error of mean	**-2%**				**-11%**					**-13%**	**-4%**	**-40%**		
		n	**9**	**9**	**1**	**3**	**9**	**5**	**9**	**9**	**5**	**9**	**9**	**9**	**9**	**5**

Notes: na = not analyzed; DL = detection limit;

Replicate analyses of CANMET Certified Reference Materials at ACME Analytical Laboratories

CRM	Analysis date	GSC-A Lab ID	Ni (mg/kg) 0.1	P (% dry wt.) 0.001	Pb (mg/kg) 0.01	Rb (mg/kg) 0.1	Re (µg/kg) 1	S (% dry wt.) 0.02	Sb (mg/kg) 0.02	Sc (mg/kg) 0.1	Se (mg/kg) 0.1	Sn (mg/kg) 0.1	Sr (mg/kg) 0.5	Ta (mg/kg) 0.05	Te (mg/kg) 0.02	Th (mg/kg) 0.1	Ti (% dry wt.) 0.001
STSD-1		**Certified Values:**	**18**	**0.168**	**34**			**0.18**	**2.00**				**28**				**0.054**
STSD-1	December 2003	196936	19	0.143	35	na	na	0.22	2.40	3.3	1.9	na	28	na	0.07	0.7	0.025
STSD-1	December 2003	196940	18	0.130	33	na	na	0.20	2.13	2.9	1.8	na	28	na	0.04	0.7	0.034
STSD-1	December 2003	196944	20	0.139	36	na	na	0.21	2.17	3.1	1.9	na	29	na	0.05	0.7	0.029
STSD-1	December 2003	20030197	18	0.119	32	na	na	0.11	2.24	3.1	1.6	na	25	na	0.05	0.7	0.022
STSD-1	December 2004	20040677	21	0.148	37	8	1	0.23	2.08	3.6	1.9	1.8	29	<0.05	0.06	0.8	0.030
STSD-1	September 2006	20060011	19	0.145	35	8	2	0.22	2.00	3.6	1.5	2.0	28	<0.05	0.09	0.7	0.031
STSD-1	January 2007	20060100	19	0.138	33	7	4	0.26	2.35	3.2	1.7	1.8	26	<0.05	0.06	0.6	0.029
STSD-1	January 2007	20060142	20	0.152	33	8	2	0.23	2.37	3.4	1.9	1.9	30	<0.05	0.05	0.6	0.027
Summary Statistics		**Min.**	**18**	**0.119**	**32**	**7**	**1**	**0.11**	**2.00**	**2.9**	**1.5**	**1.8**	**25**	**-**	**0.04**	**0.6**	**0.022**
		Max.	**21**	**0.152**	**37**	**8**	**4**	**0.26**	**2.40**	**3.6**	**1.9**	**2.0**	**30**	**-**	**0.09**	**0.8**	**0.034**
		Mean	**19**	**0.139**	**34**	**8**	**2**	**0.21**	**2.22**	**3.3**	**1.8**	**1.9**	**28**	**-**	**0.06**	**0.7**	**0.028**
		Median	**19**	**0.141**	**34**	**8**	**2**	**0.22**	**2.21**	**3.3**	**1.9**	**1.9**	**28**	**-**	**0.06**	**0.7**	**0.029**
		%RSD	**6%**	**8%**	**6%**	**3%**	**56%**	**21%**	**7%**	**8%**	**9%**	**5%**	**5%**	**-**	**26%**	**9%**	**13%**
		Percent error of mean	**+6%**	**-17%**	**+1%**			**+17%**	**+11%**				**-1%**				**-47%**
		n	**8**	**8**	**8**	**4**	**4**	**8**	**8**	**8**	**8**	**4**	**8**	**0**	**8**	**8**	**8**

CRM	Analysis date	GSC-A Lab ID	Ni (mg/kg) 0.1	P (% dry wt.) 0.001	Pb (mg/kg) 0.01	Rb (mg/kg) 0.1	Re (µg/kg) 1	S (% dry wt.) 0.02	Sb (mg/kg) 0.02	Sc (mg/kg) 0.1	Se (mg/kg) 0.1	Sn (mg/kg) 0.1	Sr (mg/kg) 0.5	Ta (mg/kg) 0.05	Te (mg/kg) 0.02	Th (mg/kg) 0.1	Ti (% dry wt.) 0.001
STSD-2		**Certified Values:**	**47**	**0.145**	**66**			**0.06**	**2.60**				**144**				**0.172**
STSD-2	December 2003	196937	44	0.124	63	na	na	0.04	2.40	5.5	0.6	na	125	na	0.06	8.2	0.088
STSD-2	December 2003	196941	46	0.117	61	na	na	0.02	2.59	5.2	0.5	na	128	na	0.05	8.6	0.103
STSD-2	December 2003	196945	47	0.112	62	na	na	0.03	2.61	5.3	0.6	na	126	na	0.10	9.0	0.109
STSD-2	December 2003	20030198	50	0.116	64	na	na	0.02	2.94	5.9	0.4	na	128	na	0.07	9.4	0.091
STSD-2	December 2004	20040678	50	0.123	71	29	1	0.04	2.39	5.5	0.4	1.6	131	<0.05	0.05	8.9	0.104
STSD-2	September 2006	20060012	54	0.131	73	33	1	0.05	*1.84*	6.8	0.3	1.8	132	<0.05	0.11	8.7	0.112
STSD-2	January 2007	20060101	45	0.122	63	28	<1	0.07	2.96	5.3	0.6	1.6	123	<0.05	0.06	7.9	0.100
STSD-2	January 2007	20060143	51	0.133	60	28	<1	0.04	3.21	6.0	0.5	1.7	131	<0.05	0.05	9.1	0.102
Summary Statistics		**Min.**	**44**	**0.112**	**60**	**28**	**<1**	**0.02**	**1.84**	**5.2**	**0.3**	**1.6**	**123**	**-**	**0.05**	**7.9**	**0.088**
		Max.	**54**	**0.133**	**73**	**33**	**1**	**0.07**	**3.21**	**6.8**	**0.6**	**1.8**	**132**	**-**	**0.11**	**9.4**	**0.112**
		Mean	**48**	**0.122**	**65**	**30**	**1**	**0.04**	**2.62**	**5.7**	**0.5**	**1.7**	**128**	**-**	**0.07**	**8.7**	**0.101**
		Median	**48**	**0.123**	**63**	**29**	**1**	**0.04**	**2.60**	**5.5**	**0.5**	**1.7**	**128**	**-**	**0.06**	**8.8**	**0.103**
		%RSD	**7%**	**6%**	**7%**	**8%**	**0%**	**42%**	**16%**	**9%**	**23%**	**6%**	**3%**	**-**	**34%**	**6%**	**8%**
		Percent error of mean	**+3%**	**-16%**	**-2%**			**-35%**	**+1%**				**-11%**				**-41%**
		n	**8**	**8**	**8**	**4**	**2**	**8**	**8**	**8**	**8**	**4**	**8**	**0**	**8**	**8**	**8**

Notes: na = not analyzed; DL = detection limit;

Replicate analyses of CANMET Certified Reference Materials at ACME Analytical Laboratories

CRM	Analysis date	GSC-A Lab ID	Ni (mg/kg) 0.1	P (% dry wt.) 0.001	Pb (mg/kg) 0.01	Rb (mg/kg) 0.1	Re (µg/kg) 1	S (% dry wt.) 0.02	Sb (mg/kg) 0.02	Sc (mg/kg) 0.1	Se (mg/kg) 0.1	Sn (mg/kg) 0.1	Sr (mg/kg) 0.5	Ta (mg/kg) 0.05	Te (mg/kg) 0.02	Th (mg/kg) 0.1	Ti (% dry wt.) 0.001
STSD-3		**Certified Values:**	**25**	**0.161**	**39**			**0.14**	**2.40**				**67**				**0.061**
STSD-3	December 2003	196938	28	0.140	44	na	na	0.18	2.74	3.5	1.8	na	64	na	0.08	1.5	0.032
STSD-3	December 2003	196942	26	0.127	42	na	na	0.13	2.88	3.0	1.7	na	63	na	0.05	1.6	0.036
STSD-3	December 2003	196946	26	0.132	41	na	na	0.16	2.75	3.2	1.8	na	64	na	0.06	1.5	0.033
STSD-3	December 2003	20030199	26	0.121	39	na	na	0.10	3.00	3.4	1.6	na	60	na	0.05	1.6	0.028
STSD-3	December 2004	20040679	29	0.134	43	15	2	0.16	2.61	3.4	1.7	1.6	62	<0.05	0.08	1.7	0.033
STSD-3	September 2006	20060013	29	0.130	41	15	4	0.16	2.29	3.3	1.7	1.6	63	<0.05	0.04	1.2	0.037
STSD-3	January 2007	20060102	26	0.136	40	15	1	0.20	2.88	3.2	1.9	1.5	59	<0.05	0.06	1.2	0.034
STSD-3	January 2007	20060144	27	0.142	36	15	1	0.15	2.95	3.3	1.9	1.7	61	<0.05	0.04	1.4	0.032
STSD-3	January 2007	20060172	26	0.133	39	15	3	0.17	2.31	3.0	1.7	1.7	61	<0.05	0.05	1.1	0.035
Summary Statistics		**Min.**	**26**	**0.121**	**36**	**15**	**1**	**0.10**	**2.29**	**3.0**	**1.6**	**1.5**	**59**	**-**	**0.04**	**1.1**	**0.028**
		Max.	**29**	**0.142**	**44**	**15**	**4**	**0.20**	**3.00**	**3.5**	**1.9**	**1.7**	**64**	**-**	**0.08**	**1.7**	**0.037**
		Mean	**27**	**0.133**	**41**	**15**	**2**	**0.16**	**2.71**	**3.3**	**1.8**	**1.6**	**62**	**-**	**0.06**	**1.4**	**0.033**
		Median	**26**	**0.133**	**41**	**15**	**2**	**0.16**	**2.75**	**3.3**	**1.7**	**1.6**	**62**	**-**	**0.05**	**1.5**	**0.033**
		%RSD	**5%**	**5%**	**6%**	**1%**	**59%**	**18%**	**10%**	**5%**	**6%**	**5%**	**3%**	**-**	**26%**	**15%**	**8%**
		Percent error of mean	**+7%**	**-18%**	**+4%**			**+12%**	**+13%**				**-8%**				**-45%**
		n	**9**	**9**	**9**	**5**	**5**	**9**	**9**	**9**	**9**	**5**	**9**	**0**	**9**	**9**	**9**

CRM	Analysis date	GSC-A Lab ID	Ni (mg/kg) 0.1	P (% dry wt.) 0.001	Pb (mg/kg) 0.01	Rb (mg/kg) 0.1	Re (µg/kg) 1	S (% dry wt.) 0.02	Sb (mg/kg) 0.02	Sc (mg/kg) 0.1	Se (mg/kg) 0.1	Sn (mg/kg) 0.1	Sr (mg/kg) 0.5	Ta (mg/kg) 0.05	Te (mg/kg) 0.02	Th (mg/kg) 0.1	Ti (% dry wt.) 0.001
STSD-4		**Certified Values:**	**23**	**0.098**	**13**			**0.09**	**3.60**				**71**				**0.107**
STSD-4	December 2003	196939	23	0.081	13	na	na	0.08	5.10	3.1	0.8	na	58	na	0.03	1.4	0.052
STSD-4	December 2003	196943	22	0.077	12	na	na	0.07	5.16	2.6	0.7	na	56	na	0.03	1.3	0.063
STSD-4	December 2003	196947	23	0.077	12	na	na	0.07	5.24	2.5	0.8	na	54	na	0.03	1.3	0.057
STSD-4	December 2003	20030200	25	0.083	13	na	na	0.06	5.43	3.3	0.8	na	63	na	0.03	0.8	0.065
STSD-4	December 2004	20040680	24	0.082	13	6	1	0.08	4.93	2.9	0.7	0.7	58	<0.05	0.03	1.5	0.057
STSD-4	September 2006	20060014	24	0.078	12	7	2	0.08	4.16	3.6	0.6	0.8	58	0	<0.02	1	0.060
STSD-4	January 2007	20060103	23	0.083	13	6	1	0.09	5.71	3.0	1.0	0.8	56	<0.05	<0.02	1.4	0.061
STSD-4	January 2007	20060145	25	0.086	13	7	1	0.08	5.69	3.3	0.7	1.0	61	<0.05	<0.02	1.6	0.062
STSD-4	January 2007	20060173	23	0.081	12	6	2	0.10	4.21	2.9	0.7	0.8	60	<0.05	0.04	1.2	0.059
Summary Statistics		**Min.**	**22**	**0.077**	**12**	**6**	**1**	**0.06**	**4.16**	**2.5**	**0.6**	**0.7**	**54**	**-**	**<0.02**	**0.8**	**0.052**
		Max.	**25**	**0.086**	**13**	**7**	**2**	**0.10**	**5.71**	**3.6**	**1.0**	**1.0**	**63**	**-**	**0.04**	**1.6**	**0.065**
		Mean	**24**	**0.081**	**13**	**6**	**1**	**0.08**	**5.07**	**3.0**	**0.8**	**0.8**	**58**	**-**	**0.03**	**1.3**	**0.060**
		Median	**23**	**0.081**	**13**	**6**	**1**	**0.08**	**5.16**	**3.0**	**0.7**	**0.8**	**58**	**-**	**0.03**	**1.3**	**0.060**
		%RSD	**5%**	**4%**	**3%**	**2%**	**39%**	**15%**	**11%**	**12%**	**15%**	**13%**	**5%**	**-**	**13%**	**19%**	**7%**
		Percent error of mean	**+3%**	**-17%**	**-3%**			**-12%**	**+41%**				**-18%**				**-44%**
		n	**9**	**9**	**9**	**5**	**5**	**9**	**9**	**9**	**9**	**5**	**9**	**1**	**6**	**9**	**9**

Notes: na = not analyzed; DL = detection limit;

Replicate analyses of CANMET Certified Reference Materials at ACME Analytical Laboratories

CRM	Analysis date	GSC-A Lab ID	Tl (mg/kg) 0.02	U (mg/kg) 0.1	V (mg/kg) 2	W (mg/kg) 0.1	Y (mg/kg) 0.01	Zn (mg/kg) 0.1	Zr (mg/kg) 0.1
STSD-1		**Certified Values:**			**47**			**165**	
STSD-1	December 2003	196936	0.22	6.7	45	0.1	na	163	na
STSD-1	December 2003	196940	0.22	6.6	46	0.1	na	168	na
STSD-1	December 2003	196944	0.22	6.6	46	0.2	na	175	na
STSD-1	December 2003	20030197	0.20	6.3	42	0.1	na	143	na
STSD-1	December 2004	20040677	0.22	6.2	45	0.1	22.5	157	0.5
STSD-1	September 2006	20060011	0.24	7.1	48	*0.7*	19.1	162	0.9
STSD-1	January 2007	20060100	0.24	6.4	42	0.2	17.1	156	0.4
STSD-1	January 2007	20060142	0.27	6.8	46	0.2	17.7	165	0.4
Summary Statistics		**Min.**	**0.20**	**6.2**	**42**	**0.1**	**17.1**	**143**	**0.4**
		Max.	**0.27**	**7.1**	**48**	**0.7**	**22.5**	**175**	**0.9**
		Mean	**0.23**	**6.6**	**45**	**0.2**	**19.1**	**161**	**0.6**
		Median	**0.22**	**6.6**	**45.5**	**0.2**	**18.4**	**163**	**0.5**
		%RSD	**9%**	**4%**	**5%**	**96%**	**13%**	**6%**	**43%**
		Percent error of mean			**-4%**			**-2%**	
		n	**8**	**8**	**8**	**8**	**4**	**8**	**4**

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CRM	Analysis date	GSC-A Lab ID	Tl (mg/kg) 0.02	U (mg/kg) 0.1	V (mg/kg) 2	W (mg/kg) 0.1	Y (mg/kg) 0.01	Zn (mg/kg) 0.1	Zr (mg/kg) 0.1
STSD-2		**Certified Values:**			**58**			**216**	
STSD-2	December 2003	196937	0.23	14.8	52	2.0	na	202	na
STSD-2	December 2003	196941	0.21	14.7	54	2.3	na	207	na
STSD-2	December 2003	196945	0.23	15.3	54	1.7	na	203	na
STSD-2	December 2003	20030198	0.22	14.6	56	1.9	na	204	na
STSD-2	December 2004	20040678	0.24	13.8	55	1.8	18.3	198	3.1
STSD-2	September 2006	20060012	0.28	17.4	59	1.8	18.0	230	4.5
STSD-2	January 2007	20060101	0.25	14.2	49	1.6	14.5	209	2.4
STSD-2	January 2007	20060143	0.26	14.5	54	1.7	14.4	222	2.6
Summary Statistics		**Min.**	**0.21**	**13.8**	**49**	**1.6**	**14.4**	**198**	**2.4**
		Max.	**0.28**	**17.4**	**59**	**2.3**	**18.3**	**230**	**4.5**
		Mean	**0.24**	**14.9**	**54**	**1.9**	**16.3**	**209**	**3.2**
		Median	**0.24**	**14.65**	**54**	**1.8**	**16.2**	**205**	**2.9**
		%RSD	**9%**	**7%**	**5%**	**12%**	**13%**	**5%**	**30%**
		Percent error of mean			**-7%**			**-3%**	
		n	**8**	**8**	**8**	**8**	**4**	**8**	**4**

Notes: na = not analyzed; DL = detection limit;

Replicate analyses of CANMET Certified Reference Materials at ACME Analytical Laboratories

CRM	Analysis date	GSC-A Lab ID	Tl (mg/kg) 0.02	U (mg/kg) 0.1	V (mg/kg) 2	W (mg/kg) 0.1	Y (mg/kg) 0.01	Zn (mg/kg) 0.1	Zr (mg/kg) 0.1
STSD-3		**Certified Values:**			**61**			**192**	
STSD-3	December 2003	196938	0.27	8.3	52	1.1	na	194	na
STSD-3	December 2003	196942	0.26	8.3	52	0.9	na	203	na
STSD-3	December 2003	196946	0.25	7.9	52	1.1	na	198	na
STSD-3	December 2003	20030199	0.24	7.8	51	1.1	na	173	na
STSD-3	December 2004	20040679	0.25	7.6	53	0.7	18.2	177	0.6
STSD-3	September 2006	20060013	0.29	8.6	52	0.8	17.0	179	1.4
STSD-3	January 2007	20060102	0.30	8.3	50	1.6	14.9	188	0.5
STSD-3	January 2007	20060144	0.29	8.1	52	1.3	13.9	183	0.4
STSD-3	January 2007	20060172	0.28	8.1	53	0.7	15.7	172	1.0
Summary Statistics		**Min.**	**0.24**	**7.6**	**50**	**0.7**	**13.9**	**172**	**0.4**
		Max.	**0.30**	**8.6**	**53**	**1.6**	**18.2**	**203**	**1.4**
		Mean	**0.27**	**8.1**	**52**	**1.0**	**15.9**	**185**	**0.8**
		Median	**0.27**	**8.1**	**52**	**1.1**	**15.7**	**183**	**0.6**
		%RSD	**8%**	**4%**	**2%**	**29%**	**11%**	**6%**	**53%**
		Percent error of mean			**-15%**			**-4%**	
		n	**9**	**9**	**9**	**9**	**5**	**9**	**5**

CRM	Analysis date	GSC-A Lab ID	Tl (mg/kg) 0.02	U (mg/kg) 0.1	V (mg/kg) 2	W (mg/kg) 0.1	Y (mg/kg) 0.01	Zn (mg/kg) 0.1	Zr (mg/kg) 0.1
STSD-4		**Certified Values:**			**51**			**82**	
STSD-4	December 2003	196939	0.11	1.9	48	0.5	na	80	na
STSD-4	December 2003	196943	0.11	1.9	47	0.2	na	80	na
STSD-4	December 2003	196947	0.10	1.8	45	0.3	na	81	na
STSD-4	December 2003	20030200	0.11	1.9	52	0.2	na	82	na
STSD-4	December 2004	20040680	0.10	1.6	47	0.2	9.7	73	1.1
STSD-4	September 2006	20060014	0.11	1.8	49	0.3	8.9	77	2.4
STSD-4	January 2007	20060103	0.12	1.9	47	0.2	8.4	80	1.0
STSD-4	January 2007	20060145	0.13	1.8	48	0.2	7.7	81	0.8
STSD-4	January 2007	20060173	0.13	1.9	48	0.2	8.6	77	1.7
Summary Statistics		**Min.**	**0.10**	**1.6**	**45**	**0.2**	**7.7**	**73**	**0.8**
		Max.	**0.13**	**1.9**	**52**	**0.5**	**9.7**	**82**	**2.4**
		Mean	**0.11**	**1.8**	**48**	**0.3**	**8.6**	**79**	**1.4**
		Median	**0.11**	**1.9**	**48**	**0.2**	**8.6**	**80**	**1.1**
		%RSD	**10%**	**5%**	**4%**	**40%**	**8%**	**4%**	**47%**
		Percent error of mean			**-6%**			**-4%**	
		n	**9**	**9**	**9**	**9**	**5**	**9**	**5**

Notes: na = not analyzed; DL = detection limit;