BRITISH COLUMBIA
Ministry of Energy and Mines
Energy and Minerals Division
Geological Survey Branch

REGIONAL STREAM WATER GEOCHEMISTRY OF THE ADAMS LAKE - NORTH BARRIERE LAKE AREA, BRITISH COLUMBIA (NTS 82M/4 AND 82M/5)

By R.E.Lett, P.Geo., S.Sibbick, P.Geo. and
J.Runnells, GIT.

OPEN FILE 1998-9

Canadian Cataloguing in Publication Data

Main entry under title:
Regional Stream water geochemistry of the Adams Lake-North Barriere Lake Area, British Columbia (NTS 82M/4 and 82M/5).

(Open File, ISSN 0835-3530 ; 1998-9)

Includes bibliographic references: p.
ISBN 0-7726-3776-8

1. Water - Composition -British Columbia - Adams Plateau Region. 2. Sediments (Geology) - British Columbia - Adams Plateau Region. 3. Geochemistry British Columbia - Adams Plateau Region. 4. Geology, Economic - British Columbia - Adams Plateau Region. I. Lett, Raymond Ernest Wingrove 1945 - . II. British Columbia Geological Survey Branch. III. Series: Open File (British Columbia. Geological Survey Branch) ; 1999-5

QE515.R43 1999 551.9' 09711'72 C99-960052-4

VICTORIA
BRITISH COLUMBIA
CANADA

JANUARY 1999

TABLE OF CONTENTS

INTRODUCTION

Open File 1998-9 presents new analytical data for 63 different elements from a regional stream water geochemistry survey (Figure 1) conducted by the British Columbia Geological Survey Branch in 1996 over an area underlain by Kootenay Terrane rocks. The stream water survey covers all or part of two 1:50 000 NTS map areas in the Adams Plateau (NTS 82M/4) and North Barriere Lake (NTS 82M/5) areas of south-central B.C. There is high potential for economic gold and polymetallic sulphide mineralization in the Cambrian to Mississippian rocks that form the Eagle Bay Assemblage within the Kootenay Terrane. These rocks host a number of gold-base metal sulphide deposits such as Homestake (MINFILE 82M025) and Samatosum (MINFILE 82M244). Stream sediment and basal till geochemistry successfully detected the larger massive-sulphide (Matysek *et al.*, 1991; Dixon-Warren 1998) because anomalous dispersal plumes for copper, cobalt, gold, lead and zinc in the till and copper dispersion patterns in drainage sediment are well developed.

Stream water surveys offer the advantage of detecting subtle anomalies derived from groundwater. The source may be concealed or buried mineralization. To be effective, stream water geochemical surveys depend on an analytical method able to reach a low detection limit for the elements of interest. Inductively coupled plasma mass spectrometry (ICP-MS) is a sufficiently sensitive method to provide detection limits in the parts per trillion (ppt) range for the most common ore indicator and pathfinder elements. Several regional stream and lake water geochemical surveys have been conducted in British Columbia by the Geological Survey Branch using ICP-MS including a regional stream water survey of the Gataga area (Lett *et al.*, 1995) and lake water surveys in central BC (Cook *et al.*, 1999).

Open File 1998-9 describes a stream water geochemical survey in which 218 sites were sampled over an area of approximately 1200 square kilometres. The average sample density was 1 site per 5.5 square kilometres. Analytical data for pH, alkalinity, sulphate, fluoride and 59 trace elements determined in the stream water samples are reported in the Open File and the distribution of pH, sulphate, aluminum, fluoride, copper and zinc described.

This Open File is a contribution to a Geological Survey Branch project of the Kootenay Terrane. Other components of this project are studies of mineral deposits (Hoy 1997), mapping of surficial geology (Dixon Warren *et al.*, 1997a), a regional till geochemical survey (Bobrowsky *at al.*, 1997b), detailed geochemical studies (Sibbick *et al.*, 1997; Lett *et al.*, 1998). Previous mineral exploration of this area has focused on exploration for massive sulphides hosted by rocks of the Fennel Formation and Eagle Bay Assemblage.

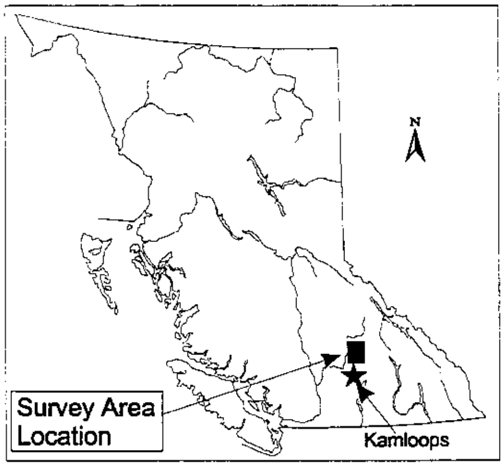

Figure 1. Location of the Stream Water Survey

OPEN FILE FORMAT

Open File 1998-9 consists of the following sections:

- Introduction, survey methodology and quality control
- A summary of results
- Sample location, geology and selected element distribution maps (Appendix A)
- Listings of field variables, analytical and quality control data (Appendix B, C, D, E, F)

Analytical and field data are included as an ASCII file on a 3.5-inch high density diskette located in the back pocket of the Open File. The sample location map is in Appendix A (Figure A-1). Data for each sample are listed in comma-delimited fields over one data record.

SURVEY AREA DESCRIPTION

The Adams Plateau and North Barriere Lake area is located in south-central British Columbia, approximately eighty kilometres north-northeast of Kamloops (Figure 1). The survey area lies within the Shuswap Highland, a region of moderate to high relief. Elevations range from 450 m above sea level along the shores of Adams Lake in the south, to 2630 m above sea level at Dunn Peak in the northwest. Several peaks which are over 600 metres above tree-line characterize the more rugged landscape in the northwest whereas in the south, the rolling, forested, topography reflects the Adams Plateau, a high (1680 m), upland region. Throughout the area are several prominent southwest trending valleys trending, the largest being the Barriere River valley.

Lakes are a conspicuous feature of the landscape, the largest being Adams Lake in the southwest part of the area Other, moderately-sized water bodies include North, South and East Barriere lakes all located near the border of the two map sheets, Johnson Lake near the center of 82M/4 and Saskum Lake near the center of 82M/5. Sinmax Creek, and numerous minor creeks, drain southeastward into Adams Lake, whereas Harper, Fennel, Fadear and Haggard creeks drain into the Barriere River which flows westward into the Thompson River.

Vegetation is typical of the Southern Columbia and Interior Subalpine forest regions (Rowe, 1972). Valley bottoms are vegetated with black cottonwood or have been cleared for agricultural purposes. Hillsides and plateaus between at elevations of approximately 1220 metres support a dense growth of western hemlock, red cedar and Douglas fir. Upper valley slopes up to tree-line support western white and Englemann spruce, and alpine fir. Above tree-line, slopes are either devoid of plant cover or sparsely vegetated with low-lying hardy shrubs. Alder and lodgepole pine are abundant in many disturbed areas.

BEDROCK AND SURFICIAL GEOLOGY

The Adams Plateau-North Barriere Lake area is underlain by Paleozoic rocks of the Eagle Bay Assemblage and Fennell Formation. The western part of the area is dominated by the Fennell Formation, a Devonian to Permian sequence of oceanic bedded cherts, gabbro, diabase, pillow basalt, sandstone, quartz-porphyry rhyolite and conglomerate. The Fennell Formation forms part of the Slide Mountain Terrane and has a thrust contact with Cambrian to Mississippian Eagle Bay Assemblage to the east. The Eagle Bay Assemblage is part of the Kootenay Terrane that was originally deposited along the ancestral margin of North America. Older Eagle Bay rocks include quartzites, quartz-rich schist and limestone.

The older rocks are overlain by grit, phyllite and quartz mica schist and coarse grained clastic metasediments interbedded with felsic volcanic rocks. Overlying the metasedimentary rocks are limestone and calcareous phyllite, calcsilicate schist and skarn, pillowed greenstone and chlorite-sericite-quartz schist of felsic origin. At the top of the sequence are slates and siltstone. The Eagle Bay Assemblage has been intruded by quartz monzonite of the Cretaceous Baldy and Raft batholiths , by sepentinite, diorite and quartz feldspar porphyry. The youngest rocks are Miocene to Tertiary Plateau basalt (Schiarriza and Preto, 1987).

The surficial deposits in the area comprise basal till, ablation till, glaciofluvial, glaciolacustrine, fluvial, organic, and colluvial deposits. Generally the plateaus and hills are mainly covered by combinations of till, colluvium, and glaciofluvial deposits, whereas fluvial, glaciofluvial and glaciolacustrine sediments are common in valley settings. Colluvial deposits predominate on steeper slopes, whereas till and glaciofluvial sediments are more abundant on gentler slopes. Organic deposits occur locally in all types of terrain (Bobrowsky *et al*, 1997a)

Two types of basal till have been identified, essentially reflecting the type of bedrock from which they were derived. In the south, basal till deposits are primarily massive to poorly-stratified with a sandy silt to silty clay texture, and a fissile matrix. To the north, basal till in the vicinity of the Baldy Batholith is characteristically sandier in texture. In these areas, the till accumulations are highly consolidated, light to medium grey in colour, with a clayey sand matrix. All of these attributes are indicative of the granitic and granodioritic bedrock source.

MINERAL DEPOSITS

Each mineral deposit type has a distinct primary trace element signature that, depending on the degree of weathering, may be closely reflected in till, soil or stream sediment geochemistry. The signature or pathfinder elements can be particularly useful in distinguishing between multiple sources of mineralized bedrock in stream sediment and water. Minor and trace element associations typical of gold and base-metal sulphide deposits in the Kootenay terrane around Adams Lake (Nelson *et al.*, 1997; Höy, 1991, 1997; Höy and Ferri, 1998; Schiarizza and Preto, 1987) are:

- Volcanogenic gold-copper-lead-zinc-sulphide and barite deposits hosted predominately by felsic volcanic rocks of the Eagle Bay Assemblage. Examples of this type are the Homestake (MINFILE 82M025), Rea Gold (MINFILE 82M191), Samatosum (MINFILE 82M244), Harper (MINFILE 82M060), and Scotch Creek (MINFILE 82LNW046). Pathfinder elements for this types of deposit are arsenic, barium, mercury, cadmium, selenium, tin, bismuth and potassium.

- Massive, volcanogenic copper-zinc sulphide deposits hosted predominantly by metasediments of the Eagle Bay Assemblage. The Mount Armour occurrence (MINFILE 92P050) is an example of this type of deposit. Pathfinder elements for this types of deposit are sodium, magnesium, cobalt, nickel and arsenic.
- Massive, volcanogenic copper-zinc sulphide deposits in mafic volcanic rocks. The Chu Chua deposit (MINFILE 92P140) hosted by mafic flows and tuffs of the Fennell Formation is an example of this deposit type. Pathfinder elements for this type of deposit are cobalt, chromium and nickel.
- Massive, lead-zinc-silver sulphide deposits hosted by metasedimentary rocks of the Eagle Bay Assemblage. An example of this type is the Spar occurrence (MINFILE 82M017). Pathfinder elements for this type of deposit are potassium, barium and manganese.
- Disseminated copper-molybdenum sulphide deposits hosted by metavolcanic and metasedimentary rocks of the Eagle Bay Assemblage adjacent to Devonian orthogneiss. Examples of this type of deposit are Harper Creek (MINFILE 82M017) and the EBL prospect (MINFILE 82M017). Pathfinder elements for this type of deposit are potassium, magnesium, arsenic, antimony, cadmium, fluorine, bismuth, molybdenum and tungsten.
- Gold mineralized quartz veins in biotite quartz monzonite of the Cretaceous Baldy Batholith. An example, discovered by follow-up of the 1996 regional till geochemical survey is the Cam-Gloria prospect (MINFILE M266). Pathfinder elements for this type of mineralization are bismuth, lead, molybdenum, fluorine and tungsten.

The location of key mineral occurrences and bedrock geology are shown in Appendix A (Figure A-2).

SURVEY METHODOLOGY

SAMPLE COLLECTION

Sample collection was carried out from late-June to late August of 1996. A total of 257 stream water samples were systematically collected from 218 sites (Appendix Figure A-1). Considerable effort was taken to collect all samples upstream of known anthropogenic disturbances such as bridges or culverts on logging roads. Streams of 1 to 2 kilometres in length were the preferred target. However, in some cases streams of greater or lesser length were sampled. Field duplicate samples were routinely collected in each analytical block of twenty samples.

Collected surface water samples were stored in two 250 millilitre Nalgene polyethylene bottles. Each bottle was rinsed thoroughly with stream water before sample collection. Precautions were taken to exclude suspended solids when possible. One bottle of each pair was immediately refrigerated after collection to retard any chemical changes. Field observations regarding sample media, sample site and local terrain were recorded. An aluminum tag inscribed with the sample identification number was fixed to a permanent object at each sample site.

SAMPLE PRESERVATION AND ANALYSIS

At the field camp, a 100 ml portion of each refrigerated 250 ml surface water sample was filtered through a 0.45-micron cellulose nitrate filter paper into an I-Chem certified™ high-density polyethylene sample bottle. The filtered sample was then acidified to pH 2 to 3 with 50% ultra-pure nitric acid. The remaining 150 millilitres was retained for pH, sulphate and fluoride analysis. At the Ministry's Victoria laboratory, quality control reference standards and analytical blanks were inserted into each analytical block of 20 water samples.

Filtered and acidified water samples were analysed for trace and major elements by inductively coupled plasma mass spectrometer (ICP-MS) for 66 elements by Activation Laboratories (Ancaster, Ontario) using a Perkin Elmer Elan 6000 inductively coupled plasma mass spectrometer and an Perkin Elmer AS91 autosampler. Reported detection limits for each element and measured parameters are listed in Table 1.

Water samples were analysed for pH, sulphate and fluoride by Can Tech Laboratories, Calgary. Sulphate in waters was determined by a turbidimetric method. A 20 ml aliquot of the sample was mixed with barium chloride and an isopropyl alcohol - hydrochloric acid - sodium chloride reagent. The turbidity of the resulting barium sulphate suspension was measured with a spectrophotometer at 420 nanometres. The determination of fluoride in waters involved mixing an aliquot of the sample with an equal volume of total ionic strength adjustment buffer (TISAB II solution). The fluoride was measured using a Corning 101 meter with an Orion fluoride electrode. The pH was measured by a combination glass-reference electrode and a Fisher Accumet pH meter using an aliquot of sample in a clean, dry beaker.

Water samples were analysed for alkalinity by Chemex Laboratories, Vancouver using a titration method. After an initial pH measurement, a suitable aliquot of unaltered sample was titrated electrometrically using a standard sulfuric acid solution. For pH > 4.5, a 50-ml sample aliquot is titrated with standard sulfuric acid to electrometrically determined end points of pH 4.5 and pH 4.2 using a Metrohm Autotitration System.

DETECTION LIMITS

Instrumental detection limits for "major" elements (e.g. Ca), alkalinity and pH are listed in Table 1 and "trace" elements in Table 2. For most of the elements measured by ICP-MS, instrument detection limits typically range from 0.02 to 0.002 ppb. However, the introduction of small amounts of contaminants during sample filtration, handling, preservation and analysis limits the ability of the instrumentation to practically reach these low concentrations. Consequently a higher and more realistic method detection limit is used to recognize the effect of low level contamination during water sample preparation and analysis. The method detection limit is calculated from element data for the distilled water blank samples using the relationship:-

Mean blank + (3 x standard deviation of blanks)

For elements commonly associated with mineralization (e.g. copper, lead, zinc) the method detection limits can be as much as two orders of magnitude higher than the instrumental detection limit. Possible bromine contamination is revealed by the high (27 ppb) concentration in one blank (Sample 968241) and by values increasing to above 20 ppb from sample 968233 to 968257. The bromine values have been replaced by "c" denoting probable contamination in Appendix B.

TABLE 1. DETECTION LIMITS FOR MAJOR ELEMENTS, ALKALINITY AND pH

Element		Instrument D.L	Method D.L	Unit
Alkalinity	ALK	1	5	ppm
Aluminum	Al	0.2	1.4	ppb
Calcium	Ca	1	274	ppb
Iron	Fe	0.2	5.38	ppb
Magnesium	Mg	0.5	36.2	ppb
pH	pH	0.1	0.1	pH
Potassium	K	1	62	ppb
Silicon	Si	1	58	ppb
Sodium	Na	0.2	19.1	ppb
Sulphate	SO4	1	1	ppm

QUALITY CONTROL

Discrimination between real geochemical trends and those variations introduced by sampling and analysis is important for the reliable interpretation of geochemical data. Control reference standards and analytical duplicates are routinely inserted into sample suites to monitor and assess accuracy and precision of analytical results. For the stream water survey the standard National Geochemical

Reconnaissance (NGR) and Regional Geochemical

TABLE 2. DETECTION LIMITS FOR MINOR AND TRACE ELEMENTS

Element		Instrument D.L	Method D.L	Unit
Antimony	Sb	0.02	0.05	ppb
Arsenic	As	0.02	0.08	ppb
Barium	Ba	0.002	0.07	ppb
Bismuth	Bi	0.002	0.002	ppb
Bromine	Br	1	8	ppb
Cadmium	Cd	0.002	0.03	ppb
Cerium	Ce	0.002	0.01	ppb
Cesium	Cs	0.002	0.01	ppb
Chromium	Cr	0.1	0.42	ppb
Cobalt	Co	0.002	0.01	ppb
Copper	Cu	0.002	0.23	ppb
Dysprosium	Dy	0.002	0.002	ppb
Erbium	Er	0.002	0.002	ppb
Europium	Er	0.002	0.002	ppb
Fluoride	F	20	42	ppb
Gadolinium	Gd	0.002	0.002	ppb
Gallium	Ga	0.002	0.01	ppb
Gemanium	Ge	0.002	0.03	ppb
Gold	Au	0.002	0.01	ppb
Hafnium	Hf	0.002	0.01	ppb
Holmium	Ho	0.002	0.002	ppb
Iodine	I	0.02	9.56	ppb
Indium	In	0.002	0.002	ppb
Lanthanum	La	0.002	0.01	ppb
Lead	Pb	0.02	0.03	ppb
Lutetium	Lu	0.002	0.002	ppb
Manganese	Mn	0.02	0.13	ppb
Molybdenum	Mo	0.02	0.03	ppb
Neodymium	Nd	0.002	0.002	ppb
Nickel	Ni	0.002	0.40	ppb
Niobium	Nb	0.002	0.02	ppb
Palladium	Pd	0.02	0.02	ppb
Platinum	Pt	0.002	0.002	ppb
Praeseodymiu	Pr	0.002	0.002	ppb
Rhenium	Re	0.002	0.002	ppb
Rubidium	Rb	0.002	0.01	ppb
Ruthenium	Ru	0.02	0.02	ppb
Samarium	Sm	0.002	0.002	ppb
Selenium	Se	0.02	0.53	ppb
Silver	Ag	0.02	0.11	ppb
Strontium	Sr	0.002	0.64	ppb
Tantalum	Ta	0.002	0.01	ppb
Terbium	Tb	0.002	0.002	ppb
Thallium	Tl	0.002	0.01	ppb
Thorium	Th	0.002	0.01	ppb
Thulium	Tm	0.002	0.002	ppb
Tin	Sn	0.002	0.04	ppb
Tungsten	W	0.002	0.01	ppb
Uranium	U	0.002	0.01	ppb
Vanadium	V	0.02	0.1	ppb
Ytterbium	Yb	0.002	0.002	ppb
Yttrium	Y	0.002	0.002	ppb
Zinc	Zn	0.002	4.67	ppb

Survey(RGS) quality control procedures were modified so that analytical precision, accuracy, possible sample contamination and method detection limits could be determined.Each block of 20 stream water samples contains :

- Seventeen routine water samples,
- One field duplicate water sample collected adjacent to one of the routine samples,
- One distilled, deionized water blank,
- One control reference standard containing water of known element concentrations.

The locations of blank and control reference samples are selected prior to sampling, whereas field duplicate sites are chosen randomly during fieldwork.

ANALYTICAL PRECISION AND ACCURACY

Analytical (ICP-MS) accuracy and precision of the major elements and a number of the trace was calculated from element data for 13 replicate analyses of the CANMET river water standard, SLRS-3.

TABLE 3. ANALYTICAL PRECISION FOR WATER STANDARD SLRS 3

Element	Mean (ppb)	% RSD	SLRS (ppb)
Aluminium	29.94	6	31
Antimony	0.19	13	0.12
Arsenic	0.73	7	0.72
Barium	13.46	3	13.4
Cadmium	0.02	98	0.02
Calcium	6145	4	6000
Chromium	0.41	51	0.3
Cobalt	0.033	17	0.027
Copper	1.34	11	1.35
Iron	100.64	6	100
Lead	0.08	24	0.07
Manganese	3.82	5	3.9
Magnesium	1627	4	1600
Molybdenum	0.24	29	0.19
Nickel	0.81	11	0.83
Potassium	663	9	700
Sodium	2308	4	2300
Strontium	32.64	8	28
Uranium	0.06	33	0.045
Vanadium	0.32	10	0.3
Zinc	1.1	18	1.04

Scatterplots of analytical results for 13 field duplicate pairs (Figure 2) shown for pH, sulphate, copper, zinc, lead and aluminium. Good correlation between duplicate values for elements such as copper and lead confirm the correlation coefficients listed in Table 5.

Precision is shown in Table 3 as the percent relative standard deviation (%RSD) and accuracy shown by direct comparison of the mean element value calculated from the 13 replicates with the SLRS 3 value. Of the major elements, Al, Ca, Fe, Mg and Na, the mean value is within 95% of the accepted value for the standard and the precision is better than 6% RSD. Potassium, however, has a poorer accuracy and a 9% RSD. The accuracy of the more common trace elements (e.g. As, Cu, Co, Cr, Mn, Mo, Pb, Zn) is good, but the analytical precision varies widely depending on how close the mean concentration approaches the instrument detection limit. For example, at 1.35 ppb, Cu precision (detection limit 0.002 ppb) is 11% RSD whereas at 0.02 ppb Cd precision (detection limit 0.01 ppb) is 98%.

Good analytical precision and accuracy is of little relevance if the sample collection and preparation error is larger than the regional geochemical variation (Fletcher, 1981). The combined sampling and analytical precision can be estimated from a comparison of data for field duplicate samples visually using scatter diagrams and, more objectively, with correlation coefficients. The correlation coefficients for major elements, trace elements, alkalinity and pH are shown in Tables 4 and 5. Estimates of analytical precision at different concentration levels are not given for the 13 blind duplicate pairs, as this is fewer than the minimum of 50 pairs recommended by Thompson and Howarth (1978). Field duplicate data for all elements are included within the data listings (as Rep 1 and Rep 2) in Appendix C, and analytical duplicate data are listed in Appendix D.

TABLE 4. MAJOR ELEMENT, ALKALINITY AND pH CORRELATION COEFFICIENTS

Element		Correlation Coefficient
Alkalinity	ALK	0.99
Aluminium	Al	0.99
Calcium	Ca	0.99
Fluoride	F	0.98
Iron	Fe	0.99
Iodine	**I**	**0.99**
Magnesium	Mg	0.99
pH	pH	0.94
Potassium	K	0.99
Silicon	Si	0.99
Sodium	Na	0.99
Sulphate	SO4	0.88

TABLE 5. TRACE ELEMENT CORRELATION COEFFICIENTS FOR FIELD DUPLICATE SAMPLES

ELEMENT		CORRELATION COEFFICIENT
Antimony	Sb	0.55
Arsenic	As	0.92
Barium	Ba	0.99
Bismuth	Bi	0.52
Bromine	Br	0.96
Cadmium	Cd	0.04
Cerium	Ce	0.99
Cesium	Cs	0.95
Chromium	Cr	0.59
Cobalt	Co	0.91
Copper	Cu	0.94
Dysprosium	Dy	0.98
Erbium	Er	0.99
Europium	Er	0.82
Fluoride	F	0.98
Gadolinium	Gd	0.98
Gallium	Ga	0.96
Germanium	Ge	-0.5
Gold	Au	0.56
Hafnium	Hf	0.70
Holmium	Ho	0.99
Indium	In	0.75
Iodine	I	0.02
Lanthanum	La	0.99
Lead	Pb	0.77
Lutetium	Lu	0.80

TABLE 5 (CONTINUED) . TRACE ELEMENT CORRELATION COEFFICIENTS FOR FIELD DUPLICATE SAMPLES

ELEMENT		CORRELATION COEFFICIENT
Manganese	Mn	0.63
Molybdenum	Mo	0.92
Neodymium	Nd	0.99
Nickel	Ni	0.91
Niobium	Nb	0.89
Palladium	Pd	0. 99
Platinum	Pt	-0.15
Praeseodymium	Pr	0.99
Rhenium	Re	0.99
Rubidium	Rb	0.99
Ruthenium	Ru	0.01
Samarium	Sm	0.95
Selenium	Se	-0.16
Silver	Ag	0.85
Strontium	Sr	0.99
Tantalum	Ta	0. 33
Terbium	Tb	0.91
Thallium	Tl	0.71
Thorium	Th	0.97
Thulium	Tm	0.94
Tin	Sn	0.70
Tungsten	W	0.86
Uranium	U	0.98
Vanadium	V	0.98
Ytterbium	Yb	0.97
Yttrium	Y	0.99
Zinc	Zn	0.34

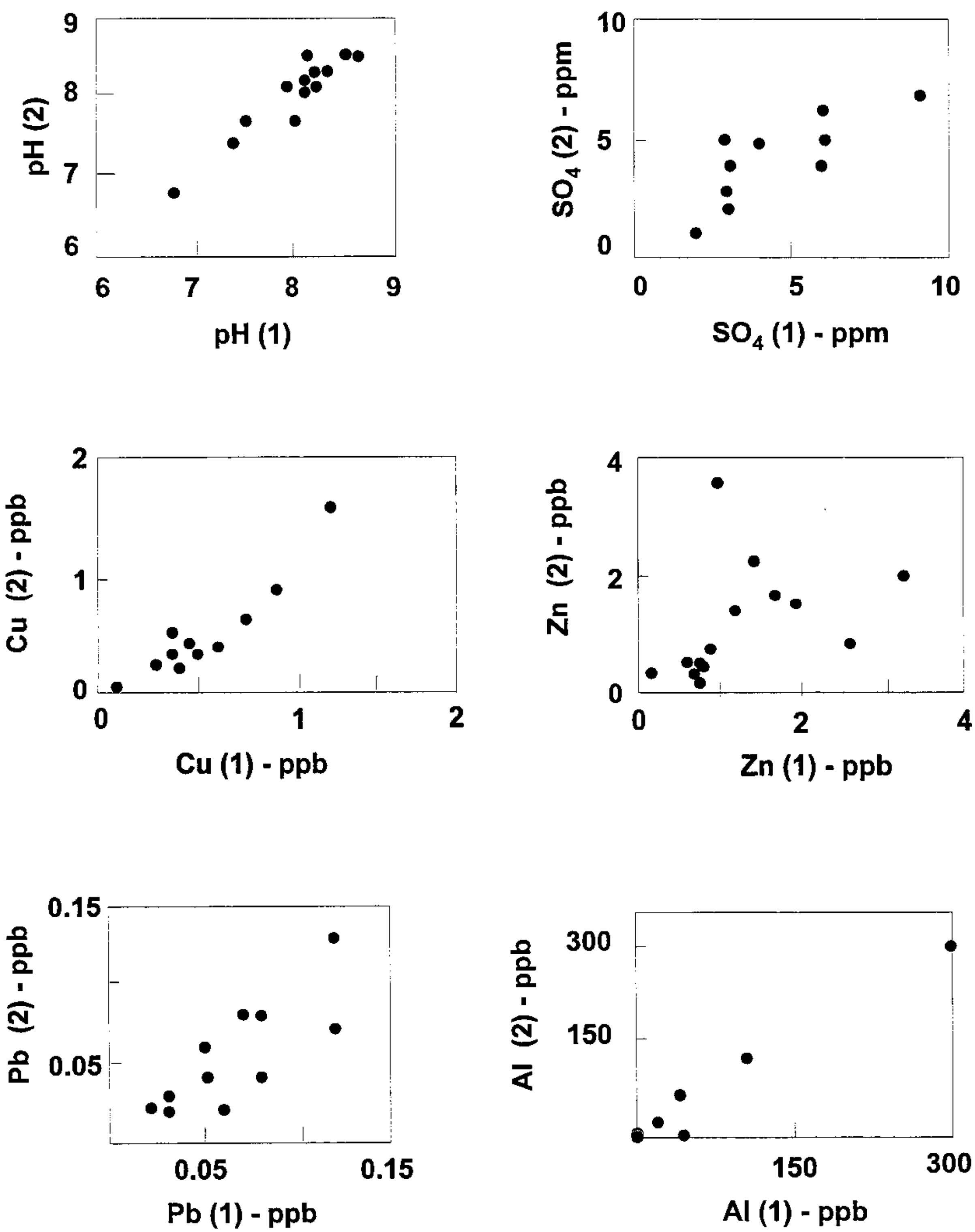

Figure 2. Duplicate Sample Data

SUMMARY OF RESULTS

Open File 1998-9 contains stream water geochemical data for pH, sulphate, alkalinity and 60 elements. Mean, median, standard deviation (SD), maximum (Max.) and 95th percentile concentration (95Perct) for trace elements calculated from data for 218 water samples are given in Table 6. In Table 7 the summary statistics for Alkalinity (ALK) and elements typically in the ppm range and pH from data for 218 samples are listed. Only selected elements typical of pathfinders for mineral deposits and useful for environmental baseline studies are described in more detail using box and symbol plots. Box and whisker plots are useful for displaying the characteristics of a population. The central vertical line on a box and whisker plot marks the median value of the distribution; the vertical limits to the box represent the range of values within +/- 1.5 of the median and the limits to the whisker extending from the box represent the range of values with +/- 3.0 of the median. Values outside of the box and the whisker are identified by asterisks and open circles respectively. Symbol plots (Appendix A) show variations in element concentrations at each sample site using different sized symbols based on mean, 95th and 98th percentiles.

pH

Low stream and spring water pH values can be a valuable exploration guide to the presence of oxidizing pyrite associated with other, economic mineral sulphides. Very acid waters are also a common indicator for acid rock drainage pollution (Salomons, 1995). Acid waters will increase the mobility of potentially toxic elements such as cadmium and lead. The acceptable pH range for drinking water quality and for the protection of aquatic life is 6.5 to 8.5 (Environment Canada, 1987).

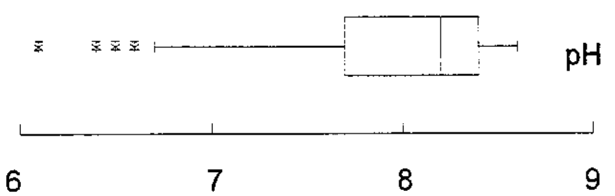

Figure 3 Box and Whisker Plot for Stream Waters pH

A box and whisker plot for stream water pH is shown in Figure 3. The median value is 8.2 and values range

TABLE 6. TRACE ELEMENT STATISTICS

Element	Mean	Median	SD	Max.	95Perct
Ag	0.02	0.01	0.03	0.175	0.056
As	0.18	0.11	0.22	2.07	0.50
Ba	15.39	9.12	16.06	89.266	47.573
Bi	0.01	0.01	0.02	0.29	0.010
Br	5	6	4	28	13.
Cd	0.02	0.01	0.04	0.321	0.059
Ce	0.002	0.14	0.36	2.567	0.553
Cs	0.02	0.01	0.07	0.822	0.058
Cr	0.35	0.30	0.29	2.10	0.80
Co	0.07	0.06	0.04	0.267	0.121
Cu	0.48	0.39	0.39	3.443	1.167
Dy	0.021	0.003	0.04	0.230	0.096
Er	0.01	0.002	0.022	0.137	0.047
Eu	0.010	0.006	0.012	0.09	0.028
Gd	0.028	0.004	0.052	0.351	0.115
Ga	0.013	0.010	0.017	0.222	0.032
Ge	0.009	0.005	0.009	0.056	0.027
Au	0.012	0.009	0.010	0.049	0.033
Hf	0.004	0.002	0.004	0.025	0.012
Ho	0.005	0.002	0.007	0.053	0.017
I	1.993	1.78	0.971	7.78	3.31
In	0.004	0.002	0.005	0.057	0.009
La	0.21	0.02	0.44	3.616	0.914
Lu	0.004	0.002	0.004	0.028	0.011
Mn	1.84	0.27	5.22	45.48	7.85
Mo	0.31	0.19	0.38	2.71	0.97
Nd	0.16	0.02	0.33	2.363	0.698
Ni	0.53	0.36	0.96	13.393	0.759
Nb	0.033	0.027	0.029	0.323	0.132
Pb	0.07	0.05	0.05	0.41	0.015
Pd	0.02	0.02	0.00	0.057	0.009
Pt	0.002	0.002	0.001	0.011	0.004
Pr	0.049	0.008	0.092	0.702	0.197
Re	0.002	0.002	0.001	0.018	0.003
Rb	0.75	0.56	0.49	2.664	1.281
Ru	0.023	0.020	0.015	0.21	0.04
Sb	0.054	0.040	0.066	0.89	0.13
Sm	0.031	0.005	0.057	0.39	0.132
Se	0.348	0.180	0.812	11.18	0.58
Sr	161.49	108.38	160.73	1005.38	460.07
Ta	0.005	0.003	0.006	0.062	0.015
Tb	0.006	0.002	0.007	0.050	0.020
Tl	0.045	0.042	0.018	0.152	0.077
Th	0.046	0.020	0.060	0.335	0.169
Tm	0.003	0.002	0.003	0.023	0.008
Sn	0.042	0.036	0.038	0.419	0.085
W	0.009	0.006	0.009	0.058	0.028
U	0.087	0.017	0.211	2.435	0.423
V	0.234	0.150	0.513	7.380	0.520
Yb	0.012	0.003	0.021	0.160	0.046
Y	0.153	0.037	0.251	1.847	0.580
Zn	1.212	0.870	1.72	20.403	3.098

TABLE 7. MAJOR ELEMENT STATISTICS

Element	Mean	Median	SD	Max.	95Perct.
ALK	89.6	78.0	65.14	276.0	202.0
Al (ppb)	29.4	4.10	64.78	657.40	140.8
Ca	31.77	27.35	24.61	96.07	73.05
F (ppb)	57.5	46.0	43.73	340.00	140.80
Fe(ppb)	17.99	5.60	45.26	551.00	67.50
K	8.47	6.77	6.88	41.09	21
Mg	6.51	3.50	8.11	47.57	23.13
pH	7.99	8.20	0.51	8.60	8.50
Na	1.77	1.148	1.87	11.96	5.23
Si	5.51	5.13	2.79	211.56	129.80
SO_4	6.30	3.00	7.56	49.00	20.00

from 6.1 to 8.5. The most acid water (pH 6.1 to 7) is from streams draining granite and granodiorite forming the Baldy Batholith across the northern part of NTS 82M5 (Figure A-3). The pattern suggests that the low pH reflects chemical changes during feldspar weathering rather than the presence of mineral sulphides.

SULPHATE

High stream and spring water sulphate levels are another useful exploration guide to the presence of oxidizing pyrite and other sulphides (Lett *et al.*, 1995, Cameron, 1977). As a general guide sulphate concentrations below 28 ppm are typically derived from meteoric water; levels ranging from 28 to 160 ppm can reflect introduction of sulphate from oxidizing pyrite or pyrrhotite and levels above 160 ppm indicate extensive bacterially mediated oxidation of sulphides (Hoag and Webber, 1976). In addition to the oxidation of pyrite in association with other economic sulphides, high dissolved sulphate can also reflect the oxidation of disseminated pyrite in coal and shale and the solution of gypsum horizons (Rose *et al.*, 1979). The maximum allowable sulphate level in drinking water is 400 ppm (Environment Canada, 1987).

A box and whisker plot for sulphate (Figure 4) shows that the median stream water concentration is 3 ppm whereas the range extends from 1 to 49 ppm. Figure A-4 shows that the stream water with the highest sulphate (49 ppm) is located in water from a stream in the southwest corner of 82M4 (Sample Site 968031) draining to the west.

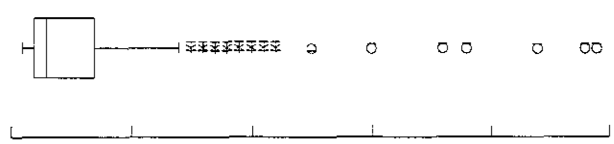

Figure 4. Box and Whisker Plot for Sulphate in Stream Water

The next highest sulphate level (48 ppm) occurs in water from a stream draining the ridge south east Barriere Lake (Sample Site 968149). The pH of the water in both of these streams is above 8.

ALUMINUM

Aluminum in stream water is most commonly derived from weathering of aluminosilicate minerals such as feldspar and clay minerals in bedrock and glacial deposits. Aluminum mobility is pH dependent. The solubility minimum for common aluminum minerals such as gibbsite (Al_2O_3) occurs at pH 6.5. The $(Al(OH)_4)^-$ ion is the stable species above pH 6.5 whereas the Al^{3+} ion predominates in acid water. Canadian and British Columbia water quality guidelines for the protection of aquatic life specify that dissolved aluminum should not exceed 100 ppb in water where the pH is 6.5 or greater (Environment Canada, 1987; Nagpal et al, 1995).

The box and whisker plot for aluminum (Figure 5) shows that while the median value is 4 ppb, concentrations can reach 657 ppb in stream water. The symbol plot for aluminum (Figure A-5) reveals that concentrations above 100 ppb all occur in streams draining the granitic and granodioritic rocks and the higher values most likely reflects weathering and release of aluminum from feldspars in the intrusive rocks.

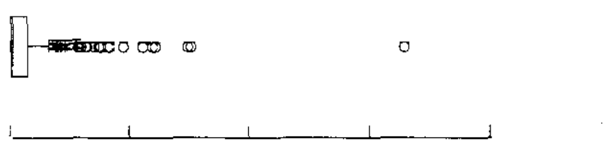

Figure 5. Box and Whisker Plot for Aluminum in Stream Water

FLUORIDE

The most common source of fluoride in stream water is from the solution of fluorite (CaF_2). British Columbia water quality guidelines for the protection of aquatic life specify that fluoride levels should not exceed 1.5 ppm. The box and whisker plot for fluoride (Figure 6) shows that the median value is 46 ppb and the maximum concentration is 340 ppb in stream water. The highest fluoride level at sample site 968093 occurs in stream draining granodiorite of the Baldy Batholith west of Honeymoon Bay on Adams Lake (Figure A-6). Another stream 0.5 kilometres north of this site has 210 ppb fluoride (Sample Site 968091). Since fluorite is known to ocuur in barren quartz veins near the Cam-Gloria gold-bismuth-lead occurrence the increased fluoride may reflect this source. Additional fluorite mineralization in the Baldy Batholith 10 kilometres northwest of the Cam Gloria property could account for the fluoride value of 280 ppb in the water from sample site 968154.

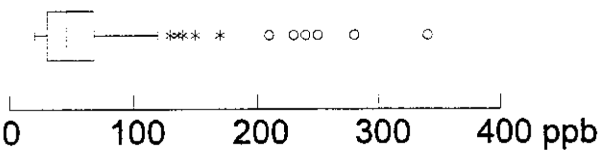

Figure 6. Box and Whisker Plot for Fluoride in Stream Waters.

Barium

Barium is released into the near-surface environment through the weathering of barite ($BaSO_4$), witherite ($BaCO_3$) and potassium feldspar. Ground water barium levels are commonly controlled by barium sulphate saturation and concentrations close to barite mineralization can exceed 900 ppb (Steel and Wagner, 1983). British Columbia water quality guidelines for the protection of aquatic life specify that dissolved barium should not exceed 1 ppm.

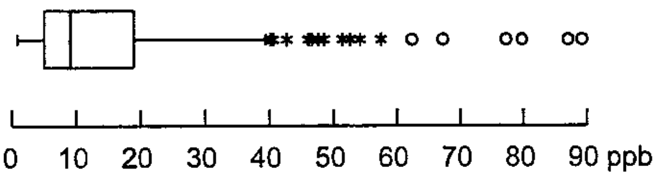

Figure 7. Box and Whisker Plot for Barium in Stream Waters

The maximum barium concentration detected in the stream water is 89 ppb and the median value is 9.1 ppb (Figure 7). Highest barium values occur west of Adams Lake in streams draining Eagle Bay mafic and felsic metavolcanic rocks that host the Rea and Samatosum deposits (Figure A-7). A cluster of samples (Sample Sites 968042, 968044, 968045) from streams draining into the west side of Adams lake contain respectively 87, 80 and 77 ppb barium. Barite horizons occur with the lead-zinc mineralization at the Homestake and Rea occurrences and are most likely to be the source for the barium in the water.

Copper

Copper in stream waters can originate from oxidized copper sulphides, solution of secondary copper minerals such as malachite and from weathered aluminosilicate minerals. Dissolved copper forms in water are simple cations, hydroxides, carbonates and natural organic complexes. Canadian and British Columbia water quality copper guidelines for the protection of aquatic life vary with water hardness. For example, Environment Canada (1987) specify allowed concentrations ranging from 2 ppb in soft water (up to 60 ppm $CaCO_3$) to 6 ppb copper in very hard (above 180 ppm $CaCO_3$) water.

The box and whisker plot for copper (Figure 8) reveals that almost all of the values are less than 2 ppb. The only stream with higher copper (3.44 ppb) is sample 968155 located in the tributary of a stream draining into East Barriere Lake (Figure A-8).

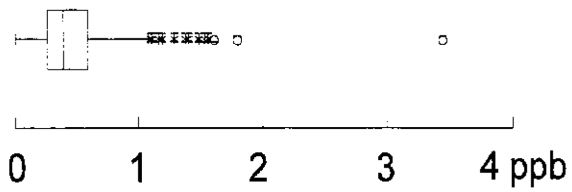

Figure 8. Box and Whisker Plot for Copper in Stream Water

Zinc

Zinc can be released into stream waters by the solution of sphalerite (ZnS) and other minerals such as smithsonite ($ZnCO_3$) and by the weathering of zinc-rich rocks such as carbonaceous shales. Zinc is very mobile at low pH and typically occurs as the divalent Zn^{2+} ion. At higher pH above 8, mobility decreases due to the formation of zinc hydroxides and carbonates. Zinc is readily absorbed to secondary iron and manganese oxides in stream and lake bottom sediments. Canadian and British Columbia water quality guidelines for the protection of aquatic life specify that the maximum allowable zinc concentration in stream water is 30 ppb.

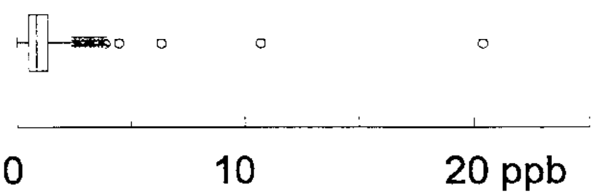

Figure 8 Box and Whisker Plot for Zinc in Stream Waters.

The box and whisker plot for zinc (Figure 8) reveals that almost all of the values are less than 20 ppb. The highest zinc concentration (20.4 ppb) was detected in sample 968002, from a stream located in the south west corner of the survey area flowing to the (Figure A-9).

CONCLUSIONS

The stream water geochemical data presented in this Open File has been published principally to assist exploration for base metal sulphide and precious metal deposits. The data has revealed :

- Copper, zinc, sulphate and pH variations in ground and surface water are commonly used as guides to base-metal mineralization. The stream water survey reveals that copper, zinc and sulphate concentrations are relatively low even in streams draining known mineral occurrences such as Samatosum. The highest copper detected in water appears the be from a stream that has no obvious source of metal.
- Low pH and elevated aluminum in stream water appears to reflect weathering of granitic rocks rather than the presence of oxidizing mineral sulphides.
- Maximum concentrations of potentially toxic elements such as arsenic, cadmium and lead in stream water are below acceptable Canadian standards for drinking water and protection of aquatic life.
- Elevated barium levels in stream water may reflect barite associated with volcanogenic massive sulphide deposits.
- The highest fluoride concentration detected in a stream draining a watershed containing a gold mineralized quartz vein. Fluorite is found in adjacent, barren quartz veins. Samples with elevated fluoride occur in other streams draining the Baldy Batholith.

ACKNOWLEDGEMENTS

The authors would like to thank all those who contributed to the completion and success of this project. In particular, Peter Bobrowsky for his encouragement and support during the field work and for his critical review of the Open File. Helpful comments and suggestions from Steve Cook, Gib McArthur and Antigone Dixon-Warren on the Open File text are also very much appreciated. Help from Wayne Jackaman in the field and in preparation of the Open File was especially welcome.

The following individuals were responsible for the various stages of Open File production.

Sample Collection: S. Sibbick, J.Runnells

Sample Preservation: S. Sibbick, J.Runnells

Data Compilation: S. Sibbick, W.Jackaman, R.Lett

Open File Production: R.Lett

REFERENCES

Bobrowsky, P.T., Leboe, E.R., Dixon-Warren, A., and Ledwon, A. (1997a): Eagle Bay Project: Till geochemistry of the Adams Plateau (82 M/4) and North Barriere Lake (82 M/5) map areas; *in* Geological Fieldwork 1996, Lefebure, D.V., McMillan, W.J., and McArthur, G., Editors, *B.C. Ministry of Employment and Investment*, Paper 1997-1, p. 413-421.

Bobrowsky, P.T., Leboe, E.R., Dixon-Warren, A., Ledwon, A., MacDougall, D. and Sibbick, S.J. (1997b) Till Geochemistry of the Adams Plateau - North Barriere Lake Area (82M/4 and 5). *BC Ministry of Employment and Investment*, Open File 1997-9.

Cameron, E.M. (1977): Geochemical Dispersion in Lake Waters and Sediments from Massive Sulphide Mineralization, Agricola Lake Area, Northwest Territories; *Journal of Geochemical Exploration*, Volume 7, pages 327-348.

Cook, S., Jackaman, W., Lett, R.E.,McCurdy, M.W. and Day, S.J. (1999): Regional Lake Water Geochenmistry of Parts of the Nechako Plateau, Central British Columbia (NTS 93F/2,3; 93K/9,10,15,16; 93L/9,16; 93M/1,2,7,8): *Ministry of Energy and Mines*, Open File 1999-5.

Dixon-Warren, A., Bobrowsky, P.T., Leboe, E.R. and Ledwon, A. (1997a). Eagle Bay Project: Surficial Geology of the Adams Lake Plateau (82M/4) and North Barriere Lake (82M/5) map areas; *in* Geological Fieldwork 1996, Lefebure, D.V., McMillan, W.J. and McArthur, G., Editors, B.C. *Ministry of Employment and Investment*, Paper 1997-1, p. 405-411.

Dixon-Warren, A., Bobrowsky, P.T., Leboe, E.R., and Ledwon, A. (1997b): Terrain geology map of the Adams Plateau area, NTS 82 M/4, scale 1:50 000; B.C. *Ministry of Employment and Investment*, Open File 1997-7.

Environment Canada (1987): Canadian Water Quality Guidelines; *Canadian Council of Resource and Environment Ministers.*

Fletcher, W.K. (1981): Analytical Methods in Geochemical Prospecting; Handbook of Exploration Geochemistry, Volume 1, Govett, G.V.S., Editor, *Elsevier*, 255 pages.

Hoag, R.B. Jr. And Webber, G.R. (1976): Significance for Mineral Exploration of Sulphate Concentrations in Groundwaters; *Canadian Institute of Mining and Metallurgy*, Bulletin, 69:776, pages 86-91.

Höy, T. (1991): Volcanogenic massive sulphide deposits in British Columbia; *in* Ore Deposits, Tectonics and Metallogeny in the Canadian Cordillera, W.J. McMillan,, Editor, B.C. Ministry of Energy, Mines and Petroleum Resources, Paper 1991-4, pages 89-199.

Höy, T. (1997): Harper Creek: a volcanogenic sulphide deposit within the Eagle Bay Assemblage, Kootenay Terrane; *in* Geological Fieldwork 1996, Lefebure, D.V., McMillan, W.J., and McArthur, G., Editors, *B.C. Ministry of Employment and Investment*, Paper 1997-1, p. 199-209.

Höy, T. and Ferri, F. (1998): Stratabound base metal deposits of the Barkerville Subterrane, Central British Columbia; *in* Geological Fieldwork 1997, Lefebure, D.V. and McMillan, W.J., Editors, *B.C. Ministry of Employment and Investment*, Paper 1998-1., p 13-1-13-12.

Lett, R.E., Bobrowsky, P., Cathro, M. and Yeow, A. (1998): Geochemical Pathfinders for massive sulphides in the Southern Kootenay Terrane; *in* Geological Fieldwork 1997, Lefebure, D.V and Mcmillan, W.J., Editors, *B.C. Ministry of Employment and Investment*, Paper 1998-1.p 15-1 - 15-9.

Lett, R.E., Jackaman, W. and Sibbick, S. (1995): Spring Water and Spring Sediment Geochemistry of the Gataga Mountain Area. *Ministry of Employment and Investment*, Open File 1996-30.

Matysek, P.F., Jackaman, W., Gravel, J.L., Sibbick, S.J. and Feulgen, S. (1991): British Columbia Regional Geochemical Survey, Seymour Arm (NTS 82M); *B.C. Ministry of Energy, Mines and Petroleum Resources*, RGS 33.

Nagpal, N.K., Pommen, L.W. and Swain, L.G. (1995): Approved and Working Criteria for Water Quality - 1995; B.C. Ministry of Environment, Lands and Parks, ISBN 0-7726-2522-0.

Nelson, J., Sibbick, S.J., Höy, T., Bobrowsky, P. and Cathro, M. (1997): The Paleozoic massive sulphide project: An Investigation of the Yukon-Tanana correlatives in British Columbia; *in* Geological Fieldwork 1996, D.V. Lefebure, W.J. McMillan and G. McArthur, Editors, B.C. Ministry of Employment and Investment, Paper 1997-1, pages 183-186.

Rose, A.W., Hawkes, H.E. and Webb, J.S. (1979): Geochemistry in Mineral Exploration, Second Edition; *Academic Press*, 657 pages.

Rowe, J.S. (1972): Forest regions of Canada; Department of Fisheries and the Environment, *Canadian Forestry Service* Publication No. 1300.

Schiarizza, P. and Preto, V.A. (1987). Geology of the Adams Plateau-Clearwater-Vavenby area; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Paper 1987-2.

Salomons, W. (1995): Environmental Impact of Metals Derived from Mining Activities: Processes, Predictions, Preventions; *Journal of Geochemical Exploration*, Volume 52, pages 5-24.

Steele, K.F. and Wagner, G.H. (1983): Hydrogeochemical Exploration for Barite, Ouchata Mountians, U.S.A.; *Journal of Geochemical Exploration*, Volume 19, pages 243-254.

Thompson, M. and Howarth, R.J. (1978): A New Approach to the Estimation of Analytical Precision; *Journal of Geochemical Exploration*, Volume 9, pages 23-30.

Sibbick, J.,Runnells,J.L., and Lett,R.E.,(1997): Eagle Bay Project: Regional Hydrogeochemical Survey and Geochemical Orientation Studies (82M4/5); *in* Geological Fieldwork 1996, Lefebure, D.V., McMillan, W.J. and McArthur, G., Editors, B.C. *Ministry of Employment and Investment*, Paper 1997-1, p. 423-427.

Wheeler, J.O. and McFeely, P.(1991): Tectonic Assemblage Map of the Canadian Cordillera and adjacent part of the United States of America, Geological Survey of Canada Map 1712A, scale 1:2000,000.

APPENDIX A. SAMPLE LOCATION AND ELEMENT DISTRIBUTION PLOTS

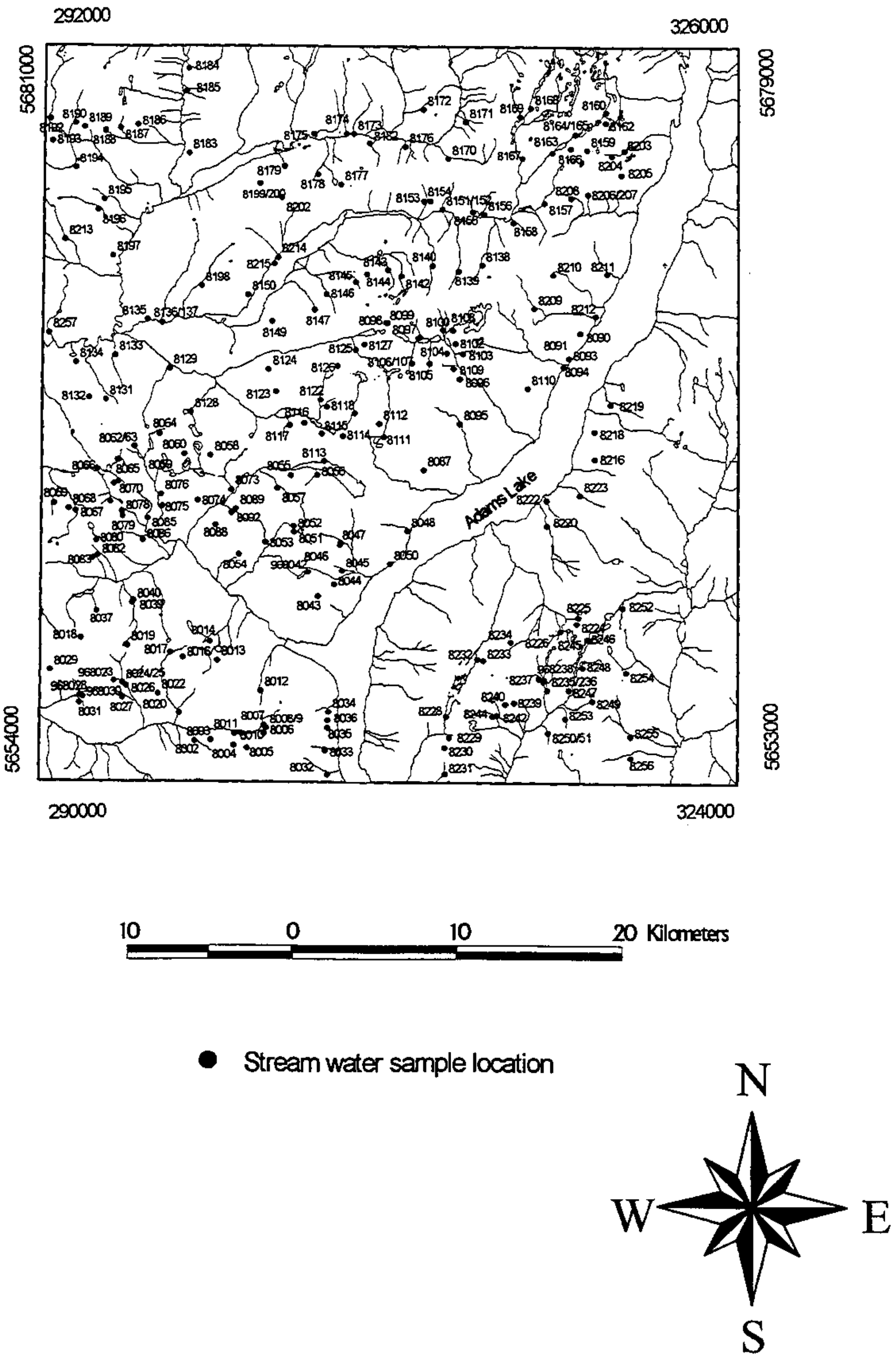

Figure A-1. Steam Water Sample Locations (Sample numbers prefixed 96)

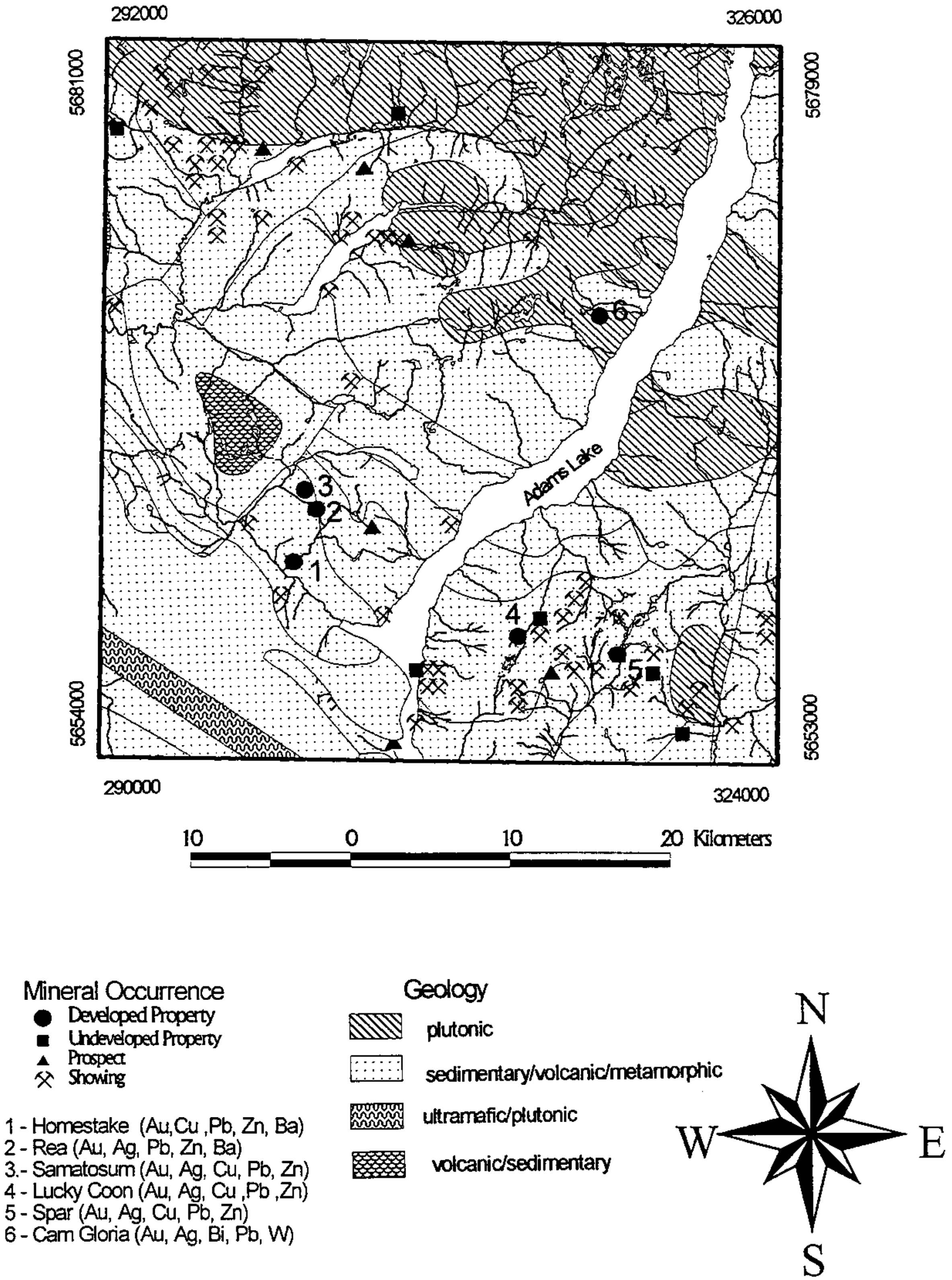

Figure A-2. Key Mineral Occurrences (Geology after Wheeler and McFeely, 1991)

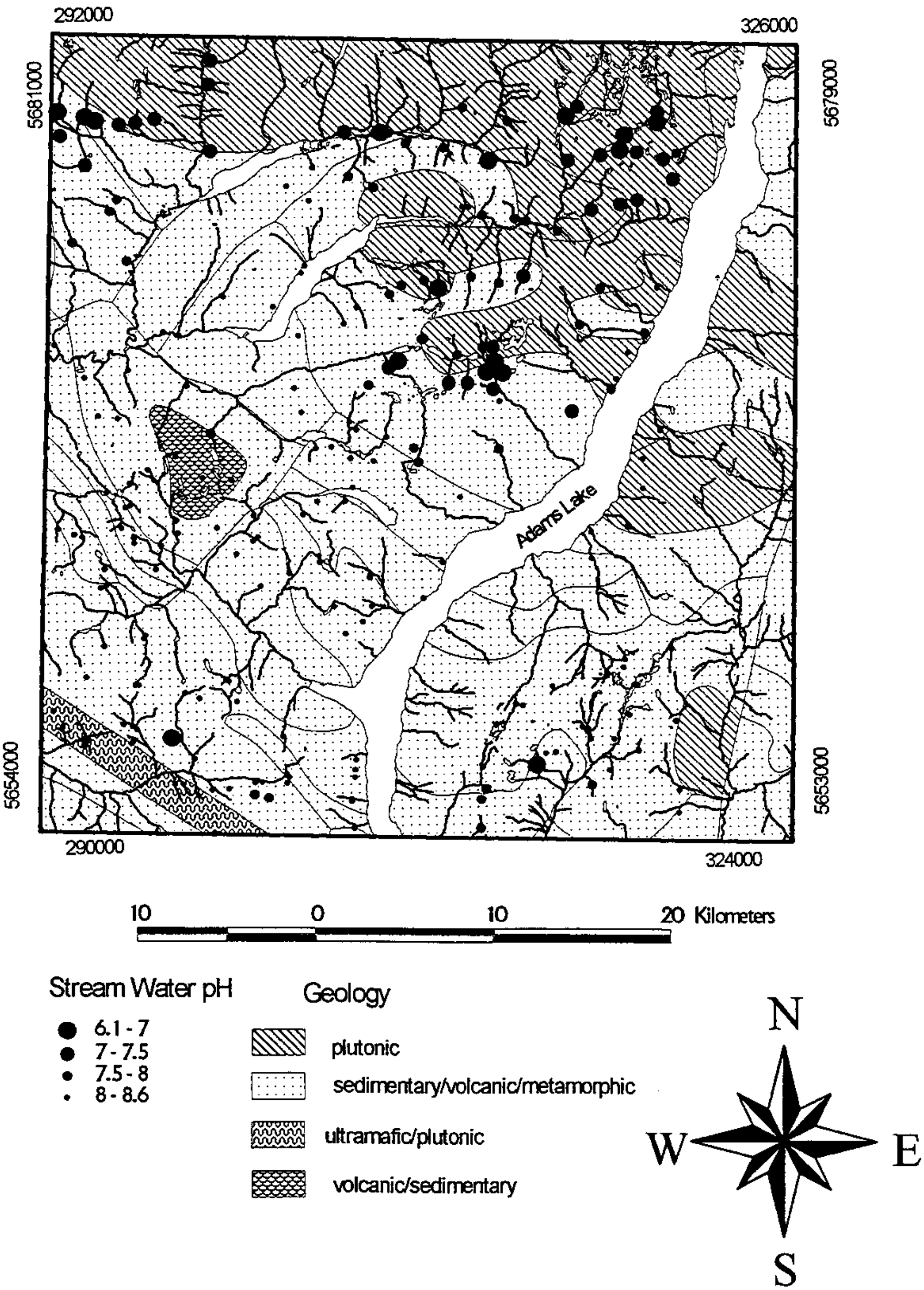

Figure A-3. Stream Water pH

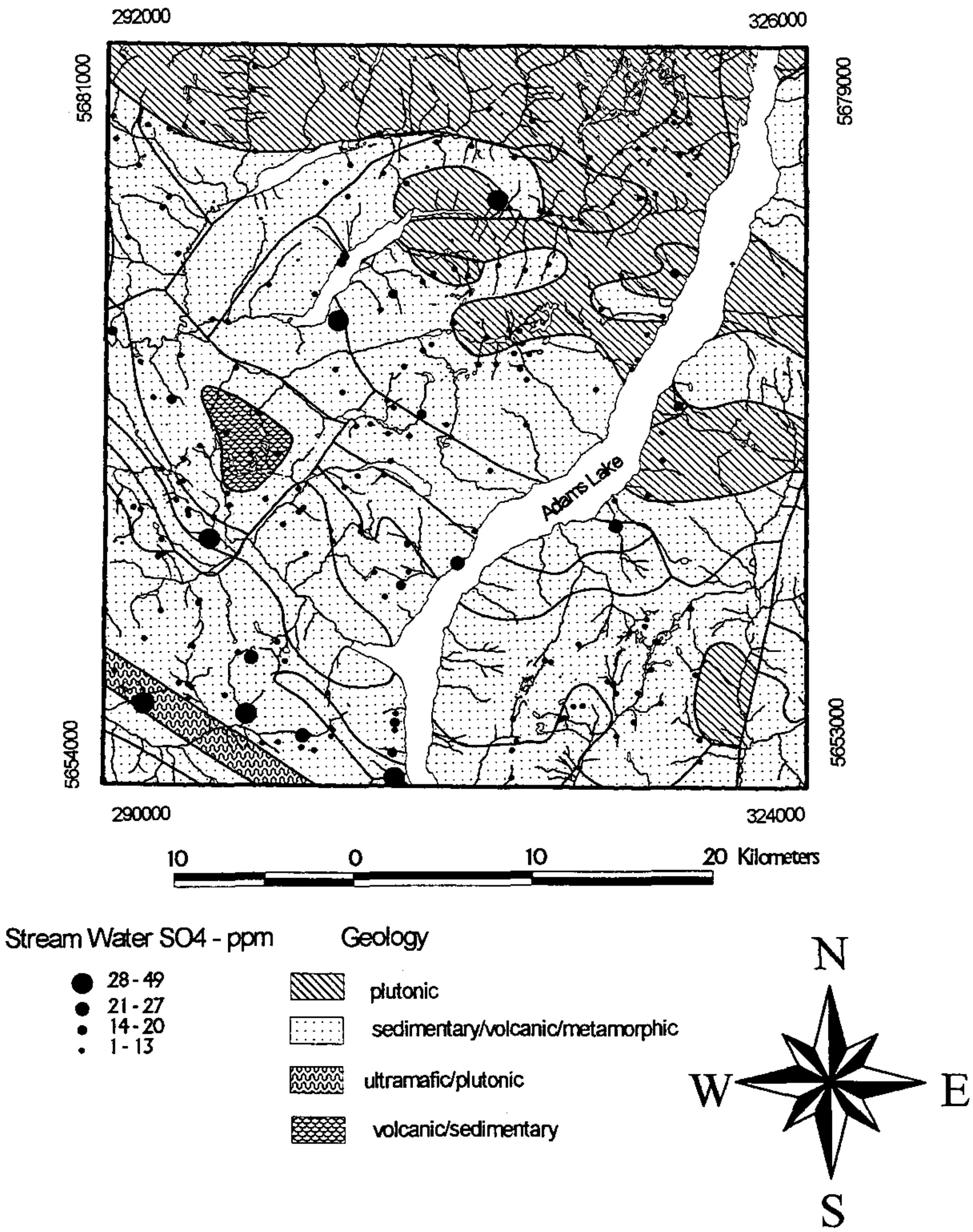

Figure A-4. Stream Water Sulphate

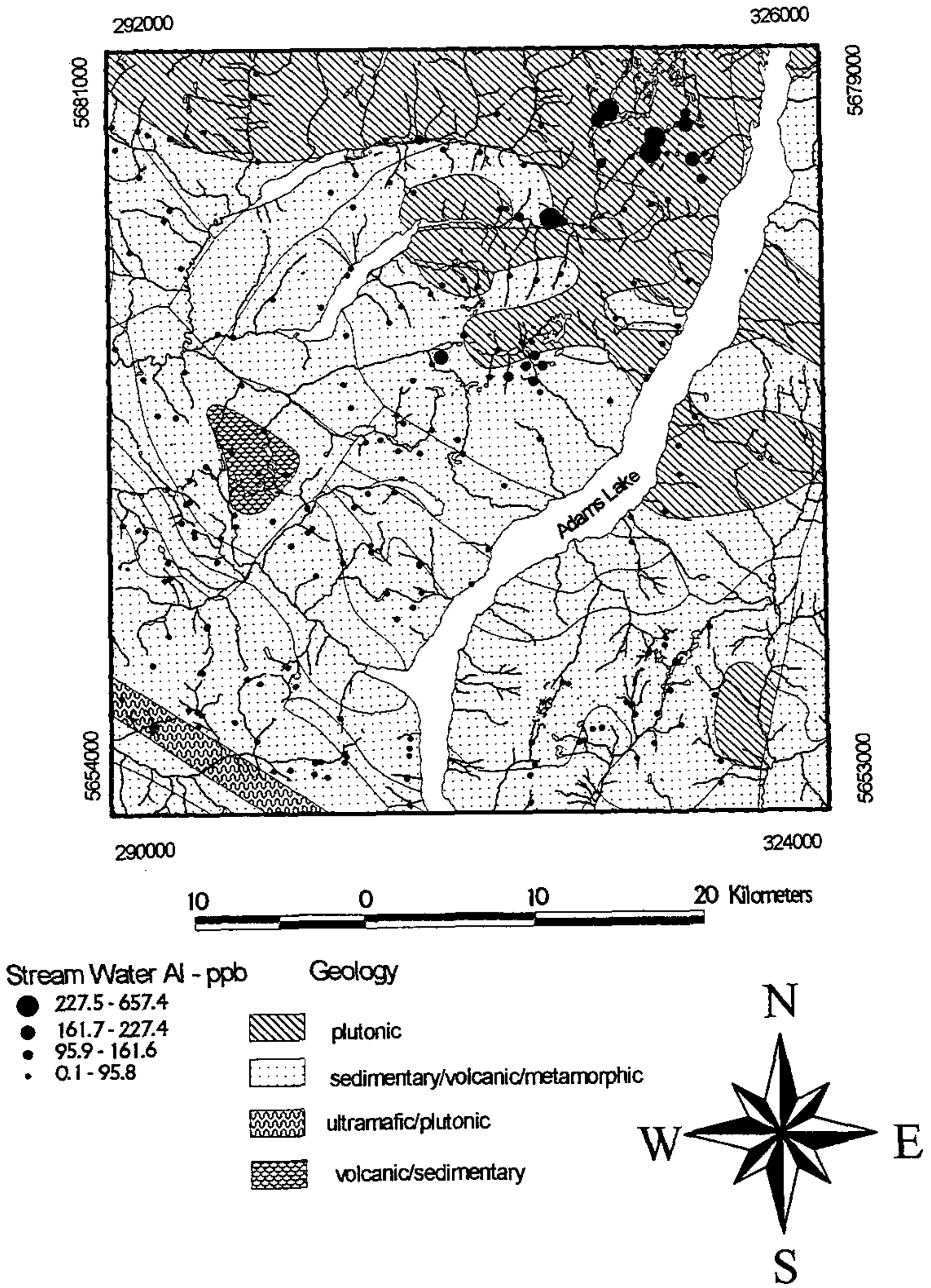

Figure A-5. Stream Water Aluminum

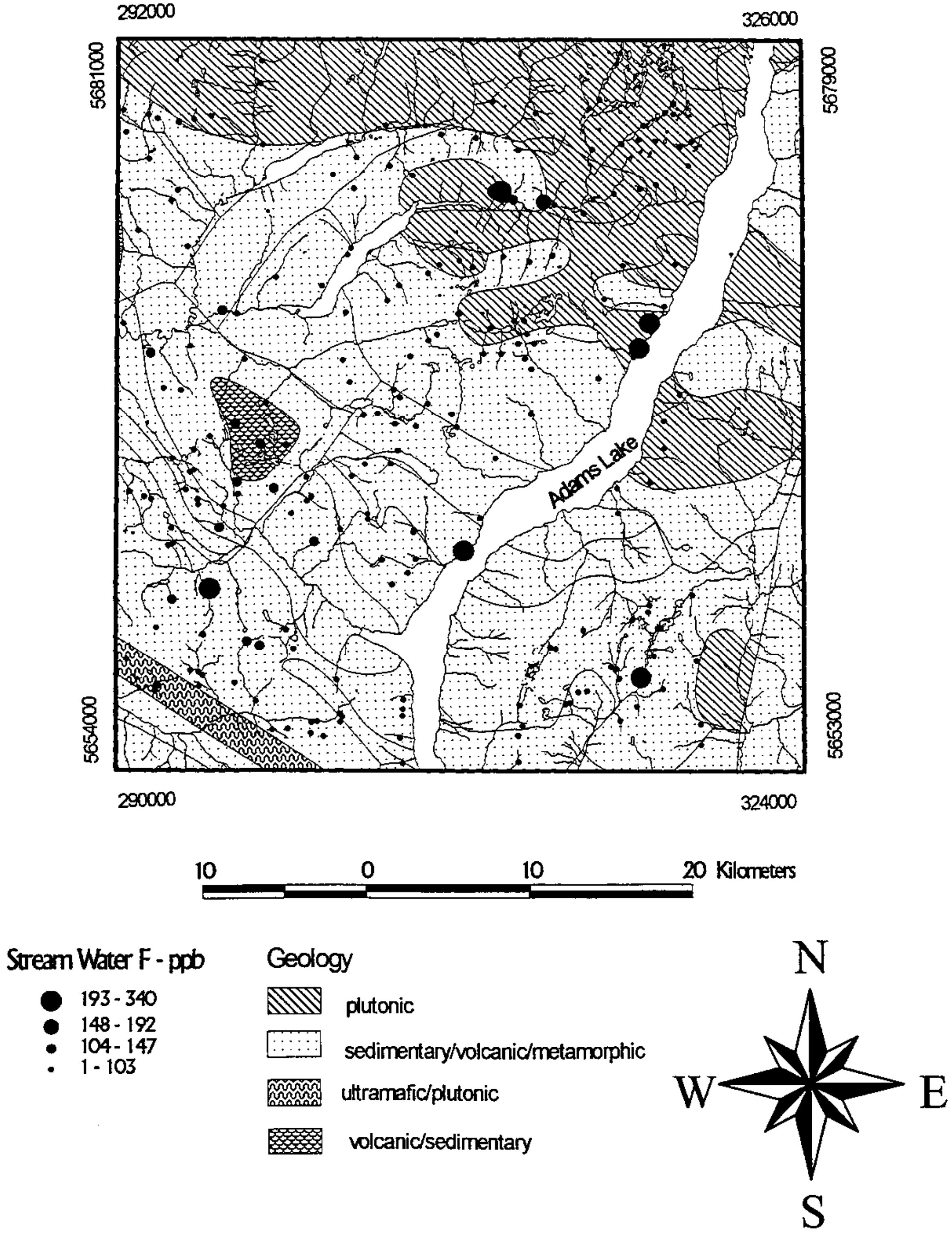

Figure A-6. Stream Water Fluoride

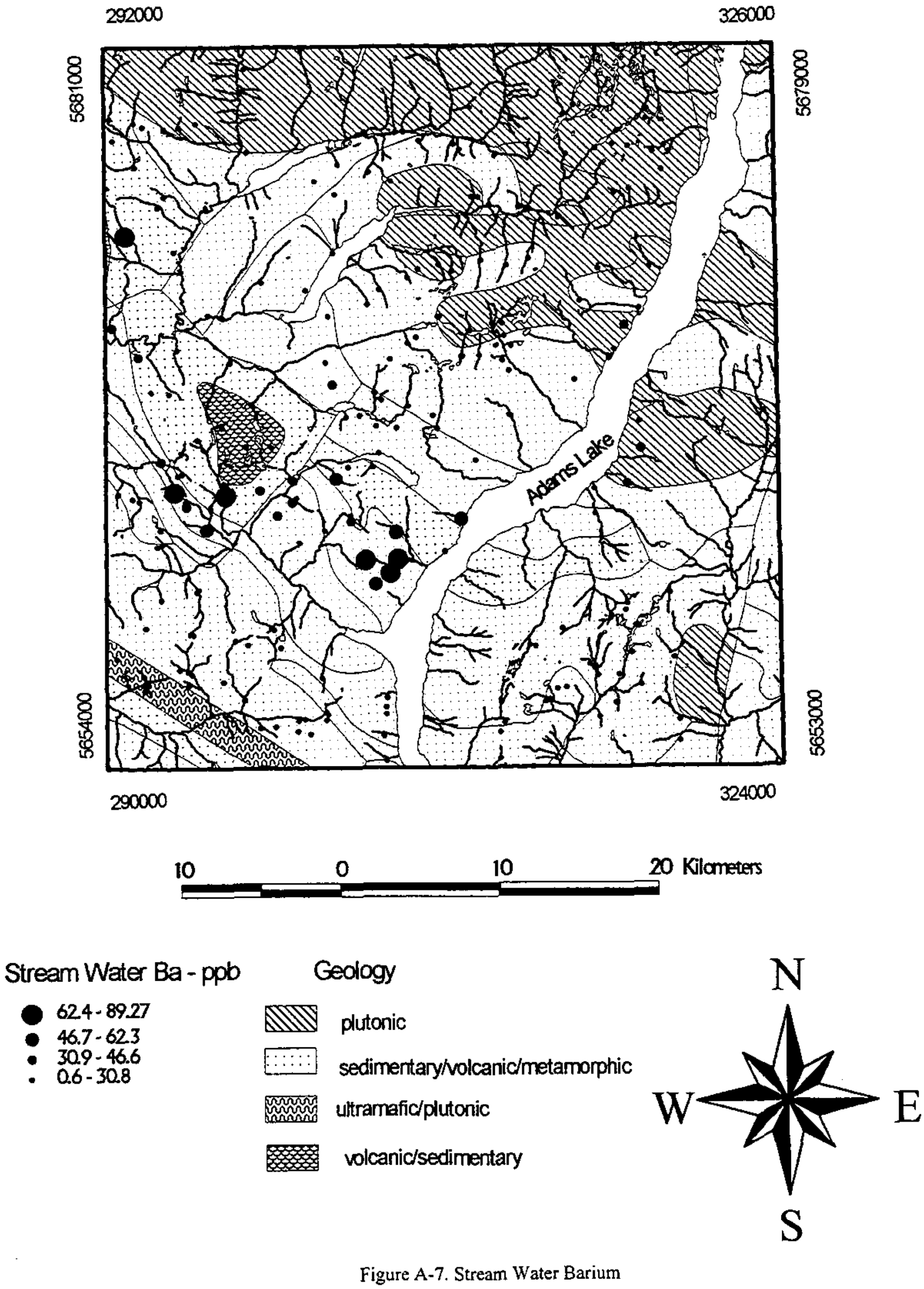

Figure A-7. Stream Water Barium

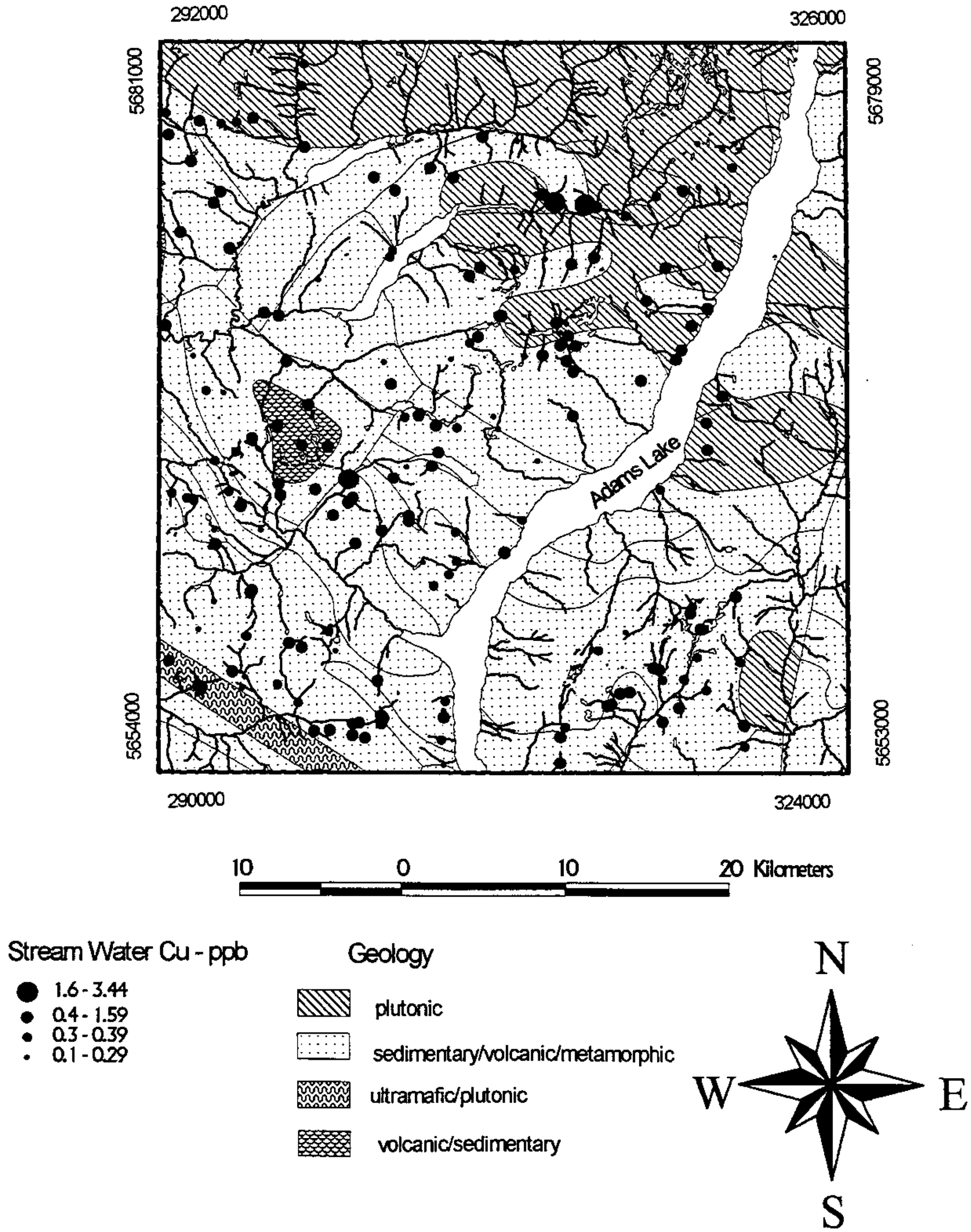

Figure A-8. Stream Water Copper

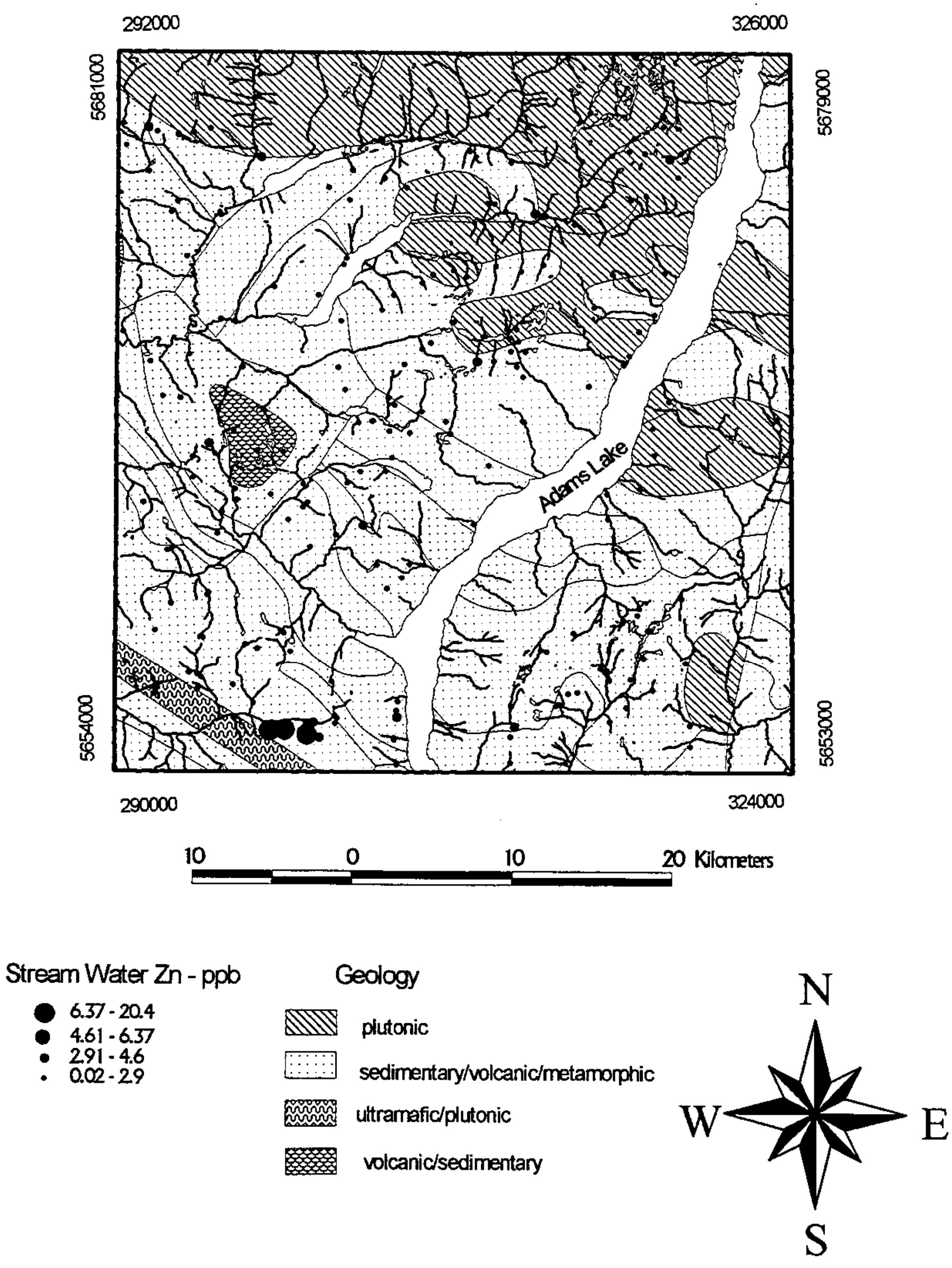

Figure A-9. Stream Water Zinc

APPENDIX B - FIELD OBSERVATIONS

TABLE B-1. REFERENCE GUIDE TO FIELD OBSERVATIONS

MAP	1:50,000 NTS map sheet number
SAMPLE	Sample number
UTM ZONE	UTM Zone number
UTM - E	UTM East coordinate (provided for NAD27)
UTM - N	UTM North coordinate (provided for NAD27)
REP	Replicate sample status: 1 First sample of a field duplicate pair 2 Second sample of a field duplicate pair
AREA	Catchment basin area (m^2)
PERI	Catchment basin peripheral length (m)
FORM	Geological units (see Table B-2) Indicates the major geological unit of the stream catchment area
WTRCLR	Water Colour: 0 Colourless 2 White cloudy 1 White cloudy 3 Brown cloudy
FLW	Water Flow: 0 Stagnant 2 Moderate 1 Slow 3 Fast
COLOUR	Sediment colour: T Tan-brown Y Yellow G Grey O Orange B Black R Red

SEDPPT	Sediment precipi N - None (otherw
CON	Presence of huma N None F Forestry M Mining
WIDTH	Stream width in r
DEPTH	Stream depth in c
BNK	Bank type: A Alluviur C Colluviu G Glacial (S Talus
BNKPPT	Bank precipitate: N - None (otherw
CHLBED	Channel Bed (doı C Course s F Fine san B Boulders
CHLPTN	Channel Pattern: S Shoots a B Braided
ODR	Stream Order
DATE	Sample collection

TABLE B-2: GEOLOGICAL LEGEND

UNIT	TERRANE-AGE	DESCRIPTION
T	Tertiary	Basalt-Andesite
ub	Slide Mountain-Permian	Fennel Formation - Pillowed metabasalt
EBP	Kootenay-Mississippian	Eagle Bay Assemblage - Phyllite and slate
EBF	Kootenay-Mississippian and/or Devonian	Eagle Bay Assemblage - Phyllite and schist derived from tuff and volcanic breccia
EBA	Kootenay-Devonian	Eagle Bay Assemblage - Sericite Quartz Phyllite derived from felsic volcanics
EBM	Kootenay-Paleozoic	Eagle Bay Assemblage-Pillowed metabasalt, greenstone, chlorite schist
EBL	Kootenay-Paleozoic	Eagle Bay Assemblage-Calcareous phyllite and limestone
EBS	Kootenay-Paleozoic	Eagle Bay Assemblage-Phyllitic sandstone, phyllite and quartzite
EBQ	Kootenay-Lower Cambrian	Eagle Bay Assemblage-Quartzite, grit and schist
EBQ	Kootenay-Lower Cambrian	Eagle Bay Assemblage-Chlorite Schist derived from mafic volcanics
EBQ	Kootenay-Lower Cambrian	Eagle Bay Assemblage-Tshinakin Limestone
EBH	Kootenay-Lower Cambrian	Eagle Bay Assemblage- Quartzite, grit and chlorite sericite schist
Kg	Cretaceous	Baldy Batholith - granite and granodiorite
ub	Kootenay-Paleozoic	Serpentine
Dgn	Late Devonian	Granite and granodiorite orthogneiss

Field Observations

MAP	SAMPLE	UTM	UTM-E	UTM-N	REP	FORM	WTRCLR	FLW	SEDCLR	SEDPPT	CON	WIDTH	DEPTH	BNK	BNKPPT	CHLBED	CHLPTN	ODR	DAYMONTH
82M4	968002	11	299139	5656214		EBL	0	2	T	N	N	0.7	20	A	N	O	S	1	1306
82M4	968003	11	300103	5656247		EBS	0	2	T	N	N	0.5	15	A	N	B	S	1	1306
82M4	968004	11	301473	5655901		EBS	0	1	T	O	N	1.0	20	O	N	F	S	1	1306
82M4	968005	11	302251	5655703		EBS	0	1	T	N	F	0.7	10	A	N	B	S	1	1306
82M4	968006	11	303306	5656521		EBS	0	3	T	N	N	1.0	25	O	N	B	S	1	1306
82M4	968007	11	303296	5657020		EBS	0	1	W	N	A	0.8	25	O	N	O	S	2	1306
82M4	968008	11	303432	5656853	1	EBS	0	3	T	N	N	1.5	15	A	N	S	S	1	1306
82M4	968009	11	303432	5656853	2	EBS	0	3	T	N	N	1.5	15	A	N	S	S	1	1306
82M4	968010	11	301917	5656609		EBS	0	1	T	N	N	0.4	10	O	N	S	S	1	1406
82M4	968011	11	301549	5656569		EBS	0	2	T	N	F	0.4	15	T	N	S	S	1	1406
82M4	968012	11	303168	5659109		EBA	0	3	T	N	F	1.0	20	T	N	S	S	1	1406
82M4	968013	11	300654	5661088		EBS	0	2	T	N	N	0.5	20	O	N	S	S	2	1406
82M4	968014	11	300247	5662234		EBS	0	1	T	O	N	0.3	15	O	N	O	S	1	1406
82M4	968016	11	298591	5661344		EBS	0	2	T	N	N	0.3	10	O	N	S	S	1	1406
82M4	968017	11	297824	5661648		EBS	0	2	T	N	N	0.6	20	T	N	S	S	1	1406
82M4	968018	11	292349	5662700		EBS	0	2	T	N	N	0.3	10	T	N	S	S	1	1406
82M4	968019	11	295239	5662157		EBS	0	1	T	N	N	0.6	15	O	N	S	S	1	1406
82M4	968020	11	298231	5657988		EBS	0	2	T	N	N	1.0	20	A	N	F	S	1	1506
82M4	968022	11	296992	5659155		EBS	0	1	T	N	N	0.2	10	T	N	S	S	1	1506
82M4	968023	11	294323	5660009		ub	0	3	T	N	F	0.7	20	T	N	B	S	2	1506
82M4	968024	11	294844	5659890	1	ub	0	3	T	N	N	0.7	25	T	N	S	S	1	1506
82M4	968025	11	294844	5659890	2	ub	0	3	T	N	N	0.7	25	T	N	S	S	1	1506
82M4	968026	11	295054	5659703		EBGt	0	2	T	N	N	0.5	20	T	N	S	S	1	1506
82M4	968027	11	294819	5659030		EBP	0	0	T	N	F	1.2	201	0	1	A	N	1	1506
82M4	968028	11	292179	5659254		EBP	0	2	T	N	N	0.5	15	A	N	S	S	2	1506
82M4	968029	11	290449	5660834		EBP	0	2	T	N	N	0.3	10	T	N	S	S	1	1506
82M4	968030	11	292362	5659143		EBP	0	3	T	N	N	0.5	20	A	N	B	S	2	1506
82M4	968031	11	292126	5658812		EBP	0	2	T	N	N	2.0	10	O	N	O	S	1	1506
82M4	968032	11	307008	5653882		EBS	0	3	W	W	N	4.0	25	C	N	S	S	2	1606
82M4	968033	11	306915	5655400		Dgn	0	4	T	W	N	0.5	20	C	N	S	S	1	1606
82M4	968034	11	307212	5657728		EBA	0	3	W	W	N	0.6	20	C	N	S	S	2	1606
82M4	968035	11	307116	5656741		EBA	0	2	T	W	N	0.4	10	C	N	S	S	1	1606
82M4	968036	11	307144	5657170		EBA	0	3	W	W	N	0.4	10	C	N	O	S	1	1606
82M4	968037	11	293372	5664367		EBS	0	3	T	W	N	0.7	15	T	N	B	S	1	1706
82M4	968039	11	295600	5664764		EBS	0	3	T	N	N	0.6	20	T	N	B	S	2	1706
82M4	968040	11	295684	5664900		EBS	0	3	W	N	N	0.5	15	T	N	B	S	1	1706
82M4	968042	11	306240	5666259		EBG	0	1	T	B	N	1.5	35	O	N	O		1	2006
82M4	968043	11	306809	5664763		EBG	0	2	T	R	N	0.5	10	T	N	S	S	1	2006
82M4	968044	11	307785	5665403		EBG	0	2	W	N	F	0.4	15	T	N	F	S	1	2006
82M4	968045	11	308291	5666236		EBG	0	3	W	N	N	0.8	20	T	N	O	S	1	2006
82M4	968046	11	308234	5667869		EBGt	0	3	W	P	F	0.4	20	T	N	C	S	1	2006
82M4	968047	11	308268	5668002		EBGt	0	3	T	N	F	0.7	20	T	N	B	S	2	2006
82M4	968048	11	312327	5668594		EBGt	0	3	W	W	N	0.5	25	A	R	B	S	1	2006

MAP	SAMPLE	UTM	UTM-E	UTM-N	STA	FORM	WTRCLR	FLW	SEDCLR	SEDPPT	CON	WIDTH	DEPTH	BNK	BNKPPT	CHLBED	CHLPTN	ODR	DAYMONTH
82M4	968050	11	311221	5666628		EBG	0	3	W	N	N	0.4	15	S	N	B	S	1	2006
82M4	968051	11	305477	5669109		EBG	0	3	T	N	F	0.4	20	T	N	B	S	1	2106
82M4	968052	11	305484	5668755		EBG	0	3	T	N	N	0.8	25	T	N	B	S	2	2106
82M4	968053	11	303762	5668209		EBG	0	2	T	N	F	0.7	10	T	N	S	M	2	2106
82M4	968054	11	302125	5667518		EBA	0	2	T	N	F	0.3	10	O	N	O	S	1	2106
82M4	968055	11	305432	5672148		EBGl	0	4	T	N	N	0.4	10	T	N	B	S	1	2306
82M4	968056	11	306990	5672129		EBG	0	3	T	N	N	0.3	10	T	N	B	S	1	2306
82M4	968057	11	304601	5671427		EBG	0	3	T	N	N	0.3	10	T	N	S	S	1	2306
82M4	968058	11	300642	5673545		T	0	2	T	N	N	0.4	15	T	N	B	S	1	2306
82M4	968059	11	299058	5673677	1	T	0	1	T	N	N	0.5	20	O	N	O	M	1	2306
82M4	968060	11	299058	5673677	2	T	0	1	T	N	N	0.5	20	O	N	O	M	1	2306
82M4	968062	11	296056	5674224	1	T	0	2	T	N	N	1.2	15	T	N	S	M	1	2306
82M4	968063	11	296056	5674224	2	T	0	2	T	N	N	1.2	15	T	N	S	M	1	2306
82M4	968064	11	297600	5674911		T	0	2	T	N	N	0.5	15	T	N	O	S	1	2306
82M4	968065	11	295018	5673469		EBS	0	3	T	N	N	0.5	20	T	N	B	S	1	2306
82M4	968066	11	293710	5672949		EBM	0	3	T	N	N	1.5	15	T	N	B	S	2	2306
82M4	968067	11	292303	5670513		EBS	0	3	T	N	N	1.5	15	T	N	B	S	2	2306
82M4	968068	11	291885	5670672		EBS	0	2	T	N	N	0.6	15	T	N	B	S	1	2306
82M4	968069	11	291001	5670998		EBS	0	3	T	N	N	2.0	10	T	N	B	S	1	2306
82M4	968070	11	294731	5672041		EBS	0	2	T	N	N	0.4	20	T	N	S	S	1	2406
82M4	968071	11	295004	5672158		EBS	0	2	T	N	N	0.3	10	T	N	S	S	1	2406
82M4	968072	11	294469	5670970		EBS	0	2	T	N	N	0.3	10	T	W	B	S	1	2406
82M4	968073	11	301817	5671440		T	0	2	T	N	F	0.4	10	T	N	B	S	2	2506
82M4	968074	11	299796	5670857		EBP	0	1	T	N	F	0.5	10	T	N	S	S	1	2506
82M4	968075	11	297634	5670611		EBP	0	1	T	N	F	0.3	15	T	N	O	S	1	2506
82M4	968076	11	297557	5671293		EBS	0	2	T	N	N	0.3	15	T	N	B	S	1	2506
82M4	968078	11	295156	5670361		EBS	0	2	T	N	N	0.5	20	T	N	O	S	1	2506
82M4	968079	11	295183	5670075		EBS	0	3	T	N	F	0.7	15	T	N	B	S	1	2506
82M4	968080	11	293506	5668659		EBS	0	1	T	N	N	0.3	10	T	N	S	S	1	2506
82M4	968082	11	293580	5667780		EBS	0	3	R	N	N	0.5	20	T	R	B	S	1	2506
82M4	968083	11	293260	5667638		EBS	0	2	T	N	N	0.5	10	T	N	S	S	1	2506
82M4	968085	11	296691	5669904		EBA	0	3	T	N	N	0.3	10	T	N	B	S	1	2506
82M4	968086	11	296376	5668575		EBM	0	3	T	P		0.4	15	T	N	B	S	1	2506
82M4	968087	11	313417	5672234		EBS	0	3	T	N	N	1.0	25	T	N	B	S	1	2706
82M4	968088	11	300816	5669316		EBG	0	2	T	N	N	0.3	10	T	N	B	S	1	2606
82M4	968089	11	302047	5670285		EBG	0	3	T	N	N	1.0	20	T	N	B	S	1	2606
82M4	968090	11	323086	5680138	1	Kg	0	2	T	N	F	0.4	10	T	N	S	S	1	2606
82M4	968091	11	323086	5680138	2	Kg	0	2	T	N	F	0.4	10	T	N	S	S	1	2606
82M4	968092	11	301771	5670053		EBF	0	3	T	N	N	0.4	15	T	N	B	S	1	2606
82M4	968093	11	322386	5678657		Kg	0	3	W	N	N	0.3	10	C	N	B	S	1	2606
82M4	968094	11	322051	5678122		Dgn	0	4	T	N	N	2.5	25	T	N	B	B	3	2606
82M4	968095	11	315662	5674907		EBQ	0	3	T	N	N	1.5	15	T	N	B	B	2	2706
82M4	968096	11	315788	5677617		EBQ	0	3	T	R	N	0.4	10	C	R	B	S	1	2706

Field Observations

MAP	SAMPLE	UTM	UTM-E	UTM-N	STA	FORM	WTRCLR	FLW	SEDCLR	SEDPPT	CON	WIDTH	DEPTH	BNK	BNKPPT	CHL
82M4	968097	11	313452	5680215		Kg	0	4	G	N	N	1.0	30	A	N	[illegible]
82M4	968098	11	311468	5681123		Kg	0	3	T	N	N	0.4	25	G	N	[illegible]
82M5	968099	11	311562	5681139		EBQ	0	3	T	N	F	0.3	10	G	N	[illegible]
82M4	968100	11	314849	5680596		Kg	0	4	T	N	N	1.5	15	T	N	[illegible]
82M4	968102	11	315572	5679776		Kg	0	3	T	N	F	0.4	10	T	N	[illegible]
82M4	968103	11	315993	5679141		Kg	1	1	T	N	F	0.4	10	T	N	[illegible]
82M4	968104	11	315050	5679200		Kg	0	3	T	N	F	1.0	15	O	N	[illegible]
82M4	968105	11	313977	5678625		Kg	0	4	T	N	N	0.9	25	T	N	[illegible]
82M4	968106	11	312918	5678636	1	Kg	0	4	T	N	N	1.0	30	T	N	[illegible]
82M4	968107	11	312918	5678636	2	Kg	0	4	T	N	N	1.0	30	T	N	[illegible]
82M4	968108	11	315453	5680551		Kg	0	4	T	N	N	1.5	30	C	N	[illegible]
82M4	968109	11	315409	5678263		Kg	0	4	T	N	N	2.0	20	T	N	[illegible]
82M4	968110	11	319831	5676926		Dgn	0	3	T	N	N	1.6	30	T	N	[illegible]
82M4	968111	11	311120	5674270		EBG	0	4	T	N	N	1.1	20	O	N	[illegible]
82M4	968112	11	310861	5675065		EBG	0	3	T	P	N	0.6	15	T	N	[illegible]
82M4	968113	11	307422	5672943		EBG	0	2	T	N	N	0.3	10	O	N	[illegible]
82M4	968114	11	308606	5674405		EBG	0	1	T	N	N	0.2	5	T	N	[illegible]
82M4	968115	11	307325	5674585		EBG	0	1	T	N	N	0.3	10	T	N	[illegible]
82M4	968116	11	306306	5675249		EBG	0	2	T	N	N	0.2	10	T	N	[illegible]
82M4	968117	11	305443	5675179		EBG	0	2	T	N	F	0.3	10	T	N	[illegible]
82M4	968118	11	309372	5675735		EBG	0	4	T	B	N	1.2	20	T	N	[illegible]
82M4	968120	11	307691	5676182		EBG	0	3	T	P	N	0.6	15	T	N	[illegible]
82M4	968122	11	307337	5676647		EBG	0	3	T	N	N	0.8	25	T	N	[illegible]
82M4	968123	11	304675	5677229		EBG	0	1	T	N	N	0.3	10	T	N	[illegible]
82M4	968124	11	304285	5678589		EBG	0	1	T	N	F	0.3	5	T	N	[illegible]
82M4	968125	11	309559	5679559		EBQ	0	3	T	N	N	2.0	30	T	N	[illegible]
82M4	968126	11	308420	5678634		EBQ	0	2	T	N	F	0.4	5	T	N	[illegible]
82M4	968127	11	310105	5679905		EBQ	0	1	T	N	N	0.2	5	T	N	[illegible]
82M4	968128	11	299548	5676140		T	0	2	T	N	N	0.5	20	T	N	[illegible]
82M4	968129	11	298320	5678833		EBP	0	3	T	N	N	0.9	25	A	N	[illegible]
82M4	968131	11	294405	5677114		T	0	2	T	N	N	0.1	10	T	N	[illegible]
82M4	968132	11	293345	5677270		EBG	0	2	T	N	N	0.3	10	T	N	[illegible]
82M4	968133	11	295058	5679754		EBP	0	3	W	W	N	0.6	20	T	N	[illegible]
82M4	968134	11	292615	5679417		T	0	1	T	N	F	0.4	10	G	N	[illegible]
82M5	968135	11	297083	5681830		T	0	1	B	B	A	0.5	10	A	N	[illegible]
82M5	968136	11	297964	5681622	1	T	0	4	T	N	N	1.1	25	A	N	[illegible]
82M5	968137	11	297964	5681622	2	T	0	4	T	N	N	1.1	25	A	N	[illegible]
82M5	968138	11	317293	5684471		Dgn	0	3	T	N	N	0.5	15	T	N	[illegible]
82M5	968139	11	315905	5684140		Dgn	0	4	T	N	N	2.0	25	T	N	[illegible]
82M5	968140	11	314332	5684528		Dgn	0	4	T	N	N	2.5	25	T	N	[illegible]
82M5	968142	11	312460	5683941		Dgn	0	4	T	N	N	2.0	25	T	N	[illegible]
82M5	968143	11	311656	5684366		EBQ	0	3	T	N	N	1.0	15	T	N	[illegible]
82M5	968144	11	310400	5684137		EBQ	0	2	T	N	N	0.4	10	T	N	[illegible]

MAP	SAMPLE	UTM	UTM-E	UTM-N	STA	FORM	WTRCLR	FLW	SEDCLR	SEDPPT	CON	WIDTH	DEPTH	BNK	BNKPPT	CHLBED	CHLPTN	ODR	DAYMONTH
82M5	968145	11	309713	5683653		EBQ	0	3	T	N	N	0.7	10	T	N	S	S	1	0807
82M5	968146	11	307890	5682976		EBQ	0	4	T	N	N	1.0	20	C	N	B	S	2	0807
82M5	968147	11	307135	5682053		EBQ	0	3	T	N	N	0.2	10	T	N	F	S	1	0807
82M5	968149	11	304581	5681463		EBQ	0	1	T	N	N	0.3	5	T	N	O	S	2	0807
82M5	968150	11	303186	5683133		EBQ	0	2	W	W	N	0.3	10	O	W	S	S	1	0807
82M5	968151	11	315034	5687914	1	Dgn	0	3	T	N	F	0.3	20	A	N	S	S	1	0907
82M5	968152	11	315034	5687914	2	Dgn	0	3	T	N	F	0.3	20	A	N	S	S	1	0907
82M5	968153	11	313937	5688432		Dgn	0	3	T	N	N	0.5	10	T	N	S	S	1	0907
82M5	968154	11	314340	5688413		Dgn	0	2	T	N	N	0.2	10	T	N	S	S	1	0907
82M5	*968155*	*11*	*316866*	*5687678*		*Dgn*	*0*	*2*	*T*	*N*	*N*	*0.4*	*10*	*T*	*N*	*S*	*S*	*1*	*0907*
82M5	968156	11	317517	5687522		Dgn	0	3	T	N	N	0.5	25	T	N	F	M	1	0907
82M5	968157	11	321198	5688063		Dgn	0	4	T	N	N	0.5	15	T	N	B	S	1	0907
82M5	968158	11	319303	5686956		Dgn	0	2	T	N	N	0.5	10	A	N	S	M	1	0907
82M5	968159	11	323847	5691189		Kg	0	1	W	N	N	0.2	5	T	N	S	S	1	1007
82M5	968160	11	325082	5693425		Kg	0	2	T	N	N	1.2	25	T	N	B	W	1	1007
82M5	968162	11	325042	5692814		Kg	0	2	T	N	N	0.3	10	T	N	B	S	1	1007
82M5	968163	11	322886	5691338		Kg	0	2	W	N	N	0.2	5	T	N	S	S	1	1007
82M5	968164	11	323185	5692165	1	Kg	0	2	W	R	N	0.3	10	T	N	B	S	1	1007
82M5	968165	11	323185	5692165	2	Kg	0	2	W	R	N	0.3	10	T	N	B	S	1	1007
82M5	968166	11	321793	5691113		Kg	0	2	T	R	N	0.3	5	T	N	S	S	1	1007
82M5	968167	11	319953	5690829		Kg	0	2	P	N	N	0.3	15	T	N	B	S	1	1007
82M5	968168	11	320550	5693817		Kg	0	3	T	N	N	1.5	25	T	N	B	S	2	1007
82M5	968169	11	319908	5693309		Kg	0	4	T	N	N	1.5	20	T	N	B	S	2	1007
82M5	968170	11	315486	5690941		Kg	0	4	T	N	N	1.2	20	C	N	B	S	2	1007
82M5	968171	11	316612	5693113		Kg	0	3	T	N	N	0.4	20	C	N	S	S	1	1007
82M5	968172	11	314077	5693950		Kg	0	2	P	N	N	0.4	5	T	N	B	S	1	1007
82M5	968173	11	309863	5692605		Kg	0	3	T	N	N	0.9	15	A	N	B	M	1	1007
82M5	968174	11	309408	5692634		Kg	0	4	W	N	N	2.5	30	A	N	B	S	2	1007
82M5	968175	11	307422	5692690		Kg	0	2	T	N	N	0.3	5	A	N	S	S	1	1007
82M5	968176	11	312935	5691740		Dgn	0	3	T	N	N	0.5	10	T	N	S	S	1	1107
82M5	968177	11	308952	5689619		T	0	1	T	N	N	0.5	5	T	N	B	S	1	1107
82M5	968178	11	307580	5690258		T	0	2	T	N	N	0.3	5	T	N	O	S	1	1107
82M5	968179	11	305619	5690809		T	0	1	T	N	N	0.1	5	T	N	O	S	1	1107
82M5	968182	11	310829	5692023		Dgn	0	3	T	N	N	0.6	10	T	N	B	S	2	1107
82M5	968183	11	299920	5691812		EBA	0	3	T	N	N	1.5	15	T	N	B	S	1	2307
82M5	968184	11	300051	5696880		Kg	0	4	T	N	N	1.5	30	A	N	B	S	2	2307
82M5	968185	11	299893	5695534		Kg	0	2	T	N	N	0.7	10	T	N	B	S	1	2307
82M5	968186	11	296859	5693676		Kg	0	2	T	B	N	0.5	10	T	N	S	S	1	2307
82M5	968187	11	295792	5693489		Kg	0	3	T	N	N	1.0	15	T	N	B	S	1	2307
82M5	968188	11	294872	5693418		EBA	0	3	T	B	N	3.0	15	T	N	B	S	1	2307
82M5	968189	11	293560	5693632		EBP	0	3	T	R	N	0.5	15	T	N	B	S	1	2307
82M5	968190	11	293014	5693878		EBP	0	4	T	N	N	3.0	15	T	N	B	S	2	2307
82M5	968192	11	291522	5694201		uF	0	3	T	N	N	3.0	30	A	N	B	S	1	2307

MAP	SAMPLE	UTM	UTM-E	UTM-N	STA	FORM	WTRCLR	FLW	SEDCLR	SEDPPT	CON	WIDTH	DEPTH	BNK	BNKPPT	CHLBED	CHLPTN	ODR	DAYMONTH
82M5	968193	11	291625	5692850		uF	0	3	G	N	N	2.0	10	B	N	B	S	1	2307
82M5	968194	11	292955	5691201		EBP	0	3	T	N	N	1.7	10	T	N	B	S	1	2307
82M5	968195	11	294662	5689233		EBP	0	2	T	N	N	0.5	5	T	N	S	S	1	2307
82M5	968196	11	294246	5688607		EBP	0	3	T	N	N	2.0	5	T	N	S	S	1	2307
82M5	968197	11	295113	5685811		EBP	0	2	G	N	N	0.4	5	T	N	B	S	1	2407
82M5	968198	11	300442	5683750		EBG	0	2	T	N	N	1.5	15	T	N	S	S	2	2407
82M5	968199	11	304103	5689814	1	EBA	0	1	T	B	P	0.2	3	O	N	O	M	1	2407
82M5	968200	11	304103	5689814	2	EBA	0	1	T	B	P	0.2	3	O	N	O	M	1	2407
82M5	968202	11	305373	5688943		Kg	0	1	T	NR	N	0.2	5	T	N	NR	M	1	2407
82M5	968203	11	326088	5691113		Kg	0	2	T	NR	N	1.0	15	C	N	NR	S	1	2407
82M5	968204	11	325330	5690783		Kg	0	2	T	NR	N	0.5	10	C	N	NR	S	1	2407
82M5	968205	11	325854	5689647		Kg	0	2	T	NR	N	1.0	15	T	N	NR	S	1	2407
82M5	968206	11	323820	5688524	1	Kg	0	3	T	NR	N	1.0	15	T	N	NR	S	2	2407
82M5	968207	11	323820	5688524	2	Kg	0	3	T	NR	N	1.0	15	T	N	NR	S	2	2407
82M5	968208	11	322838	5688319		Kg	0	3	T	NR	N	1.0	15	T	N	NR	S	2	2407
82M5	968209	11	320370	5681725		EBG	0	3	T	NR	N	0.5	10	T	N	NR	S	2	2407
82M5	968210	11	321599	5683714		Dgn	0	2	T	NR	N	0.5	10	G	N	NR	S	1	2407
82M5	968211	11	324803	5683700		Dgn	0	3	T	NR	N	0.5	10	T	N	NR	S	2	2407
82M5	968212	11	324051	5681142		EBG	0	3	T	NR	N	1.0	15	G	N	NR	S	2	2407
82M5	968213	11	292148	5686899		uF	0	3	T	NR	N	2.0	20	T	N	NR	S	2	2407
82M5	968214	11	305057	5685339		EBG	0	2	T	NR	N	0.5	10	T	N	NR	S	1	2407
82M5	968215	11	304850	5684975		EBG	0	2	T	NR	N	0.5	10	T	N	NR	S	1	2407
82M4	968216	11	323729	5672530		Dgn	0	3	T	N	N	0.9	5	G	N	B	S	1	1308
82M4	968218	11	323758	5674186		Dgn	0	3	T	N	F	1.0	20	G	N	B	B	1	1308
82M4	968219	11	324779	5675778		T	0	3	T	N	N	0.8	15	G	N	B	S	2	1308
82M4	968220	11	320733	5668630		EBG	0	3	T	N	N	1.6	10	G	N	B	S	2	1308
82M4	968222	11	320742	5670154		EBQ	0	4	G	N	N	1.5	25	G	N	B	S	2	1308
82M4	968223	11	322771	5670401		EBQ	0	2	T	N	N	0.7	0	G	N	B	S	1	1308
82M4	968224	11	322350	5662563		EBG	0	2	T	N	F	0.5	5	T	N	S	S	1	1408
82M4	968225	11	322461	5662972		EBG	0	1	T	N	N	1.1	10	A	N	S	M	1	1408
82M4	968226	11	321376	5662130		EBG	0	2	T	N	N	0.5	10	T	N	S	S	1	1408
82M4	968228	11	314291	5657178		EBG	0	3	T	N	N	1.0	10	A	N	O	S	2	1408
82M4	968229	11	314438	5655885		EBA	0	3	G	N	F	1.2	10	T	N	B	S	2	1408
82M4	968230	11	314154	5655324		EBA	0	3	O	N	N	1.2	10	T	N	B	S	1	1408
82M4	968231	11	314100	5653704		EBA	0	1	T	N	N	0.3	5	T	N	O	S	1	1408
82M4	968232	11	316274	5660623		EBG	0	3	T	N	N	1.0	15	T	N	B	S	2	1408
82M4	968233	11	316620	5660523		EBG	0	2	G	N	N	0.9	10	T	N	B	S	1	1408
82M4	968234	11	318337	5661575		EBG	0	3	G	N	N	1.1	10	T	N	B	S	1	1408
82M4	968235	11	320453	5658574	1	EBG	4	3	T	N	N	1.0	5	T	N	B	S	2	1408
82M4	968236	11	320453	5658574	2	EBG	4	3	T	N	N	1.0	5	T	N	B	S	2	1408
82M4	968237	11	319955	5659300		EBG	0	3	T	N	F	1.5	5	T	N	B	S	2	1408
82M4	968238	11	320280	5659180		EBG	0	3	T	N	N	2.0	5	T	N	B	S	2	1408
82M4	968239	11	318440	5657898		EBG	0	4	G	N	N	2.5	5	T	N	B	S	1	1408

Field Observations

MAP	SAMPLE	UTM	UTM-E	UTM-N	STA	FORM	WTRCLR	FLW	SEDCLR	SEDPPT	CON	WIDTH	DEPTH	BNK	BNKPPT	CHLBED	CHLPTN	ODR	DAYMONTH
82M4	968240	11	317869	5657846		EBG	0	2	T	N	N	0.5	10	T	N	S	S	1	1408
82M4	968242	11	317325	5657187		EBG	0	3	G	N	N	1.1	10	T	N	B	S	2	1408
82M4	968244	11	317075	5657098		EBG	0	4	G	N	N	1.3	10	B	N	B	S	2	1408
82M4	968245	11	322939	5661571		EBG	0	1	G	N	F	0.4	5	O	N	O	S	1	1508
82M4	968246	11	323089	5661543		EBG	0	1	G	N	N	2.0	5	O	N	S	M	2	1508
82M4	968247	11	321754	5658561		EBG	0	1	T	R	N	0.3	2	T	R	S	S	1	1508
82M4	968248	11	322623	5659895		EBG	0	1	G	N	N	1.0	20	O	N	O	M	1	1508
82M4	968249	11	323113	5657873		EBG	0	1	T	N	N	1.2	15	O	N	O	M	1	1508
82M4	968250	11	320399	5656003	1	EBG	0	3	G	N	N	1.0	5	T	N	B	S	1	1508
82M4	968251	11	320399	5656003	2	EBG	0	3	G	N	N	1.0	5	T	N	B	S	1	1508
82M4	968252	11	325101	5663509		EBG	0	3	G	N	N	2.5	10	T	N	B	S	1	1508
82M4	968253	11	321451	5656838		EBG	0	2	G	N	F	0.5	10	C	N	B	S	1	1508
82M4	968254	11	325212	5659506		EBG	0	3	T	N	N	1.0	5	T	N	B	S	1	1508
82M4	968255	11	325338	5655629		EBG	0	3	G	N	N	1.0	5	R	N	B	S	2	1508
82M4	968256	11	325295	5654368		EBG	0	2	T	N	N	0.5	5	T	N	S	S	1	1508
82M4	968257	11	291031	5681280		uF	0	1	T	N	N	0.5	5	G	N	S	M	2	1508

APPENDIX C - STREAM WATER GEOCHEMICAL DATA

Stream Water Geochemical Data

						Ag	Al	ALK	As	Au	Ba	Bi	Br	Ca	Cd	Ce	Co	Cr	Cs	Cu	Dy	Er	Eu	F	Fe	Ga	Gd
						0.020	0.2	1.00	0.02	0.002	0.002	0.001	1	1	0.002	0.002	0.002	0.1	0.002	0.002	0.002	0.002	0.002	20	0.2	0.002	0.002
						ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
MAP	SAMPLE	UTM-	UTM-E	UTM-N	REP	ICPMS	ICPMS	TIT	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ION	ICPMS	ICPMS	ICPMS
82M4	968002	11	299139	5656214		0.175	4.6	75	0.16	0.026	10.167	0.018	6	21568	0.056	0.102	0.097	0.4	0.005	1.491	0.004	-0.002	0.008	56	7.5	0.035	0.006
82M4	968003	11	300103	5656247		0.140	3.8	64	0.35	0.015	22.695	0.010	8	22479	0.046	0.053	0.067	0.2	0.004	1.531	-0.002	0.002	0.007	62	7.3	0.023	0.004
82M4	968004	11	301473	5655901		0.108	20.2	37	0.17	0.022	6.942	0.009	7	11842	0.028	0.074	0.045	0.1	0.006	1.487	0.009	0.005	0.010	48	9.1	0.013	0.014
82M4	968005	11	302251	5655703		0.110	36.0	27	0.16	0.015	4.554	0.008	6	9353	0.049	0.101	0.039	0.2	0.822	1.563	0.020	0.014	0.018	50	14.4	0.031	0.043
82M4	968006	11	303306	5656521		0.101	4.1	115	0.07	0.014	7.097	0.003	3	40469	0.042	0.038	0.063	0.3	0.023	0.470	-0.002	-0.002	0.005	40	7.5	0.012	-0.002
82M4	968007	11	303296	5657020		0.094	4.8	70	0.16	0.014	6.983	-0.002	5	23398	0.013	0.021	0.052	0.2	0.014	0.628	-0.002	-0.002	0.006	44	11.1	0.028	0.004
82M4	968008	11	303432	5656853	1	0.089	5.4	80	0.07	0.018	6.027	0.004	4	30407	0.027	0.022	0.047	-0.1	0.006	0.458	-0.002	0.002	-0.002	42	5.6	0.022	0.003
82M4	968009	11	303432	5656853	2	0.080	2.6	80	0.05	0.007	5.698	0.003	3	30468	0.039	0.013	0.053	0.1	0.006	0.431	-0.002	-0.002	-0.002	38	6.8	0.009	0.002
82M4	968010	11	301917	5656609		0.081	1.9	102	0.11	0.010	9.411	-0.002	8	41488	0.053	0.010	0.091	0.2	0.003	1.101	-0.002	-0.002	0.003	64	6.3	0.008	-0.002
82M4	968011	11	301549	5656569		0.077	2.4	143	0.10	0.009	5.082	0.004	7	45915	0.032	0.009	0.080	0.1	0.069	0.591	0.002	-0.002	-0.002	78	6.1	0.015	0.004
82M4	968012	11	303168	5659109		0.059	3.1	118	0.16	0.015	10.892	0.003	5	38873	0.020	0.015	0.067	0.2	0.005	0.476	-0.002	-0.002	-0.002	74	5.2	-0.002	-0.002
82M4	968013	11	300654	5661088		0.059	2.8	149	0.11	0.023	6.333	-0.002	6	41497	0.012	0.007	0.064	-0.1	0.003	0.272	-0.002	-0.002	0.004	84	11.6	-0.002	0.002
82M4	968014	11	300247	5662234		0.046	3.0	155	0.22	0.009	8.556	0.005	9	38715	0.045	-0.002	0.088	0.2	0.010	0.357	-0.002	-0.002	-0.002	88	30.3	0.010	0.003
82M4	968016	11	298591	5661344		0.041	3.9	202	0.18	0.025	13.476	0.002	11	52821	0.016	0.016	0.094	-0.1	0.002	0.605	0.006	-0.002	0.004	120	10.6	0.002	-0.002
82M4	968017	11	297824	5661648		0.041	1.7	177	0.29	0.013	17.338	0.003	9	37098	-0.002	0.015	0.084	0.3	0.006	0.708	0.003	-0.002	0.004	140	19.1	-0.002	0.002
82M4	968018	11	292349	5662700		0.058	1.3	63	0.10	0.008	1.129	-0.002	3	22043	0.035	0.006	0.035	-0.1	-0.002	0.107	-0.002	-0.002	-0.002	88	5.6	-0.002	-0.002
82M4	968019	11	295239	5662157		0.053	5.8	101	0.11	0.006	5.494	0.003	4	30160	0.093	0.007	0.057	-0.1	-0.002	0.304	0.003	-0.002	0.002	72	6.1	0.014	0.002
82M4	968020	11	298231	5657988		0.052	1.7	206	0.15	0.013	12.528	0.003	8	65087	0.180	0.006	0.098	0.2	0.010	0.327	-0.002	-0.002	-0.002	94	5.9	-0.002	0.003
82M4	968022	11	296992	5659155		0.057	1.7	210	0.19	0.007	26.129	0.004	12	43468	0.319	0.009	0.091	0.1	-0.002	0.352	-0.002	-0.002	0.009	78	2.4	0.007	-0.002
82M4	968023	11	294323	5660009		0.053	8.0	76	0.16	0.015	17.231	-0.002	6	15088	0.321	0.025	0.048	0.4	-0.002	0.589	0.005	-0.002	0.003	56	4.9	-0.002	0.006
82M4	968024	11	294844	5659890	1	0.038	1.8	114	0.12	0.019	14.250	0.002	7	30653	0.177	0.006	0.075	-0.1	0.003	0.090	-0.002	-0.002	-0.002	62	1.7	0.007	-0.002
82M4	968025	11	294844	5659890	2	0.034	1.8	143	0.18	0.009	14.244	-0.002	8	30996	0.010	0.002	0.062	-0.1	0.003	0.085	0.002	-0.002	0.002	58	1.8	0.011	-0.002
82M4	968026	11	295054	5659703		0.035	3.3	214	0.28	0.011	16.801	-0.002	12	40926	0.007	0.008	0.096	-0.1	0.003	0.133	0.002	-0.002	0.003	96	2.1	0.004	-0.002
82M4	968027	11	294819	5659030		0.044	2.0	163	0.15	0.014	10.119	0.002	10	30942	0.009	-0.002	0.065	-0.1	0.005	0.165	-0.002	-0.002	0.004	78	2.8	0.006	-0.002
82M4	968028	11	292179	5659254		0.056	1.7	147	0.23	0.021	11.698	-0.002	9	59912	0.004	0.016	0.085	0.4	-0.002	0.409	-0.002	-0.002	0.002	66	3.0	0.014	0.004
82M4	968029	11	290449	5660834		0.083	2.7	144	0.12	0.021	7.616	0.004	7	54672	0.020	0.014	0.068	-0.1	0.032	0.469	-0.002	0.006	-0.002	60	3.4	0.016	-0.002
82M4	968030	11	292362	5659143		0.082	2.9	190	0.25	0.012	17.241	-0.002	9	74430	0.035	0.013	0.096	0.1	0.006	0.503	-0.002	-0.002	0.009	72	7.1	0.012	0.006
82M4	968031	11	292126	5658812		0.077	1.8	145	0.12	0.017	7.844	0.004	7	83170	0.013	0.038	0.083	0.2	0.003	0.204	-0.002	-0.002	-0.002	70	2.6	0.020	-0.002
82M4	968032	11	307008	5653882		0.097	2.6	154	0.51	0.019	7.905	0.002	4	73325	-0.002	0.002	0.079	-0.1	0.089	0.130	-0.002	-0.002	-0.002	64	2.6	0.030	-0.002
82M4	968033	11	306915	5655400		0.071	1.8	120	0.75	0.008	8.590	-0.002	5	61088	-0.002	0.005	0.059	-0.1	0.231	0.327	0.003	-0.002	0.005	62	1.4	0.008	-0.002
82M4	968034	11	307212	5657728		0.116	1.4	120	0.22	0.010	11.441	0.003	6	54873	0.019	0.012	0.059	-0.1	0.012	0.339	-0.002	-0.002	0.005	64	0.9	0.006	-0.002
82M4	968035	11	307116	5656741		0.060	1.9	149	2.07	0.013	4.143	-0.002	8	63283	0.022	-0.002	0.068	-0.1	0.002	0.425	-0.002	-0.002	0.003	66	1.0	0.012	-0.002
82M4	968036	11	307144	5657170		0.074	1.6	157	0.81	0.012	2.939	0.003	8	73146	-0.002	0.010	0.065	-0.1	-0.002	0.190	-0.002	-0.002	-0.002	58	1.5	0.008	-0.002
82M4	968037	11	293372	5664367		0.092	3.9	141	0.15	0.036	1.495	0.008	5	46590	0.029	0.003	0.046	0.3	0.020	0.238	-0.002	-0.002	0.003	110	3.3	0.005	-0.002
82M4	968039	11	295600	5664764		0.059	2.2	226	0.34	0.016	13.311	0.003	12	66048	-0.002	0.027	0.081	0.1	-0.002	0.531	0.003	0.003	-0.002	96	2.4	0.011	-0.002
82M4	968040	11	295684	5664900		0.084	2.2	244	0.27	0.004	23.097	0.002	17	53557	-0.002	0.012	0.068	0.2	0.063	0.477	-0.002	-0.002	0.008	210	1.8	-0.002	-0.002
82M4	968042	11	306240	5666259		0.061	2.3	156	0.21	0.011	79.781	0.003	4	54183	0.027	0.013	0.119	0.1	0.011	0.213	-0.002	-0.002	0.049	48	12.7	0.010	-0.002
82M4	968043	11	306809	5664763		0.068	1.4	164	0.10	-0.002	57.521	-0.002	4	52477	0.049	0.013	0.083	-0.1	0.011	0.344	0.003	-0.002	0.022	52	4.0	0.003	-0.002
82M4	968044	11	307785	5665403		0.077	1.9	156	0.24	-0.002	77.215	0.003	5	69144	0.039	0.009	0.118	0.2	0.006	0.321	-0.002	-0.002	0.035	72	1.9	0.015	-0.002
82M4	968045	11	308291	5666236		0.070	1.8	142	0.24	0.021	87.055	0.005	6	64006	0.046	0.007	0.115	0.5	0.057	0.311	-0.002	-0.002	0.057	66	1.6	0.008	-0.002
82M4	968046	11	308234	5667869		0.075	1.7	120	0.16	-0.002	51.452	0.003	4	61543	0.031	0.008	0.087	0.1	0.010	0.256	-0.002	-0.002	0.016	52	1.9	0.008	-0.002
82M4	968047	11	308268	5668002		0.074	1.6	152	0.10	0.033	48.563	0.003	3	50181	0.015	0.016	0.080	0.3	0.040	0.302	0.005	-0.002	0.021	44	2.8	0.019	-0.002
82M4	968048	11	312327	5668594		0.052	2.1	196	0.27	0.008	47.573	0.004	10	95290	0.063	0.005	0.137	0.5	0.199	0.382	-0.002	-0.002	0.008	64	1.6	-0.002	-0.002

Stream Water Geochemical Data

MAP	SAMPLE	UTM-	UTM-E	UTM-N	REP	Ag 0.020 ppb ICPMS	Al 0.2 ppb ICPMS	ALK 1.00 ppm TIT	As 0.02 ppb ICPMS	Au 0.002 ppb ICPMS	Ba 0.002 ppb ICPMS	Bi 0.001 ppb ICPMS	Br 1 ppb ICPMS	Ca 1 ppb ICPMS	Cd 0.002 ppb ICPMS	Ce 0.002 ppb ICPMS	Co 0.002 ppb ICPMS	Cr 0.1 ppb ICPMS	Cs 0.002 ppb ICPMS	Cu 0.002 ppb ICPMS	Dy 0.002 ppb ICPMS	Er 0.002 ppb ICPMS	Eu 0.002 ppb ICPMS	F 20 ppb ION	Fe 0.2 ppb ICPMS	Ga 0.002 ppb ICPMS	Gd 0.002 ppb ICPMS
82M4	968050	11	311221	5666628		0.056	1.7	208	0.33	0.030	27.292	0.005	15	75713	0.026	-0.002	0.121	0.1	0.021	0.486	-0.002	-0.002	0.006	210	2.3	0.009	-0.002
82M4	968051	11	305477	5669109		0.050	1.2	116	0.06	0.038	6.038	0.004	4	12039	0.055	-0.002	0.040	0.1	0.015	0.520	-0.002	-0.002	0.002	46	2.2	0.005	-0.002
82M4	968052	11	305484	5668755		0.079	5.6	104	0.09	0.016	39.398	0.002	3	36089	0.047	0.014	0.069	0.2	0.054	0.649	-0.002	-0.002	0.024	38	2.1	0.008	-0.002
82M4	968053	11	303762	5668209		0.045	4.0	146	0.36	0.028	11.351	-0.002	6	29163	0.056	0.012	0.054	0.1	0.010	0.498	-0.002	-0.002	0.008	76	0.5	-0.002	-0.002
82M4	968054	11	302125	5667518		0.032	1.7	146	0.26	0.009	13.762	0.006	12	19111	0.015	0.036	0.061	-0.1	0.004	0.625	-0.002	-0.002	0.006	136	5.0	0.023	0.004
82M4	968055	11	305432	5672148		0.056	3.0	176	0.12	0.027	6.727	0.005	3	49005	0.022	0.014	0.078	-0.1	0.029	0.264	-0.002	-0.002	-0.002	24	2.0	0.005	-0.002
82M4	968056	11	306990	5672129		0.052	8.2	102	0.17	0.021	6.996	0.005	4	37759	0.033	0.025	0.070	0.1	-0.002	0.572	-0.002	-0.002	0.005	28	9.5	0.005	0.004
82M4	968057	11	304601	5671427		0.040	3.4	154	0.21	0.020	54.231	0.002	3	53097	-0.002	-0.002	0.082	0.3	0.007	0.578	-0.002	-0.002	0.016	30	4.2	0.005	-0.002
82M4	968058	11	300642	5673545		0.019	9.8	108	0.31	0.003	10.983	0.003	10	37342	0.039	0.035	0.081	-0.1	0.004	0.921	0.007	0.005	0.011	44	15.7	0.005	0.021
82M4	968059	11	299058	5673677	1	0.045	5.4	126	0.28	0.013	10.244	0.003	7	30237	0.030	0.022	0.085	0.3	-0.002	0.371	-0.002	-0.002	0.006	110	17.5	0.013	0.004
82M4	968060	11	299058	5673677	2	0.004	6.5	124	0.34	0.018	11.712	0.004	10	36164	0.029	0.025	0.079	-0.1	-0.002	0.521	0.008	0.003	0.008	74	18.0	0.004	0.008
82M4	968062	11	296056	5674224	1	0.069	7.1	78	0.26	0.009	14.264	-0.002	9	23076	-0.002	0.020	0.094	0.5	0.006	0.898	0.016	-0.002	0.009	68	25.6	0.004	0.009
82M4	968063	11	296056	5674224	2	0.028	8.8	76	0.19	0.021	18.880	0.003	6	22673	0.029	0.019	0.085	0.2	0.010	0.881	-0.002	0.004	0.021	72	27.5	-0.002	0.005
82M4	968064	11	297600	5674911		0.033	9.6	114	0.61	0.015	8.509	0.006	10	25577	0.014	0.034	0.075	0.3	-0.002	1.110	0.004	0.002	0.003	140	14.2	0.004	0.010
82M4	968065	11	295018	5673469		0.042	1.0	128	0.09	0.008	15.724	0.003	7	38629	0.020	-0.002	0.091	0.5	0.005	0.361	-0.002	-0.002	0.003	64	2.0	-0.002	-0.002
82M4	968066	11	293710	5672949		0.015	1.3	186	0.10	0.018	33.120	0.007	8	54728	0.005	-0.002	0.086	1.2	0.005	0.327	-0.002	-0.002	0.006	92	3.0	-0.002	-0.002
82M4	968067	11	292303	5670513		0.037	5.5	114	0.11	0.016	9.661	-0.002	6	31549	0.016	0.007	0.100	0.1	-0.002	0.350	-0.002	-0.002	0.003	44	2.8	0.016	0.004
82M4	968068	11	291885	5670672		0.033	4.0	126	0.04	0.047	9.229	-0.002	4	37611	-0.002	0.013	0.085	0.7	0.003	0.377	0.005	0.003	-0.002	40	3.4	0.029	0.005
82M4	968069	11	291001	5670998		0.044	4.7	106	0.18	0.034	7.487	0.004	5	31304	-0.002	0.018	0.099	-0.1	-0.002	0.326	-0.002	0.002	0.003	38	2.3	0.008	-0.002
82M4	968070	11	294731	5672041		0.014	1.9	156	0.12	0.045	11.085	0.003	6	41805	-0.002	0.006	0.112	0.6	-0.002	0.219	0.005	-0.002	0.005	60	2.3	0.010	-0.002
82M4	968071	11	295004	5672158		0.045	2.2	142	0.15	0.043	9.128	0.006	6	37433	0.007	0.007	0.074	-0.1	0.009	0.249	-0.002	0.006	0.011	74	3.0	0.010	-0.002
82M4	968072	11	294469	5670970		0.024	1.9	164	0.15	0.008	67.284	-0.002	5	55430	0.027	0.007	0.095	0.4	0.003	0.313	-0.002	-0.002	0.022	64	1.8	0.014	-0.002
82M4	968073	11	301817	5671440		-0.002	6.6	182	0.92	0.045	40.192	0.008	28	96068	0.021	0.062	0.164	0.8	0.005	1.798	0.007	0.006	0.019	46	22.7	0.026	0.008
82M4	968074	11	299796	5670857		0.007	3.7	184	0.11	0.021	37.278	-0.002	9	59669	0.034	0.012	0.108	0.3	0.011	0.585	-0.002	-0.002	0.012	110	6.0	0.008	-0.002
82M4	968075	11	297634	5670611		0.021	9.4	158	0.57	0.022	89.266	0.003	15	64539	-0.002	0.019	0.148	0.5	0.003	0.844	-0.002	0.005	0.032	78	12.5	0.017	-0.002
82M4	968076	11	297557	5671293		0.008	4.1	144	0.32	0.023	34.228	0.002	10	26745	0.053	0.005	0.117	0.2	-0.002	0.454	-0.002	0.003	0.021	120	18.9	-0.002	-0.002
82M4	968078	11	295156	5670361		0.015	1.7	144	0.22	0.018	27.694	-0.002	7	81950	-0.002	0.003	0.178	0.6	0.004	0.221	-0.002	-0.002	0.013	50	4.6	-0.002	0.003
82M4	968079	11	295183	5670075		0.028	2.2	156	0.06	0.009	38.546	0.004	6	49782	0.012	0.005	0.069	0.2	0.004	0.406	-0.002	-0.002	0.015	52	2.8	-0.002	-0.002
82M4	968080	11	293506	5668659		0.038	3.1	138	0.14	0.010	17.106	-0.002	6	39701	0.015	-0.002	0.105	0.7	0.006	0.265	-0.002	-0.002	-0.002	46	9.0	0.012	0.006
82M4	968082	11	293580	5667780		0.054	6.4	106	0.07	0.018	8.633	0.006	8	32510	-0.002	0.009	0.055	0.8	0.010	0.464	-0.002	-0.002	0.007	38	7.2	-0.002	-0.002
82M4	968083	11	293260	5667638		0.006	2.6	124	0.08	0.029	7.803	0.002	4	41135	0.032	-0.002	0.056	0.8	0.008	0.225	-0.002	-0.002	-0.002	48	6.9	-0.002	0.006
82M4	968085	11	296691	5669904		0.009	1.8	158	0.14	0.029	20.576	0.002	10	52317	0.023	0.027	0.075	0.5	-0.002	0.284	-0.002	-0.002	0.007	94	3.9	-0.002	-0.002
82M4	968086	11	296376	5668575		0.030	2.0	156	0.06	0.011	52.700	0.004	6	70597	0.006	0.007	0.084	0.7	0.021	0.260	-0.002	-0.002	0.007	120	4.1	0.016	-0.002
82M4	968087	11	313417	5672234		0.023	2.6	68	0.15	0.028	5.666	0.002	5	24468	0.025	0.008	0.043	0.6	0.011	0.153	0.005	-0.002	0.003	46	4.2	0.020	0.005
82M4	968088	11	300816	5669316		-0.002	4.1	162	0.50	0.024	34.422	0.003	7	70923	0.036	-0.002	0.104	0.6	0.005	0.579	-0.002	-0.002	0.015	58	4.9	0.012	-0.002
82M4	968089	11	302047	5670285		-0.002	4.5	140	0.49	0.021	29.877	0.003	6	57106	-0.002	-0.002	0.065	1.1	-0.002	0.459	-0.002	-0.002	0.004	52	4.0	0.018	-0.002
82M4	968090	11	323086	5680138	1	0.004	3.9	148	0.14	0.049	38.858	-0.002	12	73172	-0.002	0.011	0.070	0.8	0.012	0.602	0.005	-0.002	0.018	230	6.3	0.006	-0.002
82M4	968091	11	323086	5680138	2	-0.002	3.8	178	0.06	0.023	40.431	0.004	11	71609	-0.002	0.022	0.093	0.7	0.011	0.401	0.005	0.003	0.010	250	3.8	0.012	0.005
82M4	968092	11	301771	5670053		0.009	3.9	180	0.60	0.010	46.060	0.005	4	56984	0.034	-0.002	0.064	0.7	-0.002	0.458	-0.002	-0.002	0.017	46	6.6	-0.002	0.005
82M4	968093	11	322386	5678657		-0.002	2.1	136	0.24	0.017	30.054	0.003	16	58977	0.018	0.019	0.092	0.3	0.005	0.596	0.004	-0.002	0.014	340	4.1	0.006	0.005
82M4	968094	11	322051	5678122		-0.002	31.1	22	-0.02	0.033	8.797	-0.002	3	7987	0.019	0.103	0.038	0.3	0.004	0.403	0.030	0.003	0.022	44	6.5	0.006	0.026
82M4	968095	11	315662	5674907		0.016	60.7	30	0.12	0.003	6.884	0.006	2	9690	0.013	0.359	0.037	0.5	0.004	0.624	0.046	0.008	0.028	38	60.3	0.043	0.063

Stream Water Geochemical Data

MAP	SAMPLE	UTM-	UTM-E	UTM-N	REP	Ag 0.020 ppb ICPMS	Al 0.2 ppb ICPMS	ALK 1.00 ppm TIT	As 0.02 ppb ICPMS	Au 0.002 ppb ICPMS	Ba 0.002 ppb ICPMS	Bi 0.001 ppb ICPMS	Br 1 ppb ICPMS	Ca 1 ppb ICPMS	Cd 0.002 ppb ICPMS	Ce 0.002 ppb ICPMS	Co 0.002 ppb ICPMS	Cr 0.1 ppb ICPMS	Cs 0.002 ppb ICPMS	Cu 0.002 ppb ICPMS	Dy 0.002 ppb ICPMS	Er 0.002 ppb ICPMS	Eu 0.002 ppb ICPMS	F 20 ppb ION	Fe 0.2 ppb ICPMS	Ga 0.002 ppb ICPMS	Gd 0.002 ppb ICPMS
82M4	968096	11	315788	5677617		-0.002	11.6	52	0.03	0.007	4.761	0.005	3	16521	0.030	0.162	0.032	0.7	0.008	0.755	0.015	-0.002	0.004	36	9.2	-0.002	0.015
82M4	968097	11	313452	5680215		-0.002	38.0	16	0.08	0.030	2.118	0.004	5	5503	0.029	0.068	0.013	0.4	0.004	0.248	0.026	0.013	0.009	28	7.1	0.013	0.019
82M4	968098	11	311468	5681123		0.011	58.8	24	0.03	0.025	10.122	-0.002	2	8131	0.036	0.149	0.016	0.3	0.010	0.716	0.068	0.016	0.026	26	27.9	0.016	0.071
82M5	968099	11	311562	5681139		-0.002	47.4	20	0.04	0.022	8.332	0.006	3	7287	0.058	0.064	0.030	0.6	0.004	0.542	0.043	0.018	0.032	24	6.2	0.006	0.072
82M4	968100	11	314849	5680596		0.017	44.7	18	0.09	0.007	4.724	0.002	2	6382	-0.002	0.077	0.030	0.5	0.017	0.410	0.089	0.021	0.045	26	5.3	-0.002	0.078
82M4	968102	11	315572	5679776		0.010	150.9	8	0.07	0.036	4.780	0.005	6	1904	0.077	0.468	0.066	0.9	0.013	0.467	0.048	0.011	0.014	26	64.0	-0.002	0.067
82M4	968103	11	315993	5679141		-0.002	151.9	6	0.07	0.006	6.322	0.005	3	1998	-0.002	0.473	0.044	0.7	0.006	0.420	0.041	0.020	0.019	32	115.3	0.029	0.098
82M4	968104	11	315050	5679200		0.005	113.7	8	0.12	0.022	5.487	0.007	3	2219	-0.002	0.363	0.079	1.1	-0.002	0.471	0.054	0.040	0.026	26	67.2	0.023	0.083
82M4	968105	11	313977	5678625		0.010	126.3	16	0.04	0.021	6.159	0.004	3	5769	0.019	0.366	0.019	0.8	0.007	0.647	0.064	0.022	0.037	20	17.7	0.006	0.112
82M4	968106	11	312918	5678636	1	0.006	44.2	20	0.08	0.032	3.848	0.004	2	6130	0.061	0.034	0.004	0.1	0.006	0.282	0.033	0.005	0.013	22	10.6	0.012	0.008
82M4	968107	11	312918	5678636	2	-0.002	61.9	18	-0.02	0.008	3.660	-0.002	2	6120	0.022	0.092	0.009	0.4	0.006	0.269	0.016	0.004	0.013	24	8.3	-0.002	0.043
82M4	968108	11	315453	5680551		-0.002	81.1	12	0.13	0.017	5.078	-0.002	4	3021	-0.002	0.212	0.020	0.2	0.009	0.261	0.046	0.014	0.015	24	57.1	0.006	0.073
82M4	968109	11	315409	5678263		-0.002	109.6	26	0.11	0.024	7.570	-0.002	1	8552	-0.002	0.207	0.030	0.5	0.018	0.485	0.033	0.013	0.025	28	11.3	0.022	0.069
82M4	968110	11	319831	5676926		0.002	71.2	16	0.12	0.032	6.275	-0.002	3	3908	0.017	0.099	0.011	1.1	0.009	0.831	0.054	0.022	0.019	42	11.9	0.012	0.083
82M4	968111	11	311120	5674270		-0.002	11.9	36	0.11	0.012	4.224	0.006	2	11100	-0.002	0.026	0.016	0.9	0.003	0.215	0.005	0.003	0.003	36	4.5	0.006	-0.002
82M4	968112	11	310861	5675065		-0.002	6.0	51	0.13	0.014	4.348	0.005	1	14711	0.005	0.011	0.031	0.5	-0.002	0.186	0.004	-0.002	0.007	46	-0.2	0.016	-0.002
82M4	968113	11	307422	5672943		0.035	4.6	132	0.17	0.036	12.896	0.290	7	68391	0.010	0.072	0.066	2.0	-0.002	1.406	0.008	0.008	0.005	34	21.3	0.032	0.007
82M4	968114	11	308606	5674405		0.036	0.8	120	0.06	0.011	19.036	0.018	6	69918	0.044	0.063	0.093	0.7	0.004	0.387	-0.002	-0.002	0.006	46	4.1	0.019	-0.002
82M4	968115	11	307325	5674585		0.020	0.4	152	0.15	0.012	11.439	0.018	5	54650	0.018	0.020	0.071	0.2	0.011	0.530	-0.002	-0.002	0.003	44	2.8	0.009	0.002
82M4	968116	11	306306	5675249		0.020	1.2	178	0.16	0.014	13.423	0.016	6	57685	0.028	0.017	0.074	0.2	0.005	1.000	-0.002	-0.002	0.003	46	3.0	0.014	0.002
82M4	968117	11	305443	5675179		0.011	1.3	216	0.28	0.012	15.991	0.012	3	53674	0.059	0.022	0.059	0.1	0.008	0.302	-0.002	-0.002	0.004	62	4.6	0.021	-0.002
82M4	968118	11	309372	5675735		0.023	1.9	90	0.11	0.009	6.661	0.007	2	29517	0.012	0.035	0.040	0.3	-0.002	0.265	0.003	-0.002	0.003	36	2.0	0.018	-0.002
82M4	968120	11	307691	5676182		0.015	0.8	106	0.11	0.013	17.920	0.005	5	63392	0.039	0.012	0.072	0.4	-0.002	0.066	-0.002	-0.002	0.004	48	1.9	0.010	-0.002
82M4	968122	11	307337	5676647		0.015	2.3	102	0.09	0.020	7.740	0.012	4	34802	-0.002	0.011	0.068	0.2	-0.002	0.224	-0.002	-0.002	0.003	30	3.3	0.013	-0.002
82M4	968123	11	304675	5677229		0.006	2.8	226	0.24	0.011	40.600	0.005	5	71924	0.016	0.013	0.140	0.5	0.600	1.193	-0.002	-0.002	0.009	54	2.7	0.010	0.003
82M4	968124	11	304285	5678589		0.015	0.6	168	0.09	0.010	10.853	0.003	3	47207	0.004	0.011	0.089	0.3	0.019	0.272	0.003	-0.002	0.002	28	1.6	0.006	-0.002
82M4	968125	11	309559	5679559		0.004	51.1	14	0.06	0.007	7.086	0.003	2	5008	0.030	0.085	0.034	-0.1	0.019	0.327	0.023	0.012	0.012	26	22.7	0.010	0.037
82M4	968126	11	308420	5678634		0.009	6.2	46	0.10	0.016	6.192	0.003	3	16891	0.016	0.009	0.051	0.2	0.010	0.217	0.003	-0.002	0.002	24	4.9	0.003	0.004
82M4	968127	11	310105	5679905		0.003	166.9	8	0.13	0.010	12.224	0.004	3	2782	0.017	2.472	0.267	0.2	0.008	1.100	0.206	0.098	0.090	46	67.5	0.039	0.351
82M4	968128	11	299548	5676140		0.002	3.3	54	0.49	0.006	14.639	0.007	10	25438	0.002	0.095	0.090	0.3	-0.002	0.533	0.008	0.006	0.006	82	38.9	0.003	0.013
82M4	968129	11	298320	5678833		-0.002	1.2	130	0.28	0.010	25.365	-0.002	6	42016	-0.002	0.012	0.091	0.1	0.003	0.471	0.002	-0.002	0.007	96	1.9	0.008	0.002
82M4	968131	11	294405	5677114		0.010	2.1	116	0.18	0.010	21.989	0.004	7	67372	0.037	0.009	0.106	-0.1	-0.002	0.210	0.003	-0.002	0.002	50	2.8	0.006	0.002
82M4	968132	11	293345	5677270		0.011	0.6	128	0.23	0.006	24.984	0.003	6	44542	0.013	0.009	0.081	0.2	-0.002	0.304	-0.002	-0.002	0.004	48	2.7	0.008	0.002
82M4	968133	11	295058	5679754		0.011	0.2	184	0.22	0.010	27.682	0.003	7	70783	-0.002	0.007	0.115	0.3	-0.002	0.181	-0.002	-0.002	0.004	92	3.3	0.008	-0.002
82M4	968134	11	292615	5679417		-0.002	0.9	220	0.63	0.013	37.940	0.004	18	79129	0.008	0.012	0.133	0.4	-0.002	0.119	-0.002	-0.002	0.006	110	25.2	0.006	0.003
82M5	968135	11	297083	5681830		-0.002	2.9	276	0.36	0.012	27.584	0.004	21	85635	0.009	0.003	0.181	0.3	-0.002	0.577	-0.002	-0.002	0.004	130	3.9	0.007	-0.002
82M5	968136	11	297964	5681622	1	-0.002	-0.2	156	0.19	0.006	12.682	0.003	7	57027	-0.002	-0.002	0.087	0.3	-0.002	0.401	-0.002	-0.002	0.002	44	2.7	0.007	-0.002
82M5	968137	11	297964	5681622	2	0.006	-0.2	162	0.16	0.015	12.804	0.004	8	57441	-0.002	0.003	0.097	-0.1	-0.002	0.214	-0.002	-0.002	-0.002	46	3.1	0.002	-0.002
82M5	968138	11	317293	5684471		0.008	54.5	22	0.07	0.009	12.300	0.002	6	8018	-0.002	0.073	0.044	0.3	0.004	0.586	0.039	0.015	0.012	20	9.8	0.010	0.043
82M5	968139	11	315905	5684140		0.006	41.3	22	0.07	0.017	7.429	0.002	7	7923	-0.002	0.184	0.057	0.3	0.005	0.485	0.039	0.009	0.017	24	21.9	0.013	0.055
82M5	968140	11	314332	5684528		0.007	59.1	14	0.08	0.010	6.067	-0.002	6	5514	0.008	0.037	0.040	0.1	0.007	0.261	0.027	0.014	0.010	20	5.6	0.008	0.025
82M5	968142	11	312460	5683941		0.007	31.7	22	0.07	0.009	7.294	-0.002	7	8169	0.008	0.029	0.028	-0.1	0.005	0.317	0.017	0.003	0.004	20	12.3	0.007	0.026

						Ag	Al	ALK	As	Au	Ba	Bi	Br	Ca	Cd	Ce	Co	Cr	Cs	Cu	Dy
						0.020	0.2	1.00	0.02	0.002	0.002	0.001	1	1	0.002	0.002	0.002	0.1	0.002	0.002	0.002
						ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
MAP	SAMPLE	UTM-	UTM-E	UTM-N	REP	ICPMS	ICPMS	TIT	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS
82M5	968143	11	311656	5684366		0.007	11.5	44	0.08	0.013	11.815	-0.002	7	15958	-0.002	0.031	0.040	-0.1	0.002	0.263	0.027
82M5	968144	11	310400	5684137		0.004	27.6	22	0.03	0.013	8.952	0.005	7	8302	0.006	0.058	0.042	0.1	-0.002	0.998	0.052
82M5	968145	11	309713	5683653		0.005	46.3	20	0.10	0.009	5.680	-0.002	7	7428	-0.002	0.044	0.048	0.2	0.006	1.081	0.063
82M5	968146	11	307890	5682976		0.006	3.2	94	0.07	0.012	9.118	-0.002	7	36703	0.007	0.010	0.060	0.1	0.016	0.077	0.002
82M5	968147	11	307135	5682053		0.003	2.2	122	0.12	0.019	5.666	-0.002	8	49199	0.005	0.007	0.073	-0.1	-0.002	0.018	0.003
82M5	968149	11	304581	5681463		-0.002	2.1	116	0.25	0.013	15.538	-0.002	10	68442	0.004	-0.002	0.109	0.2	0.002	-0.002	-0.002
82M5	968150	11	303186	5683133		-0.002	1.8	144	0.07	0.013	27.314	-0.002	9	68205	0.005	-0.002	0.121	0.5	0.116	0.075	-0.002
82M5	968151	11	315034	5687914	1	-0.002	109.3	40	0.47	0.008	8.212	0.006	13	10233	0.009	0.553	0.063	0.2	0.012	1.167	0.070
82M5	968152	11	315034	5687914	2	-0.002	118.8	40	0.48	0.006	8.285	0.005	14	10213	0.022	0.572	0.083	0.2	0.010	1.611	0.065
82M5	968153	11	313937	5688432		-0.002	44.9	56	0.07	0.011	4.735	-0.002	9	20603	-0.002	0.154	0.050	-0.1	0.006	0.186	0.019
82M5	968154	11	314340	5688413		-0.002	77.8	76	0.62	0.008	8.256	0.004	15	26347	-0.002	0.222	0.115	0.1	0.015	1.167	0.022
82M5	968155	11	316866	5687678		0.004	657.4	48	1.64	0.014	14.207	0.014	18	12950	0.005	2.477	0.185	0.6	0.093	3.443	0.227
82M5	968156	11	317517	5687522		0.005	140.8	18	0.26	0.010	5.186	0.007	13	4597	0.011	1.832	0.075	0.2	0.014	1.383	0.230
82M5	968157	11	321198	5688063		-0.002	83.9	10	0.07	0.005	3.770	-0.002	9	2906	0.009	0.429	0.041	0.2	0.002	0.339	0.068
82M5	968158	11	319303	5686956		0.035	25.1	32	0.08	0.010	8.553	0.004	9	10111	0.005	0.102	0.041	0.1	0.005	0.301	0.022
82M5	968159	11	323847	5691189		0.018	47.2	12	0.02	0.012	1.784	0.005	7	3417	0.006	0.123	0.020	0.1	0.057	0.123	0.096
82M5	968160	11	325082	5693425		0.005	148.6	6	0.10	0.004	3.579	-0.002	7	1230	-0.002	0.461	0.023	0.1	0.013	0.043	0.052
82M5	968162	11	325042	5692814		0.005	163.9	6	0.06	0.006	2.655	-0.002	7	1368	0.045	0.592	0.026	0.3	0.010	-0.002	0.104
82M5	968163	11	322886	5691338		-0.002	238.4	6	0.06	0.008	2.731	-0.002	8	1731	0.006	0.453	0.028	0.3	0.009	-0.002	0.038
82M5	968164	11	323185	5692165	1	0.005	297.5	6	0.11	0.010	4.062	-0.002	9	1923	-0.002	1.503	0.055	0.4	0.005	0.091	0.136
82M5	968165	11	323185	5692165	2	-0.002	302.8	7	0.10	0.007	4.125	0.002	8	1974	0.010	1.538	0.050	0.4	0.006	0.076	0.122
82M5	968166	11	321793	5691113		-0.002	7.1	24	0.04	0.008	0.892	-0.002	9	7028	0.007	0.059	0.016	-0.1	0.011	-0.002	0.012
82M5	968167	11	319953	5690829		-0.002	111.7	6	0.06	-0.002	2.057	-0.002	8	1878	-0.002	0.196	0.033	0.2	0.008	-0.002	0.038
82M5	968168	11	320550	5693817		-0.002	243.1	4	0.08	0.007	3.148	-0.002	8	1452	0.011	0.842	0.038	0.3	0.008	0.015	0.069
82M5	968169	11	319908	5693309		-0.002	222.4	4	0.06	0.008	3.643	-0.002	8	1383	-0.002	0.463	0.027	0.1	0.013	0.017	0.048
82M5	968170	11	315486	5690941		-0.002	65.0	12	0.06	0.014	2.303	-0.002	6	3407	0.039	0.259	0.026	0.2	0.014	0.062	0.049
82M5	968171	11	316612	5693113		-0.002	5.1	30	0.06	-0.002	1.245	0.002	10	9939	0.062	0.025	0.019	-0.1	0.030	-0.002	0.007
82M5	968172	11	314077	5693950		-0.002	13.8	32	0.05	0.003	2.977	-0.002	9	10163	0.007	0.084	0.035	-0.1	0.036	0.033	0.065
82M5	968173	11	309863	5692605		0.002	79.0	12	0.05	0.011	2.924	-0.002	8	3227	0.018	0.538	0.021	-0.1	0.011	-0.002	0.088
82M5	968174	11	309408	5692634		-0.002	115.8	6	0.09	0.004	2.489	-0.002	7	1504	0.015	0.330	0.026	0.2	0.008	-0.002	0.033
82M5	968175	11	307422	5692690		-0.002	81.4	10	0.06	0.009	4.007	-0.002	8	2709	-0.002	0.269	0.023	0.3	0.006	0.021	0.064
82M5	968176	11	312935	5691740		-0.002	5.1	54	0.18	0.007	5.607	-0.002	9	20045	0.010	0.017	0.084	2.1	-0.002	0.204	0.005
82M5	968177	11	308952	5689619		-0.002	37.0	26	0.04	0.004	7.660	-0.002	10	8718	0.011	0.125	0.052	0.3	-0.002	0.723	0.048
82M5	968178	11	307580	5690258		-0.002	12.2	58	0.07	0.012	29.372	-0.002	13	19381	0.010	0.020	0.048	0.4	0.009	0.577	0.004
82M5	968179	11	305619	5690809		-0.002	2.1	106	0.05	0.008	30.669	-0.002	13	39342	0.017	0.004	0.070	0.2	-0.002	0.070	0.002
82M5	968182	11	310829	5692023		0.012	-0.2	11	0.10	-0.002	5.587	0.010	4	15486	0.021	0.033	0.040	0.2	0.005	0.462	0.009
82M5	968183	11	299920	5691812		0.012	-0.2	38	0.20	-0.002	5.055	0.009	5	3843	0.030	1.367	0.046	0.4	0.005	0.615	0.208
82M5	968184	11	300051	5696880		0.009	74.9	10	0.40	-0.002	3.832	0.006	3	2250	0.026	0.284	0.021	0.5	0.088	0.390	0.043
82M5	968185	11	299893	5695534		0.007	-0.2	8	0.15	-0.002	2.764	0.004	3	1697	0.028	0.231	0.022	0.1	0.027	0.328	0.066
82M5	968186	11	296859	5693676		0.007	94.6	8	0.12	-0.002	4.252	0.006	3	3012	0.042	0.393	0.024	0.4	0.009	0.411	0.163
82M5	968187	11	295792	5693489		0.009	91.5	4	0.08	-0.002	4.018	0.006	3	1169	0.030	0.519	0.023	0.4	0.013	0.363	0.112
82M5	968188	11	294872	5693418		0.011	63.1	3	0.10	-0.002	2.558	0.003	2	930	0.019	0.235	0.019	0.3	0.010	0.384	0.061

MAP	SAMPLE	UTM-	UTM-E	UTM-N	REP	Ag 0.020 ppb ICPMS	Al 0.2 ppb ICPMS	ALK 1.00 ppm TIT	As 0.02 ppb ICPMS	Au 0.002 ppb ICPMS	Ba 0.002 ppb ICPMS	Bi 0.001 ppb ICPMS	Br 1 ppb ICPMS	Ca 1 ppb ICPMS	Cd 0.002 ppb ICPMS	Ce 0.002 ppb ICPMS	Co 0.002 ppb ICPMS	Cr 0.1 ppb ICPMS	Cs 0.002 ppb ICPMS	Cu 0.002 ppb ICPMS	Dy 0.002 ppb ICPMS	Er 0.002 ppb ICPMS	Eu 0.002 ppb ICPMS	F 20 ppb ION	Fe 0.2 ppb ICPMS	Ga 0.002 ppb ICPMS	Gd 0.002 ppb ICPMS
82M5	968189	11	293560	5693632		0.005	54.7	7	0.13	0.003	15.060	0.003	3	2060	0.066	0.274	0.093	0.2	0.013	0.624	0.062	0.046	0.010	30	75.7	0.009	0.058
82M5	968190	11	293014	5693878		0.006	53.6	2	0.06	-0.002	1.646	-0.002	2	526	0.010	0.138	0.010	0.4	0.009	0.266	0.054	0.041	0.005	20	4.7	-0.002	0.046
82M5	968192	11	291522	5694201		0.010	22.4	10	0.07	-0.002	2.266	0.005	2	970	0.045	0.098	0.023	0.2	0.025	0.317	0.035	0.023	0.002	26	6.2	0.005	0.030
82M5	968193	11	291625	5692850		0.008	36.6	28	0.21	-0.002	27.255	0.014	3	10262	0.049	0.057	0.047	0.5	0.005	1.000	0.013	0.011	0.008	20	8.8	0.026	0.017
82M5	968194	11	292955	5691201		0.014	40.7	20	0.07	-0.002	26.674	0.007	3	5520	0.013	0.035	0.052	0.3	0.006	0.752	0.019	0.015	0.012	22	16.1	0.017	0.025
82M5	968195	11	294662	5689233		0.004	16.5	27	0.12	0.002	12.769	0.003	3	7208	0.020	0.059	0.050	0.3	0.003	0.666	0.007	0.003	0.004	44	19.6	0.009	0.012
82M5	968196	11	294246	5688607		0.006	17.4	38	0.15	0.002	26.836	0.004	3	11876	0.059	0.056	0.046	0.5	0.004	0.649	0.008	0.007	0.005	28	6.0	0.020	0.009
82M5	968197	11	295113	5685811		0.005	-0.2	43	0.17	-0.002	7.261	0.007	4	11414	0.016	0.084	0.064	0.6	0.002	1.290	0.018	0.013	0.007	46	39.5	0.028	0.032
82M5	968198	11	300442	5683750		-0.002	2.4	185	0.13	-0.002	13.773	0.005	5	84632	0.004	0.056	0.116	0.2	0.016	0.284	0.003	-0.002	0.002	56	5.6	0.017	0.003
82M5	968199	11	304103	5689814	1	0.003	3.9	214	0.09	0.003	11.837	0.004	7	67729	0.015	0.035	0.128	0.3	0.004	0.735	0.002	0.003	0.004	36	21.8	0.012	0.002
82M5	968200	11	304103	5689814	2	0.007	3.7	216	0.08	-0.002	11.764	0.006	8	66306	0.008	0.024	0.100	0.2	0.003	0.649	-0.002	-0.002	0.004	36	22.5	0.005	0.003
82M5	968202	11	305373	5688943		-0.002	3.5	153	0.06	0.003	20.277	0.010	5	61621	0.016	0.048	0.086	0.4	0.012	0.977	0.003	0.002	0.006	38	6.5	0.012	0.003
82M5	968203	11	326088	5691113		0.005	86.3	7	0.05	-0.002	3.363	0.005	3	1986	0.035	0.758	0.023	0.2	0.025	0.194	0.102	0.056	0.018	30	41.8	0.033	0.145
82M5	968204	11	325330	5690783		0.003	190.0	4	0.09	-0.002	3.646	0.004	4	1743	0.010	0.897	0.031	0.3	0.010	0.258	0.082	0.036	0.015	24	67.2	0.020	0.096
82M5	968205	11	325854	5689647		0.005	128.5	8	0.07	-0.002	4.841	0.005	4	3053	0.015	2.576	0.047	0.4	0.023	0.359	0.156	0.080	0.028	26	143.4	0.031	0.181
82M5	968206	11	323820	5688524	1	-0.002	48.1	25	0.07	-0.002	5.914	0.004	4	8598	0.013	0.099	0.038	0.3	0.007	0.288	0.062	0.032	0.018	30	6.6	0.014	0.087
82M5	968207	11	323820	5688524	2	0.005	-0.2	25	0.08	-0.002	5.914	0.006	3	7976	0.005	0.037	0.033	0.3	0.008	0.240	0.071	0.038	0.021	32	5.6	0.015	0.085
82M5	968208	11	322638	5688319		0.003	77.2	14	0.35	-0.002	5.918	0.005	5	4245	0.010	0.563	0.031	0.3	0.004	0.426	0.100	0.054	0.025	34	126.0	0.024	0.118
82M5	968209	11	320370	5681725		0.007	40.0	17	0.07	-0.002	14.241	0.006	4	6938	0.008	0.066	0.044	0.3	0.009	0.806	0.029	0.015	0.013	24	7.7	-0.002	0.043
82M5	968210	11	321599	5683714		0.003	21.9	24	-0.02	-0.002	11.714	0.003	3	7312	0.008	0.051	0.032	0.6	0.006	0.961	0.013	0.010	0.006	32	8.0	0.004	0.019
82M5	968211	11	324803	5683700		0.007	-0.2	112	0.15	-0.002	26.871	0.004	9	27721	0.003	0.016	0.062	0.2	-0.002	0.774	0.013	0.008	0.009	80	5.3	0.002	0.013
82M5	968212	11	324051	5681142		0.010	15.1	73	0.07	-0.002	28.187	0.003	10	22213	-0.002	0.038	0.097	0.2	0.002	0.804	0.011	0.005	0.005	66	9.9	0.010	0.012
82M5	968213	11	292148	5686899		0.006	17.1	34	0.12	-0.002	62.442	0.002	2	10997	0.017	0.014	0.042	0.5	-0.002	0.913	0.013	0.009	0.012	28	3.5	0.004	0.018
82M5	968214	11	305057	5685339		0.002	2.8	165	0.08	-0.002	3.062	0.002	4	70662	0.024	0.054	0.099	0.3	0.004	0.381	0.006	0.003	0.003	66	5.8	0.036	0.005
82M5	968215	11	304850	5684975		0.006	-0.2	167	0.21	-0.002	46.638	0.004	5	71205	0.007	0.033	0.120	0.2	0.003	0.390	-0.002	-0.002	0.008	46	2.9	0.020	0.004
82M4	968216	11	323729	5672530		0.003	-0.2	135	0.06	-0.002	31.209	0.004	6	59685	0.040	0.033	0.100	0.5	0.008	0.628	0.007	0.003	0.007	60	4.4	0.025	0.006
82M4	968218	11	323758	5674186		-0.002	3.9	96	0.07	-0.002	23.028	0.004	5	39661	0.013	0.026	0.073	0.5	0.007	0.663	0.002	0.003	0.005	50	6.4	0.006	0.003
82M4	968219	11	324779	5675778		-0.002	-0.2	123	0.06	-0.002	30.815	0.002	7	60469	0.033	0.039	0.104	0.3	0.005	0.900	0.006	0.006	0.007	68	5.5	0.011	0.009
82M4	968220	11	320733	5668630		-0.002	3.9	145	0.10	-0.002	20.754	-0.002	4	65782	0.010	0.027	0.111	0.2	0.012	0.279	-0.002	-0.002	0.005	44	1.2	0.014	-0.002
82M4	968222	11	320742	5670154		0.003	4.0	151	0.11	-0.002	28.279	-0.002	3	63233	0.017	0.023	0.086	0.5	0.049	0.308	-0.002	-0.002	0.006	52	1.9	0.033	0.003
82M4	968223	11	322771	5670401		0.003	-0.2	153	0.17	-0.002	42.755	0.005	5	63623	0.037	0.025	0.112	0.1	0.002	0.281	0.003	-0.002	0.010	54	2.0	0.012	0.003
82M4	968224	11	322350	5662563		-0.002	6.8	71	0.08	-0.002	24.933	0.003	3	27354	0.012	0.013	0.053	0.1	0.043	0.501	0.002	-0.002	0.004	28	3.6	0.021	0.003
82M4	968225	11	322461	5662972		-0.002	3.4	88	0.06	-0.002	9.435	-0.002	3	35496	0.024	0.010	0.058	0.4	0.007	0.325	0.002	-0.002	0.003	30	1.3	0.004	0.005
82M4	968226	11	321376	5662130		-0.002	4.4	74	0.07	-0.002	2.909	-0.002	2	35779	0.058	0.010	0.061	0.2	0.058	0.245	0.002	-0.002	-0.002	72	2.0	0.024	-0.002
82M4	968228	11	314291	5657178		0.003	7.9	85	0.10	-0.002	3.667	0.003	2	36691	0.027	0.013	0.052	0.2	0.089	0.253	-0.002	-0.002	-0.002	40	1.8	0.008	-0.002
82M4	968229	11	314438	5655885		0.005	10.2	32	0.09	-0.002	4.634	-0.002	2	12164	0.003	0.008	0.039	0.2	0.055	0.299	0.003	0.002	0.002	36	2.0	0.008	0.002
82M4	968230	11	314154	5655324		0.003	11.0	20	0.06	0.003	5.006	0.005	3	7322	0.010	0.007	0.017	0.3	0.036	0.921	0.006	0.006	0.004	30	3.2	0.007	0.009
82M4	968231	11	314100	5653704		-0.002	11.1	26	0.03	-0.002	4.394	0.002	2	11196	0.030	0.007	0.032	0.3	0.047	0.741	0.014	0.012	0.004	38	3.1	0.010	0.018
82M4	968232	11	316274	5660623		-0.002	11.7	74	0.11	-0.002	4.498	0.002	2	32909	0.004	0.009	0.063	0.2	0.027	0.241	-0.002	-0.002	-0.002	42	8.2	0.007	0.004
82M4	968233	11	316620	5660523		0.010	5.6	79	0.12	0.005	5.381	0.030	c	32549	0.011	0.069	0.056	0.6	0.014	0.357	0.004	-0.002	0.003	44	10.2	0.015	0.005
82M4	968234	11	318337	5661575		0.014	0.0	91	0.24	0.003	2.421	0.009	c	35410	-0.002	0.013	0.084	0.7	0.008	0.231	-0.002	-0.002	-0.002	34	5.6	0.017	0.002
82M4	968235	11	320453	5658574	1	0.010	5.0	69	0.08	0.003	6.019	0.010	c	27268	-0.002	0.014	0.071	0.4	0.032	0.387	0.002	0.003	0.004	84	5.5	0.016	-0.002

						Ag	Al	ALK	As	Au	Ba	Bi	Br	Ca	Cd	Ce	Co	Cr	Cs	Cu	Dy	Er	Eu	F	Fe	Ga	Gd
						0.020	0.2	1.00	0.02	0.002	0.002	0.001	1	1	0.002	0.002	0.002	0.1	0.002	0.002	0.002	0.002	0.002	20	0.2	0.002	0.002
						ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
MAP	SAMPLE	UTM-	UTM-E	UTM-N	REP	ICPMS	ICPMS	TIT	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ION	ICPMS	ICPMS	ICPMS
82M4	968236	11	320453	5658574	2	0.010	4.1	69	0.15	-0.002	6.124	0.005	c	27357	-0.002	0.011	0.064	0.6	0.023	0.351	0.002	-0.002	-0.002	86	5.5	0.013	0.002
82M4	968237	11	319955	5659300		0.007	0.8	67	0.10	-0.002	18.169	0.004	c	23878	0.011	0.006	0.052	0.5	0.012	0.418	-0.002	-0.002	0.003	38	4.0	0.013	0.002
82M4	968238	11	320280	5659180		0.009	5.4	66	0.12	0.003	11.162	0.003	c	25451	-0.002	0.010	0.064	0.3	0.013	0.403	-0.002	-0.002	-0.002	60	4.3	0.015	0.002
82M4	968239	11	318440	5657898		0.004	0.4	54	0.11	0.003	15.455	0.004	c	19929	0.020	-0.002	0.052	0.5	0.017	0.401	-0.002	-0.002	0.003	38	4.4	0.013	-0.002
82M4	968240	11	317869	5657846		0.013	2.4	48	0.04	0.003	11.557	-0.002	c	17253	0.038	0.005	0.037	0.6	0.044	0.675	-0.002	-0.002	0.002	46	7.2	0.007	0.002
82M4	968242	11	317325	5657187		0.006	4.7	52	0.24	0.003	9.751	0.002	c	19169	-0.002	-0.002	0.046	0.4	0.030	0.414	-0.002	-0.002	-0.002	30	4.3	-0.002	-0.002
82M4	968244	11	317075	5657098		0.022	5.4	45	0.18	0.005	6.264	0.002	c	17516	0.017	0.023	0.060	0.6	0.040	0.554	-0.002	-0.002	-0.002	32	6.0	0.019	0.002
82M4	968245	11	322939	5661571		0.152	4.4	85	0.13	0.025	28.874	0.007	c	31960	0.021	0.040	0.054	1.2	0.033	0.539	-0.002	-0.002	0.005	26	11.1	0.043	0.002
82M4	968246	11	323089	5661543		0.056	2.7	67	0.08	0.004	21.174	-0.002	c	25810	0.003	0.006	0.062	0.8	0.016	0.381	-0.002	-0.002	0.004	28	5.7	0.010	-0.002
82M4	968247	11	321754	5658561		0.036	-0.2	75	0.05	0.010	1.060	-0.002	c	32924	0.010	-0.002	0.055	0.9	0.027	0.389	-0.002	-0.002	-0.002	240	2.2	0.004	-0.002
82M4	968248	11	322623	5659895		0.028	1.3	55	0.06	0.005	5.898	-0.002	c	21887	-0.002	0.007	0.047	0.4	0.003	0.325	-0.002	-0.002	-0.002	64	7.1	0.009	-0.002
82M4	968249	11	323113	5657873		0.018	-0.2	70	0.17	0.008	1.563	-0.002	c	28685	0.011	-0.002	0.055	0.6	0.019	0.393	-0.002	-0.002	-0.002	52	4.0	0.009	-0.002
82M4	968250	11	320399	5656003	1	0.017	23.3	14	0.09	0.005	3.775	-0.002	c	5537	0.005	0.013	0.021	0.3	0.014	0.468	0.012	0.008	0.004	80	4.9	0.016	0.018
82M4	968251	11	320399	5656003	2	0.014	22.3	14	0.11	0.004	3.915	-0.002	c	5444	0.020	0.009	0.022	0.6	0.016	0.411	0.013	0.008	0.003	82	2.6	0.013	0.015
82M4	968252	11	325101	5663509		0.017	8.7	66	0.07	-0.002	14.254	-0.002	c	22491	-0.002	-0.002	0.052	0.3	0.018	0.445	-0.002	-0.002	-0.002	30	2.7	0.010	-0.002
82M4	968253	11	321451	5656838		0.014	3.9	48	0.15	-0.002	4.247	-0.002	c	19933	0.006	-0.002	0.049	0.1	0.033	0.477	-0.002	-0.002	-0.002	40	2.0	0.005	-0.002
82M4	968254	11	325212	5659506		0.013	-0.2	55	0.01	0.005	1.932	-0.002	c	23512	0.016	0.005	0.051	0.4	0.016	0.368	-0.002	-0.002	0.003	58	3.0	-0.002	-0.002
82M4	968255	11	325338	5655629		0.008	4.3	64	0.08	0.004	3.428	-0.002	c	26812	-0.002	0.006	0.069	0.3	0.009	0.401	-0.002	-0.002	-0.002	54	1.9	0.008	-0.002
82M4	968256	11	325295	5654368		0.013	6.3	45	0.10	0.003	5.444	-0.002	c	18460	-0.002	-0.002	0.044	0.4	0.006	0.386	0.002	-0.002	-0.002	44	2.5	0.006	-0.002
82M4	968257	11	291031	5681280		0.013	1.6	86	0.23	-0.002	31.567	-0.002	c	27499	0.052	0.103	0.085	0.6	-0.002	0.914	0.011	0.007	0.010	54	3.2	0.015	0.010

Stream Water Geochemical Data

SAMPLE	Ge	Hf	Ho	I	In	K	La	Lu	Mg	Mn	Mo	Na	Nb	Nd	Ni	Pb	Pd	pH	Pr	Pt	Rb	Re	Ru	Sb	Se	Si
	0.002	0.002	0.002	0.020	0.002	1	0.002	0.002	0.2	0.02	0.02	0.2	0.002	0.002	0.002	0.02	0.02		0.002	0.002	0.002	0.002	0.02	0.020	0.02	1
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	PH	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS
968002	0.007	-0.002	-0.002	2.840	0.007	531	0.061	0.008	5143.9	0.56	0.39	1210.3	0.059	0.042	1.086	-0.02	-0.02	8.2	0.027	-0.002	0.276	-0.002	-0.02	0.100	0.17	6565
968003	0.021	0.007	-0.002	2.850	0.008	1101	0.055	0.004	2706.1	0.24	0.26	1084.3	0.060	0.022	0.493	-0.02	-0.02	8.1	0.012	0.004	0.445	-0.002	-0.02	0.090	0.80	6289
968004	0.018	0.007	-0.002	2.750	0.003	499	0.187	0.003	2082.6	0.23	0.04	792.0	0.047	0.135	0.563	-0.02	-0.02	7.8	0.037	0.002	0.507	-0.002	-0.02	0.110	0.17	5003
968005	0.017	0.016	0.010	2.890	0.003	334	0.275	0.002	2157.8	0.42	0.06	775.1	0.040	0.179	0.714	0.04	-0.02	7.8	0.067	0.003	0.613	-0.002	-0.02	0.210	0.92	4721
968006	0.019	-0.002	-0.002	2.760	0.005	351	0.022	-0.002	3053.9	0.21	0.04	545.2	0.031	0.015	0.167	0.24	-0.02	8.4	0.004	-0.002	0.406	-0.002	-0.02	0.030	0.39	2911
968007	0.007	0.003	-0.002	2.940	-0.002	528	0.029	-0.002	2685.3	3.51	0.09	874.9	0.031	0.013	0.162	-0.02	-0.02	8.1	0.010	-0.002	0.545	-0.002	-0.02	0.150	0.31	4677
968008	0.009	0.010	-0.002	2.820	-0.002	406	0.013	-0.002	1882.4	0.25	0.05	601.0	0.039	0.005	0.237	0.06	-0.02	8.2	0.004	0.006	0.472	-0.002	-0.02	0.040	0.07	3277
968009	-0.002	-0.002	-0.002	2.810	-0.002	411	0.013	-0.002	1852.0	0.23	0.06	572.4	0.028	0.016	0.181	-0.02	-0.02	8.3	0.005	-0.002	0.435	-0.002	-0.02	0.030	0.42	3314
968010	0.012	-0.002	-0.002	3.100	-0.002	873	0.018	-0.002	11247.0	0.26	0.07	1557.6	0.028	0.011	0.371	0.03	-0.02	8.2	0.002	-0.002	0.471	-0.002	-0.02	0.060	0.97	7341
968011	-0.002	0.004	-0.002	3.060	-0.002	674	0.010	-0.002	10886.2	0.16	0.09	1498.1	0.029	0.010	0.315	-0.02	-0.02	8.5	0.004	0.003	0.542	-0.002	-0.02	0.040	0.16	6289
968012	0.014	-0.002	-0.002	2.930	-0.002	767	0.026	-0.002	6531.1	0.19	0.10	1259.4	0.037	0.014	0.228	-0.02	-0.02	8.3	0.004	-0.002	0.528	-0.002	-0.02	-0.020	0.81	6111
968013	0.005	-0.002	-0.002	3.160	-0.002	398	0.018	-0.002	11967.3	0.56	0.06	1404.2	0.036	0.005	0.346	-0.02	-0.02	8.6	-0.002	0.003	0.311	-0.002	-0.02	0.030	-0.02	7482
968014	0.009	0.004	-0.002	3.500	-0.002	384	0.011	-0.002	13300.1	6.72	0.08	2444.7	0.022	0.007	0.357	0.03	-0.02	8.4	-0.002	0.003	0.334	-0.002	-0.02	0.060	0.14	10017
968016	0.013	0.010	0.002	3.060	-0.002	461	0.016	-0.002	19658.9	0.72	0.13	3062.7	0.011	0.019	0.542	-0.02	-0.02	8.6	0.011	0.004	0.344	-0.002	-0.02	0.030	0.16	9379
968017	0.012	-0.002	-0.002	3.000	0.003	696	0.018	-0.002	17201.3	1.58	0.27	5022.7	0.021	0.017	0.804	-0.02	-0.02	8.5	0.007	-0.002	0.457	-0.002	-0.02	0.060	0.69	10787
968018	0.019	-0.002	-0.002	2.450	-0.002	352	0.008	-0.002	2413.0	0.11	0.08	1154.7	0.010	0.007	0.095	-0.02	-0.02	8.2	0.003	0.002	0.086	-0.002	-0.02	0.020	-0.02	5164
968019	-0.002	-0.002	-0.002	2.420	-0.002	727	0.015	-0.002	5505.3	0.15	0.02	941.4	0.013	0.009	0.240	-0.02	-0.02	8.3	0.005	0.004	0.434	-0.002	-0.02	0.030	0.08	5758
968020	0.013	-0.002	-0.002	2.400	-0.002	911	0.009	-0.002	19097.3	0.23	0.10	2376.4	0.017	0.008	0.408	0.03	-0.02	8.3	-0.002	-0.002	0.552	-0.002	-0.02	-0.020	0.07	7435
968022	0.021	-0.002	-0.002	3.080	-0.002	561	0.014	-0.002	15968.1	0.08	0.19	2123.3	0.029	0.003	0.871	-0.02	-0.02	7.0	0.006	-0.002	0.464	0.002	-0.02	0.050	-0.02	8273
968023	-0.002	-0.002	0.002	2.730	-0.002	379	0.040	0.002	5736.0	0.18	0.08	765.8	0.024	0.034	13.393	-0.02	-0.02	8.5	0.016	0.003	0.612	-0.002	-0.02	0.070	0.31	6207
968024	0.006	-0.002	-0.002	2.680	-0.002	669	0.010	-0.002	6861.4	0.16	0.16	1081.7	0.031	0.007	0.351	-0.02	-0.02	8.1	0.004	-0.002	0.488	-0.002	-0.02	0.040	0.27	5915
968025	0.004	-0.002	-0.002	2.520	-0.002	671	0.008	-0.002	7027.9	0.14	0.10	1110.2	0.019	0.005	0.306	-0.02	-0.02	8.5	-0.002	-0.002	0.473	-0.002	-0.02	-0.020	-0.02	6061
968026	-0.002	-0.002	-0.002	2.530	-0.002	728	0.004	-0.002	17136.7	0.09	0.14	2049.5	0.021	0.004	0.349	-0.02	-0.02	8.4	-0.002	-0.002	0.499	-0.002	-0.02	0.030	0.19	7724
968027	0.006	0.005	-0.002	2.550	0.002	412	0.007	-0.002	10528.8	0.29	0.23	1587.4	0.043	0.015	0.837	-0.02	-0.02	8.4	0.002	-0.002	0.345	-0.002	0.03	0.080	-0.02	8344
968028	-0.002	-0.002	-0.002	3.010	-0.002	528	0.023	-0.002	17817.2	0.15	0.46	1945.2	0.022	0.007	0.942	-0.02	-0.02	8.4	0.004	-0.002	0.119	0.006	-0.02	0.140	2.31	7437
968029	-0.002	-0.002	-0.002	3.380	0.003	917	0.019	-0.002	7590.3	0.23	0.48	1144.1	0.035	0.020	0.614	-0.02	-0.02	8.5	-0.002	0.003	0.363	-0.002	-0.02	0.100	2.31	5686
968030	-0.002	-0.002	-0.002	4.110	-0.002	871	0.010	-0.002	22403.4	1.86	0.90	2113.6	0.015	-0.002	1.111	-0.02	-0.02	8.3	0.006	-0.002	0.388	0.004	-0.02	0.130	1.93	8237
968031	0.010	-0.002	-0.002	3.360	-0.002	792	0.010	-0.002	37466.2	0.26	2.57	2134.7	0.014	-0.002	0.484	-0.02	-0.02	8.5	0.005	-0.002	0.274	0.018	-0.02	0.050	11.18	5065
968032	0.010	-0.002	-0.002	2.990	-0.002	737	0.005	-0.002	16968.5	0.14	0.40	1303.4	0.019	-0.002	0.258	-0.02	-0.02	8.3	0.003	-0.002	0.390	0.003	-0.02	0.060	0.56	4001
968033	0.019	-0.002	-0.002	2.930	-0.002	988	0.005	-0.002	5020.8	0.08	0.54	1248.1	0.019	-0.002	0.284	-0.02	-0.02	8.3	0.006	-0.002	0.724	-0.002	-0.02	0.050	1.92	4422
968034	0.003	-0.002	-0.002	3.310	-0.002	871	0.004	-0.002	19037.3	0.16	0.29	1934.5	0.026	-0.002	0.096	-0.02	-0.02	8.2	0.002	0.003	0.200	-0.002	-0.02	-0.020	0.97	5427
968035	0.023	-0.002	-0.002	3.170	-0.002	1072	-0.002	-0.002	8250.0	0.30	0.39	2621.2	0.016	-0.002	0.299	-0.02	-0.02	8.2	0.005	0.003	0.206	-0.002	-0.02	0.050	0.15	5768
968036	0.029	-0.002	-0.002	3.180	0.003	1189	0.007	-0.002	10055.7	0.35	0.43	2807.2	0.015	-0.002	0.270	-0.02	-0.02	8.4	0.002	-0.002	0.182	-0.002	-0.02	0.040	0.50	6300
968037	-0.002	0.025	-0.002	3.140	-0.002	688	0.005	-0.002	14780.9	0.18	0.05	2268.4	0.015	-0.002	0.320	0.06	-0.02	8.3	0.004	0.005	0.241	-0.002	-0.02	-0.020	0.16	7632
968039	-0.002	-0.002	-0.002	2.970	-0.002	1266	0.017	-0.002	23537.8	0.22	0.11	2864.9	0.014	-0.002	0.320	0.03	-0.02	8.3	0.002	0.003	0.312	-0.002	-0.02	0.060	-0.02	7934
968040	0.011	-0.002	-0.002	3.110	-0.002	1484	0.009	-0.002	47573.2	0.14	0.34	8729.9	0.010	-0.002	0.355	-0.02	-0.02	8.5	0.003	-0.002	1.147	-0.002	-0.02	0.060	1.20	8821
968042	-0.002	-0.002	-0.002	2.700	-0.002	280	0.008	-0.002	6068.0	28.48	0.09	929.3	0.013	-0.002	0.405	-0.02	-0.02	8.4	-0.002	-0.002	0.246	-0.002	-0.02	0.060	0.90	5253
968043	0.014	0.003	-0.002	2.280	-0.002	578	0.014	-0.002	9567.4	0.16	0.08	1104.2	-0.002	0.005	0.719	-0.02	-0.02	8.5	0.002	-0.002	0.550	-0.002	0.02	0.040	1.19	5229
968044	-0.002	-0.002	-0.002	2.120	-0.002	625	-0.002	-0.002	10101.5	0.16	0.17	1364.6	0.008	-0.002	0.328	-0.02	-0.02	8.2	-0.002	0.004	0.375	-0.002	-0.02	0.120	0.51	6146
968045	-0.002	-0.002	-0.002	2.520	-0.002	658	0.006	-0.002	6518.5	0.13	0.18	1274.8	0.010	0.004	0.442	0.05	-0.02	8.3	-0.002	-0.002	0.516	-0.002	-0.02	0.040	0.54	5375
968046	0.025	-0.002	-0.002	2.200	-0.002	449	0.002	-0.002	5482.1	0.19	0.12	849.9	0.009	-0.002	0.369	-0.02	-0.02	8.3	0.002	-0.002	0.281	-0.002	-0.02	0.050	0.21	4361
968047	-0.002	0.003	-0.002	2.490	-0.002	371	0.008	-0.002	8601.1	0.11	0.15	596.0	0.018	0.010	0.339	-0.02	-0.02	8.2	0.003	0.003	0.365	-0.002	-0.02	0.030	0.51	3311
968048	0.025	-0.002	-0.002	2.480	-0.002	2472	0.009	-0.002	43763.3	0.16	0.81	4700.5	0.010	-0.002	0.816	-0.02	-0.02	8.3	-0.002	-0.002	1.281	0.004	-0.02	0.100	0.46	10365

SAMPLE	Ge	Hf	Ho	I	In	K	La	Lu	Mg	Mn	Mo	Na	Nb	Nd	Ni	Pb	Pd	pH	Pr	Pt
	0.002	0.002	0.002	0.020	0.002	1	0.002	0.002	0.2	0.02	0.02	0.2	0.002	0.002	0.002	0.02	0.02		0.002	0.002
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb		ppb	ppb
	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	PH	ICPMS	ICPMS
968050	-0.002	-0.002	-0.002	2.330	-0.002	1678	0.005	-0.002	34065.2	0.23	0.48	4447.2	0.016	-0.002	0.790	0.06	-0.02	8.5	0.003	-0.002
968051	-0.002	-0.002	-0.002	2.530	-0.002	641	-0.002	-0.002	3750.3	0.54	0.15	1096.3	0.007	-0.002	0.560	0.05	-0.02	8.2	0.002	0.003
968052	0.026	-0.002	-0.002	2.570	-0.002	294	0.010	-0.002	2146.6	0.88	0.06	715.1	0.012	0.005	0.539	0.05	-0.02	8.3	0.005	-0.002
968053	0.004	0.014	-0.002	2.600	-0.002	784	0.007	-0.002	27476.9	0.24	0.12	1789.0	0.009	-0.002	0.469	0.11	-0.02	8.3	-0.002	-0.002
968054	-0.002	0.008	-0.002	4.230	0.004	1652	0.046	0.017	13113.2	1.79	0.12	4193.3	0.049	0.032	0.894	0.09	-0.02	8.2	0.033	-0.002
968055	0.031	-0.002	-0.002	1.980	-0.002	278	0.016	-0.002	14722.2	0.09	0.05	542.6	0.037	-0.002	0.703	0.03	-0.02	8.4	0.022	-0.002
968056	-0.002	0.008	0.003	2.410	0.005	638	0.019	0.004	9862.6	0.64	0.20	1244.7	0.042	0.014	0.737	0.03	-0.02	8.1	0.016	-0.002
968057	-0.002	0.002	-0.002	1.800	0.002	675	0.024	-0.002	5726.0	0.21	0.31	1072.6	0.038	-0.002	0.596	0.03	-0.02	8.4	0.011	-0.002
968058	-0.002	0.024	0.005	3.000	-0.002	778	0.078	-0.002	7453.0	4.71	0.14	5962.1	0.043	0.100	0.778	0.09	-0.02	8.1	0.030	-0.002
968059	-0.002	0.021	-0.002	2.300	0.002	920	0.025	-0.002	7921.8	4.34	0.27	9184.7	0.031	0.042	0.759	0.12	-0.02	8.1	0.013	-0.002
968060	0.032	0.010	-0.002	2.260	0.005	1068	0.031	0.002	9359.4	6.72	0.36	10795.3	0.039	0.056	1.241	0.07	-0.02	8.2	0.018	0.003
968062	-0.002	-0.002	0.003	2.340	-0.002	1019	0.030	0.007	4684.9	10.93	0.10	1621.0	0.037	0.031	1.299	0.05	-0.02	8.1	0.014	-0.002
968063	0.029	0.012	-0.002	2.220	0.003	1037	0.028	-0.002	4719.0	10.83	0.09	1657.9	0.042	0.047	1.197	0.06	-0.02	8.1	0.011	0.006
968064	0.056	0.008	0.005	2.080	-0.002	476	0.045	0.004	5187.0	0.43	0.26	11961.9	0.041	0.012	1.553	0.05	-0.02	8.4	0.017	0.002
968065	0.011	0.006	-0.002	1.810	0.003	697	0.003	0.002	6667.0	0.08	0.14	1869.8	0.047	-0.002	0.573	0.04	-0.02	8.4	-0.002	-0.002
968066	0.006	-0.002	-0.002	1.670	-0.002	1524	0.011	0.003	9527.3	0.12	0.17	2040.6	0.031	-0.002	0.592	0.06	-0.02	8.4	-0.002	-0.002
968067	0.038	-0.002	-0.002	1.650	-0.002	832	0.021	-0.002	7006.8	0.40	0.07	1093.1	0.063	-0.002	0.225	0.05	-0.02	8.3	0.008	-0.002
968068	-0.002	-0.002	-0.002	1.410	-0.002	613	0.020	-0.002	5529.6	0.10	0.08	1044.4	0.070	-0.002	0.756	0.10	-0.02	8.4	0.008	-0.002
968069	-0.002	-0.002	-0.002	1.330	-0.002	710	0.009	-0.002	4838.0	0.13	0.08	1027.7	0.034	0.011	0.351	0.04	-0.02	8.3	0.006	0.006
968070	0.008	-0.002	-0.002	1.490	-0.002	994	-0.002	0.004	9962.8	0.11	0.09	1824.7	0.042	0.005	0.177	0.05	-0.02	8.4	0.004	-0.002
968071	-0.002	-0.002	-0.002	1.530	-0.002	667	0.002	-0.002	10836.4	0.08	0.14	1873.7	0.030	0.015	0.026	0.05	-0.02	8.5	0.005	0.003
968072	-0.002	-0.002	-0.002	1.170	-0.002	2509	0.002	-0.002	7943.2	0.14	0.15	1130.3	0.057	-0.002	0.190	-0.02	-0.02	8.2	-0.002	-0.002
968073	0.049	0.006	0.009	2.940	-0.002	2342	0.084	-0.002	28137.3	1.16	0.50	11719.0	0.041	0.055	1.288	0.12	-0.02	8.1	0.027	-0.002
968074	0.027	0.014	-0.002	2.670	-0.002	883	0.017	-0.002	12416.7	2.28	0.25	4070.4	-0.002	0.011	0.156	0.11	-0.02	8.4	0.003	-0.002
968075	0.036	-0.002	-0.002	3.010	0.002	1530	0.019	0.003	19297.7	9.77	0.25	9098.9	0.024	-0.002	1.033	0.06	-0.02	8.3	0.005	0.006
968076	0.004	-0.002	-0.002	2.130	-0.002	601	0.018	-0.002	13209.6	3.37	0.13	9407.4	0.023	0.009	2.844	0.10	-0.02	8.3	-0.002	0.002
968078	0.024	-0.002	-0.002	1.190	0.003	1367	0.010	-0.002	6803.5	0.90	0.19	1694.4	0.023	0.010	0.261	0.06	-0.02	8.3	-0.002	-0.002
968079	0.027	-0.002	-0.002	0.990	-0.002	1552	0.018	-0.002	6647.6	0.12	0.13	1086.9	0.013	-0.002	0.100	0.06	-0.02	8.5	0.003	-0.002
968080	-0.002	-0.002	-0.002	1.180	0.005	973	0.011	-0.002	7235.3	0.67	0.09	1150.9	0.025	0.014	0.875	0.05	-0.02	8.5	0.002	0.003
968082	-0.002	-0.002	-0.002	1.790	-0.002	638	0.013	-0.002	7730.4	0.23	0.02	1192.0	0.045	-0.002	1.061	0.05	-0.02	8.3	0.004	0.003
968083	-0.002	-0.002	-0.002	1.250	-0.002	836	0.022	-0.002	4783.6	0.11	0.06	1172.4	0.005	0.018	0.547	0.06	-0.02	8.4	-0.002	-0.002
968085	-0.002	-0.002	-0.002	1.800	0.004	902	0.014	-0.002	9061.0	0.27	0.20	2418.9	0.050	-0.002	1.004	0.04	-0.02	8.4	0.009	-0.002
968086	0.037	0.009	-0.002	1.790	-0.002	3929	0.002	-0.002	25785.4	0.33	0.40	2390.7	0.016	-0.002	1.320	0.04	-0.02	8.2	-0.002	-0.002
968087	-0.002	-0.002	-0.002	1.850	-0.002	914	0.015	-0.002	2950.1	0.10	0.20	1061.8	0.043	-0.002	0.586	0.04	-0.02	8.2	0.002	0.004
968088	-0.002	0.011	-0.002	1.710	0.002	904	0.011	-0.002	13814.4	0.12	0.91	2125.3	0.016	0.006	0.891	0.05	-0.02	8.3	-0.002	0.010
968089	-0.002	-0.002	-0.002	1.910	-0.002	777	0.007	-0.002	14498.3	0.55	0.23	1356.0	0.003	-0.002	1.214	0.02	-0.02	8.5	-0.002	0.011
968090	0.003	-0.002	0.002	2.220	-0.002	2211	0.049	-0.002	4122.8	0.30	0.46	3849.1	0.009	0.038	0.957	0.03	-0.02	8.3	0.005	-0.002
968091	0.012	-0.002	-0.002	2.300	0.003	2067	0.036	-0.002	4011.1	0.15	0.74	3784.3	0.008	0.050	1.264	-0.02	-0.02	8.3	0.004	-0.002
968092	0.027	0.003	-0.002	1.680	0.002	746	0.012	0.002	14467.7	0.20	0.27	1758.7	0.022	0.009	0.483	0.04	-0.02	8.3	0.004	-0.002
968093	-0.002	-0.002	0.003	3.050	-0.002	2581	0.045	-0.002	5278.4	0.26	0.12	5471.6	0.010	0.018	0.330	0.05	-0.02	8.5	0.021	-0.002
968094	-0.002	-0.002	0.012	1.490	-0.002	772	0.300	0.003	881.8	0.15	0.13	1106.6	0.005	0.256	0.427	-0.02	-0.02	7.7	0.073	0.009
968095	-0.002	0.007	0.007	1.610	0.002	877	0.568	-0.002	2069.7	1.88	0.08	1086.1	0.026	0.433	0.634	0.06	-0.02	7.8	0.120	0.004

Stream Water Geochemical Data

SAMPLE	Ge	Hf	Ho	I	In	K	La	Lu	Mg	Mn	Mo	Na	Nb	Nd	Ni	Pb	Pd	pH	Pr	Pt	Rb	Re	Ru	Sb	Se	Si
	0.002	0.002	0.002	0.020	0.002	1	0.002	0.002	0.2	0.02	0.02	0.2	0.002	0.002	0.002	0.02	0.02		0.002	0.002	0.002	0.002	0.02	0.020	0.02	1
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	PH	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS
968096	0.025	-0.002	-0.002	1.390	0.002	675	0.277	-0.002	3467.7	0.22	0.25	895.1	0.013	0.113	0.532	0.05	-0.02	8.1	0.054	0.006	0.517	-0.002	-0.02	0.030	-0.02	3944
968097	0.005	-0.002	0.007	1.420	0.007	575	0.209	0.003	422.3	0.19	0.05	785.2	0.016	0.191	-0.002	0.02	-0.02	7.7	0.036	-0.002	0.843	-0.002	-0.02	-0.020	-0.02	3808
968098	0.003	-0.002	0.016	1.510	0.005	958	0.514	0.004	641.7	1.25	0.28	877.5	0.012	0.408	0.590	0.15	-0.02	7.6	0.119	-0.002	1.050	0.003	-0.02	0.030	0.15	4578
968099	0.047	-0.002	0.008	1.610	-0.002	906	0.560	0.002	583.6	0.52	0.14	892.0	0.021	0.426	0.295	0.06	-0.02	7.7	0.149	0.003	0.910	-0.002	-0.02	0.020	-0.02	4357
968100	-0.002	-0.002	0.014	1.260	0.002	680	0.467	0.004	570.2	0.22	0.47	783.4	0.008	0.442	0.685	0.03	-0.02	7.6	0.123	-0.002	2.276	-0.002	-0.02	0.030	0.03	3647
968102	-0.002	0.009	0.016	2.120	-0.002	829	0.516	0.006	384.9	12.38	-0.02	906.8	0.013	0.466	0.179	0.04	-0.02	6.8	0.125	-0.002	2.447	-0.002	-0.02	0.060	0.30	2783
968103	-0.002	-0.002	0.007	2.030	0.003	570	0.355	0.005	378.7	4.89	-0.02	981.9	0.006	0.346	0.156	-0.02	-0.02	6.8	0.082	-0.002	1.503	0.002	-0.02	-0.020	-0.02	2519
968104	0.017	-0.002	0.010	1.670	-0.002	351	0.578	0.007	386.5	11.66	-0.02	856.5	0.009	0.485	0.575	0.05	-0.02	6.9	0.151	0.005	0.941	-0.002	-0.02	0.040	-0.02	2727
968105	0.003	-0.002	0.009	1.540	0.004	435	0.854	0.005	461.3	1.01	0.02	591.3	0.053	0.732	0.443	0.10	-0.02	7.4	0.218	0.009	1.018	-0.002	-0.02	0.020	-0.02	2949
968106	0.004	-0.002	-0.002	0.750	0.002	279	0.330	-0.002	732.9	0.54	0.19	660.6	0.037	0.260	0.506	0.05	-0.02	7.4	0.054	-0.002	0.755	-0.002	-0.02	0.040	-0.02	2995
968107	0.024	-0.002	0.003	1.170	-0.002	271	0.299	-0.002	724.8	0.47	0.10	649.6	0.032	0.200	0.839	0.06	-0.02	7.4	0.056	0.005	0.803	-0.002	-0.02	0.070	0.60	2829
968108	-0.002	-0.002	0.009	1.230	-0.002	446	0.350	0.007	347.3	2.70	0.02	793.6	0.042	0.300	0.103	0.05	-0.02	7.2	0.082	-0.002	1.251	-0.002	-0.02	0.020	-0.02	2959
968109	-0.002	-0.002	0.019	1.520	0.002	539	0.818	-0.002	1555.7	0.52	0.09	721.6	0.033	0.689	0.534	0.06	-0.02	7.5	0.192	-0.002	1.252	-0.002	-0.02	-0.020	-0.02	3470
968110	-0.002	0.010	0.011	1.000	0.002	560	0.504	0.004	530.4	0.36	0.04	1028.9	0.035	0.554	0.421	0.09	-0.02	7.4	0.147	-0.002	1.432	-0.002	-0.02	0.030	0.58	4335
968111	-0.002	-0.002	-0.002	0.830	-0.002	440	0.063	-0.002	2113.0	0.28	0.05	916.6	0.022	0.028	0.474	0.08	-0.02	7.7	0.027	-0.002	0.432	-0.002	-0.02	0.030	-0.02	4362
968112	-0.002	-0.002	-0.002	0.630	-0.002	660	0.027	-0.002	2825.9	0.12	0.10	995.5	0.026	0.030	0.387	0.05	-0.02	8.0	0.004	-0.002	0.504	-0.002	-0.02	0.050	-0.02	4534
968113	0.002	0.014	0.003	1.810	0.015	1703	0.059	0.008	21121.5	0.15	0.12	2491.7	0.021	0.042	0.778	0.35	-0.02	8.5	0.022	-0.002	0.497	-0.002	-0.02	0.070	0.42	14470
968114	-0.002	0.003	-0.002	1.630	0.006	1124	0.018	0.004	6159.0	0.42	0.34	1137.5	0.024	0.010	0.794	0.06	-0.02	8.4	0.007	-0.002	0.329	-0.002	-0.02	0.080	0.12	6261
968115	0.005	-0.002	-0.002	1.390	0.004	1073	0.013	-0.002	15233.6	0.13	0.13	1076.4	0.015	0.008	0.759	0.04	-0.02	8.5	-0.002	-0.002	0.390	-0.002	0.03	0.060	-0.02	6015
968116	0.006	0.006	-0.002	2.150	0.003	912	0.017	-0.002	12370.8	0.08	0.26	1343.9	0.021	0.008	0.774	0.05	-0.02	8.5	0.005	-0.002	0.467	-0.002	-0.02	0.100	-0.02	6721
968117	0.004	-0.002	-0.002	1.390	0.002	511	0.008	-0.002	23390.7	1.53	0.28	1051.9	0.018	0.003	0.644	0.05	-0.02	8.3	0.002	-0.002	0.279	-0.002	0.03	0.890	0.19	5292
968118	-0.002	0.002	-0.002	1.310	0.003	888	0.014	-0.002	4098.8	0.20	0.19	985.5	0.025	0.012	0.471	0.04	-0.02	8.2	0.005	-0.002	0.634	-0.002	-0.02	0.050	-0.02	4280
968120	0.007	-0.002	-0.002	1.510	-0.002	1577	0.009	-0.002	7602.0	0.22	0.22	1126.3	0.014	0.006	0.697	0.11	-0.02	8.2	-0.002	-0.002	0.505	-0.002	-0.02	0.050	-0.02	5418
968122	0.011	-0.002	-0.002	1.710	0.003	828	0.011	-0.002	3807.1	0.17	0.27	842.0	0.075	0.003	0.452	0.09	-0.02	8.4	0.004	-0.002	0.734	-0.002	0.04	0.120	-0.02	3935
968123	0.010	-0.002	-0.002	1.990	-0.002	1761	0.014	-0.002	19465.8	0.16	0.14	1969.7	0.064	0.003	0.772	0.10	-0.02	8.3	0.002	-0.002	2.664	-0.002	-0.02	0.040	0.29	7157
968124	0.012	-0.002	-0.002	1.390	-0.002	766	0.011	-0.002	13528.5	0.04	0.10	974.4	0.043	0.016	0.206	0.02	-0.02	8.6	0.004	-0.002	0.849	-0.002	-0.02	0.030	0.05	4962
968125	0.014	0.005	0.004	1.480	-0.002	535	0.266	-0.002	684.9	0.66	0.11	695.7	0.037	0.258	0.285	0.06	-0.02	7.5	0.065	-0.002	1.207	-0.002	-0.02	0.030	-0.02	2624
968126	0.007	-0.002	-0.002	1.500	-0.002	605	0.026	-0.002	1563.8	3.94	0.08	556.5	0.027	0.017	0.223	0.05	-0.02	8.0	0.005	-0.002	0.980	-0.002	0.03	0.020	0.03	3341
968127	0.014	0.010	0.037	1.760	-0.002	449	2.184	0.012	307.4	13.78	0.04	748.8	0.039	2.197	0.894	0.19	-0.02	6.9	0.564	-0.002	1.113	-0.002	-0.02	0.020	-0.02	4184
968128	0.006	0.010	-0.002	2.970	-0.002	749	0.075	-0.002	6199.8	5.71	0.21	6622.9	0.022	0.076	0.471	0.04	-0.02	7.9	0.022	-0.002	0.464	-0.002	-0.02	0.060	0.09	8259
968129	-0.002	0.003	-0.002	1.910	-0.002	1032	0.016	-0.002	8507.1	0.10	0.26	4522.5	0.021	0.010	0.494	0.02	-0.02	8.5	0.004	-0.002	0.528	0.003	0.05	0.090	0.33	9101
968131	-0.002	0.003	-0.002	1.810	-0.002	975	0.016	-0.002	6305.5	0.15	0.25	1897.2	0.021	0.018	0.091	0.03	-0.02	8.4	0.005	-0.002	0.342	-0.002	-0.02	0.070	0.15	7449
968132	0.008	-0.002	-0.002	1.300	-0.002	975	0.016	-0.002	6385.9	0.07	0.12	2038.9	0.017	0.020	0.224	0.04	-0.02	8.4	0.005	-0.002	0.284	-0.002	0.04	0.050	0.12	8149
968133	-0.002	0.003	-0.002	1.320	-0.002	871	0.003	-0.002	12204.8	0.08	0.36	1790.4	0.022	0.004	0.309	0.04	-0.02	8.2	-0.002	-0.002	0.289	0.008	0.04	0.110	1.24	7649
968134	0.003	0.005	-0.002	6.720	0.002	1448	0.008	-0.002	12062.8	45.48	0.64	2869.2	0.018	0.005	0.277	0.05	-0.02	8.3	-0.002	-0.002	0.328	-0.002	0.10	0.060	0.37	8557
968135	0.017	-0.002	-0.002	7.780	-0.002	1923	-0.002	-0.002	30252.4	7.85	0.45	3500.4	0.015	-0.002	0.689	0.15	-0.02	8.5	-0.002	-0.002	0.656	0.002	-0.02	0.080	0.22	9715
968136	0.004	0.007	-0.002	1.010	-0.002	700	0.005	-0.002	10409.5	0.21	0.22	1447.5	0.012	-0.002	0.372	0.03	-0.02	8.5	-0.002	-0.002	0.348	-0.002	-0.02	0.020	0.11	6178
968137	0.006	-0.002	-0.002	1.090	-0.002	692	0.004	-0.002	10478.6	0.18	0.17	1444.2	0.013	-0.002	0.335	0.03	-0.02	8.5	-0.002	-0.002	0.369	-0.002	-0.02	0.040	0.18	6305
968138	0.003	-0.002	0.008	1.230	-0.002	958	0.387	-0.002	779.9	0.36	0.06	643.9	0.018	0.300	0.101	0.03	-0.02	7.3	0.093	-0.002	1.658	-0.002	-0.02	0.020	0.05	3511
968139	0.006	-0.002	0.007	1.250	-0.002	851	0.344	0.002	712.1	1.84	0.24	854.9	0.015	0.327	0.267	0.07	-0.02	7.7	0.082	-0.002	1.503	-0.002	-0.02	-0.020	0.19	3817
968140	0.007	0.004	0.005	1.340	-0.002	594	0.224	0.002	413.7	0.18	0.08	562.5	0.010	0.216	0.268	0.09	-0.02	7.6	0.059	-0.002	1.457	-0.002	-0.02	-0.020	0.05	3011
968142	-0.002	0.002	0.005	1.420	-0.002	941	0.192	0.002	516.3	0.24	0.12	617.6	0.023	0.159	0.335	0.06	-0.02	6.9	0.044	-0.002	1.239	-0.002	-0.02	-0.020	0.20	2424

SAMPLE	Ge	Hf	Ho	I	In	K	La	Lu	Mg	Mn	Mo	Na	Nb	Nd	Ni	Pb	Pd	pH	Pr	Pt	Rb	Re	Ru	Sb	Se	Si
	0.002	0.002	0.002	0.020	0.002	1	0.002	0.002	0.2	0.02	0.02	0.2	0.002	0.002	0.002	0.02	0.02		0.002	0.002	0.002	0.002	0.02	0.020	0.02	1
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	PH	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS
968143	-0.002	-0.002	0.005	1.340	-0.002	1212	0.218	0.002	1008.7	0.07	0.16	824.9	0.025	0.217	0.357	0.02	-0.02	7.9	0.056	-0.002	0.717	-0.002	-0.02	-0.020	0.23	3466
968144	-0.002	0.003	0.011	1.340	-0.002	994	0.759	0.003	857.4	0.25	0.21	807.8	0.020	0.599	0.489	0.14	-0.02	7.7	0.166	-0.002	0.851	-0.002	-0.02	-0.020	0.07	3642
968145	-0.002	0.005	0.011	1.430	-0.002	776	0.840	0.004	850.4	0.10	0.14	834.5	0.014	0.689	0.712	0.08	-0.02	7.7	0.197	-0.002	1.430	-0.002	-0.02	0.020	-0.02	3981
968146	0.007	-0.002	-0.002	1.110	-0.002	1813	0.037	-0.002	7170.8	0.16	0.61	1196.8	0.018	0.022	0.479	0.07	-0.02	8.3	0.009	-0.002	0.813	0.002	0.06	-0.020	-0.02	3652
968147	0.008	-0.002	-0.002	1.230	-0.002	1554	0.049	-0.002	5060.7	0.11	1.08	1252.8	0.015	0.024	0.562	0.12	-0.02	8.5	0.010	-0.002	0.194	-0.002	0.05	0.020	-0.02	4498
968149	0.008	-0.002	-0.002	1.240	-0.002	2539	0.006	-0.002	23130.3	0.08	0.88	1780.8	0.020	0.005	0.664	0.07	-0.02	8.2	-0.002	-0.002	1.067	0.005	0.21	0.060	0.15	5614
968150	0.007	-0.002	-0.002	1.880	-0.002	2181	0.003	-0.002	10998.3	0.08	1.64	2004.4	0.015	-0.002	0.623	0.09	-0.02	8.2	-0.002	-0.002	0.616	-0.002	0.07	0.050	0.24	5534
968151	0.010	0.005	0.014	3.330	-0.002	1859	0.781	0.007	3958.4	1.28	0.30	3987.8	0.041	0.559	0.912	0.12	-0.02	7.9	0.148	-0.002	0.507	-0.002	-0.02	0.050	0.19	12980
968152	0.006	0.003	0.012	3.280	-0.002	1915	0.816	0.006	4026.8	1.37	0.16	4082.6	0.056	0.519	1.080	0.13	-0.02	8.1	0.161	-0.002	0.537	-0.002	-0.02	0.100	0.27	13183
968153	0.010	-0.002	0.005	1.610	-0.002	1832	0.161	-0.002	3361.3	1.31	0.11	3652.8	0.042	0.117	0.409	0.09	-0.02	8.1	0.036	-0.002	0.343	-0.002	0.03	0.030	0.22	9041
968154	0.003	-0.002	0.006	2.090	-0.002	3533	0.200	0.004	9720.5	1.83	0.22	6533.2	0.064	0.154	1.506	0.07	-0.02	8.2	0.043	-0.002	1.618	0.002	0.03	0.070	0.28	12078
968155	0.018	0.023	0.050	3.780	0.003	2650	2.267	0.022	4601.8	6.07	0.19	5850.5	0.323	1.899	2.452	0.41	-0.02	8.0	0.487	-0.002	1.656	-0.002	-0.02	0.070	0.33	16512
968156	0.007	0.016	0.040	2.570	-0.002	1250	3.616	0.019	1083.0	3.36	0.16	2723.8	0.073	2.363	0.539	0.12	-0.02	7.7	0.702	-0.002	1.522	-0.002	-0.02	0.060	-0.02	9208
968157	0.009	0.006	0.013	1.770	-0.002	866	1.032	0.006	509.8	0.67	0.50	1523.2	0.031	0.638	0.136	0.05	-0.02	7.4	0.186	-0.002	1.346	-0.002	-0.02	0.040	0.19	5906
968158	0.008	0.005	0.004	1.520	0.009	1500	0.188	0.008	1621.3	0.65	0.45	2321.4	0.132	0.162	0.248	0.04	-0.02	7.6	0.056	-0.002	0.857	-0.002	-0.02	0.140	-0.02	6814
968159	0.005	0.006	0.015	1.480	0.004	235	0.728	0.006	221.0	0.22	0.09	979.3	0.101	0.665	0.133	0.03	-0.02	7.5	0.173	-0.002	0.721	-0.002	-0.02	0.050	-0.02	4764
968160	-0.002	0.007	0.010	1.640	0.006	117	0.434	0.005	136.1	4.06	0.05	820.9	0.090	0.336	0.143	0.06	-0.02	7.2	0.096	-0.002	0.388	-0.002	-0.02	0.090	0.05	3057
968162	0.019	0.007	0.017	1.680	0.003	96	0.914	0.008	168.6	2.58	0.03	960.1	0.047	0.717	0.135	0.04	-0.02	6.5	0.209	-0.002	0.368	-0.002	-0.02	0.030	-0.02	4640
968163	-0.002	0.008	0.009	1.750	-0.002	264	0.451	0.006	237.8	1.00	-0.02	847.1	0.054	0.291	0.074	0.02	-0.02	6.7	0.089	-0.002	0.803	-0.002	-0.02	0.070	0.09	4211
968164	0.015	0.020	0.022	2.220	0.002	174	1.035	0.009	264.0	8.49	-0.02	1156.3	0.063	0.776	0.172	0.07	-0.02	6.8	0.227	-0.002	0.562	-0.002	-0.02	0.050	0.26	5793
968165	0.003	0.027	0.022	2.300	0.003	180	1.051	0.009	267.2	8.62	0.03	1188.2	0.064	0.778	0.174	0.05	-0.02	6.8	0.222	-0.002	0.554	-0.002	-0.02	0.070	0.17	5744
968166	0.004	-0.002	0.004	1.780	-0.002	340	0.083	0.003	671.6	0.11	0.08	2181.9	0.030	0.087	0.043	0.04	-0.02	7.4	0.024	-0.002	0.320	-0.002	0.03	0.060	-0.02	8464
968167	0.003	0.009	0.009	1.570	0.003	286	0.610	0.004	281.6	0.25	0.03	880.1	0.033	0.375	0.067	0.04	-0.02	7.4	0.120	-0.002	1.008	-0.002	-0.02	0.040	-0.02	4319
968168	0.004	0.012	0.016	1.970	-0.002	111	0.596	0.005	169.2	6.71	0.04	829.7	0.041	0.486	0.109	0.04	-0.02	7.1	0.143	-0.002	0.398	-0.002	-0.02	0.060	0.52	3264
968169	-0.002	0.010	0.010	1.680	-0.002	116	0.313	0.004	148.3	3.73	-0.02	747.9	0.037	0.266	-0.002	0.05	-0.02	6.6	0.071	-0.002	0.460	-0.002	-0.02	0.040	0.14	3241
968170	-0.002	0.005	0.011	1.560	-0.002	395	0.774	0.007	512.2	2.20	0.22	1268.6	0.038	0.477	0.161	0.07	-0.02	6.8	0.157	-0.002	1.531	-0.002	-0.02	0.060	0.15	5288
968171	0.004	-0.002	-0.002	1.720	-0.002	414	0.068	-0.002	638.0	0.33	0.97	1535.5	0.020	0.045	0.110	0.04	-0.02	7.7	0.014	-0.002	1.084	-0.002	-0.02	-0.020	0.06	5699
968172	0.005	0.004	0.015	1.860	-0.002	527	0.907	0.006	1102.5	0.16	0.19	2181.0	0.025	0.624	0.211	0.04	-0.02	7.8	0.179	-0.002	2.247	-0.002	0.03	0.030	-0.02	6385
968173	0.005	0.004	0.016	2.120	-0.002	599	1.482	0.007	450.8	0.70	0.13	1368.4	0.041	0.874	0.104	0.06	-0.02	7.7	0.280	-0.002	2.176	-0.002	-0.02	0.100	0.25	4936
968174	0.005	-0.002	0.009	1.840	-0.002	182	0.539	0.004	142.9	0.46	0.06	641.7	0.033	0.336	0.093	0.10	-0.02	6.9	0.110	-0.002	0.678	-0.002	-0.02	-0.020	0.22	2720
968175	0.009	0.003	0.013	1.950	-0.002	460	0.946	0.007	391.1	0.18	0.16	1101.3	0.040	0.608	0.127	0.03	-0.02	7.2	0.186	-0.002	1.297	-0.002	-0.02	-0.020	-0.02	4680
968176	0.005	-0.002	-0.002	2.030	-0.002	1462	0.062	-0.002	2601.8	0.32	0.08	2211.4	0.016	0.059	0.461	0.07	-0.02	7.9	0.016	-0.002	0.744	-0.002	-0.02	-0.020	0.10	5803
968177	0.007	0.004	0.009	2.330	-0.002	1129	0.344	0.003	1115.0	1.73	0.03	1603.2	0.020	0.321	0.273	0.05	-0.02	7.8	0.085	-0.002	1.111	-0.002	-0.02	0.030	-0.02	6434
968178	-0.002	0.008	-0.002	2.850	-0.002	2309	0.040	0.002	1819.5	2.94	0.21	1957.0	0.020	0.033	0.314	0.03	-0.02	7.9	0.010	-0.002	0.755	-0.002	-0.02	-0.020	0.11	6105
968179	0.008	-0.002	-0.002	2.340	-0.002	4109	0.016	-0.002	2333.8	0.05	0.32	2496.5	0.014	0.009	0.479	0.04	-0.02	8.4	0.003	-0.002	0.445	-0.002	-0.02	-0.020	0.46	6813
968182	0.007	0.023	0.002	5.900	0.009	1122	0.080	0.003	1308.4	0.22	0.10	1854.0	0.048	0.075	0.395	0.10	-0.02	7.8	0.020	-0.002	0.816	-0.002	-0.02	0.030	-0.02	5658
968183	0.004	0.008	0.042	2.920	0.009	319	1.956	0.028	544.1	3.77	0.78	1859.4	0.074	1.325	0.334	0.12	-0.02	7.4	0.397	-0.002	0.596	-0.002	-0.02	0.030	-0.02	6133
968184	0.007	0.004	0.009	2.330	0.008	242	0.485	0.006	231.5	0.57	2.71	1313.8	0.051	0.301	0.243	0.08	-0.02	7.4	0.094	-0.002	1.143	-0.002	-0.02	0.050	0.07	4248
968185	0.010	-0.002	0.015	2.130	0.005	214	0.521	0.009	210.5	0.41	1.55	1675.4	0.028	0.395	0.160	0.07	-0.02	7.3	0.109	-0.002	1.055	-0.002	-0.02	0.030	0.15	5683
968186	0.018	0.005	0.031	2.300	0.007	219	1.441	0.018	167.4	1.22	0.23	969.8	0.049	1.051	0.174	0.10	-0.02	7.2	0.289	-0.002	0.794	-0.002	-0.02	0.040	-0.02	3313
968187	0.017	0.002	0.029	2.100	0.011	183	0.872	0.015	119.1	0.71	0.26	767.4	0.049	0.691	0.178	0.14	-0.02	7.3	0.196	-0.002	0.540	-0.002	-0.02	0.030	0.14	2853
968188	0.005	0.005	0.013	1.620	0.003	112	0.461	0.008	79.3	0.91	0.52	577.9	0.050	0.344	0.167	0.07	-0.02	7.1	0.097	-0.002	0.313	-0.002	-0.02	0.030	-0.02	2080

Stream Water Geochemical Data

SAMPLE	Ge	Hf	Ho	I	In	K	La	Lu	Mg	Mn	Mo	Na	Nb	Nd	Ni	Pb	Pd	pH	Pr	Pt	Rb	Re	Ru	Sb	Se	Si
	0.002	0.002	0.002	0.020	0.002	1	0.002	0.002	0.2	0.02	0.02	0.2	0.002	0.002	0.002	0.02	0.02		0.002	0.002	0.002	0.002	0.02	0.020	0.02	1
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	PH	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS
968189	0.011	0.004	0.014	1.950	0.006	291	0.363	0.009	278.2	13.14	0.99	1147.9	0.029	0.289	0.270	0.21	-0.02	7.0	0.083	-0.002	1.107	-0.002	-0.02	0.040	0.04	3763
968190	0.012	0.003	0.011	1.610	0.004	72	0.236	0.006	49.0	0.48	0.40	298.6	0.026	0.202	0.093	0.08	-0.02	6.4	0.057	-0.002	0.251	-0.002	-0.02	0.030	0.06	1523
968192	0.011	-0.002	0.008	2.080	0.007	128	0.160	0.005	115.5	0.60	1.98	355.5	0.029	0.142	0.264	0.07	-0.02	6.6	0.034	-0.002	0.390	-0.002	-0.02	0.030	0.04	1603
968193	0.005	0.006	-0.002	1.290	0.057	126	0.065	0.013	2182.8	0.32	0.13	428.0	0.144	0.073	0.443	0.24	-0.02	7.2	0.028	-0.002	0.255	-0.002	-0.02	0.130	0.39	2465
968194	-0.002	0.006	0.004	1.410	0.024	119	0.056	0.007	1403.3	0.66	0.04	461.0	0.116	0.077	0.258	0.08	-0.02	7.3	0.023	-0.002	0.244	-0.002	-0.02	0.060	0.82	2542
968195	0.017	0.003	-0.002	1.530	0.009	210	0.033	0.006	3573.8	2.61	0.01	874.8	0.077	0.035	1.634	0.06	-0.02	7.7	0.012	-0.002	0.255	-0.002	-0.02	0.050	0.09	3333
968196	0.019	0.003	-0.002	1.430	0.010	149	0.027	0.004	3393.3	0.21	-0.02	646.4	0.065	0.037	0.434	0.05	-0.02	7.9	0.011	-0.002	0.206	-0.002	-0.02	0.070	0.26	2879
968197	0.015	0.004	0.003	1.550	0.009	321	0.071	0.006	5365.0	0.49	-0.02	1332.1	0.054	0.076	0.510	0.14	-0.02	8.0	0.019	-0.002	0.216	-0.002	-0.02	0.060	0.26	5429
968198	-0.002	-0.002	-0.002	1.510	0.015	819	0.025	0.008	9745.8	0.59	0.39	1423.0	0.046	0.023	0.277	0.07	-0.02	8.5	0.012	-0.002	0.393	-0.002	0.03	0.050	0.32	5240
968199	0.013	-0.002	-0.002	4.830	0.004	968	0.023	0.006	26950.9	17.49	0.52	1174.9	0.032	0.018	0.283	0.08	-0.02	8.6	0.011	-0.002	0.982	-0.002	0.03	0.030	0.13	3747
968200	0.013	0.003	-0.002	4.750	0.006	1051	0.023	0.009	27184.8	2.37	0.66	1066.7	0.039	0.016	0.194	0.08	-0.02	8.5	0.007	0.003	0.956	-0.002	-0.02	0.020	0.42	3853
968202	0.009	0.005	-0.002	2.540	0.008	1455	0.022	0.008	9676.6	0.39	0.66	889.4	0.044	0.015	0.323	0.09	-0.02	8.4	0.008	-0.002	1.398	-0.002	0.04	0.020	0.36	4355
968203	0.017	0.004	0.021	1.730	0.007	158	1.052	0.008	274.1	4.59	0.08	1340.2	0.051	0.873	0.022	0.11	-0.02	7.7	0.242	-0.002	0.594	-0.002	-0.02	0.020	0.64	4662
968204	0.014	0.011	0.014	1.700	0.006	98	0.654	0.007	166.1	6.26	0.10	898.9	0.051	0.505	0.036	0.09	-0.02	7.3	0.141	-0.002	0.439	-0.002	-0.02	0.030	0.58	3889
968205	0.016	0.009	0.028	1.800	0.004	186	1.503	0.014	313.6	6.73	0.07	1033.4	0.049	1.092	0.187	0.07	-0.02	7.4	0.332	-0.002	1.070	-0.002	-0.02	0.160	-0.02	4165
968206	0.020	0.004	0.013	1.400	-0.002	668	0.756	0.005	636.3	0.22	1.25	2490.8	0.035	0.530	0.139	0.05	-0.02	7.5	0.148	-0.002	1.305	-0.002	-0.02	0.030	-0.02	4825
968207	0.003	-0.002	0.016	1.490	0.002	636	0.766	0.005	621.0	0.13	2.07	2395.8	0.032	0.553	0.066	0.04	-0.02	7.7	0.149	-0.002	1.305	-0.002	-0.02	0.020	0.12	4844
968208	0.020	0.009	0.018	2.200	0.005	677	0.882	0.008	624.7	1.76	0.53	1799.5	0.048	0.698	0.231	0.14	-0.02	7.4	0.187	-0.002	1.296	-0.002	-0.02	-0.020	-0.02	5377
968209	0.002	0.010	0.007	1.670	-0.002	1003	0.250	0.005	674.3	0.27	0.19	1243.7	0.041	0.219	0.339	0.16	-0.02	7.6	0.056	-0.002	1.958	-0.002	-0.02	-0.020	-0.02	4408
968210	0.028	0.003	0.002	1.540	-0.002	1082	0.138	0.003	1005.8	4.05	0.19	1987.9	0.033	0.089	0.159	0.06	-0.02	7.8	0.029	-0.002	1.499	-0.002	-0.02	0.020	0.54	4725
968211	0.011	-0.002	0.003	2.420	0.002	2894	0.117	0.003	3494.6	0.17	0.91	2704.7	0.027	0.097	0.217	0.05	-0.02	8.4	0.022	-0.002	0.264	-0.002	-0.02	0.020	0.15	8171
968212	0.004	-0.002	0.002	3.200	0.002	3274	0.104	-0.002	3663.9	0.22	1.25	3053.4	0.014	0.071	0.522	0.03	-0.02	7.8	0.021	-0.002	0.331	-0.002	-0.02	0.030	0.08	9167
968213	0.010	0.009	0.005	1.410	-0.002	127	0.031	0.002	1885.6	0.13	0.12	576.1	0.027	0.042	0.242	0.07	-0.02	7.8	0.008	-0.002	0.176	-0.002	-0.02	0.040	0.22	2673
968214	0.014	0.003	-0.002	0.930	0.042	1037	0.044	0.022	14537.4	0.15	0.40	1907.5	0.108	0.040	0.358	0.10	-0.02	8.3	0.024	0.005	0.221	-0.002	-0.02	0.070	0.45	5062
968215	0.004	-0.002	-0.002	1.140	0.019	251	0.028	0.012	13037.4	0.22	0.22	1369.3	0.083	0.025	0.399	0.07	-0.02	8.5	0.013	-0.002	0.358	-0.002	0.03	0.100	0.39	5882
968216	0.006	0.003	-0.002	1.120	0.011	1972	0.030	0.007	5667.8	0.55	0.62	1935.6	0.081	0.025	0.395	0.06	-0.02	8.5	0.013	-0.002	1.053	-0.002	-0.02	0.050	0.20	6075
968218	0.009	-0.002	-0.002	1.460	0.006	1760	0.021	0.005	4519.2	0.35	0.57	2466.9	0.053	0.019	0.263	0.05	-0.02	8.4	0.007	-0.002	1.516	-0.002	0.02	0.050	0.32	4687
968219	-0.002	-0.002	0.002	1.640	0.007	1873	0.051	0.006	4857.4	0.61	0.91	2923.1	0.046	0.036	0.378	0.10	-0.02	8.4	0.012	-0.002	1.445	0.003	0.04	0.040	0.20	7837
968220	0.006	0.005	-0.002	0.810	0.007	977	0.014	0.006	9766.0	0.16	0.62	1093.2	0.040	0.009	0.300	0.04	-0.02	8.5	0.005	-0.002	0.849	-0.002	-0.02	0.070	0.12	3328
968222	-0.002	-0.002	-0.002	1.110	0.007	925	0.017	0.006	8867.7	0.27	0.76	1380.3	0.040	0.011	2.553	0.07	-0.02	8.4	0.004	-0.002	0.750	0.002	0.03	0.030	0.32	3759
968223	0.007	0.003	-0.002	1.110	0.006	1987	0.017	0.004	5851.1	0.16	0.64	1642.6	0.042	0.008	0.346	0.10	-0.02	8.5	0.004	-0.002	0.630	-0.002	0.02	0.020	0.37	5593
968224	0.015	-0.002	-0.002	1.200	-0.002	317	0.011	0.002	959.8	0.32	0.17	476.7	0.035	0.011	0.174	0.07	-0.02	8.2	0.004	-0.002	0.958	-0.002	-0.02	0.040	0.37	2667
968225	0.006	-0.002	-0.002	0.990	0.005	138	0.008	0.003	2293.4	0.80	0.19	425.3	0.028	0.007	0.139	0.07	-0.02	8.4	0.003	-0.002	0.271	-0.002	-0.02	-0.020	0.15	2836
968226	0.017	-0.002	-0.002	0.800	0.008	270	0.008	-0.002	567.0	0.19	0.95	472.3	0.037	0.009	0.241	0.08	-0.02	8.2	0.003	-0.002	1.492	-0.002	-0.02	-0.020	0.28	3836
968228	-0.002	-0.002	-0.002	1.310	-0.002	248	0.010	-0.002	763.5	0.27	0.39	344.8	0.031	0.009	0.165	0.09	-0.02	8.3	0.002	-0.002	1.323	-0.002	-0.02	-0.020	0.20	2128
968229	-0.002	-0.002	-0.002	0.890	0.005	220	0.010	0.002	481.0	0.17	0.32	357.4	0.029	0.018	0.224	0.02	-0.02	7.9	0.002	-0.002	1.147	-0.002	-0.02	0.020	0.04	2243
968230	0.011	0.003	0.003	1.040	0.006	166	0.031	0.002	304.5	0.71	0.15	361.5	0.025	0.042	0.095	0.09	-0.02	7.7	0.009	-0.002	0.670	-0.002	-0.02	0.020	0.16	2222
968231	0.007	0.002	0.003	0.950	0.003	278	0.087	0.003	567.8	0.61	0.24	579.2	0.028	0.084	0.116	0.08	-0.02	7.7	0.022	-0.002	0.907	-0.002	-0.02	-0.020	0.24	3430
968232	0.006	-0.002	-0.002	0.860	0.003	156	0.009	0.002	897.9	1.88	0.22	292.2	0.024	0.005	0.244	0.05	-0.02	8.3	0.002	-0.002	0.582	-0.002	-0.02	0.040	0.22	1270
968233	-0.002	0.003	-0.002	1.780	-0.002	193	0.032	0.005	1689.6	0.48	0.15	557.8	0.042	0.023	0.331	0.15	-0.02	8.2	0.010	-0.002	0.446	-0.002	0.03	0.050	0.27	2413
968234	-0.002	-0.002	-0.002	1.610	-0.002	236	0.009	0.004	1103.8	-0.02	0.11	458.2	0.026	0.005	0.293	0.08	-0.02	8.3	0.003	-0.002	0.410	-0.002	0.02	0.060	-0.02	2196
968235	-0.002	-0.002	-0.002	1.560	-0.002	357	0.021	0.002	939.6	-0.02	0.97	697.0	0.027	0.012	0.629	0.05	-0.02	8.2	0.003	-0.002	1.233	-0.002	0.02	0.040	0.18	3783

SAMPLE	Ge	Hf	Ho	I	In	K	La	Lu	Mg	Mn	Mo	Na	Nb	Nd	Ni	Pb	Pd	pH	Pr	Pt
	0.002	0.002	0.002	0.020	0.002	1	0.002	0.002	0.2	0.02	0.02	0.2	0.002	0.002	0.002	0.02	0.02		0.002	0.002
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb		ppb	ppb
	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	PH	ICPMS	ICPMS
968236	-0.002	-0.002	-0.002	1.800	-0.002	364	0.008	-0.002	960.5	-0.02	0.74	679.1	0.020	0.007	0.472	0.06	-0.02	8.1	0.002	-0.002
968237	-0.002	-0.002	-0.002	1.720	-0.002	1070	0.006	-0.002	1542.0	-0.02	0.36	592.7	0.014	0.007	0.344	0.04	-0.02	8.2	-0.002	-0.002
968238	-0.002	-0.002	-0.002	1.830	-0.002	725	0.007	-0.002	1270.8	-0.02	0.69	725.7	0.023	0.008	0.270	0.20	-0.02	8.2	-0.002	-0.002
968239	-0.002	-0.002	-0.002	1.600	-0.002	1083	-0.002	-0.002	825.3	0.54	0.45	580.2	0.012	0.004	0.380	0.06	-0.02	8.1	-0.002	-0.002
968240	-0.002	-0.002	-0.002	1.690	-0.002	692	0.004	-0.002	983.8	2.18	0.60	578.3	0.008	0.002	0.629	0.05	-0.02	8.1	-0.002	-0.002
968242	0.003	-0.002	-0.002	1.820	-0.002	424	0.004	-0.002	601.7	-0.02	0.24	465.6	0.023	-0.002	0.270	0.07	-0.02	6.1	-0.002	-0.002
968244	-0.002	-0.002	-0.002	1.210	0.005	396	0.019	0.009	589.4	-0.02	0.38	486.7	0.074	0.030	0.446	0.16	-0.02	8.0	0.018	-0.002
968245	-0.002	0.005	-0.002	1.410	0.003	261	0.024	0.011	2244.3	43.76	0.29	623.5	0.052	0.034	0.298	0.15	-0.02	8.2	0.025	-0.002
968246	0.007	-0.002	-0.002	0.670	-0.002	359	0.003	0.002	1229.6	0.44	0.25	619.4	0.019	0.004	0.323	0.07	-0.02	8.3	-0.002	-0.002
968247	0.010	0.002	-0.002	0.320	-0.002	378	-0.002	0.002	700.1	-0.02	1.04	745.0	0.014	0.007	0.479	0.12	-0.02	8.3	0.002	-0.002
968248	0.002	-0.002	-0.002	0.760	-0.002	302	0.005	0.002	877.0	3.64	0.23	689.3	0.023	0.006	0.375	0.06	-0.02	8.2	0.002	-0.002
968249	-0.002	-0.002	-0.002	0.490	-0.002	371	0.006	-0.002	434.7	0.52	0.18	576.2	0.013	0.011	0.341	0.09	-0.02	8.3	0.003	-0.002
968250	0.012	-0.002	0.003	0.490	-0.002	451	0.073	-0.002	482.8	-0.02	0.42	818.0	0.015	0.072	0.451	0.08	-0.02	8.0	0.015	-0.002
968251	-0.002	-0.002	0.003	0.740	-0.002	453	0.067	-0.002	491.9	-0.02	0.47	799.2	0.010	0.064	0.385	0.04	-0.02	7.7	0.020	-0.002
968252	-0.002	-0.002	-0.002	0.810	-0.002	203	0.006	-0.002	2018.3	0.07	0.19	597.9	0.005	0.004	0.367	0.05	-0.02	8.2	0.002	-0.002
968253	-0.002	-0.002	-0.002	0.660	-0.002	620	0.007	-0.002	782.7	-0.02	0.61	794.5	0.025	0.006	0.579	0.07	-0.02	8.1	-0.002	-0.002
968254	-0.002	-0.002	-0.002	0.590	-0.002	333	0.006	0.002	528.4	-0.02	0.42	549.8	0.010	0.003	0.370	0.09	-0.02	8.2	-0.002	-0.002
968255	-0.002	-0.002	-0.002	0.620	-0.002	601	0.009	-0.002	1053.0	-0.02	0.46	789.5	0.007	0.012	0.352	0.05	-0.02	8.2	0.004	-0.002
968256	-0.002	-0.002	-0.002	0.570	-0.002	641	0.011	-0.002	964.4	-0.02	0.39	885.4	0.009	0.010	0.288	0.15	-0.02	8.1	0.003	-0.002
968257	-0.002	0.002	0.003	1.330	-0.002	470	0.050	0.002	6102.0	-0.02	0.29	1967.2	0.009	0.049	0.687	0.11	-0.02	8.2	0.008	-0.002

SAMPLE	Sm	Sn	SO_4	Sr	Ta	Tb	Th	Tl	Tm	U	V	W	Y	Yb	Zn
	0.002	0.002	1	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.02	0.002	0.002	0.002	0.002
	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
	ICPMS	ICPMS	TURB	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS
968002	0.007	0.109	4	106.287	0.002	0.007	0.052	0.020	-0.002	0.030	0.17	0.032	0.070	0.007	20.403
968003	0.008	0.055	6	147.142	0.004	0.005	0.025	0.021	-0.002	0.005	0.24	0.039	0.070	-0.002	10.727
968004	0.013	0.051	2	71.327	-0.002	0.009	0.023	0.021	-0.002	0.004	0.11	0.019	0.098	0.007	6.370
968005	0.032	0.079	1	70.683	0.005	0.006	0.032	0.029	-0.002	0.006	0.11	0.018	0.186	0.011	3.019
968006	-0.002	0.051	5	252.547	-0.002	-0.002	0.011	0.022	-0.002	-0.002	0.11	0.019	0.047	0.004	2.283
968007	0.008	0.066	2	108.078	0.004	-0.002	0.013	0.020	-0.002	0.005	0.12	0.012	0.043	-0.002	1.809
968008	-0.002	0.056	3	128.372	-0.002	-0.002	0.011	0.020	-0.002	-0.002	0.08	0.023	0.027	-0.002	1.693
968009	-0.002	0.039	5	129.225	-0.002	-0.002	0.008	0.022	-0.002	-0.002	0.09	0.015	0.025	-0.002	1.702
968010	-0.002	0.074	9	250.992	0.004	0.005	0.012	0.030	-0.002	-0.002	0.09	0.015	0.031	0.002	4.499
968011	-0.002	0.024	21	274.833	0.005	-0.002	0.009	0.022	-0.002	-0.002	0.08	0.016	0.029	-0.002	3.782
968012	-0.002	0.023	9	175.605	0.010	-0.002	0.008	0.013	-0.002	-0.002	0.07	0.014	0.031	-0.002	1.558
968013	-0.002	0.031	6	235.717	0.003	-0.002	0.012	0.023	-0.002	0.089	0.11	0.006	0.024	-0.002	1.080
968014	0.003	0.060	2	221.746	0.006	-0.002	0.015	0.021	-0.002	0.043	0.11	0.010	0.023	-0.002	1.231
968016	0.008	0.032	25	299.017	0.003	-0.002	0.025	0.016	-0.002	0.221	0.15	0.006	0.051	0.004	1.102
968017	0.003	0.069	2	252.155	-0.002	-0.002	0.012	0.017	-0.002	0.119	0.17	0.010	0.045	-0.002	0.913
968018	-0.002	0.065	5	97.985	0.009	-0.002	0.004	0.021	-0.002	0.004	0.07	0.008	0.007	-0.002	0.809
968019	0.003	0.046	2	131.120	-0.002	-0.002	0.007	0.031	-0.002	-0.002	0.06	0.007	0.031	-0.002	2.305
968020	-0.002	0.028	30	377.684	0.002	-0.002	0.011	0.021	-0.002	0.017	0.09	0.004	0.022	-0.002	0.798
968022	-0.002	0.066	11	129.669	-0.002	-0.002	0.010	0.030	-0.002	0.205	0.10	0.010	0.033	-0.002	0.966
968023	-0.002	0.012	2	37.192	0.006	-0.002	0.007	0.031	-0.002	0.004	0.12	0.010	0.059	0.004	0.928
968024	0.007	0.030	3	115.954	0.005	-0.002	0.005	0.029	-0.002	0.007	0.07	0.013	0.025	-0.002	0.932
968025	-0.002	0.013	4	115.328	0.003	-0.002	0.006	0.024	-0.002	-0.002	0.09	0.007	0.014	-0.002	0.770
968026	-0.002	0.068	9	159.755	-0.002	-0.002	0.008	0.020	-0.002	0.027	0.10	0.003	0.020	-0.002	0.943
968027	0.008	0.027	6	72.877	0.003	-0.002	0.004	0.031	-0.002	0.039	0.10	0.003	0.017	-0.002	1.032
968028	0.009	-0.002	9	209.091	0.005	-0.002	0.009	0.027	-0.002	0.099	0.22	0.012	0.026	-0.002	1.210
968029	-0.002	0.098	9	163.284	0.005	0.004	0.006	0.018	-0.002	-0.002	0.16	0.014	0.031	-0.002	0.928
968030	-0.002	0.041	15	410.259	0.004	0.002	0.005	0.024	-0.002	0.080	0.32	0.006	0.022	-0.002	0.662
968031	-0.002	0.010	49	666.681	0.021	0.002	0.005	0.024	-0.002	0.035	0.15	-0.002	0.022	-0.002	1.544
968032	-0.002	0.045	44	819.935	-0.002	-0.002	0.002	0.017	-0.002	0.056	0.09	0.006	0.015	-0.002	0.687
968033	-0.002	0.020	16	208.121	0.015	-0.002	-0.002	0.015	-0.002	0.005	0.13	-0.002	0.015	-0.002	0.180
968034	0.011	0.084	5	347.940	0.004	-0.002	-0.002	0.036	-0.002	0.360	0.09	0.007	0.006	-0.002	1.341
968035	-0.002	0.082	7	460.069	0.008	-0.002	0.004	0.020	-0.002	0.184	0.05	-0.002	0.005	-0.002	3.733
968036	-0.002	0.013	14	552.617	-0.002	-0.002	0.002	0.027	-0.002	0.150	0.11	0.004	0.015	-0.002	0.709
968037	-0.002	0.067	8	204.108	0.005	-0.002	0.004	0.027	-0.002	0.064	0.06	0.017	0.010	-0.002	1.536
968039	-0.002	0.064	11	380.378	0.006	-0.002	0.005	0.021	-0.002	0.082	0.15	0.005	0.022	-0.002	0.454
968040	-0.002	0.069	11	492.480	0.004	-0.002	0.006	0.024	-0.002	0.029	0.35	0.005	0.013	0.002	0.368
968042	0.008	0.017	2	139.685	0.012	-0.002	0.003	0.023	-0.002	0.011	0.13	-0.002	0.018	-0.002	2.342
968043	-0.002	0.034	3	146.298	-0.002	-0.002	0.003	0.018	-0.002	-0.002	0.05	-0.002	0.019	-0.002	0.228
968044	-0.002	-0.002	20	182.534	-0.002	-0.002	0.003	0.024	-0.002	-0.002	0.07	-0.002	0.004	-0.002	0.808
968045	-0.002	0.035	3	192.405	0.009	-0.002	0.002	0.032	-0.002	0.004	0.27	0.005	0.005	-0.002	0.041
968046	0.008	0.017	3	95.963	-0.002	-0.002	0.003	0.024	-0.002	-0.002	0.23	-0.002	0.013	-0.002	-0.002
968047	-0.002	0.033	2	59.437	0.010	-0.002	-0.002	0.041	-0.002	0.003	0.14	0.011	0.012	-0.002	-0.002
968048	-0.002	-0.002	3	344.999	0.007	-0.002	0.004	0.027	-0.002	0.016	0.83	0.010	0.010	-0.002	0.021

SAMPLE	Sm	Sn	SO_4	Sr	Ta	Tb	Th	Tl	Tm	U	V	W	Y	Yb	Zn
	0.002	0.002	1	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.02	0.002	0.002	0.002	0.002
	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
	ICPMS	ICPMS	TURB	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS
968050	-0.002	0.044	22	300.523	-0.002	0.002	0.007	0.036	-0.002	0.139	0.26	0.005	0.010	-0.002	-0.002
968051	-0.002	0.024	1	35.204	-0.002	-0.002	-0.002	0.023	-0.002	-0.002	0.10	0.025	0.010	-0.002	-0.002
968052	-0.002	0.061	2	80.638	-0.002	-0.002	-0.002	0.030	-0.002	-0.002	0.08	-0.002	0.021	-0.002	3.098
968053	-0.002	0.026	9	101.293	0.012	-0.002	0.002	0.030	-0.002	-0.002	0.07	-0.002	0.003	-0.002	0.460
968054	-0.002	0.046	2	140.129	0.007	0.023	0.160	0.020	-0.002	0.022	0.37	0.034	0.017	0.006	0.350
968055	-0.002	-0.002	2	38.075	-0.002	0.002	0.034	0.025	-0.002	0.005	0.15	0.012	0.004	-0.002	1.541
968056	-0.002	0.037	2	74.374	0.010	-0.002	0.050	0.040	-0.002	0.007	0.41	0.024	0.044	-0.002	0.306
968057	-0.002	0.037	2	135.463	0.007	0.004	0.028	0.037	-0.002	-0.002	0.44	0.019	0.017	-0.002	1.376
968058	0.024	0.022	1	147.246	-0.002	0.005	0.069	0.052	0.003	0.024	0.53	0.014	0.123	-0.002	0.776
968059	-0.002	0.039	2	184.557	0.008	0.006	0.047	0.044	0.002	0.025	0.94	-0.002	0.080	-0.002	0.749
968060	0.009	0.069	1	226.581	0.005	0.005	0.040	0.043	-0.002	0.018	1.12	0.007	0.111	0.006	0.534
968062	-0.002	0.032	6	139.013	-0.002	0.003	0.034	0.041	-0.002	0.046	0.18	0.013	0.055	0.005	3.228
968063	-0.002	0.035	5	136.256	0.007	-0.002	0.030	0.033	0.003	0.032	0.18	0.006	0.056	0.006	2.052
968064	0.010	0.025	3	99.782	0.013	0.004	0.033	0.036	0.004	0.039	7.38	0.005	0.092	0.003	1.223
968065	0.007	0.023	8	197.976	0.018	0.003	0.014	0.031	-0.002	0.005	0.17	-0.002	0.014	-0.002	0.364
968066	-0.002	0.035	6	337.521	0.007	-0.002	0.015	0.034	-0.002	-0.002	0.18	0.007	0.008	0.002	1.047
968067	-0.002	0.031	3	180.667	-0.002	-0.002	0.014	0.046	-0.002	0.007	0.16	-0.002	0.023	-0.002	-0.002
968068	-0.002	0.054	3	200.443	0.010	0.003	0.015	0.081	-0.002	0.023	0.11	-0.002	0.025	-0.002	0.819
968069	-0.002	-0.002	3	160.210	0.010	0.003	0.013	0.039	-0.002	0.005	0.13	0.005	0.016	0.004	-0.002
968070	0.010	0.042	3	194.674	0.015	-0.002	0.012	0.060	-0.002	0.004	0.09	0.005	0.035	-0.002	-0.002
968071	-0.002	0.032	5	178.939	0.006	-0.002	0.013	0.045	-0.002	-0.002	0.10	0.010	0.019	-0.002	0.559
968072	0.024	0.027	4	396.124	0.005	-0.002	0.010	0.026	-0.002	-0.002	0.20	0.011	0.022	-0.002	-0.002
968073	0.009	0.045	1	346.577	-0.002	0.006	0.075	0.053	-0.002	0.132	1.68	0.019	0.210	0.005	2.271
968074	-0.002	0.013	2	273.466	-0.002	-0.002	0.019	0.022	-0.002	-0.002	0.36	-0.002	0.013	-0.002	0.242
968075	-0.002	0.009	2	416.693	-0.002	0.002	0.020	0.043	-0.002	0.050	0.89	0.005	0.044	-0.002	1.043
968076	0.007	-0.002	3	320.607	-0.002	-0.002	0.014	0.043	-0.002	-0.002	0.23	0.007	0.041	0.007	2.488
968078	-0.002	0.017	1	439.881	-0.002	-0.002	0.013	0.073	-0.002	-0.002	0.17	-0.002	0.010	-0.002	-0.002
968079	-0.002	0.021	4	312.201	0.010	-0.002	0.008	0.037	-0.002	-0.002	0.15	-0.002	0.017	-0.002	-0.002
968080	-0.002	0.075	2	261.023	-0.002	-0.002	0.010	0.049	-0.002	0.011	0.12	0.007	0.018	-0.002	-0.002
968082	-0.002	0.033	2	247.029	-0.002	-0.002	0.018	0.033	-0.002	0.005	0.15	-0.002	0.018	-0.002	0.760
968083	0.006	0.030	3	212.289	-0.002	-0.002	0.009	0.041	-0.002	-0.002	0.06	0.006	0.037	-0.002	0.598
968085	-0.002	0.032	12	239.741	-0.002	-0.002	0.012	0.047	-0.002	0.028	0.25	0.006	0.018	-0.002	0.704
968086	-0.002	0.020	36	767.984	0.006	-0.002	0.008	0.031	-0.002	0.006	0.25	-0.002	0.008	-0.002	0.450
968087	-0.002	0.013	3	139.226	0.006	-0.002	0.006	0.052	-0.002	-0.002	0.09	-0.002	0.023	0.005	0.894
968088	-0.002	0.055	10	463.989	-0.002	-0.002	0.006	0.047	-0.002	0.020	0.42	0.012	0.030	-0.002	0.637
968089	0.034	0.025	11	233.651	0.007	-0.002	0.007	0.030	-0.002	0.015	0.29	-0.002	0.022	-0.002	0.657
968090	-0.002	0.048	6	1005.308	0.015	-0.002	0.018	0.037	-0.002	0.482	0.57	-0.002	0.127	-0.002	0.718
968091	-0.002	0.036	4	993.139	0.011	-0.002	0.011	0.037	-0.002	0.384	0.43	-0.002	0.094	-0.002	0.403
968092	0.009	0.015	7	219.568	0.008	-0.002	0.011	0.049	-0.002	0.058	0.18	0.008	0.032	-0.002	1.094
968093	0.019	0.026	8	898.289	-0.002	0.003	0.010	0.030	0.004	0.027	0.49	-0.002	0.124	-0.002	0.602
968094	0.034	-0.002	2	88.746	0.008	0.006	0.022	0.024	-0.002	0.009	0.16	0.012	0.322	0.016	0.469
968095	0.135	0.014	2	73.478	0.024	0.011	0.024	0.043	0.005	0.054	0.17	-0.002	0.366	0.022	0.770

SAMPLE	Sm	Sn	SO_4	Sr	Ta	Tb	Th	Tl	Tm	U	V	W	Y	Yb	Zn
	0.002	0.002	1	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.02	0.002	0.002	0.002	0.002
	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
	ICPMS	ICPMS	TURB	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS
968096	0.031	0.019	5	140.517	-0.002	-0.002	0.012	0.030	-0.002	0.053	0.12	-0.002	0.093	-0.002	0.648
968097	0.035	0.040	1	43.634	-0.002	-0.002	0.014	0.044	-0.002	0.034	0.21	0.011	0.310	0.006	0.692
968098	0.073	-0.002	1	38.804	0.016	0.008	0.067	0.035	0.003	0.025	0.20	-0.002	0.367	0.013	1.794
968099	0.081	-0.002	1	42.293	-0.002	0.012	0.041	0.036	0.004	0.012	0.14	0.006	0.437	0.013	0.697
968100	0.065	0.025	2	79.875	-0.002	0.013	0.038	0.040	0.004	0.020	0.19	-0.002	0.646	0.032	0.440
968102	0.071	0.022	3	29.689	-0.002	0.008	0.052	0.042	0.004	0.024	0.34	0.006	0.432	0.005	0.421
968103	0.079	0.031	3	26.606	0.008	0.010	0.035	0.040	0.004	0.035	0.19	-0.002	0.423	-0.002	1.076
968104	0.129	0.053	2	22.493	-0.002	0.010	0.047	0.038	0.006	0.065	0.19	-0.002	0.627	0.025	0.439
968105	0.166	0.019	2	33.057	0.016	0.007	0.196	0.040	0.002	0.035	0.15	0.006	0.366	0.031	1.694
968106	0.069	0.041	3	32.559	0.009	0.003	0.072	0.037	-0.002	0.016	0.10	-0.002	0.149	-0.002	1.024
968107	0.030	0.022	4	32.731	-0.002	0.012	0.108	0.039	0.004	0.028	0.11	-0.002	0.151	0.006	3.600
968108	0.043	-0.002	3	33.876	-0.002	0.010	0.043	0.050	0.007	0.017	0.17	-0.002	0.273	0.016	1.152
968109	0.059	0.038	3	73.251	-0.002	0.010	0.090	0.057	0.002	0.071	0.12	0.009	0.289	0.013	0.866
968110	0.126	0.020	2	41.022	-0.002	0.017	0.034	0.071	0.005	0.019	0.17	-0.002	0.457	0.005	1.535
968111	-0.002	0.060	2	69.635	-0.002	-0.002	0.024	0.012	-0.002	-0.002	-0.02	-0.002	0.065	-0.002	0.689
968112	-0.002	-0.002	2	95.720	-0.002	-0.002	0.018	0.045	-0.002	-0.002	0.10	-0.002	0.022	-0.002	0.620
968113	0.013	0.085	2	161.254	0.030	0.012	0.026	0.152	0.002	0.042	0.42	0.046	0.060	0.013	0.435
968114	0.003	0.196	3	274.550	0.005	-0.002	0.012	0.045	-0.002	0.019	0.17	0.009	0.030	-0.002	2.533
968115	-0.002	0.038	3	201.510	0.002	0.003	0.011	0.034	-0.002	-0.002	0.12	0.012	0.025	-0.002	0.635
968116	-0.002	0.059	2	96.331	0.010	-0.002	0.012	0.040	-0.002	0.018	0.35	0.013	0.025	-0.002	0.380
968117	-0.002	0.058	5	108.545	-0.002	0.002	0.015	0.046	-0.002	0.026	0.22	0.021	0.018	-0.002	0.703
968118	-0.002	0.054	17	154.833	0.006	-0.002	0.008	0.056	-0.002	0.002	0.09	0.008	0.020	0.003	0.672
968120	-0.002	0.036	1	308.539	-0.002	-0.002	0.013	0.043	-0.002	0.013	0.10	0.006	0.022	-0.002	0.411
968122	-0.002	0.065	3	171.513	0.010	-0.002	0.021	0.066	-0.002	0.003	0.08	0.009	0.013	-0.002	1.083
968123	-0.002	0.038	3	280.069	-0.002	-0.002	0.046	0.040	-0.002	0.012	0.57	0.008	0.045	-0.002	0.902
968124	0.002	0.027	3	193.317	0.006	-0.002	0.019	0.043	-0.002	0.003	0.17	0.006	0.031	-0.002	0.310
968125	0.033	0.043	2	32.886	0.002	0.007	0.031	0.041	-0.002	0.009	0.08	-0.002	0.166	0.012	1.294
968126	0.004	0.039	3	96.959	0.006	-0.002	0.016	0.040	-0.002	-0.002	0.05	0.003	0.056	0.002	0.605
968127	0.390	0.078	2	43.135	0.007	0.049	0.039	0.036	0.013	0.187	0.20	0.006	1.186	0.074	1.319
968128	0.011	0.043	2	145.426	0.004	0.003	0.032	0.033	-0.002	0.060	0.75	0.004	0.077	0.006	0.843
968129	-0.002	0.026	6	211.093	0.004	-0.002	0.020	0.040	-0.002	0.013	0.48	-0.002	0.052	-0.002	0.403
968131	0.003	0.038	15	356.687	0.002	-0.002	0.020	0.038	-0.002	0.051	0.16	0.003	0.054	-0.002	0.945
968132	-0.002	0.048	3	251.304	-0.002	-0.002	0.022	0.029	-0.002	-0.002	0.15	-0.002	0.050	-0.002	0.650
968133	-0.002	0.051	13	363.310	0.004	-0.002	0.009	0.063	-0.002	-0.002	0.08	0.005	0.016	-0.002	0.729
968134	-0.002	0.022	9	591.040	0.004	-0.002	0.013	0.055	-0.002	0.412	0.16	-0.002	0.023	-0.002	0.638
968135	-0.002	0.062	8	248.999	0.005	-0.002	0.019	0.039	-0.002	0.099	0.21	-0.002	0.010	-0.002	0.461
968136	-0.002	0.060	4	188.395	-0.002	-0.002	0.009	0.035	-0.002	0.044	0.14	-0.002	0.011	-0.002	0.207
968137	-0.002	0.080	5	184.112	-0.002	-0.002	0.008	0.049	-0.002	0.047	0.11	0.005	0.012	-0.002	0.349
968138	0.049	0.025	3	46.235	0.005	0.008	0.023	0.047	0.002	0.011	0.14	-0.002	0.263	0.016	1.050
968139	0.058	0.036	3	65.947	-0.002	0.005	0.011	0.046	0.003	0.044	0.15	-0.002	0.214	0.013	1.218
968140	0.027	0.028	3	43.238	-0.002	0.006	0.015	0.043	-0.002	0.039	0.11	0.003	0.204	0.010	0.966
968142	0.037	0.029	2	51.017	0.003	0.003	0.018	0.046	-0.002	0.014	0.06	-0.002	0.146	0.007	0.935

SAMPLE	Sm	Sn	SO_4	Sr	Ta	Tb	Th	Tl	Tm	U	V	W	Y	Yb	Zn
	0.002	0.002	1	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.02	0.002	0.002	0.002	0.002
	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
	ICPMS	ICPMS	TURB	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS
968143	0.044	0.014	4	87.202	-0.002	0.005	0.011	0.043	-0.002	0.009	0.11	-0.002	0.201	0.008	0.025
968144	0.098	0.060	3	38.962	0.006	0.012	0.009	0.048	0.003	-0.002	0.13	-0.002	0.326	0.016	1.945
968145	0.129	0.038	3	38.579	0.003	0.016	0.016	0.044	0.004	0.009	0.09	0.003	0.419	0.020	0.923
968146	0.005	0.021	18	194.102	-0.002	-0.002	0.005	0.037	-0.002	-0.002	0.05	-0.002	0.019	-0.002	0.876
968147	-0.002	0.032	11	206.908	0.004	-0.002	0.003	0.063	-0.002	0.052	0.06	-0.002	0.026	-0.002	0.942
968149	-0.002	0.013	48	560.901	0.005	-0.002	0.014	0.033	-0.002	0.010	0.20	-0.002	0.008	-0.002	0.685
968150	-0.002	0.024	6	210.157	-0.002	-0.002	0.002	0.038	-0.002	-0.002	1.05	-0.002	0.006	-0.002	0.717
968151	0.112	0.019	9	78.650	0.005	0.011	0.043	0.036	0.006	0.491	0.25	0.008	0.493	0.039	1.457
968152	0.079	0.021	7	77.856	0.006	0.011	0.033	0.028	0.006	0.480	0.28	0.008	0.464	0.031	2.281
968153	0.037	0.062	6	182.890	-0.002	0.004	0.022	0.071	-0.002	0.500	0.40	0.004	0.144	0.009	0.870
968154	0.028	0.041	38	168.898	0.007	0.005	0.059	0.041	0.004	0.680	0.36	0.013	0.196	0.013	1.756
968155	0.300	0.043	11	110.256	0.062	0.040	0.291	0.055	0.022	-0.002	1.15	0.040	1.847	0.126	3.239
968156	0.359	0.032	3	38.030	0.009	0.050	0.191	0.047	0.017	-0.002	0.52	0.016	1.451	0.111	1.293
968157	0.104	0.052	2	19.597	0.005	0.013	0.082	0.050	0.004	0.313	0.28	0.006	0.398	0.031	2.409
968158	0.025	0.045	3	97.415	-0.002	0.013	0.335	0.048	-0.002	0.066	0.17	0.022	0.163	0.014	0.897
968159	0.116	0.033	1	16.971	0.004	0.020	0.115	0.058	0.005	0.882	0.08	0.008	0.463	0.030	1.197
968160	0.058	0.064	3	8.131	0.007	0.011	0.127	0.039	0.004	-0.002	0.11	0.006	0.333	0.024	1.162
968162	0.138	0.047	2	7.930	0.003	0.021	0.119	0.033	0.005	0.205	0.11	0.006	0.520	0.032	0.399
968163	0.049	0.066	2	10.918	0.006	0.008	0.158	0.040	0.005	0.350	0.17	-0.002	0.333	0.021	0.272
968164	0.134	0.055	3	13.299	0.005	0.023	0.194	0.035	0.009	-0.002	0.24	0.007	0.705	0.051	0.628
968165	0.141	0.034	2	13.187	0.014	0.023	0.278	0.036	0.009	-0.002	0.24	0.004	0.710	0.056	0.520
968166	0.011	0.008	1	56.876	-0.002	0.004	0.038	0.040	0.003	2.435	0.38	-0.002	0.122	0.012	0.200
968167	0.062	0.070	1	11.857	0.004	0.008	0.068	0.040	0.004	0.225	0.20	-0.002	0.251	0.016	0.267
968168	0.092	0.033	3	10.314	0.005	0.013	0.132	0.042	0.007	0.706	0.15	0.003	0.499	0.035	0.529
968169	0.041	0.035	2	9.888	0.003	0.008	0.069	0.036	0.005	0.350	0.18	-0.002	0.369	0.029	0.333
968170	0.078	0.029	2	17.395	0.003	0.010	0.147	0.045	0.004	0.234	0.16	0.003	0.426	0.028	0.653
968171	0.005	0.033	1	45.249	-0.002	-0.002	0.019	0.033	-0.002	0.097	0.17	-0.002	0.070	0.003	2.215
968172	0.101	0.171	2	62.887	0.004	0.017	0.066	0.038	0.007	0.131	0.13	-0.002	0.625	0.027	0.425
968173	0.125	0.021	2	26.070	0.008	0.019	0.213	0.044	0.007	0.455	0.23	0.002	0.580	0.038	0.626
968174	0.056	0.021	2	11.393	0.003	0.007	0.125	0.039	0.003	0.191	0.15	-0.002	0.286	0.024	0.695
968175	0.087	0.048	2	20.962	0.006	0.014	0.123	0.044	0.008	-0.002	0.28	-0.002	0.552	0.043	0.248
968176	0.008	0.063	11	227.598	0.003	-0.002	0.023	0.038	-0.002	0.044	0.11	0.015	0.063	0.003	0.774
968177	0.048	0.036	2	109.728	0.003	0.009	0.034	0.043	0.004	0.051	0.17	0.004	0.324	0.017	0.667
968178	0.005	0.085	4	67.800	0.005	-0.002	0.034	0.048	-0.002	0.022	0.14	-0.002	0.063	-0.002	0.390
968179	0.003	0.024	12	92.431	-0.002	-0.002	0.012	0.041	-0.002	0.022	0.35	0.004	0.025	-0.002	0.493
968182	0.013	0.037	7	163.019	-0.002	0.004	0.061	0.055	-0.002	0.015	0.11	0.005	0.068	0.007	1.786
968183	0.252	0.050	4	23.774	0.022	0.035	0.176	0.047	0.023	0.423	0.30	0.018	1.238	0.160	3.892
968184	0.060	0.053	3	17.697	0.004	0.009	0.115	0.065	0.005	0.391	0.14	0.013	0.315	0.046	1.232
968185	0.086	0.086	3	15.088	-0.002	0.010	0.068	0.071	0.008	0.254	0.10	0.007	0.413	0.054	0.907
968186	0.194	0.065	2	23.204	0.006	0.023	0.121	0.071	0.014	0.430	0.13	-0.002	0.964	0.098	1.027
968187	0.132	0.037	2	9.658	0.008	0.019	0.134	0.084	0.014	0.175	0.10	0.011	0.743	0.084	1.323
968188	0.069	0.021	3	6.306	-0.002	0.009	0.086	0.065	0.006	0.022	0.08	0.058	0.354	0.036	1.022

SAMPLE	Sm	Sn	SO_4	Sr	Ta	Tb	Th	Tl	Tm	U	V	W	Y	Yb	Zn
	0.002	0.002	1	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.02	0.002	0.002	0.002	0.002
	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
	ICPMS	ICPMS	TURB	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS
968189	0.054	0.052	3	13.926	0.007	0.010	0.067	0.067	0.008	0.203	0.12	0.010	0.423	0.043	1.913
968190	0.050	0.065	3	3.286	-0.002	0.009	0.035	0.051	0.007	0.063	0.05	0.014	0.351	0.043	3.094
968192	0.032	0.031	2	5.539	-0.002	0.008	0.023	0.077	0.004	0.010	0.05	0.013	0.219	0.026	1.884
968193	0.017	0.085	4	40.121	-0.002	0.016	0.316	0.081	-0.002	0.038	0.18	0.034	0.091	0.014	2.489
968194	0.020	0.044	2	22.967	-0.002	0.010	0.187	0.076	0.002	0.018	0.14	0.022	0.152	0.020	0.664
968195	0.018	0.042	3	39.619	-0.002	0.006	0.118	0.062	-0.002	0.003	0.06	0.014	0.039	0.008	0.512
968196	0.007	0.038	3	46.587	-0.002	0.006	0.068	0.059	-0.002	0.004	0.11	0.019	0.051	0.006	0.314
968197	0.023	0.066	5	74.560	-0.002	0.007	0.095	0.058	-0.002	0.038	0.08	0.011	0.121	0.014	0.719
968198	0.004	0.022	9	255.700	-0.002	0.010	0.102	0.060	-0.002	0.012	0.09	0.009	0.023	0.007	0.321
968199	0.004	0.032	10	360.713	-0.002	0.007	0.071	0.053	-0.002	0.044	0.13	0.005	0.015	0.005	0.773
968200	-0.002	0.025	10	354.904	-0.002	0.007	0.109	0.071	-0.002	0.047	0.10	0.002	0.017	0.006	0.182
968202	0.004	0.052	5	211.544	0.009	0.006	0.078	0.078	-0.002	0.011	0.10	0.005	0.022	0.006	0.906
968203	0.170	0.071	2	12.753	0.006	0.023	0.105	0.062	0.006	0.231	0.08	0.004	0.455	0.046	0.556
968204	0.109	0.046	3	12.496	0.010	0.016	0.131	0.078	0.007	0.427	0.13	0.004	0.373	0.034	3.780
968205	0.201	0.032	2	22.371	-0.002	0.029	0.169	0.084	0.014	0.554	0.18	0.009	0.759	0.067	1.363
968206	0.092	0.046	3	61.666	0.005	0.012	0.073	0.046	0.004	0.124	0.19	0.024	0.364	0.031	2.585
968207	0.100	0.048	3	61.810	0.003	0.016	0.050	0.060	0.006	0.212	0.20	0.027	0.388	0.032	0.859
968208	0.120	0.148	3	36.030	0.009	0.018	0.114	0.083	0.008	0.261	0.15	0.006	0.512	0.052	1.029
968209	0.054	0.053	3	41.008	0.019	0.006	0.076	0.101	0.003	0.032	0.14	0.011	0.168	0.016	1.059
968210	0.025	0.065	2	54.977	0.004	0.004	0.055	0.069	-0.002	0.009	0.11	0.012	0.124	0.009	0.434
968211	0.015	0.058	14	100.293	-0.002	0.005	0.041	0.071	-0.002	0.018	0.51	0.015	0.088	0.007	0.351
968212	0.014	0.018	5	95.833	-0.002	0.004	0.012	0.048	-0.002	0.023	0.51	0.014	0.106	0.006	0.641
968213	0.016	0.016	2	34.173	-0.002	0.003	0.026	0.066	-0.002	0.007	0.13	-0.002	0.099	0.010	0.295
968214	0.005	0.039	18	247.087	-0.002	0.020	0.318	0.079	-0.002	0.254	0.08	0.029	0.049	0.021	0.346
968215	0.008	0.017	19	185.053	-0.002	0.012	0.197	0.065	-0.002	0.017	0.11	0.020	0.022	0.011	0.573
968216	0.004	0.032	9	280.358	-0.002	0.006	0.135	0.063	-0.002	0.011	0.29	0.010	0.035	0.009	1.960
968218	0.002	0.038	13	200.033	-0.002	0.004	0.109	0.063	-0.002	0.013	0.20	0.015	0.024	0.006	0.817
968219	0.008	0.020	16	364.895	-0.002	0.007	0.091	0.049	-0.002	0.422	0.34	0.016	0.055	0.010	0.797
968220	0.003	0.037	21	236.811	-0.002	0.005	0.050	0.066	-0.002	0.161	0.16	0.007	0.015	0.005	0.688
968222	0.002	0.102	12	269.823	-0.002	0.005	0.049	0.060	-0.002	0.371	0.38	0.009	0.016	0.005	0.654
968223	0.003	0.018	11	522.215	-0.002	0.003	0.070	0.067	-0.002	0.068	0.16	0.012	0.019	-0.002	0.290
968224	-0.002	0.025	2	96.941	0.007	-0.002	0.044	0.059	-0.002	0.008	0.09	0.003	0.017	0.006	0.752
968225	0.005	0.014	2	93.224	-0.002	0.003	0.026	0.059	-0.002	0.017	0.12	0.006	0.019	0.005	0.110
968226	0.006	0.027	7	100.172	-0.002	0.003	0.043	0.067	-0.002	0.012	0.06	0.013	0.019	-0.002	0.962
968228	-0.002	0.033	3	105.525	-0.002	-0.002	0.031	0.070	-0.002	0.018	0.06	-0.002	0.009	0.004	0.773
968229	-0.002	0.014	4	45.224	-0.002	-0.002	0.029	0.064	-0.002	0.005	0.04	0.013	0.025	0.003	3.382
968230	-0.002	0.036	2	29.599	-0.002	0.002	0.029	0.068	-0.002	0.006	0.05	0.005	0.076	0.004	0.830
968231	0.016	0.040	7	49.453	-0.002	0.004	0.031	0.046	-0.002	0.021	0.04	0.005	0.143	0.011	1.463
968232	-0.002	0.015	4	111.404	-0.002	-0.002	0.036	0.058	-0.002	0.094	0.04	0.004	0.007	-0.002	1.432
968233	0.007	0.026	7	134.424	0.016	0.006	0.066	0.067	-0.002	0.011	0.20	0.030	0.018	0.002	1.966
968234	-0.002	0.009	6	185.417	0.007	-0.002	0.017	0.043	-0.002	0.002	0.07	0.018	-0.002	0.005	0.926
968235	-0.002	-0.002	6	119.094	0.009	0.002	0.029	0.049	-0.002	-0.002	0.13	0.028	0.015	0.004	1.213

SAMPLE	Sm	Sn	SO_4	Sr	Ta	Tb	Th	Tl	Tm	U	V	W	Y	Yb	Zn
	0.002	0.002	1	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.02	0.002	0.002	0.002	0.002
	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
	ICPMS	ICPMS	TURB	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS
968236	-0.002	0.004	6	119.111	0.003	-0.002	0.018	0.041	-0.002	0.006	0.13	0.017	0.009	0.004	1.409
968237	-0.002	-0.002	5	83.498	0.005	-0.002	0.012	0.050	-0.002	-0.002	0.34	0.010	0.004	0.002	1.983
968238	0.006	-0.002	7	90.467	-0.002	-0.002	0.014	0.056	-0.002	0.002	0.14	0.017	0.017	-0.002	1.048
968239	-0.002	-0.002	4	61.209	-0.002	-0.002	0.008	0.033	-0.002	-0.002	0.24	0.009	-0.002	-0.002	1.852
968240	0.003	-0.002	4	52.071	0.002	-0.002	0.009	0.052	-0.002	-0.002	0.17	0.013	0.003	0.002	2.747
968242	-0.002	-0.002	3	62.168	0.008	-0.002	0.008	0.044	-0.002	-0.002	0.09	0.008	0.004	0.003	1.021
968244	-0.002	0.014	4	61.280	0.004	0.010	0.079	0.053	-0.002	0.008	0.18	0.039	0.015	0.008	1.273
968245	0.002	0.419	2	148.601	0.014	0.017	0.055	0.062	-0.002	0.025	0.36	0.038	0.019	0.007	2.760
968246	-0.002	0.153	3	103.239	0.006	-0.002	0.020	0.057	-0.002	0.002	0.21	0.006	0.006	0.002	1.135
968247	-0.002	0.104	11	138.955	-0.002	-0.002	0.023	0.037	-0.002	-0.002	0.13	0.022	0.020	0.005	1.125
968248	-0.002	0.094	4	79.546	0.007	-0.002	0.020	0.054	-0.002	-0.002	0.09	0.019	0.009	0.003	0.997
968249	-0.002	0.055	5	108.377	-0.002	0.004	0.007	0.069	-0.002	-0.002	0.17	0.007	0.018	-0.002	1.128
968250	0.009	0.053	3	23.718	0.005	0.003	0.007	0.055	0.002	-0.002	0.14	0.007	0.135	0.013	1.947
968251	0.013	0.046	3	23.897	0.009	0.002	0.006	0.040	-0.002	-0.002	0.13	0.005	0.108	0.005	1.534
968252	0.003	0.056	1	87.084	-0.002	-0.002	0.005	0.042	-0.002	-0.002	0.13	0.006	0.008	-0.002	1.221
968253	0.003	0.029	8	72.674	0.005	-0.002	0.004	0.053	-0.002	-0.002	0.09	0.013	0.021	0.003	1.054
968254	-0.002	0.020	9	87.431	0.005	-0.002	0.002	0.081	-0.002	-0.002	0.13	0.013	0.010	-0.002	1.480
968255	-0.002	0.013	10	103.806	-0.002	-0.002	-0.002	0.046	-0.002	-0.002	0.19	0.020	0.015	0.002	0.792
968256	0.003	0.004	7	73.290	0.006	-0.002	0.004	0.056	-0.002	-0.002	0.24	0.010	0.011	0.004	1.309
968257	0.008	0.061	20	160.544	0.014	0.002	0.004	0.060	-0.002	-0.002	0.22	0.005	0.064	0.004	1.519

APPENDIX D - FIELD DUPLICATE SAMPLE DATA

Field Duplicate Sample Geochemical Data

MAP	SAMPLE	UTM-	UTM-E	UTM-N	RE	Ag 0.020 ppb ICPMS	Al 0.2 ppb ICPMS	ALK 1.00 ppm TIT	As 0.02 ppb ICPMS	Au 0.002 ppb ICPMS	Ba 0.002 ppb ICPMS	Bi 0.001 ppb ICPMS	Br 1 ppb ICPMS	Ca 1 ppb ICPMS	Cd 0.002 ppb ICPMS	Ce 0.002 ppb ICPMS	Co 0.002 ppb ICPMS	Cr 0.1 ppb ICPMS	Cs 0.002 ppb ICPMS	Cu 0.002 ppb ICPMS	Dy 0.002 ppb ICPMS	Er 0.002 ppb ICPMS	Eu 0.002 ppb ICPMS	F 20 ppb ION	Fe 0.2 ppb ICPMS	Ga 0.002 ppb ICPMS	Gd 0.002 ppb ICPMS
82M	968008	11	303432	5656853	1	0.089	5.4	80	0.07	0.018	6.027	0.004	4	30407	0.027	0.022	0.047	-0.1	0.006	0.456	-0.002	0.002	-0.002	42	5.6	0.022	0.003
82M	968009	11	303432	5656853	2	0.080	2.6	80	0.05	0.007	5.698	0.003	3	30468	0.039	0.013	0.053	0.1	0.006	0.431	-0.002	-0.002	-0.002	38	6.8	0.009	0.002
82M	968024	11	294844	5659890	1	0.038	1.8	114	0.12	0.019	14.250	0.002	7	30653	0.177	0.006	0.075	-0.1	0.003	0.090	-0.002	-0.002	-0.002	62	1.7	0.007	-0.002
82M	968025	11	294844	5659890	2	0.034	1.8	143	0.18	0.009	14.244	-0.002	8	30996	0.010	0.002	0.062	-0.1	0.003	0.085	0.002	-0.002	0.002	58	1.8	0.011	-0.002
82M	968059	11	299058	5873677	1	0.045	5.4	128	0.28	0.013	10.244	0.003	7	30237	0.030	0.022	0.085	0.3	-0.002	0.371	-0.002	-0.002	0.006	110	17.5	0.013	0.004
82M	968060	11	299058	5873677	2	0.004	6.5	124	0.34	0.018	11.712	0.004	10	36164	0.029	0.025	0.079	-0.1	-0.002	0.521	0.008	0.003	0.008	74	18.0	0.004	0.008
82M	968062	11	296056	5674224	1	0.069	7.1	78	0.28	0.009	14.264	-0.002	9	23076	-0.002	0.020	0.094	0.5	0.006	0.898	0.016	-0.002	0.009	68	25.6	0.004	0.009
82M	968063	11	296056	5674224	2	0.028	8.8	76	0.19	0.021	18.880	0.003	6	22673	0.029	0.019	0.085	0.2	0.010	0.881	-0.002	0.004	0.021	72	27.5	-0.002	0.005
82M	968090	11	323086	5680138	1	0.004	3.9	148	0.14	0.049	38.858	-0.002	12	73172	-0.002	0.011	0.070	0.8	0.012	0.602	0.005	-0.002	0.018	230	6.3	0.006	-0.002
82M	968091	11	323086	5680138	2	-0.002	3.8	178	0.06	0.023	40.431	0.004	11	71609	-0.002	0.022	0.093	0.7	0.011	0.401	0.005	0.003	0.010	250	3.8	0.012	0.005
82M	968106	11	312918	5678636	1	0.006	44.2	20	0.08	0.032	3.848	0.004	2	6130	0.061	0.034	0.004	0.1	0.006	0.282	0.033	0.005	0.013	22	10.6	0.012	0.008
82M	968107	11	312918	5678636	2	-0.002	61.9	18	-0.02	0.008	3.660	-0.002	2	6120	0.022	0.092	0.009	0.4	0.006	0.269	0.016	0.004	0.013	24	8.3	-0.002	0.043
82M	968136	11	297964	5681622	1	-0.002	-0.2	156	0.19	0.006	12.682	0.003	7	57027	-0.002	-0.002	0.087	0.3	-0.002	0.401	-0.002	-0.002	0.002	44	2.7	0.007	-0.002
82M	968137	11	297964	5681622	2	0.006	-0.2	162	0.16	0.015	12.804	0.004	8	57441	-0.002	0.003	0.097	-0.1	-0.002	0.214	-0.002	-0.002	-0.002	48	3.1	0.002	-0.002
82M	968151	11	315034	5687914	1	-0.002	109.3	40	0.47	0.008	8.212	0.006	13	10233	0.009	0.553	0.063	0.2	0.012	1.167	0.070	0.035	0.023	120	85.8	0.039	0.087
82M	968152	11	315034	5687914	2	-0.002	118.8	40	0.48	0.006	8.285	0.005	14	10213	0.022	0.572	0.083	0.2	0.010	1.611	0.065	0.028	0.020	130	99.5	0.036	0.089
82M	968164	11	323185	5692165	1	0.005	297.5	6	0.11	0.010	4.062	-0.002	9	1923	-0.002	1.503	0.055	0.4	0.005	0.091	0.138	0.061	0.022	26	115.7	0.029	0.144
82M	968165	11	323185	5692165	2	-0.002	302.8	7	0.10	0.007	4.125	0.002	6	1974	0.010	1.538	0.050	0.4	0.006	0.076	0.122	0.062	0.016	26	120.7	0.027	0.140
82M	968199	11	304103	5689814	1	0.003	3.9	214	0.09	0.003	11.837	0.004	7	67729	0.015	0.035	0.128	0.3	0.004	0.735	0.002	0.003	0.004	38	21.8	0.012	0.002
82M	968200	11	304103	5689814	2	0.007	3.7	216	0.08	-0.002	11.764	0.006	8	66306	0.008	0.024	0.100	0.2	0.003	0.649	-0.002	-0.002	0.004	36	22.5	0.005	0.003
82M	968206	11	323820	5666524	1	-0.002	48.1	25	0.07	-0.002	5.914	0.004	4	8598	0.013	0.099	0.038	0.3	0.007	0.288	0.062	0.032	0.016	30	6.6	0.014	0.087
82M	968207	11	323820	5666524	2	0.005	-0.2	25	0.08	-0.002	5.914	0.008	3	7978	0.005	0.037	0.033	0.3	0.008	0.240	0.071	0.038	0.021	32	5.6	0.015	0.085
82M	968235	11	320453	5658574	1	0.010	5.0	69	0.08	0.003	6.019	0.010	26	27288	-0.002	0.014	0.071	0.4	0.032	0.387	0.002	0.003	0.004	84	5.5	0.016	-0.002
82M	968236	11	320453	5658574	2	0.010	4.1	69	0.15	-0.002	6.124	0.005	31	27357	-0.002	0.011	0.064	0.6	0.023	0.351	0.002	-0.002	-0.002	66	5.5	0.013	0.002
82M	968250	11	320399	5656003	1	0.017	23.3	14	0.09	0.005	3.775	-0.002	62	5537	0.005	0.013	0.021	0.3	0.014	0.468	0.012	0.008	0.004	60	4.9	0.016	0.018
82M	968251	11	320399	5656003	2	0.014	22.3	14	0.11	0.004	3.915	-0.002	30	5444	0.020	0.009	0.022	0.6	0.016	0.411	0.013	0.006	0.003	62	2.6	0.013	0.015

Field Duplicate Sample Geochemical Data

SAMPLE	Mg	Mn	Mo	Na	Nb	Nd	Ni	Pb	Pd	pH	Pr	Pt	Rb	Re	Ru	Sb	Se
	0.2	0.02	0.02	0.2	0.002	0.002	0.002	0.02	0.02		0.002	0.002	0.002	0.002	0.02	0.020	0.02
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb		ppb	ppb	ppb	ppb	ppb	ppb	ppb
	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	PH	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS
968008	1882.4	0.25	0.05	601.0	0.039	0.005	0.237	0.06	-0.02	8.2	0.004	0.006	0.472	-0.002	-0.02	0.040	0.07
968009	1852.0	0.23	0.06	572.4	0.028	0.016	0.181	-0.02	-0.02	8.3	0.005	-0.002	0.435	-0.002	-0.02	0.030	0.42
968024	6861.4	0.16	0.16	1081.7	0.031	0.007	0.351	-0.02	-0.02	8.1	0.004	-0.002	0.488	-0.002	-0.02	0.040	0.27
968025	7027.9	0.14	0.10	1110.2	0.019	0.005	0.306	-0.02	-0.02	8.5	-0.002	-0.002	0.473	-0.002	-0.02	-0.020	-0.02
968059	7921.6	4.34	0.27	9184.7	0.031	0.042	0.759	0.12	-0.02	8.1	0.013	-0.002	0.352	-0.002	-0.02	0.060	0.24
968060	9359.4	6.72	0.36	10795.3	0.039	0.056	1.241	0.07	-0.02	8.2	0.018	0.003	0.416	-0.002	-0.02	0.140	-0.02
968062	4684.9	10.93	0.10	1621.0	0.037	0.031	1.299	0.05	-0.02	8.1	0.014	-0.002	0.443	-0.002	-0.02	0.110	0.06
968063	4719.0	10.83	0.09	1657.9	0.042	0.047	1.197	0.06	-0.02	8.1	0.011	0.006	0.396	0.002	-0.02	0.070	-0.02
968090	4122.8	0.30	0.46	3849.1	0.009	0.038	0.957	0.03	-0.02	8.3	0.005	-0.002	0.609	-0.002	-0.02	0.020	0.10
968091	4011.1	0.15	0.74	3784.3	0.008	0.050	1.264	-0.02	-0.02	8.3	0.004	-0.002	0.603	-0.002	-0.02	-0.020	0.40
968106	732.9	0.54	0.19	660.6	0.037	0.260	0.508	0.05	-0.02	7.4	0.054	-0.002	0.755	-0.002	-0.02	0.040	-0.02
968107	724.8	0.47	0.10	649.6	0.032	0.200	0.639	0.06	-0.02	7.4	0.056	0.005	0.803	-0.002	-0.02	0.070	0.60
968136	10409.5	0.21	0.22	1447.5	0.012	-0.002	0.372	0.03	-0.02	8.5	-0.002	-0.002	0.348	-0.002	-0.02	0.020	0.11
968137	10478.6	0.18	0.17	1444.2	0.013	-0.002	0.335	0.03	-0.02	8.5	-0.002	-0.002	0.369	-0.002	-0.02	0.040	0.18
968151	3958.4	1.28	0.30	3987.8	0.041	0.559	0.912	0.12	-0.02	7.9	0.148	-0.002	0.507	-0.002	-0.02	0.050	0.19
968152	4026.8	1.37	0.16	4082.6	0.056	0.519	1.080	0.13	-0.02	8.1	0.161	-0.002	0.537	-0.002	-0.02	0.100	0.27
968164	264.0	8.49	-0.02	1156.3	0.063	0.776	0.172	0.07	-0.02	6.8	0.227	-0.002	0.582	-0.002	-0.02	0.050	0.26
968165	267.2	8.62	0.03	1188.2	0.064	0.778	0.174	0.05	-0.02	6.8	0.222	-0.002	0.554	-0.002	-0.02	0.070	0.17
968199	26950.9	17.49	0.52	1174.9	0.032	0.016	0.283	0.08	-0.02	6.6	0.011	-0.002	0.982	-0.002	0.03	0.030	0.13
968200	27184.8	2.37	0.66	1068.7	0.039	0.016	0.194	0.08	-0.02	6.5	0.007	0.003	0.956	-0.002	-0.02	0.020	0.42
968206	636.3	0.22	1.25	2490.8	0.035	0.530	0.139	0.05	-0.02	7.5	0.148	-0.002	1.305	-0.002	-0.02	0.030	-0.02
968207	621.0	0.13	2.07	2395.8	0.032	0.553	0.066	0.04	-0.02	7.7	0.149	-0.002	1.305	-0.002	-0.02	0.020	0.12
968235	939.6	-0.02	0.97	697.0	0.027	0.012	0.629	0.05	-0.02	8.2	0.003	-0.002	1.233	-0.002	0.02	0.040	0.18
968236	960.5	-0.02	0.74	679.1	0.020	0.007	0.472	0.06	-0.02	8.1	0.002	-0.002	1.244	-0.002	-0.02	0.040	0.26
968250	482.8	-0.02	0.42	816.0	0.015	0.072	0.451	0.08	-0.02	8.0	0.015	-0.002	1.341	-0.002	-0.02	-0.020	0.24
968251	491.9	-0.02	0.47	799.2	0.010	0.084	0.385	0.04	-0.02	7.7	0.020	-0.002	1.311	-0.002	-0.02	0.020	0.74

SAMPLE	Si	Sm	Sn	SO_4	Sr	Ta	Tb	Th	Tl	Tm	U	V	W	Y	Yb	Zn
	1	0.002	0.002	1	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.02	0.002	0.002	0.002	0.002
	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
	ICPMS	ICPMS	ICPMS	TURB	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS
968008	3277	-0.002	0.056	3	128.372	-0.002	-0.002	0.011	0.020	-0.002	-0.002	0.08	0.023	0.027	-0.002	1.693
968009	3314	-0.002	0.039	5	129.225	-0.002	-0.002	0.008	0.022	-0.002	-0.002	0.09	0.015	0.025	-0.002	1.702
968024	5915	0.007	0.030	3	115.954	0.005	-0.002	0.005	0.029	-0.002	0.007	0.07	0.013	0.025	-0.002	0.932
968025	6061	-0.002	0.013	4	115.326	0.003	-0.002	0.006	0.024	-0.002	-0.002	0.09	0.007	0.014	-0.002	0.770
968059	9142	-0.002	0.039	2	184.557	0.006	0.006	0.047	0.044	0.002	0.025	0.94	-0.002	0.080	-0.002	0.749
968060	10584	0.009	0.069	1	226.581	0.005	0.005	0.040	0.043	-0.002	0.018	1.12	0.007	0.111	0.006	0.534
968062	7188	-0.002	0.032	6	139.013	-0.002	0.003	0.034	0.041	-0.002	0.046	0.18	0.013	0.055	0.005	3.228
968063	7238	-0.002	0.035	5	136.256	0.007	-0.002	0.030	0.033	0.003	0.032	0.18	0.006	0.056	0.006	2.052
968090	10168	-0.002	0.048	6	1005.308	0.015	-0.002	0.018	0.037	-0.002	0.482	0.57	-0.002	0.127	-0.002	0.718
968091	9967	-0.002	0.036	4	993.139	0.011	-0.002	0.011	0.037	-0.002	0.384	0.43	-0.002	0.094	-0.002	0.403
968106	2995	0.069	0.041	3	32.559	0.009	0.003	0.072	0.037	-0.002	0.016	0.10	-0.002	0.149	-0.002	1.024
968107	2829	0.030	0.022	4	32.731	-0.002	0.012	0.108	0.039	0.004	0.028	0.11	-0.002	0.151	0.006	3.600
968136	6178	-0.002	0.060	4	188.395	-0.002	-0.002	0.009	0.035	-0.002	0.044	0.14	-0.002	0.011	-0.002	0.207
968137	6305	-0.002	0.080	5	184.112	-0.002	-0.002	0.008	0.049	-0.002	0.047	0.11	0.005	0.012	-0.002	0.349
968151	12980	0.112	0.019	9	78.650	0.005	0.011	0.043	0.036	0.006	0.491	0.25	0.008	0.493	0.039	1.457
968152	13183	0.079	0.021	7	77.856	0.006	0.011	0.033	0.028	0.006	0.480	0.28	0.008	0.464	0.031	2.281
968164	5793	0.134	0.055	3	13.299	0.005	0.023	0.194	0.035	0.009	-0.002	0.24	0.007	0.705	0.051	0.628
968165	5744	0.141	0.034	2	13.187	0.014	0.023	0.278	0.036	0.009	-0.002	0.24	0.004	0.710	0.056	0.520
968199	3747	0.004	0.032	10	360.713	-0.002	0.007	0.071	0.053	-0.002	0.044	0.13	0.005	0.015	0.005	0.773
968200	3853	-0.002	0.025	10	354.904	-0.002	0.007	0.109	0.071	-0.002	0.047	0.10	0.002	0.017	0.008	0.182
968206	4825	0.092	0.048	3	61.666	0.005	0.012	0.073	0.046	0.004	0.124	0.19	0.024	0.364	0.031	2.585
968207	4844	0.100	0.048	3	61.610	0.003	0.016	0.050	0.060	0.006	0.212	0.20	0.027	0.386	0.032	0.859
968235	3783	-0.002	-0.002	6	119.094	0.009	0.002	0.029	0.049	-0.002	-0.002	0.13	0.028	0.015	0.004	1.213
968236	3786	-0.002	0.004	6	119.111	0.003	-0.002	0.018	0.041	-0.002	0.006	0.13	0.017	0.009	0.004	1.409
968250	3434	0.009	0.053	3	23.718	0.005	0.003	0.007	0.055	0.002	-0.002	0.14	0.007	0.135	0.013	1.947
968251	3437	0.013	0.046	3	23.897	0.009	0.002	0.006	0.040	-0.002	-0.002	0.13	0.005	0.108	0.005	1.534

APPENDIX E - DISTILLED WATER BLANK DATA

Distilled Water Blank Sample Geochemical Data

SAMPLE	Ag	Al	ALK	As	Au	Ba	Bi	Br	Ca	Cd	Ce	Co	Cr	Cs	Cu	Dy
	0.02	0.20	1	0	0.0	0.0	0.0	1	1	0	0.00	0.00	0.10	0.0	0.00	0.0
	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
	ICPMS	ICPMS	TIT	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS
968001	0.112	1.4	-1	0.08	-0.002	0.039	-0.002	5	52	0.020	0.008	0.005	0.1	-0.002	0.239	-0.002
968021	0.032	-0.2	-1	0.02	-0.002	-0.002	0.002	4	-1	0.009	-0.002	0.003	-0.1	-0.002	0.022	-0.002
968041	0.053	-0.2	1	-0.02	-0.002	-0.002	-0.002	2	292	-0.002	-0.002	0.003	-0.1	0.009	-0.002	-0.002
968081	0.005	-0.2	-1	-0.02	0.010	-0.002	0.003	2	-1	-0.002	-0.002	-0.002	0.2	-0.002	0.067	-0.002
968101	-0.002	-0.2	2	-0.02	-0.002	-0.002	0.002	1	-1	-0.002	-0.002	-0.002	0.4	-0.002	-0.002	-0.002
968121	-0.002	-0.2	1	-0.02	-0.002	0.025	-0.002	1	49	-0.002	-0.002	-0.002	-0.1	-0.002	-0.002	-0.002
968141	-0.002	-0.2	1	-0.02	-0.002	-0.002	-0.002	4	-1	-0.002	-0.002	-0.002	-0.1	-0.002	-0.002	-0.002
968181	0.005	0.8	5	-0.02	-0.002	0.063	-0.002	3	9	0.022	-0.002	0.003	0.2	-0.002	0.067	-0.002
968201	-0.002	-0.2	1	0.02	-0.002	-0.002	-0.002	2	22	-0.002	-0.002	-0.002	0.2	-0.002	-0.002	-0.002
968221	-0.002	-0.2	1	-0.02	-0.002	0.016	-0.002	-1	17	-0.002	-0.002	-0.002	-0.1	-0.002	-0.002	-0.002
968241	0.003	-0.2	2	0.02	-0.002	-0.002	-0.002	27	45	-0.002	-0.002	-0.002	0.2	-0.002	0.019	-0.002

SAMPLE	Er	Eu	F	Fe	Ga	Gd	Ge	Hf	Ho	I	In	K	La	Lu	Mg	Mn
	0.002	0.002	20.000	0.200	0.002	0.002	0.00	0.00	0.002	0.020	0.002	1.000	0.002	0.00	0.20	0.020
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
	ICPMS	ICPMS	ION	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS
968001	-0.002	-0.002	38	5.8	0.013	-0.002	0.024	0.010	-0.002	3.830	-0.002	65	0.013	-0.002	1.2	0.07
968021	-0.002	-0.002	36	-0.2	0.002	-0.002	0.005	-0.002	-0.002	3.460	-0.002	-1	-0.002	-0.002	18.9	-0.02
968041	-0.002	-0.002	20	-0.2	-0.002	-0.002	0.013	-0.002	-0.002	3.740	-0.002	-8	-0.002	-0.002	32.7	0.09
968081	-0.002	-0.002	20	-0.2	-0.002	-0.002	-0.002	-0.002	-0.002	2.050	-0.002	-1	-0.002	-0.002	1.5	0.03
968101	-0.002	-0.002	20	-0.2	-0.002	-0.002	0.003	-0.002	-0.002	1.640	-0.002	-1	0.009	-0.002	-0.2	-0.02
968121	-0.002	-0.002	20	-0.2	-0.002	-0.002	0.003	-0.002	-0.002	2.590	-0.002	-1	-0.002	-0.002	4.7	-0.02
968141	-0.002	-0.002	20	-0.2	-0.002	-0.002	0.003	-0.002	-0.002	2.490	-0.002	-1	-0.002	-0.002	-0.2	-0.02
968181	-0.002	-0.002	20	0.6	-0.002	-0.002	0.008	0.005	-0.002	9.580	-0.002	11	-0.002	-0.002	4.1	0.11
968201	-0.002	-0.002	20	-0.2	-0.002	-0.002	0.007	-0.002	-0.002	4.630	-0.002	1	-0.002	-0.002	14.8	0.04
968221	-0.002	-0.002	20	-0.2	0.004	-0.002	0.007	-0.002	-0.002	3.880	-0.002	-1	-0.002	-0.002	8.2	-0.02
968241	-0.002	-0.002	22	1.2	-0.002	-0.002	-0.002	-0.002	-0.002	3.580	-0.002	18	-0.002	-0.002	-0.2	-0.02

Distilled Water Blank Sample Geochemical Data

SAMPLE	Mo	Na	Nb	Nd	Ni	Pb	Pd	pH	Pr	Pt	Rb	Re
	0.020	0.200	0.002	0.002	0.002	0.020	0.020		0.002	0.002	0.002	0.002
	ppb	ppb	ppb	ppb	ppb	ppb	ppb		ppb	ppb	ppb	ppb
	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	PH	ICPMS	ICPMS	ICPMS	ICPMS
968001	-0.02	6.6	0.019	0.003	-0.002	0.03	-0.02	5.3	0.002	-0.002	0.008	-0.002
968021	-0.02	-0.2	0.012	-0.002	0.018	-0.02	-0.02	8.5	-0.002	0.004	-0.002	-0.002
968041	0.02	2.9	0.005	-0.002	-0.002	-0.02	-0.02	5.5	-0.002	-0.002	0.004	-0.002
968061	-0.02	1.5	0.010	-0.002	0.026	-0.02	-0.02	5.6	0.004	-0.002	-0.002	-0.002
968101	-0.02	-0.2	-0.002	-0.002	-0.002	-0.02	-0.02	5.6	-0.002	0.004	-0.002	-0.002
968121	-0.02	-0.2	0.006	-0.002	0.032	-0.02	-0.02	5.6	-0.002	-0.002	-0.002	-0.002
968141	-0.02	-0.2	-0.002	-0.002	-0.002	-0.02	-0.02	5.6	-0.002	-0.002	-0.002	-0.002
968161	-0.02	2.4	0.002	0.003	0.376	-0.02	-0.02	5.5	-0.002	-0.002	0.008	-0.002
968201	0.01	-0.2	0.008	-0.002	-0.002	-0.02	-0.02	5.5	-0.002	-0.002	0.006	-0.002
968221	0.02	-0.2	0.012	-0.002	0.055	-0.02	-0.02	5.5	-0.002	-0.002	0.004	-0.002
968241	-0.02	19.6	-0.002	-0.002	0.100	-0.02	-0.02	8.1	-0.002	-0.002	0.003	-0.002

SAMPLE	Ru	Sb	Se	Si	Sm	Sn	SO4	Sr	Ta	Tb	Th	Tl	Tm
	0.020	0.020	0.020	1.000	0.002	0.002	1.000	0.002	0.002	0.002	0.002	0.002	0.00
	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb
	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	TURB	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPM
968001	-0.02	0.050	0.35	46	-0.002	0.010	1	0.107	-0.002	-0.002	-0.002	0.004	-0.0
968021	-0.02	-0.020	0.09	-1	-0.002	-0.002	1	0.285	0.005	-0.002	-0.002	-0.002	-0.0
968041	-0.02	-0.020	-0.02	-5	-0.002	0.040	1	0.575	-0.002	-0.002	-0.002	-0.002	-0.0
968061	-0.02	0.020	0.36	-1	-0.002	0.019	1	0.056	-0.002	-0.002	-0.002	-0.002	-0.0
968101	-0.02	0.030	-0.02	-1	-0.002	-0.002	1	0.098	-0.002	-0.002	0.004	-0.002	-0.0
968121	-0.02	-0.020	-0.02	18	-0.002	-0.002	1	0.194	0.003	-0.002	-0.002	-0.002	-0.0
968141	-0.02	-0.020	-0.02	3	-0.002	-0.002	1	0.023	-0.002	-0.002	-0.002	-0.002	-0.0
968161	-0.02	-0.020	-0.02	37	0.002	0.006	1	0.100	-0.002	-0.002	-0.002	-0.002	-0.0
968201	-0.02	-0.020	0.16	20	-0.002	-0.002	1	0.298	-0.002	-0.002	0.008	0.004	-0.0
968221	-0.02	-0.020	0.27	17	-0.002	-0.002	1	0.255	-0.002	-0.002	-0.002	0.004	-0.0
968241	-0.02	-0.020	0.24	-1	-0.002	-0.002	1	-0.002	0.003	-0.002	-0.002	-0.002	-0.0

APPENDIX F - CONTROL STANDARD SLRS -3 DATA

Control Water Standard SLRS 3 Geochemical Data

SAMPLE	Ag	Al	ALK	As	Au	Ba	Bi	Br	Ca	Cd	Ce
	0.020	0.2	1.00	0.02	0.002	0.002	0.001	1	1	0.002	0.002
	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
	ICPMS	ICPMS	TIT	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS
968015	0.068	29.8	4340	0.71	0.041	13.725	0.003	40	6197	0.029	0.347
968038	0.086	31.9	4300	0.78	0.026	14.066	0.003	36	6298	0.022	0.469
968049	0.085	30.6	4300	0.67	0.030	13.672	0.003	27	6157	0.086	0.437
968077	0.044	28.8	4300	0.69	0.033	12.742	0.005	37	5621	0.028	0.266
968084	0.022	33.5	4350	0.66	0.037	14.245	0.003	46	6893	0.014	0.378
968119	0.027	29.9	4320	0.71	0.027	13.418	0.009	35	6091	0.017	0.272
968130	0.009	30.2	4340	0.69	0.020	13.445	0.006	33	6032	0.018	0.275
968148	0.003	28.9	4350	0.73	0.022	13.647	-0.002	40	6101	0.018	0.248
968180	-0.002	32.0	4300	0.74	0.019	13.401	-0.002	36	6155	0.011	0.240
968191	0.008	30.3	4250	0.74	0.004	13.089	0.009	30	6041	0.022	0.314
968217	-0.002	28.6	4300	0.84	-0.002	13.093	0.003	29	6209	0.010	0.324
968227	-0.002	27.7	4300	0.74	0.002	12.754	0.003	27	6045	0.008	0.293
968243	0.008	27.0	4300	0.76	0.006	13.621	0.007	57	6053	-0.002	0.207

SAMPLE	Co	Cr	Cs	Cu	Dy	Er	Eu	F	Fe	Ga	Gd
	0.002	0.1	0.002	0.002	0.002	0.002	0.002	20	0.2	0.002	0.002
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ION	ICPMS	ICPMS	ICPMS
968015	0.031	0.3	0.007	1.401	0.020	0.010	0.015	40	107.0	0.020	0.027
968038	0.029	0.3	0.020	1.356	0.014	0.012	0.011	20	100.0	0.005	0.052
968049	0.033	0.2	0.024	1.337	0.037	0.009	0.015	20	98.4	0.005	0.044
968077	0.030	0.3	0.016	1.314	0.013	0.006	0.022	20	100.0	0.008	0.025
968084	0.039	0.3	0.008	1.342	0.005	0.003	-0.002	20	109.3	0.006	0.031
968119	0.032	0.4	0.005	1.340	0.019	0.006	0.006	20	93.8	0.024	0.030
968130	0.027	0.2	0.006	1.294	0.015	0.009	0.009	20	93.0	0.013	0.027
968148	0.037	0.4	0.006	1.216	0.019	0.008	0.010	20	93.3	0.009	0.024
968180	0.034	0.3	0.005	1.296	0.012	0.008	0.006	20	97.6	0.010	0.031
968191	0.034	0.7	0.007	1.618	0.025	0.009	0.008	20	110.1	0.027	0.024
968217	0.032	0.6	0.006	1.502	0.019	0.012	0.011	20	105.7	0.030	0.030
968227	0.048	0.4	0.008	1.402	0.020	0.015	0.009	20	101.3	0.017	0.025
968243	0.028	0.9	0.008	0.967	0.013	0.007	0.007	20	98.8	0.015	0.020

SAMPLE	Ge	Hf	Ho	I	In	K	La	Lu	Mg	Mn
	0.002	0.002	0.002	0.020	0.002	1	0.002	0.002	0.2	0.02
	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS	ICPMS
968015	0.006	0.013	0.004	3.490	0.005	706	0.266	-0.002	1641.0	4.00
968038	0.063	0.011	0.004	3.960	0.003	691	0.347	-0.002	1758.5	3.69
968049	-0.002	-0.002	0.002	3.920	-0.002	677	0.363	-0.002	1605.8	3.67
968077	0.025	0.008	0.006	2.190	-0.002	635	0.297	-0.002	1589.2	3.40
968084	0.008	-0.002	0.002	2.510	-0.002	744	0.257	-0.002	1778.2	4.04
968119	0.006	0.010	0.004	2.520	0.005	701	0.211	0.003	1604.2	3.99
968130	0.006	0.008	0.004	2.920	0.002	686	0.217	-0.002	1608.1	3.76
968148	0.008	0.004	0.004	2.470	-0.002	679	0.234	-0.002	1602.9	3.85
968180	0.010	0.004	0.002	2.970	-0.002	708	0.232	-0.002	1616.0	3.84
968191	0.007	0.023	0.005	8.270	0.008	634	0.248	0.003	1583.8	3.93
968217	0.008	0.056	0.004	6.430	0.018	547	0.249	0.008	1588.9	3.93
968227	0.019	0.025	0.003	6.190	0.008	548	0.235	0.003	1583.3	3.85
968243	0.007	0.012	0.005	5.180	-0.002	661	0.221	-0.002	1596.3	3.73