

NORTHERN BC SAMPLE REANALYSIS PROJECT
Geoscience BC Report 2011-02

Release Date: January 2011

Data Files: GBC Report 2011-02.PDF & GBC Report 2011-02.XLS
 NBC STRM Compilation.XLS & NBC LAKE Compilation.XLS

PROJECT SUMMARY

The Northern BC Reanalysis Project is a continuation of a series of large-scale reanalysis initiatives that have been sponsored by Geoscience BC since 2007 (Figure 1). Recognized as a cost-effective means of updating information collected during older government funded regional geochemical surveys, these programs have significantly improved the BC geochemical database by providing a wide range of new analytical information at improved detection levels plus greater data compatibility with analytical methods currently being employed (Jackaman, 2011).

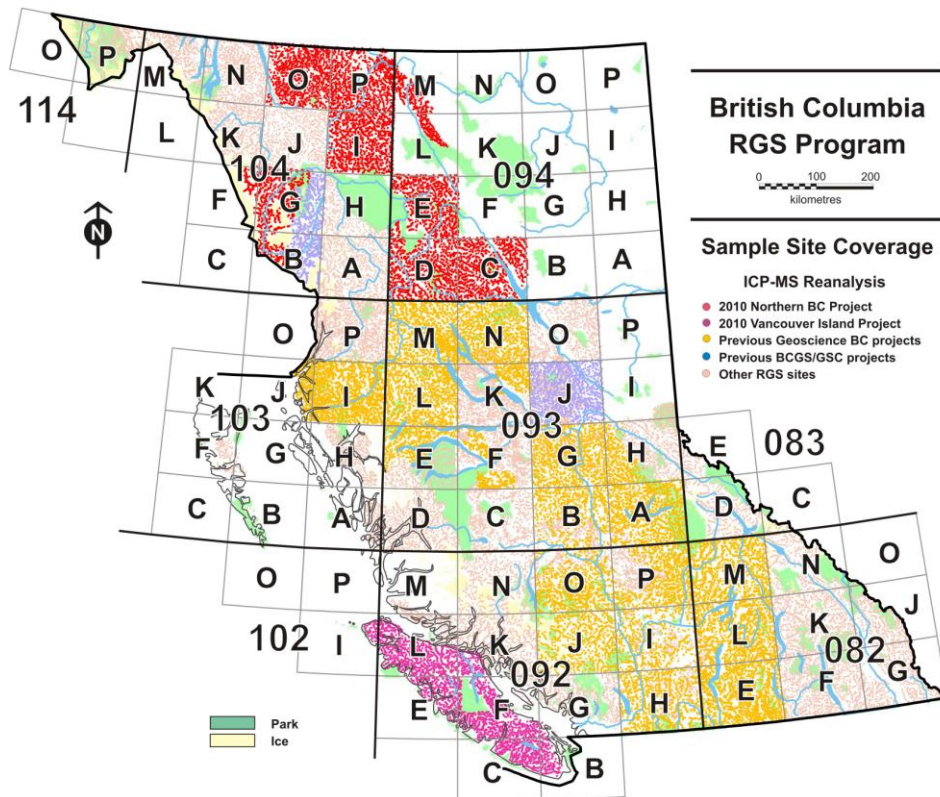


Figure 1. Locations of Geoscience BC and BC Geological Survey–sponsored ICP-MS reanalysis work (Abbreviations: BCGS, British Columbia Geological Survey; GSC, Geological Survey of Canada; ICP-MS, inductively coupled plasma–mass spectrometry; RGS, Regional Geochemical Survey).

PROJECT METHODS

Regional geochemical surveys targeted for this project were originally conducted from 1979 to 1997 and include parts of NTS map areas 094C, D, E, L, M and 104B, G, I, O, P. In co-operation with the BC Geological Survey (BCGS) and Natural Resources Canada (NRCAN), samples were retrieved from storage facilities in Victoria and Ottawa. A total of 8572 drainage-sediment and quality-control samples were delivered to Acme Analytical Laboratories Ltd. (Vancouver) and analyzed by an ultra-trace aqua-regia digestion (0.5 g) ICP-MS technique for 53 elements. Table 1 provides a complete listing of the analytes and ranges.

Table 1. List of elements and associated detection levels from ICP-MS analysis using aqua-regia digestion, Northern BC Reanalysis Project areas.

Element		Detection Levels	Units	Element		Detection Levels	Units
Gold	Au	0.2 to 100000	ppb	Selenium	Se	0.1 to 100	ppm
Silver	Ag	2 to 100000	ppb	Strontium	Sr	0.5 to 10000	ppm
Aluminum	Al	0.01 to 10	%	Tellurium	Te	0.02 to 1000	ppm
Arsenic	As	0.1 to 10000	ppm	Thorium	Th	0.1 to 2000	ppm
Boron	B	20 to 2000	ppm	Titanium	Ti	0.001 to 5	%
Barium	Ba	0.5 to 10000	ppm	Thallium	Tl	0.02 to 1000	ppm
Bismuth	Bi	0.02 to 2000	ppm	Uranium	U	0.05 to 2000	ppm
Calcium	Ca	0.01 to 40	%	Vanadium	V	2 to 10000	ppm
Cadmium	Cd	0.01 to 2000	ppm	Tungsten	W	0.05 to 100	ppm
Cobalt	Co	0.1 to 2000	ppm	Zinc	Zn	0.1 to 10000	ppm
Chromium	Cr	0.5 to 10000	ppm				
Copper	Cu	0.01 to 10000	ppm	Beryllium	Be	0.1 to 1000	ppm
Iron	Fe	0.01 to 40	%	Cerium	Ce	0.1 to 2000	ppm
Gallium	Ga	0.1 to 100	ppm	Cesium	Cs	0.02 to 2000	ppm
Mercury	Hg	5 to 50000	ppb	Germanium	Ge	0.1 to 100	ppm
Potassium	K	0.01 to 10	%	Hafnium	Hf	0.02 to 1000	ppm
Lanthanum	La	0.5 to 10000	ppm	Indium	In	0.02 to 1000	ppm
Magnesium	Mg	0.01 to 30	%	Lithium	Li	0.1 to 2000	ppm
Manganese	Mn	1 to 10000	ppm	Niobium	Nb	0.02 to 2000	ppm
Molybdenum	Mo	0.01 to 2000	ppm	Rubidium	Rb	0.1 to 2000	ppm
Sodium	Na	0.001 to 5	%	Rhenium	Re	1 to 1000	ppb
Nickel	Ni	0.1 to 10000	ppm	Tin	Sn	0.1 to 100	ppm
Phosphorus	P	0.001 to 5	%	Tantalum	Ta	0.05 to 2000	ppm
Lead	Pb	0.01 to 10000	ppm	Yttrium	Y	0.01 to 2000	ppm
Sulphur	S	0.02 to 5	%	Zirconium	Zr	0.1 to 2000	ppm
Antimony	Sb	0.02 to 2000	ppm	Platinum	Pt	2 to 100000	ppb
Scandium	Sc	0.1 to 100	ppm	Palladium	Pd	10 to 200000	ppb

DIGITAL DATA FILES

Results generated by the Northern BC Reanalysis project have been compiled into the following digital data files. Information on file format, data structure, abbreviations and field observation codes have been provided in Appendix A.

1. *GBC Report 2011-02.XLS*

Digital data file *GBC Report 2011-02.XLS* includes the 2010 ICP-MS analytical results. The data has been carefully checked for analytical quality using blind duplicate samples and control reference material. When determined to be complete and accurate, the reanalysis data were merged with sample site location information acquired from the original survey publications (Lett, 2005).

2. *NBC_STRM_Compilation.XLS and NBC_LAKE_Compilation.XLS*

Digital data files *NBC_STRM_Compilation.XLS* and *NBC_LAKE_Compilation.XLS* contain complete data listings for all regional geochemical surveys conducted in the study area. This includes the 2010 reanalysis results compiled with original field and analytical data, plus results from recent sampling and reanalysis programs conducted in NTS map areas 104A, B, G, H and J.

ACKNOWLEDGEMENTS

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REFERENCES

Jackaman, W. (2011): British Columbia Regional Geochemical Survey: new analytical data and sample archive upgrades; *in* Geoscience BC Summary of Activities 2010, Geoscience BC, Report 2011-1.

URL<<http://www.geosciencebc.com>>

Lett, R.E.W. (2005): Regional Geochemical Survey Database on CD, BC Ministry of Energy, Mines and Petroleum Resources, Geofile 2005-17, CD-ROM.

URL <<http://www.empr.gov.bc.ca/Mining/Geoscience/Geochemistry/Pages/default.aspx>>

Massey, N.W.D., MacIntyre, D.G., Desjardins, P.J. and Cooney, R.T. (2005): Digital geology map of British Columbia: whole province, B.C. Ministry of Energy and Mines, Geofile 2005-1.

URL<<http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/DigitalGeologyMaps/Pages/default.aspx>>

Disclaimer

While every effort has been taken to ensure the accuracy of the information in this release package, the data is provided in an 'as-is' basis, without any warranty, guarantee or representation of any kind, whether expressed or implied. It is the responsibility of the user to check the facts before entering any financial or other commitment based upon this information.

Appendix A

NORTHERN BC SAMPLE REANALYSIS PROJECT

DIGITAL DATA FILES

1. GBC REPORT 2011-02.XLS

Digital data file *GBC Report 2011-02.XLS* includes new ICP-MS analytical results for a total of 7,651 stream and lake sediment samples. Samples were originally collected as part of regional geochemical surveys conducted in the Northern BC study area. These surveys are listed in Table 2.

Table 2. List of Northern BC Reanalysis Project target areas used to produce digital file
GBC Report 2011-02.XLS.

Survey Year	Map Area	Survey Type	NTS Map	Samples
1979	Jennings River	stream/lake survey	104O	894
1979	McDame	stream survey	104P	845
1987	Iskut River	stream survey	104B	197
1987	Sumdum	stream survey	104F	150
1987	Telegraph Creek	stream survey	104G	652
1995	Gataga Mountain	stream survey	094L	183
1996	Cry Lake	stream survey	104I	1199
1996	Kechika Trough	lake survey	104P/094M	470
1997	McConnell Creek	stream survey	094D	1032
1997	Toddoggone River	stream survey	094E	962
1998	Mesilinka River	stream survey	094C	1067

Data File Notes:

- File *GBC Report 2011-02.XLS* includes ICP-MS data generated as part of the 2010 Northern BC Reanalysis Project. Analytical data is provided in its original reported state.
- The file consists of a single XLS tab. The first 21 data fields (Table 4) present site identification and location attributes. Fields 22 to 74 list the associated analytical results (Table 7).
- Data determined at less than detection are listed as negative values and cells containing missing data have been left blank.
- It should be noted that although efforts have been made to include all samples from the target survey areas, there are gaps in the final data set due to missing archive material.

2. NBC_STRM_COMPILATION.XLS & NBC_LAKE_COMPILATION.XLS

To provide complete reporting of historical field and analytical data collected in the northern BC study area, survey results for all regional geochemical surveys conducted in the region have been compiled and provided in data files *NBC_STRM_Compilation.XLS* and *NBC_LAKE_Compilation.XLS*. These files include complete listing of original survey data plus any subsequent INAA and ICP-MS reanalysis results for the drainage sediment and water surveys listed in Table 3.

Table 3. List of Northern BC surveys used to produce digital files
NBC_STRM_Compilation.xls and NBC_LAKE_Compilation.xls.

Survey Year	Map Area	Survey Type	NTS Map	Samples
1979	Jennings River	stream survey	104O	946
1979	McDame	stream survey	104P	848
1987	Iskut River	stream survey	104B	698
1987	Sumdum	stream survey	104F	150
1987	Telegraph Creek	stream survey	104G	1136
1995	Gataga Mountain	stream survey	094L	184
1996	Cry Lake	stream survey	104I	1228
1997	McConnell Creek	stream survey	094D	1034
1997	Toddoggone River	stream survey	094E	963
1998	Mesilinka River	stream survey	094C	1068
2000	Dease Lake	stream survey	104J	963
2004	Bowser Basin	stream survey	104A	1084
2004	Spastsizi Plateau	stream survey	104H	379
1979	Jennings River	lake survey	104O	80
1996	Kechika Trough	lake survey	104P/094M	471

Data File Notes:

- File *NBC_STRM_Compilation.XLS* contains 10,681 sample records associated with stream based surveys and file *NBC_LAKE_Compilation.XLS* contains 551 sample records compiled from lake based surveys.
- Data file structures have been standardized to accommodate all possible data reporting options. As a result surveys may not include information for all fields listed. Missing analytical data is reported as '-1' and missing field data is listed as a blank cell.
- Analytical data provided in the compilation XLS files have been modified. Data determined at less than reported laboratory detection levels have been changed to the reported detection level.
- For more detailed descriptions of sample collection methods, analytical techniques and element detection levels refer to original published reports at:

URL <<http://www.empr.gov.bc.ca/Mining/Geoscience/Geochemistry/Pages/default.aspx>>

DATA FILE FORMAT

Digital data files containing recorded sample site observations and analytical results are provided in XLS format. Each XLS file includes the following five (5) tabs:

1. FIELD DATA: recorded site location information and observations
2. AAS: all original AAS data in sediments plus gold by fire assay
3. INAA: all published INAA data in sediments
4. ICPMS: all published ICP-MS data in sediments
5. OTHER: all published F and LOI sediment data plus pH, F, U, SO(4) and conductivity in waters

Table 4 lists the sample site identification and location attributes provided in the first 21 data fields for each XLS tab. The various analytical data summarized in Tables 5 to 8 are listed starting at field 22. This structure enables different media (stream and lake) files to be appended and fields of data can be moved between the tabs.

Table 4. Common data fields provided for each XLS tab.

Field	Name	Description
1	IDORDER	Sequential order of data records in the compilation.
2	REPORT	Report designation of original published data.
3	NAME	NTS map name of survey area.
4	TYPE1	Survey type: STRM = stream, LAKE = lake.
5	TYPE2	Survey scale: RGS = regional, TS = targeted.
6	MASTERID	Unique ID number listed for each data record.
7	MAP250	National Topographic System (NTS) 1:250,000 scale map underlying site.
8	MAP50	National Topographic System (NTS) 1:50,000 scale map underlying site.
9	MAP20	National Topographic System (NTS) 1:20,000 scale map underlying site.
10	YEAR	Year sample was collected.
11	ID	Unique sample site ID.
12	STATUS	Identifies the collection of multiple samples from a single site.
13	UTMZ	Site location UTM zone.
14	UTME83	Site location UTM easting (NAD83).
15	UTMN83	Site location UTM northing (NAD83).
16	LAT	Latitude (decimal degrees) calculated from NAD83 UTM coordinates.
17	LONG	Longitude (decimal degrees) calculated from NAD83 UTM coordinates.
18	ELEV	Site elevation in metres.
19	STRAT1	Underlying geology at sample site (field STRAT1 from Massey et al., 2005).
20	LAB	Analytical laboratory conducting listed sediment analysis.
21	MTHD	Primary sediment analytical method used.

ANALYTICAL ATTRIBUTES

Table 5. SEDIMENT ANALYTICAL DATA – AAS Tab

Field	Element	Method	Units
22	Gold (1st Analysis)	Au1 FA	ppb
23	Gold (Repeat)	Au2 FA	ppb
24	Silver	Ag AAS	ppm
25	Arsenic	As AAA-H	ppm
26	Barium	Ba XRF	ppm
27	Bismuth	Bi AAS-H	ppm
28	Cadmium	Cd AAS	ppm
29	Cobalt	Co AAS	ppm
30	Chromium	Cr AAS	ppm
31	Copper	Cu AAS	ppm
32	Iron	Fe AAS	pct
33	Mercury	Hg AAS-F	ppb

Field	Element	Method	Units
34	Manganese	Mn AAS	ppm
35	Molybdenum	Mo AAS	ppm
36	Nickel	Ni AAS	ppm
37	Lead	Pb AAS	ppm
38	Antimony	Sb AAS-H	ppm
39	Selenium	Se AAS-H	ppm
40	Tin	Sn AAS	ppm
41	Uranium	U NADNC	ppm
42	Vanadium	V AAS	ppm
43	Tungsten	W COLOR	ppm
44	Zinc	Zn AAS	ppm

Table 6. SEDIMENT ANALYTICAL DATA – INAA Tab

Field	Element	Method	Units
22	Gold (1st Analysis)	Au1 INAA	ppb
23	Gold (Repeat)	Au2 INAA	ppb
24	Silver	Ag INAA	ppm
25	Arsenic	As INAA	ppm
26	Barium	Ba INAA	ppm
27	Bromine	Br INAA	ppm
28	Calcium	Ca INAA	pct
29	Cadmium	Cd INAA	ppm
30	Cerium	Ce INAA	ppm
31	Cobalt	Co INAA	ppm
32	Chromium	Cr INAA	ppm
33	Cesium	Cs INAA	ppm
34	Europium	Eu INAA	ppm
35	Iron	Fe INAA	pct
36	Hafnium	Hf INAA	ppm
37	Mercury	Hg INAA	ppm
38	Iridium	Ir INAA	ppm
39	Lanthanum	La INAA	ppm
40	Lutetium	Lu INAA	ppm
41	Molybdenum	Mo INAA	ppm

Field	Element	Method	Units
42	Sodium	Na INAA	pct
43	Neodymium	Nd INAA	ppm
44	Nickel	Ni INAA	ppm
45	Rubidium	Rb INAA	ppm
46	Antimony	Sb INAA	ppm
47	Scandium	Sc INAA	ppm
48	Selenium	Se INAA	ppm
49	Samarium	Sm INAA	ppm
50	Tin	Sn INAA	ppm
51	Strontium	Sr INAA	ppm
52	Tantalum	Ta INAA	ppm
53	Terbium	Tb INAA	ppm
54	Tellurium	Te INAA	ppm
55	Thorium	Th INAA	ppm
56	Uranium	U INAA	ppm
57	Tungsten	W INAA	ppm
58	Ytterbium	Yb INAA	ppm
59	Zinc	Zn INAA	ppm
60	Zirconium	Zr INAA	ppm
61	Sample Weight	Wt GRAV	g

Table 7. SEDIMENT ANALYTICAL DATA – ICPMS Tab

Field	Element	Method	Units	Field	Element	Method	Units		
22	Gold	Au	ICPMS	ppb	49	Selenium	Se	ICPMS	ppm
23	Silver	Ag	ICPMS	ppb	50	Strontium	Sr	ICPMS	ppm
24	Aluminum	Al	ICPMS	pct	51	Tellurium	Te	ICPMS	ppm
25	Arsenic	As	ICPMS	ppm	52	Thorium	Th	ICPMS	ppm
26	Barium	Ba	ICPMS	ppm	53	Titanium	Ti	ICPMS	pct
27	Bismuth	Bi	ICPMS	ppm	54	Thallium	Tl	ICPMS	ppm
28	Boron	B	ICPMS	ppm	55	Uranium	U	ICPMS	ppm
29	Calcium	Ca	ICPMS	pct	56	Vanadium	V	ICPMS	ppm
30	Cadmium	Cd	ICPMS	ppm	57	Tungsten	W	ICPMS	ppm
31	Cobalt	Co	ICPMS	ppm	58	Zinc	Zn	ICPMS	ppm
32	Chromium	Cr	ICPMS	ppm					
33	Copper	Cu	ICPMS	ppm	59	Beryllium	Be	ICPMS	ppm
34	Iron	Fe	ICPMS	pct	60	Cerium	Ce	ICPMS	ppm
35	Gallium	Ga	ICPMS	ppm	61	Cesium	Cs	ICPMS	ppm
36	Mercury	Hg	ICPMS	ppb	62	Germanium	Ge	ICPMS	ppb
37	Potassium	K	ICPMS	pct	63	Hafnium	Hf	ICPMS	ppm
38	Lanthanum	La	ICPMS	ppm	64	Indium	In	ICPMS	ppm
39	Magnesium	Mg	ICPMS	pct	65	Lithium	Li	ICPMS	ppm
40	Manganese	Mn	ICPMS	ppm	66	Niobium	Nb	ICPMS	ppm
41	Molybdenum	Mo	ICPMS	ppm	67	Palladium	Pd	ICPMS	ppb
42	Sodium	Na	ICPMS	pct	68	Platinum	Pt	ICPMS	ppb
43	Nickel	Ni	ICPMS	ppm	69	Rhenium	Re	ICPMS	ppb
44	Phosphorus	P	ICPMS	pct	70	Rubidium	Rb	ICPMS	ppm
45	Lead	Pb	ICPMS	ppm	71	Tin	Sn	ICPMS	ppm
46	Sulphur	S	ICPMS	pct	72	Tantalum	Ta	ICPMS	ppm
47	Antimony	Sb	ICPMS	ppm	73	Yttrium	Y	ICPMS	ppm
48	Scandium	Sc	ICPMS	ppm	74	Zirconium	Zr	ICPMS	ppm

Table 8. SEDIMENT& WATER ANALYTICAL DATA – OTHER Tab

Field	Element	Method	Units	
22	Fluorine	F	AAS	ppm
23	Loss On Ignition	LOI	GRAV	pct
	Waters ...			
24	pH	pH	GCE	
25	Uranium	U	LIF	ppb
26	Fluoride	F	ION	ppb
27	Sulphate	SO4	TURB	ppm
28	Conductivity	CND	GCE	uS

Abbreviation Definitions:

AAS	atomic absorption spectroscopy	INAA	instrumental neutron activation analysis
AAS-F	flameless AAS	ICPMS	inductively coupled plasma mass spectroscopy
AAS-H	hydride generation AAS	GCE	glass combination electrode
XRF	x-ray fluorescence	LIF	laser-induced fluorescence
COLOR	colourimetrically	ION	specific ion electrode
NADNC	neutron activation with delayed neutron counting	TURB	turbidimetric
FA	fire assay	GRAV	gravimetric (weight difference)

EXPLANATION OF CODES FOR FIELD OBSERVATIONS – STREAM SITES

SAMPLE MATERIAL (MAT):

- | | |
|---------------------|------------------------|
| 1 - Stream Sediment | 6 - Water and Sediment |
|---------------------|------------------------|

STREAM SOURCE (SORC):

- | | |
|-----------------|------------------------|
| 0 – Unknown | 2 - Spring Run-off |
| 1 – Groundwater | 3 - Glacier Melt Water |

STREAM ORDER (ORDR):

- | | |
|---------------|----------------|
| 0 – Undefined | 3 - Tertiary |
| 1 – Primary | 4 - Quaternary |
| 2 – Secondary | |

STREAM TYPE (TYPE):

- | | |
|---------------|-----------------|
| 0 – Undefined | 2 - Seasonal |
| 1 – Permanent | 3 - Re-emergent |

PHYSIOGRAPHY (PHYS):

- | | |
|------------------------|-------------------------|
| 0 - Lowland Plain | 3 - Hilly, Undulating |
| 1 - Muskeg, Swamp | 4 - Mountains, Mature |
| 2 - Peneplain, Plateau | 5 - Mountains, Youthful |

DRAINAGE PATTERN (DRNP):

- | | |
|--------------------|------------------------|
| 0 - Poorly Defined | 4 - Interrupted |
| 1 – Dendritic | 5 - Glacially Deranged |
| 2 – Herringbone | 6 - Basinal |
| 3 – Rectangular | 7 - Other |

CONTAMINATION (CONT):

- | | |
|--------------|-----------------|
| 0 - None | 5 - Industrial |
| 1 - Possible | 6 - Agriculture |
| 2 - Probable | 7 - Domestic |
| 3 - Definite | 8 - Forestry |
| 4 - Mining | 9 - Burned |

STREAM WIDTH (WDTH): Width of the stream at the sample site in metres.

STREAM DEPTH (DPTH): Depth of the stream at the sample site in centimetres.

STREAM FLOW RATE (FLOW): Visual estimate of stream flow velocity.

- | | |
|--------------|-------------|
| 0 - Stagnant | 3 – Fast |
| 1 - Slow | 4 - Torrent |
| 2 - Moderate | |

EXPLANATION OF CODES FOR FIELD OBSERVATIONS – STREAM SITES Con't

STREAM WATER COLOUR (WTRC):

- | | |
|------------------|------------------|
| 0 - Colourless | 3 - Brown Cloudy |
| 1 - Brown, Clear | 4 - Other |
| 2 - White Cloudy | |

BANK TYPE (BANK):

- | | |
|---------------|---------------------|
| 0 - Unknown | 4 - Glacial Outwash |
| 1 - Alluvial | 5 - Bare Rock |
| 2 - Colluvial | 6 - Talus, Scree |
| 3 - Till | 7 - Organic |

BANK PRECIPITATE (BNKP): Presence of stain, weathering on rocks surrounding the sample site.

- 0 - None, otherwise same codes as sediment colour.

SEDIMENT COMPOSITION (COMP): Bulk composition of sand\finer\organics.

- | | |
|-----------------|-------------------|
| 0 - Absent | 2 - Medium 33-67% |
| 1 - Minor < 33% | 3 - Major >67% |

SEDIMENT COLOUR (SEDC): General colour of collected sediment.

- | | |
|-----------------|----------------|
| 1 - Red | 5 - Green |
| 2 - White, Buff | 6 - Gray, Blue |
| 3 - Black | 7 - Pink |
| 4 - Yellow | 8 - Tan, Brown |

SEDIMENT PRECIPITATE (SEDP): Presence of any coatings on the sample or on stream bed materials at the sample site.

- 0 - None, otherwise same codes as sediment colour.

CHANNEL BED (CBED):

- | | |
|-----------------------|----------------------|
| 1 - Boulders | 3 - Sand and Gravels |
| 2 - Fine Sand to Clay | 4 - Organics |

CHANNEL PATTERN (CPTN):

- | | |
|----------------------|----------------|
| 1 - Shoots and Pools | 3 - Meandering |
| 2 - Braided | 4 - Disturbed |

DATE (DATE): Day and month sample collected.

EXPLANATION OF CODES FOR FIELD OBSERVATIONS – LAKE SITES

LAKE AREA (AREA): Lake area in square kilometres.

- | | |
|-----------------|----------------------|
| 0 - Pond | 2 - 1.0 to 5.0 |
| 1 - 0.25 to 1.0 | 3 - Greater Than 5.0 |

SAMPLE DEPTH (DPTH): Lake depth at sample site to nearest metre.

EXPLANATION OF CODES FOR FIELD OBSERVATIONS – LAKE SITES Con't

RELIEF (RELF): Relief of the surrounding lake catchment basin.

- | | |
|------------|----------|
| 1 - Low | 3 - High |
| 2 - Medium | |

SEDIMENT COMPOSITION (COMP):

- | | |
|-----------|--------------|
| 1 - Gel | 3 - Sands |
| 2 - Fines | 4 - Organics |

CONTAMINATION (CONT): Degree or type of human contamination.

- | | |
|----------|--------------|
| 0 - None | 1 - Possible |
|----------|--------------|

SEDIMENT COLOUR (SEDC):

- | | |
|------------|------------|
| 1 - Tan | 4 - Grey |
| 2 - Yellow | 5 - Brown |
| 3 - Green | 6 - Black |
| 7 - White | 8 - Orange |

SUSPENDED MATTER (SUSP):

- | | |
|-----------|-----------|
| 0 - None | 2 - Heavy |
| 1 - Light | |

DATE (DATE): Day and month sample collected.

EXPLANATION OF CODES FOR FIELD OBSERVATIONS – OTHER

The following additional information was generated for each sample record by overlaying the sample site location point file with various digital polygon coverages using simple GIS routines.

ECO REGION NAME: Major physiographic & minor macroclimatic variation, from Ecoregion Classification of BC.

ECO SECTION NAME: Minor physiographic/macroclimatic variation, from Ecoregion Classification of BC.

ZONE NAME: Major biogeoclimatic zone, from Biogeoclimatic Ecosystem Classification of BC.

SUB ZONE NAME: Minor biogeoclimatic zone, from Biogeoclimatic Ecosystem Classification of BC.

TECTONIC BELT: Geological feature underlying sample site, from Massey et al., 2005.

TERRANE: Geological feature underlying sample site, from Massey et al., 2005.

STRAT NAME: Geological feature underlying sample site, from Massey et al., 2005.

STRAT LABEL: Geological feature underlying sample site, from Massey et al., 2005.

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