GEOSCIENCE BC MPB DATA REPOSITORY

Version 1.0 (July 2007)

Geoscience BC Contribution Number GBC051

File: README.PDF

A large area in central British Columbia infested by the mountain pine beetle (MPB) has been the focus of several federal and provincial geoscience initiatives over the last 25 years. Results of this work have produced a large collection of publicly available multimedia regional geochemical information. As part of the MPB Infestation Area Regional Geochemical Data Repository Project, a digital database of this geochemical information plus associated geospatial base maps has been compiled on CD. The primary goal of this project is to consolidate this diverse data landscape into a functional data repository. The resulting digital framework includes regional geochemical data and associated geospatial information that can be easily accessed and incorporated into a wide range of exploration and research activities. The repository will provide immediate benefits of data access, delivery and functionality, as well as assist in the planning of detailed surveys and targeted studies, identify gaps in geochemical data that can be profiled for future attention, and provide long-term data management advantages.

The MPB Data Repository is currently comprised of location information and a of wide range multielement analytical results compiled from regional bark, lake, till and stream surveys. It includes a total of 30,187 samples collected from 28.239 sites. The information covers over 250,000 square kilometres and sample site density ranges from 1 site every 2 square kilometres to 1 site every 20 or more square kilometres.



Seamlessly integrating the information is challenging due to the many modifications to methods and specifications that have been introduced during the 30 years of survey activity. To account for these variations, specific information on these modifications has been noted in the collection. Refer to PDF document files provided for each survey type for detailed descriptions of format and data presentation. The project remains a work in progress and any comments and/or suggestions are welcome.

The current data CD (version 1.0) consists of the following file folders and files:

1. REGIONAL GEOCHEMICAL DATA/

Data files are provided in XLS, DBF and ARC Shapefile format:

- /Bark Surveys •
 - ✓ BARK README.PDF ✓ BARK_ICP.XLS BARK_ICP.DBF ✓ BARK_INA.XLS BARK_INA.DBF
 - ✓ BARK_OTHR.XLS BARK_OTHR.DBF

/Lake Surveys

✓	LAKE README.PDF	
✓	LAKE_SED_AAS.XLS	LAKE_AAS.DBF
✓	LAKE_SED_ICP.XLS	LAKE_ICP.DBF
✓	LAKE_SED_INA.XLS	LAKE_INA.DBF
✓	LAKE_WATR.XLS	LAKEWATR.DBF
✓	LAKE_SED_OTHR.XLS	LAKEOTHR.DBF

/Stream Surveys •

✓	STREAM README.PDF	
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- ✓ STRM_SED_AAS.XLS STRM_AAS.DBF
- ✓ STRM_SED_ICP.XLS STRM_ICP.DBF
- ✓ STRM_SED_INA.XLS STRM_INA.DBF STRMWATR.DBF
- ✓ STRM_WATR.XLS
- ✓ STRM_SED_OTHR.XLS STRMOTHR.DBF

/Till Surveys •

- ✓ TILL README.PDF ✓ TILL_ICP.XLS
- TILL_ICP.DBF ✓ TILL_INA.XLS TILL_INA.DBF

2. GEOSPATIAL DATA/

ARC Shapefiles in NAD 83 and BC Albers or geographic (decimal degree) projection:

• /Albers and /Geographic

\checkmark	GRID 20K	NTS 20,000 grid polygons
\checkmark	GRID 50K	NTS 50,000 grid polygons
\checkmark	GRID 250K	NTS 250,000 grid polygons
\checkmark	TOPO ROAD	Road network lines
✓	TOPO RAIL	Rail network lines
✓	TOPO STREAM	Stream lines
✓	TOPO RIVER	River polygons
✓	TOPO LAKE	Lake polygons
\checkmark	TOPO ICE	Ice polygons
\checkmark	TOPO OCEAN	Ocean polygons
\checkmark	TOPO PROV PARK	Provincial park polygons
\checkmark	TOPO FED PARK	Federal park polygons
\checkmark	TOPO INDIAN RESERVES	Indian Reserves polygons
\checkmark	GEOL BEDROCK	Bedrock geology polygons (Massey, 2005)
✓	GEOL QUATERNARY	Quaternary geology polygons (Massey, 2005)
✓	GEOL FAULTS	Faults lines (Massey, 2005)
✓	GEOL MINFILE	MINFILE points (Feb 2006)
✓	MTO JAN07	Mineral titles polygons (Jan 2007)

Source:

http://www.em.gov.bc.ca/Mining/Geolsurv/MapPlace/geoData.htm

Geology Reference:

Nick Massey, B.C. Ministry of Energy & Mines, Geological Survey Branch, Victoria, *Publication Date:* January 2005

SAMPLE SITE LOCATION DATA and DESCRIPTIONS

The following data structure (fields 1 to 16) is common to all digital data files:

Field	Label	Туре	Length	Example
1	MASTERID	CHAR	20	STRM82L761003
2	TYPE	CHAR	4	SS
3	MAP50	CHAR	6	82L02
4	MAP20	CHAR	8	082L.006
5	YEAR	NUM	6	1976
6	ID	CHAR	10	1003
7	STATUS	NUM	2	0
8	UTMZ	NUM	2	11
9	UTME83	NUM	6	365989
10	UTMN83	NUM	7	5543318
11	LAT	NUM	10(5)	50.02707
12	LONG	NUM	10(5)	-118.87102
13	STRAT	CHAR	8	PrPzog
14	REPORT	CHAR	25	BCGS RGS 32
15	LAB	CHAR	20	CHEMEX
16	MTHD	CHAR	6	AAS

Explanation of Codes

MASTERID	: Unique ID number listed for each data record. Consists of survey type, NTS map sheet designation, collection year, and sample ID number.		
TYPE:	Type of regional survey: BS - Bark; LS - Lake; SS - Stream; TS - Till		
MAP50:	National Topographic System (NTS)1:50,000 scale map.		
MAP20:	National Topographic System (NTS)1:20,000 scale map.		
YEAR:	Year sample was collected.		
ID:	Original sample site ID.		
STATUS:	Identifies the collection of multiple samples from a single site.		
UTMZ:	Site location UTM zone.		
UTME83:	Site location UTM easting (NAD83).		
UTMN83:	Site location UTM northing (NAD83).		
LAT:	Latitude (decimal degrees) calculated from NAD83 UTM coordinates.		
LONG:	Longitude (decimal degrees) calculated from NAD83 UTM coordinates.		
STRAT:	Underlying geology at sample site (field STRAT1 from Massey, 2005).		
REPORT:	Original report designation of published data.		
LAB:	Analytical laboratory conducting listed analysis.		
MTHD:	Primary analytical method used.		
AAS	Atomic absorption spectrometry.		
AAS	+: Atomic absorption spectrometry plus gold by fire assay.		
ICP: ICP+	Inductively coupled plasma analysis.		
ICP	IS: Inductively coupled plasma mass spectrometry		
INAA	Instrumental neutron activation analysis.		

ANALYTICAL DATA

Analytical data are presented in the following data structure. Refer to specific survey PDF document files for additional details on analytical information. Please note that

- ✓ Analytical data are provided in its original published state. This includes data listed as negative values and/or as half reported detection limits.
- ✓ Analytical data files include all possible element determinations for each analytical method.
- \checkmark Data not included as part of a survey's original analytical suite and missing data have been listed as 0.
- ✓ All data is listed to three decimal places, refer to survey PDF document files for information on the reported significant figures used for each analytical measurement.

Label	Туре	Length	Units
AU1	NUM	8(3)	PPB
AU2	NUM	8(3)	PPB
AG	NUM	8(3)	PPM
AS	NUM	8(3)	PPM
BA	NUM	8(3)	PPM
BI	NUM	8(3)	PPM
CD	NUM	8(3)	PPM
CO	NUM	8(3)	PPM
CR	NUM	8(3)	PPM
CU	NUM	8(3)	PPM
FE	NUM	8(3)	PCT
HG	NUM	8(3)	PPB
MN	NUM	8(3)	PPM
MO	NUM	8(3)	PPM
NI	NUM	8(3)	PPM
PB	NUM	8(3)	PPM
SB	NUM	8(3)	PPM
SE	NUM	8(3)	PPM
SN	NUM	8(3)	PPM
U	NUM	8(3)	PPM
V	NUM	8(3)	PPM
W	NUM	8(3)	PPM
ZN	NUM	8(3)	PPM
PPB:	parts per billion		
PPM:	parts per million		

AAS Data Files (lake and stream surveys):

- PCT: percent

ICP Data Files (bark, lake, stream and till surveys):

Label	Туре	Length	Units
AU	NUM	8(3)	PPB
AG	NUM	8(3)	PPM
AL	NUM	8(3)	PCT
AS	NUM	8(3)	PPM
В	NUM	8(3)	PPM
BA	NUM	8(3)	PPM
BE	NUM	8(3)	PPM
BI	NUM	8(3)	PPM
CA	NUM	8(3)	PCT
CD	NUM	8(3)	PPM
CE	NUM	8(3)	PPM
CO	NUM	8(3)	PPM
CR	NUM	8(3)	PPM
CU	NUM	8(3)	PPM
FE	NUM	8(3)	PCT
GA	NUM	8(3)	PPM
HG	NUM	8(3)	PPB
К	NUM	8(3)	PCT
LA	NUM	8(3)	PPM
LI	NUM	8(3)	PPM
MG	NUM	8(3)	PCT
MN	NUM	8(3)	PPM
MO	NUM	8(3)	PPM
NA	NUM	8(3)	PCT
NB	NUM	8(3)	PPM
NI	NUM	8(3)	PPM
Р	NUM	8(3)	PCT
PB	NUM	8(3)	PPM
RB	NUM	8(3)	PPM
S	NUM	8(3)	PCT
SB	NUM	8(3)	PPM
SC	NUM	8(3)	PPM
SE	NUM	8(3)	PPM
SN	NUM	8(3)	PPM
SR	NUM	8(3)	PPM
TA	NUM	8(3)	PPM
TE	NUM	8(3)	PPM
TH	NUM	8(3)	PPM
ΤI	NUM	8(3)	PCT
TL	NUM	8(3)	PPM
U	NUM	8(3)	PPM
V	NUM	8(3)	PPM
W	NUM	8(3)	PPM
Y	NUM	8(3)	PPM
ZN	NUM	8(3)	PPM
ZR	NUM	8(3)	PPM

INA Data Files (bark	, lake,	stream	and til	l surveys):
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Label	Туре	Length	Units
AU1	NUM	8(3)	PPB
AU2	NUM	8(3)	PPB
AG	NUM	8(3)	PPM
AS	NUM	8(3)	PPM
BA	NUM	8(3)	PPM
BR	NUM	8(3)	PPM
CA	NUM	8(3)	PCT
CD	NUM	8(3)	PPM
CE	NUM	8(3)	PPM
CO	NUM	8(3)	PPM
CR	NUM	8(3)	PPM
CS	NUM	8(3)	PPM
EU	NUM	8(3)	PPM
FE	NUM	8(3)	PCT
HF	NUM	8(3)	PPM
HG	NUM	8(3)	PPM
IR	NUM	8(3)	PPM
LA	NUM	8(3)	PPM
LU	NUM	8(3)	PPM
MO	NUM	8(3)	PPM
NA	NUM	8(3)	PCT
ND	NUM	8(3)	PPM
NI	NUM	8(3)	PPM
RB	NUM	8(3)	PPM
SB	NUM	8(3)	PPM
SC	NUM	8(3)	PPM
SE	NUM	8(3)	PPM
SM	NUM	8(3)	PPM
SN	NUM	8(3)	PPM
SR	NUM	8(3)	PPM
TA	NUM	8(3)	PPM
ТВ	NUM	8(3)	PPM
TE	NUM	8(3)	PPM
TH	NUM	8(3)	PPM
U	NUM	8(3)	PPM
W	NUM	8(3)	PPM
YB	NUM	8(3)	PPM
ZN	NUM	8(3)	PPM
ZR	NUM	8(3)	PPM
WT	NUM	8(3)	G

OTHR Data Files (lake and stream surveys):

Label	Туре	Length	<u>Units</u>
F	NUM	8(2)	PPM
LOI	NUM	8(2)	PCT

WATR Data Files (lake and stream surveys):

Label	Туре	Length	Units
рН	NUM	8(2)	pН
Ŭ	NUM	8(2)	PPB
F	NUM	8(2)	PPB
SO4	NUM	8(2)	PPM
CND	NUM	8(2)	uS

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This data repository is subject to change. Please contact Geoscience BC for information on the latest version.