

SURFICIAL GEOLOGY
Scale 1:100 000

BRITISH COLUMBIA SURFICIAL DEPOSITS

PROGLACIAL DEPOSITS

LACUSTRINE DEPOSITS: Varved silt, clay, and sand, locally drumlinized and fluted through minor ice re-advance, fringed by beach deposits. Deposits up to 120 m thick along Nechako, >200 m thick along Blackwater.

Meltwater or outwash channel deposits bounded by cutbanks or terraces

UNDIVIDED GLACIOLACUSTRINE AND GLACIOFLUVIAL DEPOSITS: Sand, silt and clay with local accumulations up to 70 m thick along valley bottoms

GLACIAL DEPOSITS

Undivided glacial till and ground moraine. Areas of low relief include abundant drumlins, rock drumlins, fluting, and esker complexes. Bedrock exposures predominate above 1700 m elevation

Outwash channel cutbank or terrace
Small meltwater or abandoned stream channel indicating direction of flow
Fluting or glacial striation
Drumlin, direction of flow known
Eskers and esker complexes
Kettled and pitted terrain

Note: Glacial deposits and features within NTS 93H are unmapped

Sources of information:

Geological Survey of Canada

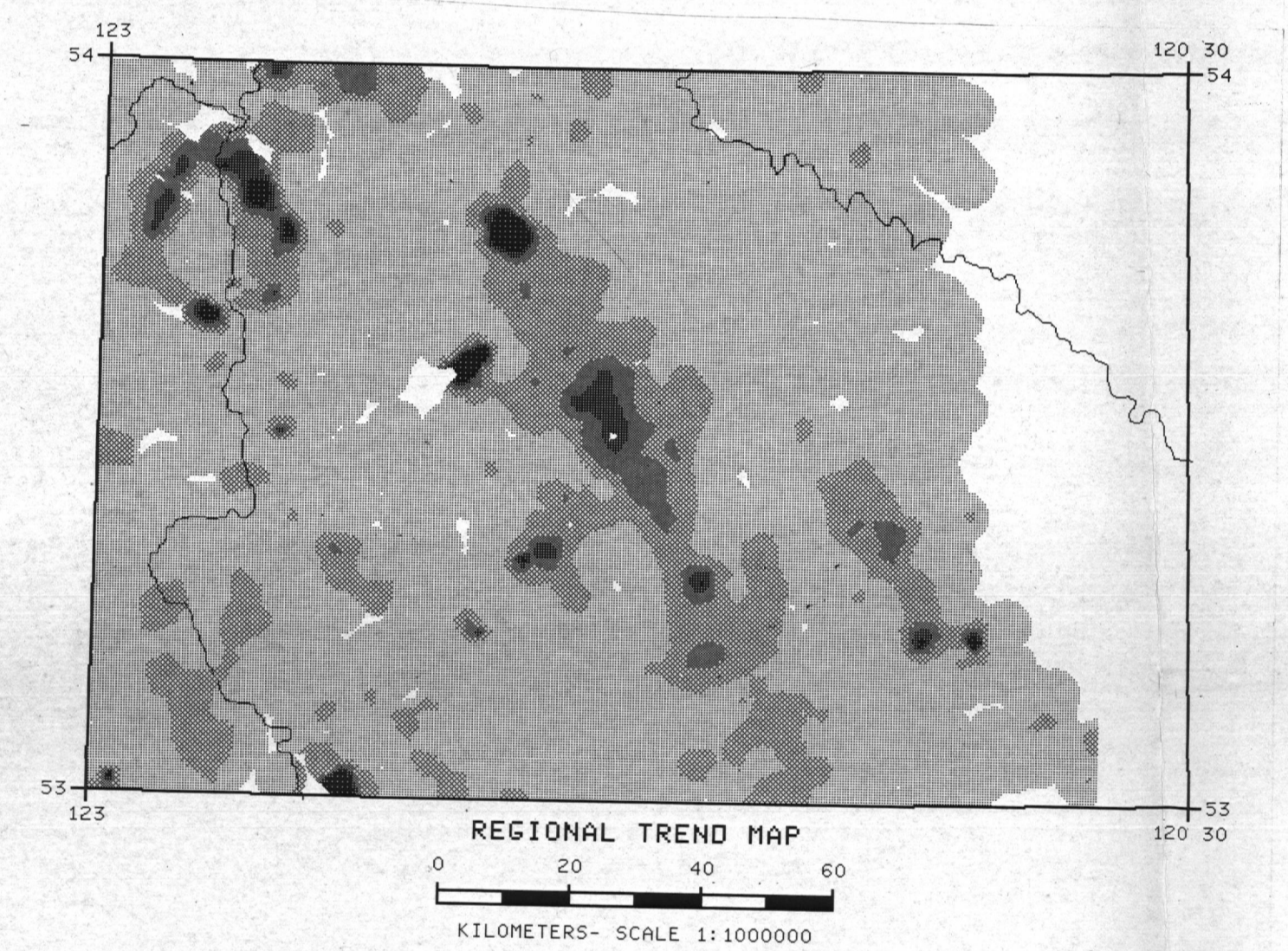
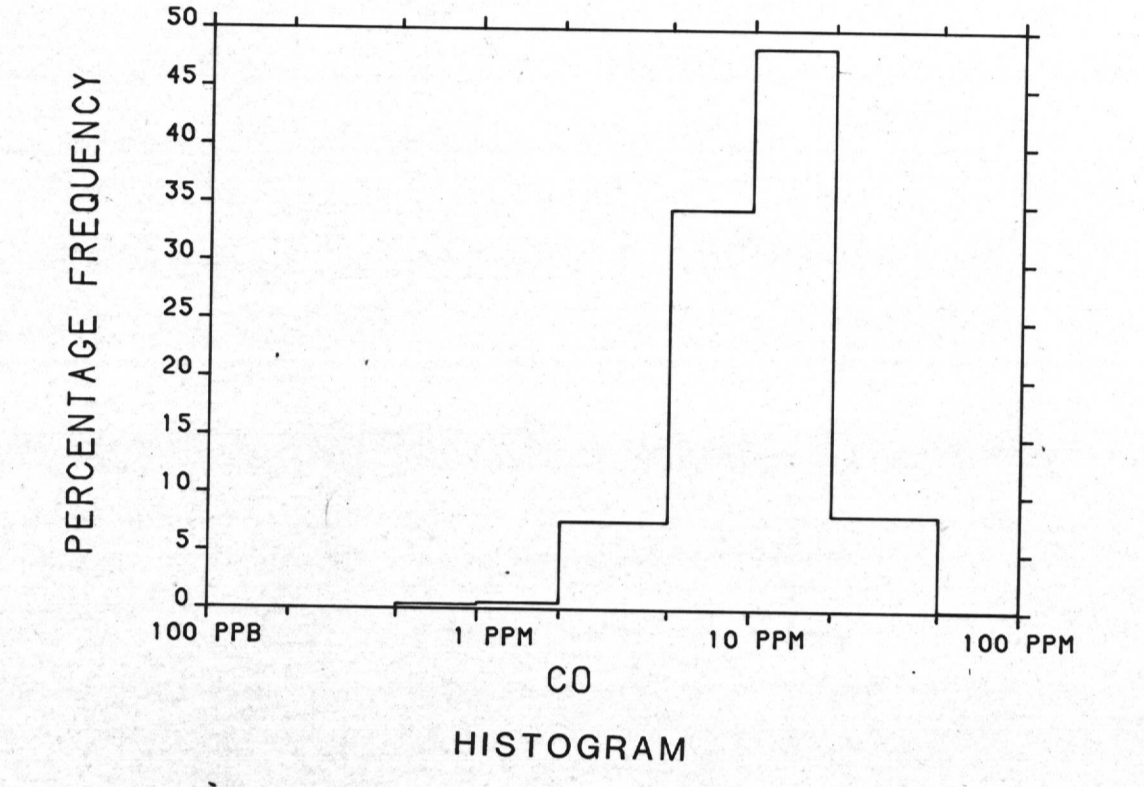
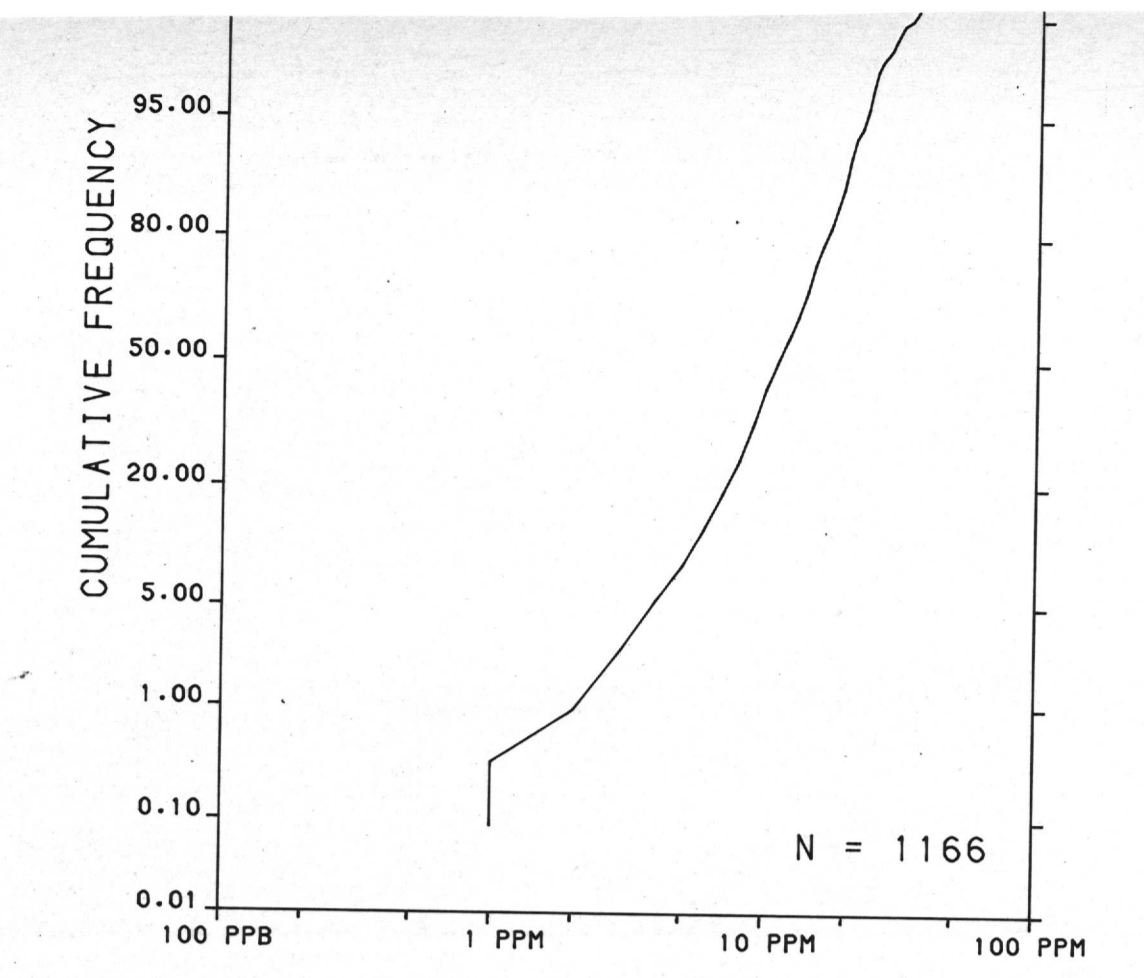
1938: Geology of Willow River Sheet
Map 335 A, West Half
Map 336 A, East Half

Tipper, H.W.

1971: Glacial Geomorphology and Pleistocene History of Central British Columbia;
Geological Survey of Canada,
Bulletin 196. 89p. (esp. Map 1288A, scale 1:250 000)

Tipper, H.W., Campbell, R.B., Taylor, G.C. and Stott, D.F.

1979: Parsip River,
British Columbia;
Geological Survey of Canada,
Map 1424A, scale 1:1 000 000



REGIONAL TREND MAP
Scale 1:100 000

Provincial Open File
BC RS-12-1984 (1936 E/2, 93H W/2)

LEGEND
(This legend to be used west of 122°00' W)

Note: This legend is common for Regional Geochemical 72-1984 Open File 1107

- CENOZOIC**
- QUATERNARY**
- 17 PLEISTOCENE AND RECENT
TILL 40 TILL GRAVEL, SAND, SILT, ALLUVIUM
- TERTIARY**
- MIOCENE AND PLEISTOCENE**
16 MELT 42 LOYNE BASALT FLOWS, BRECCIA, AND TUFF
15 SANDS 42 SANDSTONE, SHALE, CONGLOMERATE, DIATOMITE, LIGNITE
- OLIGOCENE AND MIOCENE**
14 SANDS 42 ANDAGU GROUP: ANDESITE, BASALT, DACITE
- PALEOCENE, EOCENE, OLIGOCENE**
13 SANDS 42 CONGLOMERATE, SANDSTONE, SHALE, TUFF, BRECCIA
- MESOZOIC - CENOZOIC**
- UPPER CRETACEOUS AND LOWER TRIASSIC**
12 SILET 41 JAZZA LAKE GROUP: RHYOLITE, DACITE, TRACHYTE, SANDSTONE, SHALE, CONGLOMERATE
- CRETACEOUS**
- 11 SANDS 38 ANDESITE, TUFF, BRECCIA, ARGILLITE, ARKOSE, CONGLOMERATE
10 LOWER CRETACEOUS
10 SANDS 38 JAZZA LAKE GROUP: CONGLOMERATE, GREYWACKE, SHALE, COAL, VOLCANIC BRECCIA
- JURASSIC**
- MIDDLE JURASSIC**
9 SANDS 34 HAZELTON GROUP (PART) UNDIVIDED: BASALT, ANDESITE, TUFF, BRECCIA, GREYWACKE, MUDSTONE, CONGLOMERATE
- LOWER AND MIDDLE JURASSIC**
8 SILET 34 SHALE, GREYWACKE, CONGLOMERATE
- UPPER TRIASSIC AND LOWER JURASSIC**
7 SANDS 30 TACGA GROUP: ANDESITE, BASALT, TUFF, BRECCIA, CONGLOMERATE, GREYWACKE, SHALE, LIMESTONE
- TRIASSIC**
- UPPER TRIASSIC**
6 ILMON 20 LIMESTONE
5 ILLIT 20 BLACK PHYLITE, SILTSTONE, LIMESTONE, QUARTZITE
- PALEOZOIC**
- PENNSYLVANIAN AND PERMIAN**
4 ICHRT 20 CACHE CREEK GROUP: RIBBON CHERT, BLACK ARGILLITE, LIMESTONE, GREENSTONE
- MISSISSIPPIAN AND/OR YOUNGER**
3 ISLT 21 SLIDE MOUNTAIN GROUP: BASALT, BRECCIA, TUFF, CHERT, ARGILLITE, SANDSTONE, LIMESTONE, CONGLOMERATE
- CAMBRIAN**
- LOWER CAMBRIAN**
2 ILMON 20 MURAL FORMATION: LIMESTONE (INCLUDES MANTO FORMATION SILTSTONE, SANDSTONE)
- PROTEROZOIC**
- HADRYNIAN**
1 SANDS 04 KAZA GROUP: SANDSTONE, CONGLOMERATE, GRIT, PHYLITE, SCHIST, AMPHIBOLITE, MARBLE, GNEISS

- PLUTONIC ROCKS**
- TERTIARY**
- 10 HORR 42 GRANODIORITE, QUARTZ DIORITE, QUARTZ MONZONITE
9 IOTM 30 MAVER INTRUSIONS: QUARTZ MONZONITE, SYENITE, MONZONITE, GRANODIORITE, DIORITE
- UPPER TRIASSIC**
8 GORJ 20 TAKOMKANE BATHOLITE AND BODIES OF SIMILAR AGE AND LITHOLOGY: GRANODIORITE, QUARTZ DIORITE, QUARTZ MONZONITE
- PERMIAN AND/OR TRIASSIC**
7 IPRM 20 THIRUBAL INTRUSIONS AND SIMILAR BODIES: PERIODITE, DUNITE, PYROXENITE, SERPENTINITE

- SYMBOLS**
- GEOLOGICAL BOUNDARY: MAPPED, ASSUMED
FAULT: MAPPED, ASSUMED
THRUST FAULT (TEEN ON HANGINGWALL): MAPPED, ASSUMED
ANTICLINAL AXIS
SYNCLINAL AXIS
STREAM SAMPLE SITE

Geology and Mineral Deposits

Generalized geology after Geological Survey of Canada Map 49-1960, Prince George, British Columbia, 1:500 000, H. W. Tipper, 1968, and Geological Survey of Canada Map 1424A, Parsip River, British Columbia, 1:1 000 000, compilation by H. W. Tipper, R. B. Campbell, G. C. Taylor, and D. F. Stott, 1979, used to determine dominant sedimentary rock type for grouping of geochemical data.

The four-letter monomeric name indicates rock type and the two-digit number indicates age.

For location of the following specific information for this area refer to British Columbia Ministry of Energy, Mines and Petroleum Resources: Mineral Deposits, refer to Mineral Inventory Map (MII) 503 (PRINCE GEORGE); Assessment Reports, refer to Assessment Report Index Map (AR) 825 (PRINCE GEORGE); Geologic Grouping Mapping Reports, refer to Index to Bedrock Geological Mapping, 1982; Mineral and Place Name Maps, contact Ministry of Energy, Mines and Petroleum Resources, Titles Branch, for current edition.

Geological Survey of Canada
Resource Geophysics and Geochemistry Division
Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources

CONTRACTORS

Sample collection by McElhanney Surveying and Engineering Ltd., Vancouver
Sample preparation by Golder Associates, Ottawa

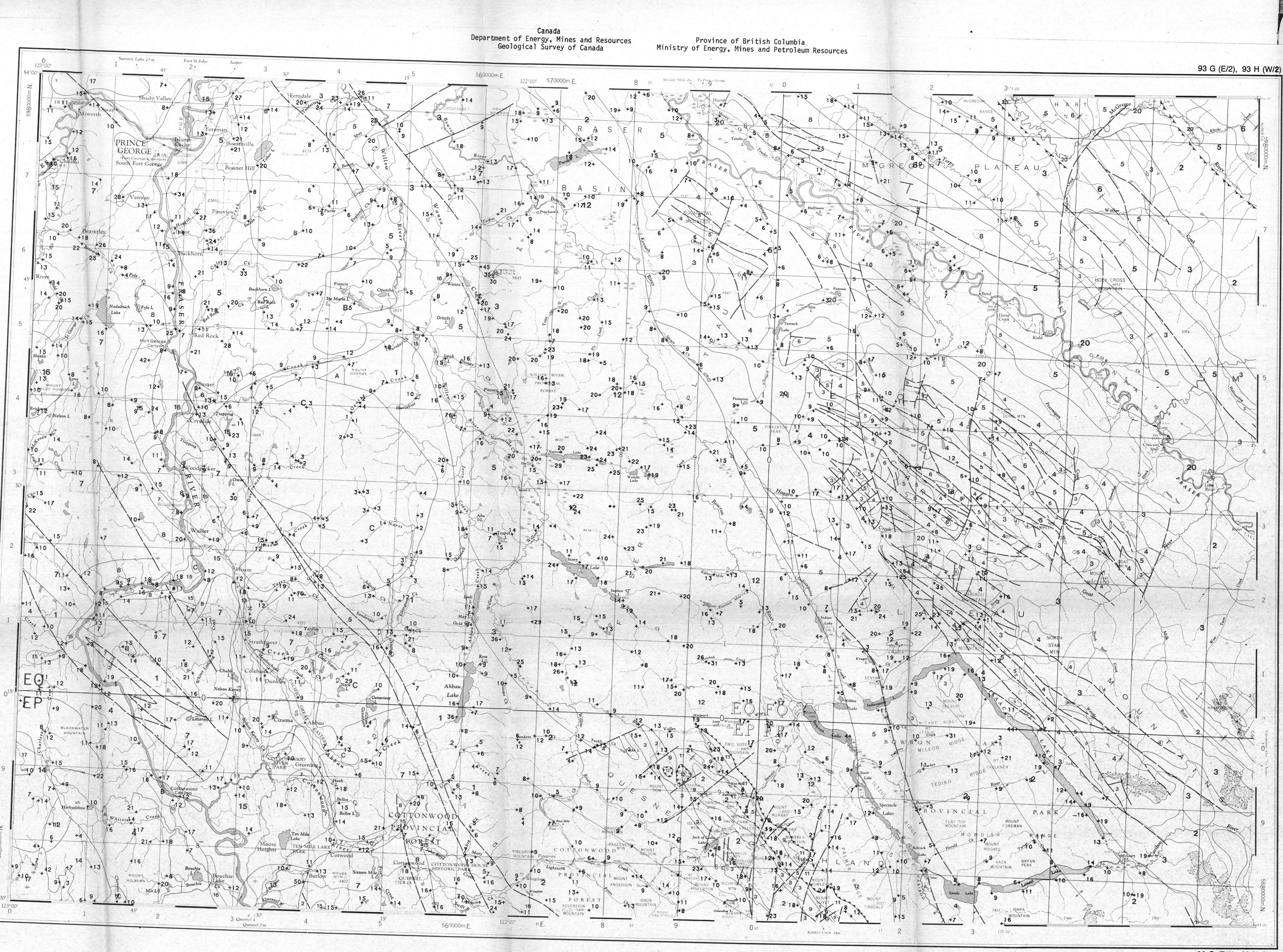
Sediment chemical analysis by Barringer Magenta Ltd., Reddick, Ontario
Water chemical analysis by Barringer Magenta Laboratories (Alberta) Ltd., Calgary

Copies of map material and listings of field observations and analytical data, from which the material was prepared, may be available at users expense by application to:

K.G. Campbell Corporation
880 Wellington St.
Box 238
Ottawa, Ontario
K1R 6K7

The data are also available in digital form.
For further information please contact:

The Director
Computer Science Centre
Department of Energy, Mines and Resources
Ottawa, Ontario
K1A 0E4



Elevation in feet above mean sea level

Mean magnetic declination 1985, 27°34' West, decreasing 9.9' annually. Readings vary from 26°41' in the SW corner to 28°27' in the NE corner of the map area

Scale 1:250 000

Unusual Transverse Mercator Projection
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COBALT (ppm)
GSC OPEN FILE 1107

REGIONAL GEOCHEMICAL RECONNAISSANCE MAP 72-1984
JOINT CANADA/BRITISH COLUMBIA PROGRAM
STREAM SEDIMENT AND WATER GEOCHEMICAL SURVEY
EAST-CENTRAL BRITISH COLUMBIA

Scale 1:250 000

Unusual Transverse Mercator Projection
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Base map assembled by the Geological Cartography Unit from maps published at the same scale by the Surveys and Mapping Branch in 1969, 1970

This map has been reprinted from a scanned version of the original map. Reproduction per numeration done for this project.

LEGEND
(This legend to be used east of 122°00' W only.)

Note: This legend is common for Regional Geochemical 72-1984 Open File 1107

- QUATERNARY**
- 17 PLEISTOCENE AND RECENT
TILL 40 TILL GRAVEL, SAND, SILT, ALLUVIUM
- CRETACEOUS OR TERTIARY**
- 16 UPPER CRETACEOUS OR PALEOCENE
15 COAL 41 BROWN RIVER COAL BEDS: CONGLOMERATE, BRECCIA, SANDSTONE, SHALE, COAL
- UPPER JURASSIC AND LOWER CRETACEOUS**
12 SANDS 35 NIKARASIN FORMATION: SANDSTONE, SILTY SHALE, SILTSTONE
- JURASSIC**
- LOWER TO UPPER JURASSIC**
11 SILET 34 FERNIE GROUP: SHALE, SILTY SHALE, SILTSTONE
- UPPER TRIASSIC**
- 10 ILLIT 20 PHYLITE, ARGILLITE, MINOR LIMESTONE, QUARTZITE
- MIDDLE AND UPPER TRIASSIC**
9 ILMON 20 SNIPAY RIVER GROUP, WHITEHOUSE FORMATION: LIMESTONE AND DOLOMITE
- LOWER AND MIDDLE TRIASSIC**
8 ILMON 20 SULLYHILL MOUNTAIN FORMATION: SILTSTONE AND SILTY LIMESTONE
- MISSISSIPPIAN AND PERMIAN**
- 7 ILMON 20 FLOODE GROUP, ISABEL GROUP, BANFF FORMATION: LIMESTONE, SANDSTONE, SILTY SHALE, DOLOMITE, CHERT
- MISSISSIPPIAN**
- 6 ISLT 21 SELOU MOUNTAIN GROUP: ANTLER FORMATION: FILLW BASALT, BRECCIA, TUFF, MINOR DIORITE AND GABBRO, CHERT, ARGILLITE, LITHIC SANDSTONE
- LOWER MISSISSIPPIAN AND/OR OLDER**
- 5 ILMON 20 GUYET FORMATION: GREENBERY FORMATION: CONGLOMERATE, ARGILLITE, LITHIC SANDSTONE, GRENOSTONE, LIMESTONE
- DEVONIAN**
- 4 ILMON 20 FALLS OF SOUTHK, ALEXO, PERDIX, MOUNT HARK, FLUME FORMATIONS: LIMESTONE, SHALE, SANDSTONE, SILTSTONE
- LOWER DEVONIAN AND YOUNGER**
- 3 ISLT 21 BLACK STUART FORMATION: BASALT, CHERT, SANDY BRECCIA, DOLOMITE, BRECCIA, UPPER UNIT CHERT ARGILLITE, PHYLITE, SANDY LIMESTONE
- SILURIAN**
- LOWER SILURIAN**
2 ILMON 20 WOODS FORMATION: ALL OR IN PART DOLOMITE, LIMESTONE, QUARTZITE, SHALE, GRENOSTONE, FLOW AND SILLS
- ODOVICAN**
- LOWER AND MIDDLE ODOVICAN**
1 ILMON 20 BUCKLE MOUNTAIN, CHISHINA FORMATIONS: DOLOMITE, LIMESTONE, SANDSTONE, SHALE, QUARTZITE
- CAMBRIAN**
- 1 ILMON 20 LYVA, DOME CREEK, ARCTOMYS, WATERFLOW, HOTA-ADOLPHUS, TATE-CHITANG, TITKANA FORMATIONS: SHALE, SILTY LIMESTONE, DOLOMITE, SANDSTONE, SILTSTONE, ARGILLITE, PHYLITE
- LOWER CAMBRIAN AND HADRYNIAN**
- 1 IPRM 20 MANTO MURAL, MIDAL, MANAGHON, YAKES PEAK FORMATIONS: QUARTZITE, LIMESTONE, SHALE, SILTSTONE, PHYLITE, DOLOMITE, CONGLOMERATE
- HADRYNIAN**
- 1 ILMON 20 YANKEE BELLE, CUNNINGHAM FORMATIONS: SHALE, LIMESTONE, SILTSTONE, DOLOMITE, PHYLITE
- MISSISSIPPIAN OR YOUNGER**
- 1 IPRM 21 SERPENTINITE

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Generalized geology after Geological Survey of Canada Map 1384A, assessment Report 72-25, Geology Survey of Canada Map 1424A, Parsip River, British Columbia, 1:1 000 000, compilation by H. W. Tipper, R. B. Campbell, G. C. Taylor, and D. F. Stott, 1979; Figure 2, Geological Map of the Parsip River Area, 1979, Geological Survey of Canada; Ministry of Energy, Mines and Petroleum Resources Bulletin 47, Geology 781, Assessment Report of the Parsip River Area, by A. Sutherland Brown, 1982, and Geological Survey of Canada Open File 1107, Assessment Report of the Parsip River Area, by L. C. Stuck, 1983, used to determine dominant sedimentary rock type for grouping of geochemical data.

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This map forms one of a series of maps released by the Geological Survey of Canada, Open File 1107. The Open File consists of maps of various geochemical variables: 10 for stream sediment, 3 for stream water and 1 sample site location

COBALT (ppm)
GSC OPEN FILE 1107
EAST-CENTRAL BRITISH COLUMBIA