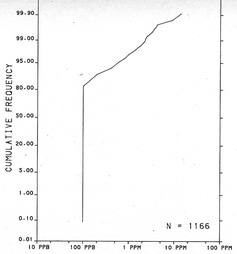
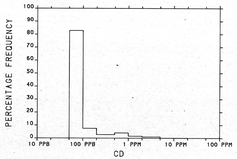
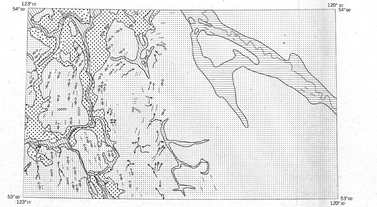




CD

HISTOGRAM



SURFICIAL GEOLOGY

Kilometres 0 20 40 60

Scale 1:1 000 000

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)

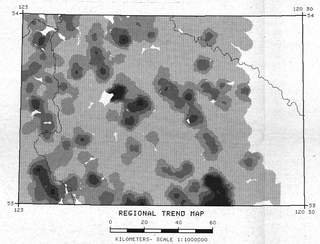
Tipper, H.W., Campbell, R.B., Taylor, G.C. and Stott, D.F.

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

CD

PPM	%TILE
14.0	MAX
1.4	90
0.6	95
0.2	90
0.1	80
0.1	MIN

1166 SAMPLES



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

LEGEND

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

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

CENOZOIC

QUATERNARY

PLEISTOCENE AND RECENT

12 (TILL 44) TILL, GRAVEL, SAND, SILT, ALLUVIUM

TERTIARY

MIOCENE AND PLIOCENE

16 (BSLT 43) OLIVINE BASALT FLOWS, BRECCIA, AND TUFF

15 (SNDS 43) SANDSTONE, SHALE, CONGLOMERATE, DIATOMITE, LIGNITE

OLIGOCENE AND MIOCENE

14 (ANDS 42) *ENDAKO GROUP*: ANDESITE, BASALT, DACITE

PALEOCENE, EOCENE, OLIGOCENE

13 (CGLM 42) CONGLOMERATE, SANDSTONE, SHALE, TUFF, BRECCIA

MESOZOIC - CENOZOIC

UPPER CRETACEOUS AND LOWER TERTIARY

12 (RYLT 41) *OOTSA LAKE GROUP*: RHYOLITE, DACITE, TRACHYTE, SANDSTONE, SHALE, CONGLOMERATE

CRETACEOUS

11 (ANDS 36) ANDESITE, TUFF, BRECCIA, ARGILLITE, ARKOSE, CONGLOMERATE

LOWER CRETACEOUS

10 (CGLM 38) *SKEENA GROUP*: CONGLOMERATE, GREYWACKE, SHALE, COAL, VOLCANIC BRECCIA

JURASSIC

MIDDLE JURASSIC

9 (ANDS 34) *HAZELTON GROUP (PART)* UNDIVIDED: BASALT, ANDESITE, TUFF, BRECCIA, GREYWACKE, MUDSTONE, CONGLOMERATE

LOWER AND MIDDLE JURASSIC

8 (SHLE 34) SHALE, GREYWACKE, CONGLOMERATE

UPPER TRIASSIC AND LOWER JURASSIC

7 (ANDS 33) *TAKLA GROUP*: ANDESITE, BASALT, TUFF, BRECCIA, CONGLOMERATE, GREYWACKE, SHALE, LIMESTONE

TRIASSIC

UPPER TRIASSIC

6 (LMSN 32) LIMESTONE

5 (PLLT 32) BLACK PHYLLITE, SILTSTONE, LIMESTONE, QUARTZITE

PALEOZOIC

PENNSYLVANIAN AND PERMIAN

4 (CGWT 29) *CACHE CREEK GROUP*: RIBBON CHERT, BLACK ARGILLITE, LIMESTONE, GREENSTONE

MISSISSIPPIAN AND YOUNGER

3 (BSLT 28) *SLIDE MOUNTAIN GROUP*: BASALT, BRECCIA, TUFF, CHERT, ARGILLITE, SANDSTONE, LIMESTONE, CONGLOMERATE

CAMBRIAN

LOWER CAMBRIAN

2 (LMSN 12) *MURAL FORMATION*: LIMESTONE (INCLUDES *MAYO FORMATION* SILTSTONE, SANDSTONE)

PROTEROZOIC

NEOPROTEROZOIC

1 (GNDS 04) *KAZA GROUP*: SANDSTONE, CONGLOMERATE, GRIT, PHYLLITE, SCHIST, AMPHIBOLITE, MARBLE, GNEISS

PLUTONIC ROCKS

TERTIARY

D (GRDR 42) GRANODIORITE, QUARTZ DIORITE, QUARTZ MONZONITE

LOWER CRETACEOUS

C (QTMZ 36) *RAVER INTRUSIONS*: QUARTZ MONZONITE, SYENITE, MONZONITE, GRANODIORITE, DIORITE

UPPER TRIASSIC

B (GRDR 20) *TAKOMKANE BATHOLITH AND BODIES OF SIMILAR AGE AND LITHOLOGY*: GRANODIORITE, QUARTZ DIORITE, QUARTZ MONZONITE

PERMIAN AND/OR TRIASSIC

A (GPPN 31) *TREMBLEUR INTRUSIONS AND SIMILAR BODIES*: PERIDOTITE, DUNITE, PYROXENITE, SERPENTINITE

SYMBOLS

GEOLOGICAL BOUNDARY: MAPPED, ASSUMED

FAULT: MAPPED, ASSUMED

THRUST FAULT (TEETH 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 inch to 4 miles, H. W. Tipper, 1959 and Geological Survey of Canada Map 1424A, Parsnip 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 sediment lean rock type for processing of geochemical data.

The four-letter mnemonic 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 (MIH) 93G (PRINCE GEORGE) and Assessment Report Index Map (ARI) 93H (MUSKWA); Geological Mapping, refer to Index to Bedrock Geologic Mapping, 1982; Mineral and Placer Claim Maps, contact Ministry of Energy, Mines and Petroleum Resources, Titles Branch, for current editions.

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 Engineer Ltd., Vancouver
Sample preparation by Golder Associates, Ottawa

Sediment chemical analysis by Barringer Magenta Ltd., Rexdale, Ontario
Water chemical analyses 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
580 Wellington St.
Bay 238
Ottawa, Ontario
K1R 6K7

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

The Director
Computer Science Centre
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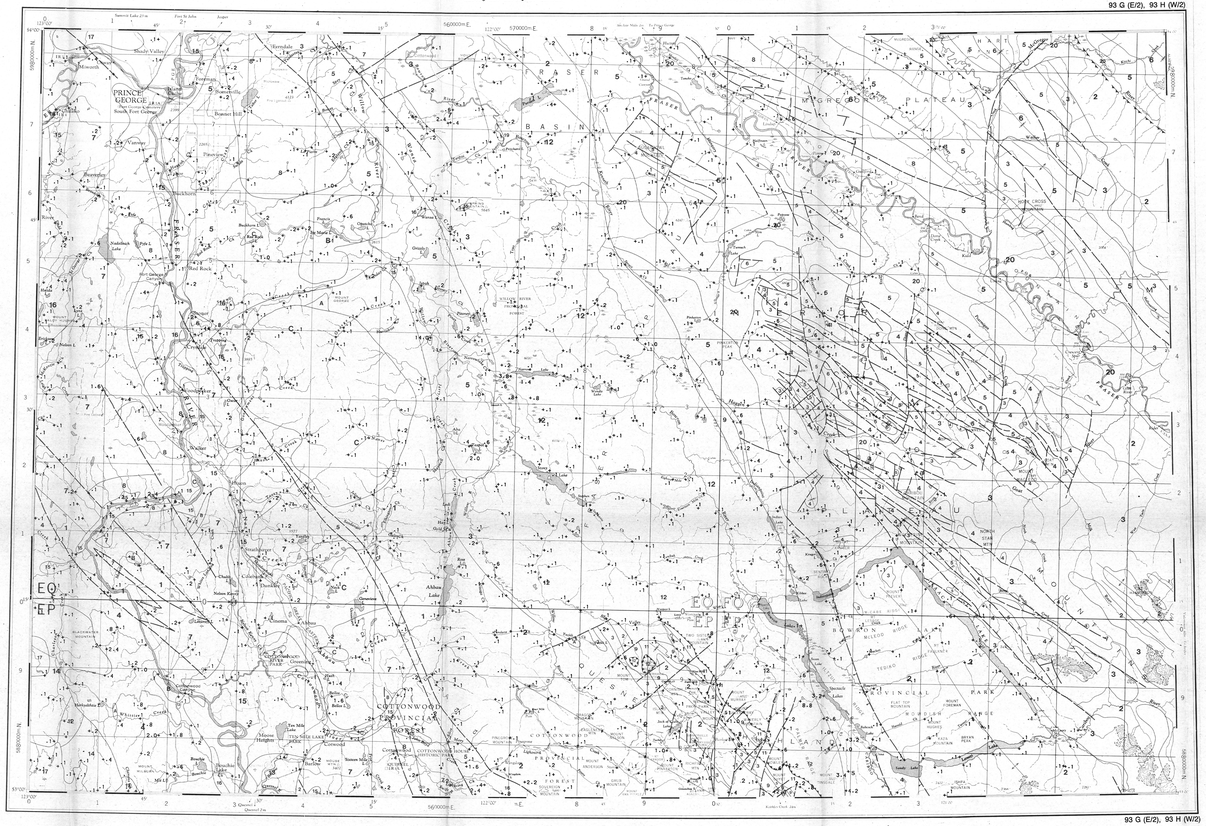
Canada
Department of Energy, Mines and Resources
Geological Survey of Canada

Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources

93 G (E/2), 93 H (W/2)



93 G (E/2), 93 H (W/2)

INDEX MAP

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

CADMIUM (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

Kilometres 5 0 5 10 15 20 Kilometres

Universal 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

NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND INDEX TO ADJOINING GEOLOGICAL SURVEY OF CANADA MAPS

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

LEGEND

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

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

QUATERNARY

PLEISTOCENE AND RECENT

20 (TILL 44) TILL, GRAVEL, SAND, SILT, ALLUVIUM

CRETACEOUS OR TERTIARY

UPPER CRETACEOUS OR PALEOCENE

19 (CGLM 41) *BOWRON RIVER COAL BEDS*: CONGLOMERATE, BRECCIA, SANDSTONE, SHALE, COAL

UPPER JURASSIC AND LOWER CRETACEOUS

18 (SNCB 36) *MCADAM FORMATION*: SANDSTONE, SILTY SHALE, SILTSTONE

JURASSIC

LOWER TO UPPER JURASSIC

17 (SHLE 34) *FERNIE GROUP*: SHALE, SILTY SHALE, SILTSTONE

TRIASSIC

UPPER TRIASSIC

16 (PLLT 32) PHYLLITE, ARGILLITE, MINOR LIMESTONE, QUARTZITE

MIDDLE AND UPPER TRIASSIC

15 (LMSN 32) *SPRAY RIVER GROUP, ANTHOROSE FORMATION*: LIMESTONE AND DOLOSTONE

LOWER AND MIDDLE TRIASSIC

14 (SLSN 32) *TOAD/PINK MOUNTAIN FORMATION*: SILTSTONE AND SILTY LIMESTONE

MISSISSIPPIAN AND PERMIAN

13 (SLSN 28) *CANOE RIVER GROUP, ISKNELL GROUP, BANFF FORMATION*: LIMESTONE, SANDSTONE, LIMY SHALE, DOLOSTONE, CHERT

MISSISSIPPIAN

LOWER MISSISSIPPIAN AND/OR YOUNGER

12 (BSLT 28) *SLIDE MOUNTAIN GROUP, ANTLER FORMATION*: PILLOW BASALT, BRECCIA, TUFF, MINOR DIORITE AND GABBRO, CHERT, ARGILLITE, LITHIC SANDSTONE

LOWER MISSISSIPPIAN AND/OR OLDER

11 (CGLM 21) *QUIET FORMATION, GREENBERRY FORMATION*: CONGLOMERATE, ARGILLITE, LITHIC SANDSTONE, CRINOIDAL LIMESTONE

DEVONIAN

UPPER AND MIDDLE DEVONIAN

10 (LMSN 18) *FALLOFF, SOUTHER, ALEXO, PERDRIX, MOUNT HAWK, FLUME FORMATIONS*: LIMESTONE, SHALE, SANDSTONE, SILTSTONE

LOWER DEVONIAN AND YOUNGER

9 (BSLT 18) *BLACK STUART FORMATION*: BASALT, CHERT, CHERT BRECCIA; DOLOMITE BRECCIA, UPPER UNIT: CHERTY ARGILLITE, PHYLLITE, SANDY LIMESTONE

SILURIAN

LOWER SILURIAN

8 (LMSN 16) *MOUNT ROBSON FORMATION*: ALL OR IN PART: DOLOMITE, LIMESTONE, QUARTZITE, CHERT, GRANODIORITE AND LAMPROPHYRE DIKES AND SILLS

ORDOVICIAN

LOWER AND MIDDLE ORDOVICIAN

7 (SLMT 14) *SKOKI, MISKANAW, CHILCHINA FORMATIONS*: DOLOMITE, LIMESTONE, SANDSTONE, SHALE, QUARTZITE

CAMBRIAN

6 (SHLE 12) *LYNX, DOME CREEK, ARCTOMYS, WATERFLOWL, HOYA-AZOPHUS, TATEI-CHETANG, TITKANA FORMATIONS*: SHALE, SILTY LIMESTONE, DOLOMITE, SANDSTONE, SILTSTONE, ARGILLITE, PHYLLITE

LOWER CAMBRIAN AND NEOPROTEROZOIC

5 (QRTZ 11) *MONTE, MURAL, MURDASHAUGHTON, YANKEE PEAK FORMATIONS*: QUARTZITE, LIMESTONE, SHALE, SILTSTONE, PHYLLITE, DOLOMITE, CONGLOMERATE

NEOPROTEROZOIC

4 (SHLE 04) *YANKEE BELLE, CUNNINGHAM FORMATIONS*: SHALE, LIMESTONE, SILTSTONE, DOLOMITE, PHYLLITE

3 (PLLT 04) *MITTIE GROUP, ISAAC FORMATION*: PHYLLITE, ARGILLITE, SCHIST, SANDSTONE, LIMESTONE, CONGLOMERATE

2 (FPCA 04) *KAZA GROUP, CROMMIDGE FORMATION, MIDDLE MITTIE GROUP*: FELDSPATHIC SANDSTONE, GRANULE CONGLOMERATE, SILTSTONE, ARGILLITE, PHYLLITE, SCHIST, LIMESTONE MARBLE

1 (ARGL 04) *LOWER MITTIE GROUP*: ARGILLITE, PHYLLITE, SANDSTONE, LIMESTONE, SCHIST

INTRUSIVE ROCKS

MISSISSIPPIAN OR YOUNGER

A (GPPN 21) SERPENTINITE

SYMBOLS

GEOLOGICAL BOUNDARY: MAPPED, ASSUMED

FAULT (DOT ON DOWNTHROWN SIDE): MAPPED, ASSUMED

THRUST FAULT (TEETH ON HANGINGWALL): MAPPED, ASSUMED

ANTICLINAL AXIS

SYNCLINAL AXIS

STREAM SAMPLE SITE

GEOLOGY AND MINERAL DEPOSITS

Generalized geology after Geological Survey of Canada, Map 1266A, to accompany Paper 72-30, Geology of McBride Map Area, British Columbia, by R. B. Campbell, E. W. Mountjoy, and F. G. Young; Geological Survey of Canada Map 1424A, Parsnip River, British Columbia, 1:1 000 000, compilation by H. W. Tipper, R. B. Campbell, G. C. Taylor, and D. F. Stott, 1979; Geological Map of the Canoe River Area, by A. Sutherland Brown, 1963, and accompanying British Columbia Ministry of Energy, Mines and Petroleum Resources Bulletin 47, Geology of the Canoe River Area, by A. Sutherland Brown, 1963; and Geological Survey of Canada Open File 1260, Geology, Valemount, British Columbia, by R. G. Wheeler and R. A. Shrimb, 1981, used to determine dominant sediment lean rock type for processing 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: 18 for stream sediments, 3 for stream water and 1 sample site location

This map has been reprinted from a scanned version of the original map and may contain some numeration d'une partie sur papier.

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