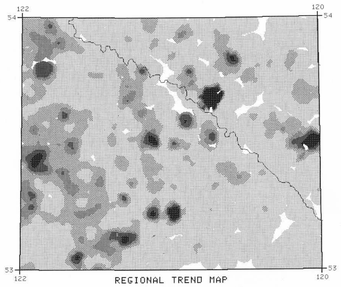
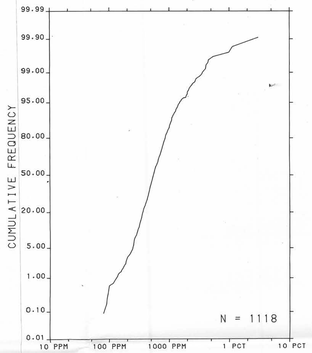
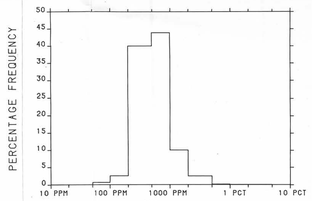
Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources
Provincial Open File
BC RGS-14-1985







The regional geochemical trend map displayed above utilized a moving weighted average using an inverse distance function ($1/d^3$) to filter out minor irregularities and emphasize broad-scale regional features. Single point anomalies may be suppressed or eliminated, however, geological units which are chemically enriched, or large metallic deposits undergoing weathering would be expected to produce identifiable anomalies.

CONTRACTORS

Sample collection by McElhanney Surveying and Engineering Ltd., Vancouver

Sample preparation by Golder Associates, Ottawa (1984) and Kamloops Research and Assay Laboratory Ltd., Kamloops B.C. (1985)

Sediment chemical analyses by Barringer Magenta Ltd., Rexdale, Ontario (1984) and Bondar-Clegg and Company Ltd., North Vancouver, B.C. (1985)

Water chemical analyses by Barringer Magenta Laboratories (Alberta) Ltd., Calgary (1984) and Chemex Labs Ltd., North Vancouver, B.C. (1985)

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.
Bay 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

Contribution to Canada-British Columbia Mineral Development Agreement 1985-89, a subsidiary agreement under the Economic and Regional Development Agreement. West half of the project jointly funded under a letter of understanding by the Geological Survey of Canada and British Columbia. East half of the project funded by British Columbia

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

Energy, Mines and Resources Canada — Énergie, Mines et Ressources Canada

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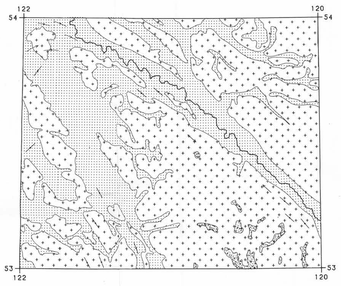


SURFICIAL GEOLOGY

Undivided Glaciofluvial, Glaciolacustrine and morainal deposits: sand, silt, gravel and clay with local accumulations up to 70 m thick along valley bottoms: may include meltwater or outwash channel deposits, alluvium, varved silt, clay and sand, glacial till and ground moraine

Predominantly Rock: below 1,700 m elevation, discontinuous veneers of glacial till and ground moraine, and minor colluvium; valley bottoms may contain drumlinoid features, fluting, kame and esker complexes

Glaciers, permanent snowfields

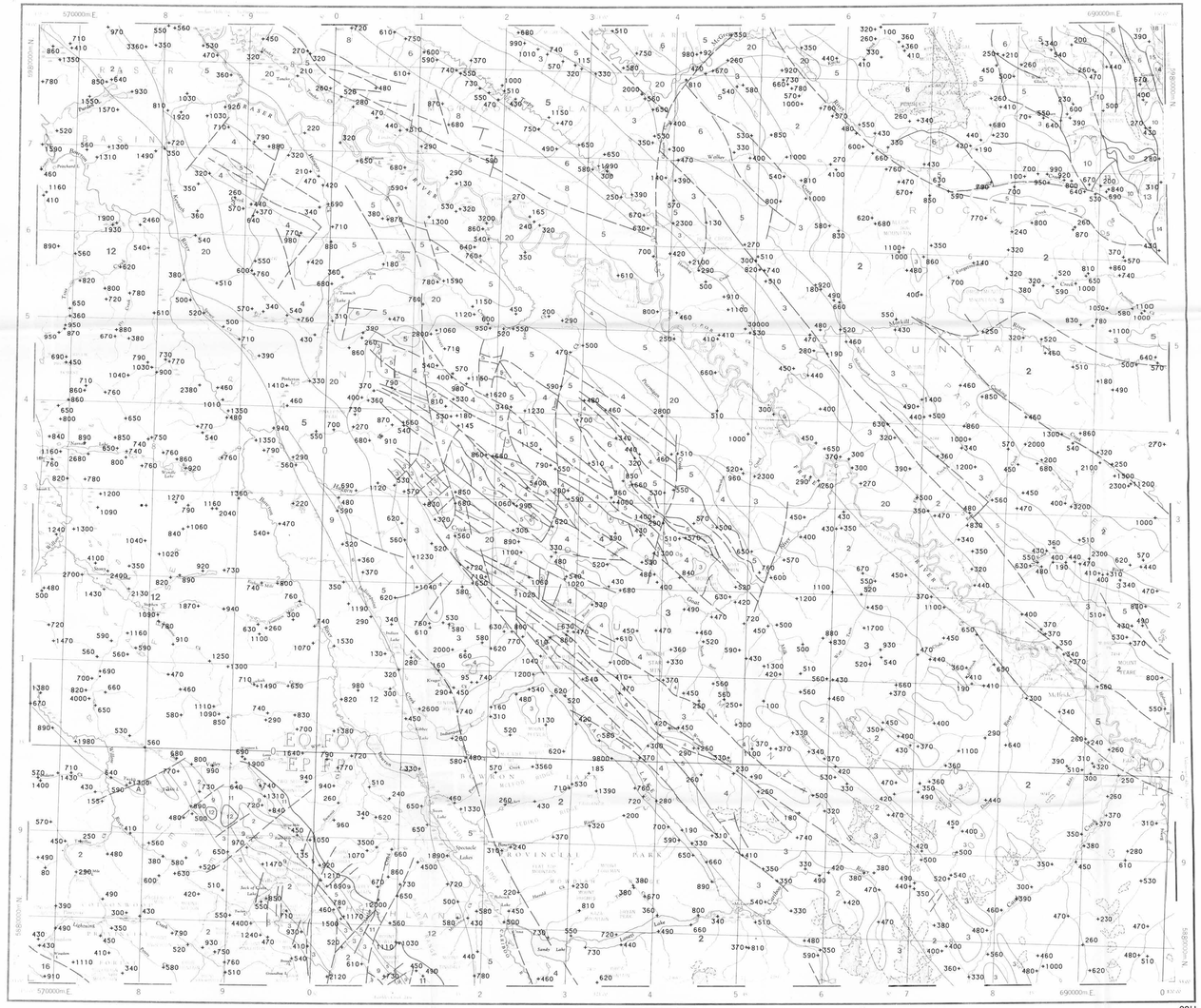
Ice flow direction inferred from various data

Fluting, glacial striae

Sources of information:
Prest, V.K., Grant, D.R. and Rampton, V.N. (1967) Glacial Map of Canada, Geological Survey of Canada, Map 1253A (Scale 1:5,000,000).
Campbell, R.B. and Mountjoy, E.W. (1967) Geology - McBRIDE, British Columbia, Geological Survey of Canada, Map 1356A (Scale 1:250 000)

GEOLOGICAL SURVEY OF CANADA — COMMISSION GEOLOGIQUE DU CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES
MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES

93H



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INDEX MAP

Elevation in feet above mean sea level

Mean magnetic declination 1986, 23°17' East, decreasing 15.5' annually. Readings vary from 22°43'E in the SE corner to 23°50'E in the NW corner of the map-area

MANGANESE (ppm)
GSC OPEN FILE 1215
REGIONAL GEOCHEMICAL RECONNAISSANCE MAP 80-1985
CANADA - BRITISH COLUMBIA
MINERAL DEVELOPMENT AGREEMENT (1985-89)
STREAM SEDIMENT AND WATER GEOCHEMICAL SURVEY
EAST-CENTRAL BRITISH COLUMBIA, 1985

Scale 1:250 000

Kilometres 5 0 5 10 15 20 Kilometres

Universal Transverse Mercator Projection

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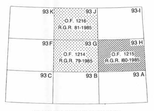
Base-map at the same scale published by the Surveys and Mapping Branch in 1966
Streams were revised by the Geological Survey of Canada for this edition



MANGANESE (ppm)
GSC OPEN FILE 1215
EAST-CENTRAL BRITISH COLUMBIA, 1985

LEGEND

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 (SNDS 35) *MIKANASSIN FORMATION:* SANDSTONE, SILTY SHALE, SILTSTONE

JURASSIC
LOWER TO UPPER JURASSIC
17 (ISHLE 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, WHITEHORSE FORMATION:* LIMESTONE AND DOLOSTONE

LOWER AND MIDDLE TRIASSIC
14 (SLSN 32) *SULPHUR MOUNTAIN FORMATION:* SILTSTONE AND SILTY LIMESTONE

MISSISSIPPIAN AND PERMIAN
13 (LMSN 23) *RUNDLE GROUP, ISHBEL GROUP; BANFF FORMATION:* LIMESTONE, SANDSTONE, LIMY SHALE, DOLOSTONE, CHERT

MISSISSIPPIAN
12 (BSLT 21) *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) *GUYET FORMATION, GREENBERRY FORMATION:* CONGLOMERATE, ARGILLITE, LITHIC SANDSTONE, CRINOIDAL LIMESTONE

DEVONIAN
UPPER AND MIDDLE DEVONIAN
10 (LMSN 18) *PALLISER, SOUTHESK, 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 (DLMT 16) *NONDA FORMATION* ALL OR IN PART: DOLOMITE, LIMESTONE, QUARTZITE, SHALE, GREENSTONE FLOWS AND SILLS

ORDOVICIAN
LOWER AND MIDDLE ORDOVICIAN
7 (DLMT 14) *SKOKI, MONKMAN, CHUSHINA FORMATIONS:* DOLOMITE, LIMESTONE, SANDSTONE, SHALE, QUARTZITE

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

LOWER CAMBRIAN AND HADRYNIAN
5 (QRTZ 11) *MAHTO, MURAL, MIDAS, McNAUGHTON, YANKS PEAK FORMATIONS:* QUARTZITE, LIMESTONE, SHALE, SILTSTONE, PHYLLITE, DOLOMITE, CONGLOMERATE

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

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

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

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

INTRUSIVE ROCKS

MISSISSIPPIAN OR YOUNGER
A (SRPN 21) SERPENTINITE

Geological boundary
Fault (mapped, assumed)
No analytical result

GEOLOGY AND MINERAL DEPOSITS

Generalized geology after Geological Survey of Canada, Map 1356A to accompany Paper 72-35, *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; Figure 2, Geological Map of the Cariboo River Area accompanying British Columbia Ministry of Energy, Mines and Petroleum Resources Bulletin 47, *Geology of the Cariboo River Area*, by A. Sutherland Brown, 1963; and Geological Survey of Canada Open File 781, *Bedrock Geology of Barkerville-Cariboo Area*, by L. C. Struick, 1981, used to determine dominant catchment basin rock type for grouping 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 (MI) 93H (McBRIDE); Assessment Reports, refer to Assessment Report Index Map (AR) 93H (McBRIDE); Bedrock Geological Mapping Reports, refer to *Index to Bedrock Geological Mapping, 1982*; Mineral and Placer Claim Maps, contact Ministry of Energy, Mines and Petroleum Resources, Titles Branch, for current editions.

This map forms one of a series of maps released by the Geological Survey of Canada, Open Files 1214 to 1216. This Open File consists of maps of various geochemical variables: 18 for stream sediment, 3 for stream water and 1 sample site location

The west half of this Open File was previously released as Open File 1107 in 1985

MANGANESE (ppm)
GSC OPEN FILE 1215
EAST-CENTRAL BRITISH COLUMBIA, 1985