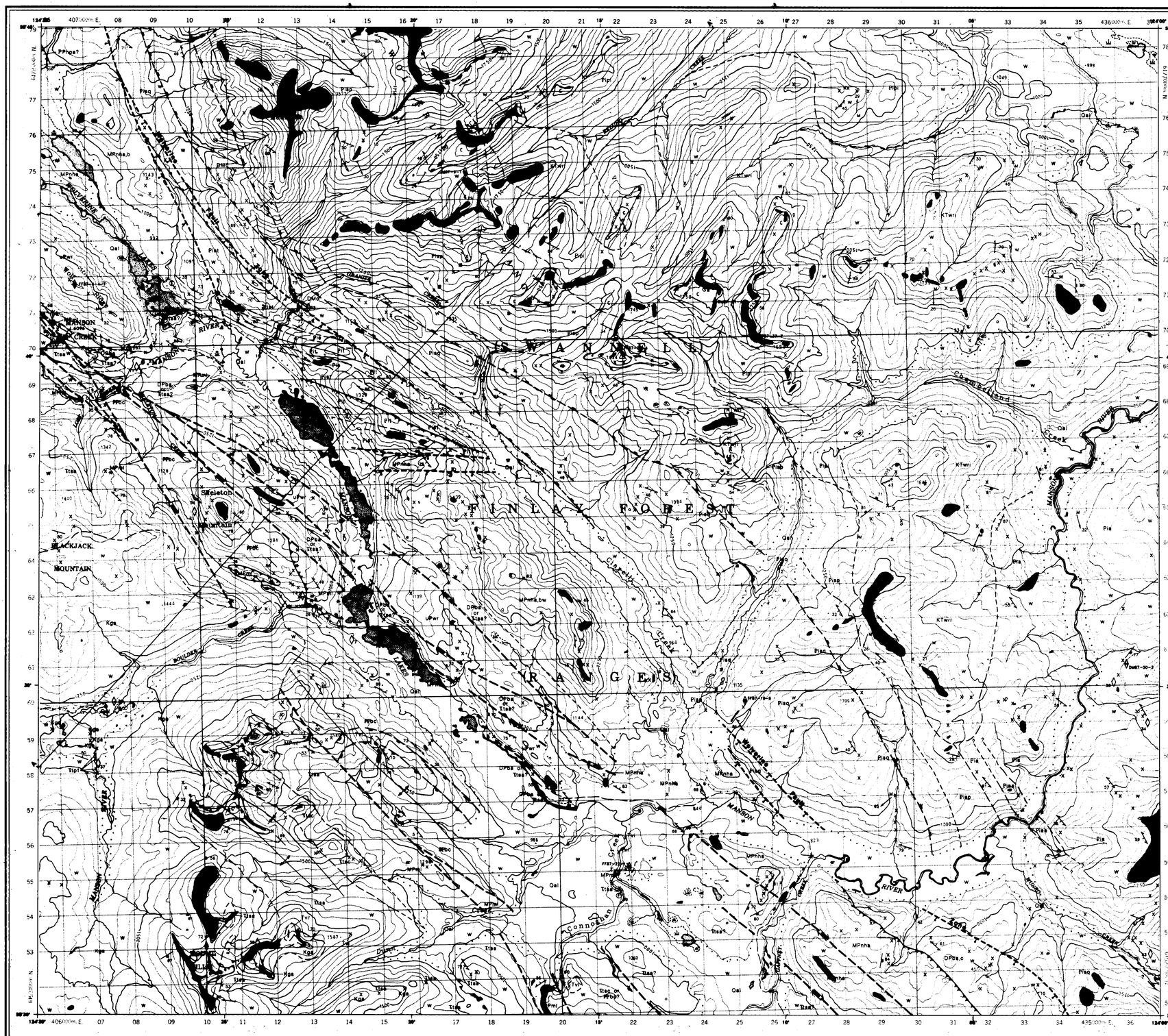


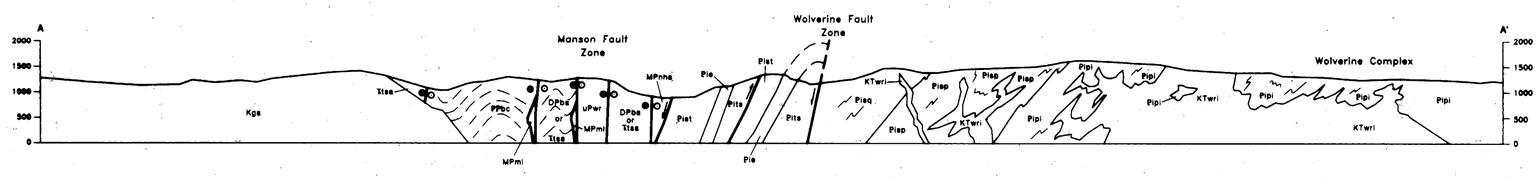
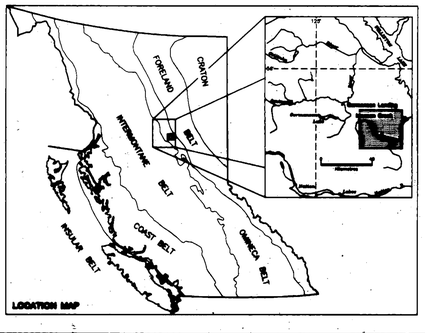


Table of Mineral Occurrences

Map Number	MINFILE Number	Commodities
2	093N 023	Au, Ag, Cu, Sb
6	093N 027	Pb, Ag
7	093N 028	Pb, Ag
9	093N 030	Pb, W, Cu, Zn, Ag
11	093N 117	Pb, Ag
13	093N 136	Pb
14	093N 137	Pb, Zn, Ag, Ba, Au, Cu, Mo
17	093N 197	Pb, Zn, Mo, Ag, Au
19	093N 134	Au, Ag
20	093N 132	Au, Ag
21	093N 148	Pb
32	093N 012	Nb, Zr, Ti, U, Th
33	093N 174	Nb, Zr, Ti, U, Th
34	093N 201	Th, La, Ce, Nd, Y, To, Cu
35	093N 180	Cu
36	093N 118	Mo,Cu
37	093N 119	Mo,Cu
38	093N 133	Mo
41	093N 135	Cr
42	093N 087	Ba
43	093N 203	C



BC Ministry of Energy, Mines and Petroleum Resources

Geological Survey Branch

GEOSCIENCE MAP 1994-1

GEOLOGY OF THE MANSON CREEK MAP AREA

NTS 93N/9

Geology by F. Ferri, D.M. Melville,

Scale 1:50 000

0 1 2 3 KILOMETRES

LEGEND

INTRUSIVE ROCKS

TERTIARY

Tvi — Sub-volcanic feldspar andesites, locally vesicular, fragmental; associated with monzonites to quartz monzonites, pink to biege, dikes and irregular bodies.

CRETACEOUS OR YOUNGER
WOLVERINE RANGE INTRUSIONS

KTwri — Garnet-muscovite-biotite granodiorite to granite and related pegmatite, beige to grey

CRETACEOUS
GERMANSEN BATHOLITH

Kgs — Biotite-muscovite granite to granodiorite, megacrystic, associated with garnet bearing pegmatites and aplite dikes

UPPER PALEOZOIC OR YOUNGER
WOLF RIDGE GABBRO

uPwr — Foliated biotite-hornblende-pyroxene gabbro, dark green to green, with related pegmatite

DEVONIAN TO MISSISSIPPIAN

DMc — Carbonatites; biotite and aegerine sovite; syenite; monzonite; foliated

VOLCANIC AND SEDIMENTARY ROCKS

QUATERNARY

Qal — Unconsolidated sands, silts, gravels; fluvial-glacial

MIDDLE TO UPPER TRIASSIC
TAKLA GROUP
PLUGHAT MOUNTAIN SUCCESSION

Ttpl — Tuff and agglomerate, lesser volcanic sandstone and conglomerate, grey to dark grey, massive to thickly bedded polymict, volcanic siltstone, argillite to calcareous argillite, and masive basalt

SLATE CREEK SUCCESSION

Ttsa — Argillite, slate, calcareous argillite, siliceous argillite, dark grey to grey, very thin to moderately bedded, lesser poymict volcanic sandstone, conglomerate and tuff, limestone, chert, massively bedded quartz-rich sandstone and siltstone at base

Ttsc — Massive and pillowed basalt, dark grey to green, may contain a moderate foliation

NINA CREEK GROUP
PENNSYLVANIAN TO PERMIAN
PILLOW RIDGE SUCCESSION

PPnpa — Massive and pillowed basalt, dark grey to green, minor varicoloured chert, siliceous argillite and gabbro

MISSISSIPPIAN TO PERMIAN
MOUNT HOWELL SUCCESSION

MPnha — Argillite, siliceous argillite, dark grey, grey to light grey, massive to poorly bedded, varicoloured chert (cream, grey, green, maroon) massive to moderately bedded, gabbro sills, basalt, wackes, quartz and quartz chert wackes, limestone, finely crystalline, minor quartz bearing tuffs

MPnhb — Gabbro, green to dark green, sill-like bodies

MANSON LAKES ULTRAMAFICS

MPml — Serpentine, dark green, massive with minor asbestos; talc-serpentine schist, dark to light green; moriqpoite-magnetite-quartz-serpentine-talc-ankerite schist, grey to brown

UPPER(?) DEVONIAN TO PERMIAN
BIG CREEK GROUP

DPbc — Argillite, black to dark grey, slightly siliceous, massive to poorly bedded; minor quartz wacke, limestone, finely crystalline

DPba — Shale, argillite, blue-grey to grey; minor quartz-chert sandstone, massively bedded

PALEOZOIC(?) AND PROTEROZOIC
BOULDER CREEK GROUP

PPbc — Phyllite, slate, siltstone, schist, grey-green; sandstone, impure sandstone, grey-green, thin to moderately bedded; limestone or marble, minor amphibolite

UPPER PROTEROZOIC
INGENIKA GROUP
STELKUZ FORMATION

Pist — Slate, siltstone, green to grey; sandstone and impure quartzite, grey to brown, planar bedded, massive to thickly bedded minor dolomitic limestone

ESPEE FORMATION

Pis — Limestone, locally dolomitic, grey, moderately to thinly bedded marble

TSAYDIZ FORMATION

Pit — Slate, phyllite, greenish grey to grey, interlayered with thinly bedded limestone to argilaceous limestone; minor siltstone, quartz and feldspathic wackes and marble

SWANNELL FORMATION

Piaq — Micaceous meta-quartzite; quartz-mica schist, meta-quartzite and minor amphibolite,

Piap — Quartzo-feldspathic paragneiss, quartz-feldspar mica schist, micaceous meta-quartzite, calcsilicate and amphibolite gneiss

Pipi — Quartzo-feldspathic paragneiss and schist; minor amphibolite gneiss, calcsilicate gneiss; abundant granite and granite pegmatite

Pia — Quartzo-feldspathic paragneiss; amphibolite gneiss, calcsilicate gneiss; minor schist; abundant granite and granite pegmatite (a) marble, calcsilicate gneiss

NOTES

Geology from geological fieldwork performed by F. Ferri, D.M. Melville, G.A. Malensek and N.R. Swift during the summer of 1987. Geology was mapped at a scale of 1:20 000. The geology of the map area is described in Bedrock Geology of the Germansen Landing – Manson Creek Area by Ferri, F. and Melville, D.M.; BC. Ministry of Energy, Mines and Petroleum Resources Bulletin 91.

REFERENCES

Ferri, F., Melville, D.M., Malensek, G.A. and Swift, N.R. (1988): Geology of the Manson Lakes Map Sheet, 93N/9; B.C. Ministry of Energy, Mines and Petroleum Resources, Open File 1988-12.

Basemap produced by Surveys and Mapping Branch, Department of Energy Mines and Resources, Ottawa, 1975. Transverse Mercator projection, Zone 10. North American Datum 1927. The 1975 magnetic bearing is 28°34' east of grid north and is decreasing 3.5' annually. Grid north is 1°02' west of true north for centre of map.

SYMBOLS

- Geological boundary (defined, approximate, assumed)
- Normal fault (defined, approximate, assumed)
- Thrust fault (defined, approximate, assumed)
- Strike-slip fault (approximate)
- Movement indicator: (Block moved away from viewer); (Block moved towards viewer)
- Bedding (tops known, inclined, vertical); (tops unknown, inclined, vertical)
- Pillows (tops known)
- F1 foliation (inclined, vertical)
- F2 foliation (inclined, vertical)
- F3 foliation (inclined, vertical)
- F4 foliation (inclined, vertical)
- F1 minor fold axis
- F2 minor fold axis
- F3 minor fold axis
- F1 minor fold axis with S symmetry
- F1 minor fold axis with Z symmetry
- F1 minor fold axis with M symmetry
- F2 minor fold axis with S symmetry
- F2 minor fold axis with Z symmetry
- F3 minor fold axis with M symmetry
- Bedding-cleavage intersection (c)
- Mineral lineation (m)
- Deformed clast lineation (s)
- Joints (inclined, vertical)
- Vein (inclined, vertical)
- Syncline
- Anticline
- Mineral isograd (biotite-garnet-staurolite-sillimanite) (symbol on high grade side)
- Fossil locality (F)
- Ultramafite occurrence (*)
- Geochronology sample location (b-biotite, m-muscovite, h-hornblende, z-uranium/lead, a-apatite) FF88-344
- Mineral occurrence (see table) (2)
- Cross-section line (A–A')
- Isolated outcrop, station location (x)
- Area of rock exposure
- Limit of Quaternary cover
- Contours interval 50 metres (900)