

Geological Survey Branch
GEOSCIENCE MAP 1984-3
GEOLOGY BETWEEN NINA LAKE AND OSILINKA RIVER, BRITISH COLUMBIA
 NTS 93N/15 (N1/2), 94C/2 (S1/2)
 Geology by F. Ferri, D.M. Melville

Scale 1:50 000
 0 1 2 3
 KILOMETRES

- LEGEND**
- TRASSIC OR JURASSIC**
 Tlw Wenhite, dark grey to black, massive, slightly magnetic, minor serpentine and asbestos, gabbro, minor varicoloured chert
- QUATERNARY**
 Qal Unconsolidated sands, silts, gravels; fluvial-glacial
- BLUE LAKE VOLCANICS**
 Tlv Pyroxene-phyric basalt, dark grey, massive or fragmental, local flows or dikes
- INTRUSIVE ROCKS**
 Plaw Argillite, dark grey to black, massive, slightly magnetic, minor serpentine and asbestos, gabbro, minor varicoloured chert
- VOLCANIC AND SEDIMENTARY ROCKS**
 Qal Unconsolidated sands, silts, gravels; fluvial-glacial
 Tlv Pyroxene-phyric basalt, dark grey, massive or fragmental, local flows or dikes
- NINA CREEK GROUP**
PENNSYLVANIAN TO PERMIAN
 PPhna Massive and pillowed basalt, dark grey to green, minor varicoloured chert, siliceous argillite and gabbro
 PPhnb Argillite, dark grey to grey, siliceous argillite, varicoloured chert (cream, grey, maroon, green), massive to moderately bedded
- MISSISSIPPIAN TO PERMIAN**
 MPhna 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 luffs
- LAY RANGE ASSEMBLAGE**
 MPhnb Gabbro, green to dark green, sill-like bodies
- UPPER DEVONIAN TO PERMIAN**
 DPbc Tuff, tuffaceous siltstone, volcanic sandstone or conglomerate, blue grey-green, polymict, argillite and siltstone, grey-green to green
 DPba Agglomerate and lapilli tuff, grey to green and maroon, argillite and felspar phyric; lesser tuffaceous siltstone, and argillite
- MIDDLE DEVONIAN**
 ODe Dolomite, limestone, dark grey to grey, feld, poorly bedded, locally fossiliferous; dolomite, grey, massive, finely crystalline
- ORDOVICIAN TO LOWER DEVONIAN**
 ODe Upper Member: dolomite, limestone and sandy dolomite, grey, massive bedded, locally silicified; minor grey-brown argillite and dark grey to grey quartzite. Lower Member: limestone and dolomite, grey, massive to thinly bedded, siltstone and coxite, locally silicified, minor dark grey argillite
- MIDDLE CAMBRIAN TO ORDOVICIAN (?)**
 CODe Shale, siltstone, grey to dark grey; limestone, argillaceous, thin bedded, grey to black
- LOWER CAMBRIAN**
 ATAN GROUP
 Kk Upper part: limestone, massive, to thickly bedded, argillite, grey, slightly argillaceous and dolomitic, may be oolitic; Lower part: limestone, thinly bedded, grey, dark grey to grey
- MOUNT BROWN QUARTZITE**
 Kcb Upper part: shale, siltstone, olive-green to grey, thin to moderately bedded; sandstone, beige to tan, moderately bedded; minor quartzite. Lower part: quartzite, massive to thickly bedded, white, grey, beige or maroon
- UPPER PROTEROZOIC**
 INGENIKA GROUP
 PIt Shale, 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; marne
- TSAYDZ FORMATION**
 PIt Shale, phyllite, greenish grey to grey, interbedded with thinly bedded limestone to argillaceous limestone; minor siltstone, quartz and feldspathic wackes and marne
- SWANWELL FORMATION**
 PIs Upper part: impure quartzite and sandstone, massively bedded, lesser siltstones, shales, phyllites and feldspathic wackes. Middle part: feldspathic wacke, massive, coarse grained, lesser shale, phyllite, quartz wacke and sandstone. Lower part: quartz and feldspathic wackes, thin to thickly bedded, lesser impure sandstone, siltstone, marne, silt and phyllite. Metamorphosed to garnet-staurolite and sillimanite bearing schists and gneisses; intruded by pegmatite and related granodiorite within sillimanite zone, micaceous meta-quartzite; quartz-mica schist meta-quartzite and minor amphibolite

NOTES

Geology from geological fieldwork performed by F. Ferri, D.M. Melville, J. Whittles and W. Holmes during the summer of 1989. Geology was mapped at a scale of 1:20 000. The geology of the map area is described in Bedrock Geology of the Garman 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. (1990). Geology Between Nina Lake and Osilinka River, British Columbia, 93N/15 (North Half) and 94C/2 (South Half). BC, Ministry of Energy, Mines and Petroleum Resources, Open File 1990-17.
 Basemap is a composite of several maps produced by the Surveys and Mapping Branch, Department of the Energy, Mines and Resources, Ottawa, 1975. Transverse Mercator projection, Zone 10, North American Datum 1927. The 1976 magnetic bearing is 292° east of grid north and is decreasing 3.9° annually. Grid north is 1°27' 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).....
- Bedding (top known, inclined, vertical).....
- Bedding (top unknown, inclined, vertical).....
- Pillows (top known).....
- F1 fallation (inclined, vertical).....
- Fallation in Garman batholith (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 W symmetry.....
- F2 minor fold axis with S symmetry.....
- F2 minor fold axis with Z symmetry.....
- F3 minor fold axis with W symmetry.....
- Bedding-cleavage intersection.....
- Mineral lineation.....
- Deformed cleat lineation.....
- Joints (inclined, vertical).....
- Vein (inclined, vertical).....
- Syncline.....
- Anticline.....
- Mineral lagged (bifurcated-garnet-sillimanite) (symbol on high grade side).....
- Fossil locality.....
- Geochronology sample location (b=biotite, m=muonite, h=hornblende, z=uranium/lead, a=apatite).....
- Mineral occurrence (see table).....
- Cross-section line.....
- Isolated outcrop, station location.....
- Area of rock exposure.....
- Limit of Quaternary cover.....
- Contours interval 50 metres.....

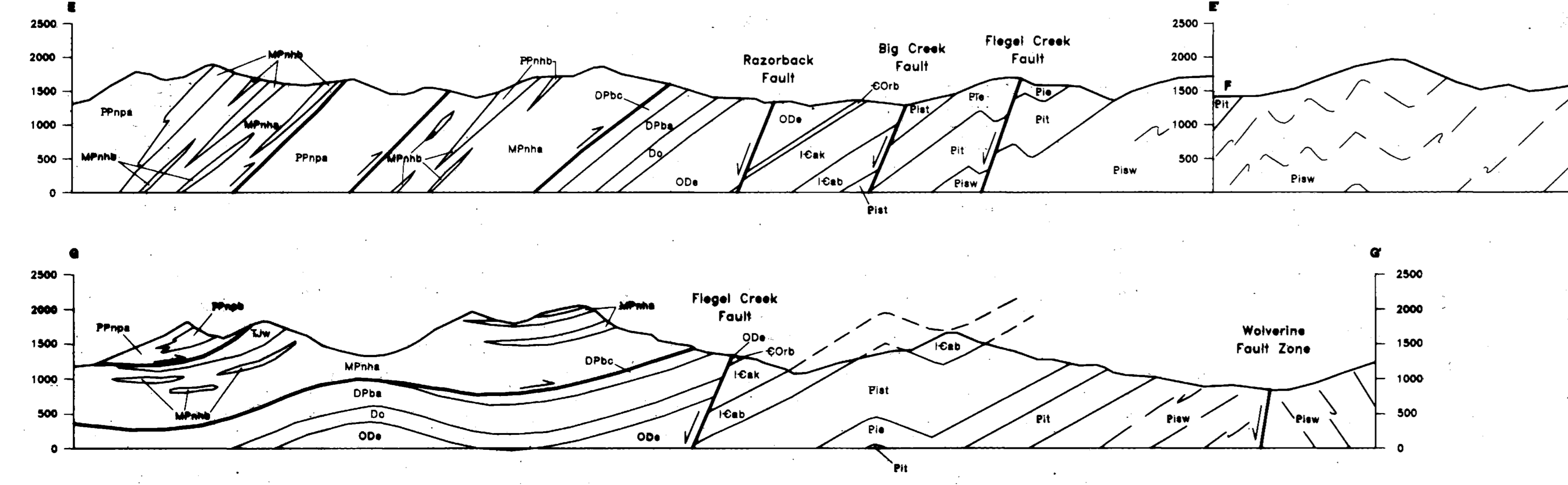


Table of Mineral Occurrences

Map Number	MINFILE Number	Commodities
23	093N 130	Zn, Pb, Ba
24	093N 073	Zn, Pb, Ag, Ba
25	093N 078	Zn, Pb, Ag, Ba
26	094C 096	Zn, Pb, Ba
27	093N 114	Zn, Pb, Ge, Ag
28	093N 158	Pb, Zn
29	093N 172	Zn, Pb, Ag, Ba
30	093N 170	Pb, Zn, Ag
31	093N 011	Au, Ag, Co, Zn

