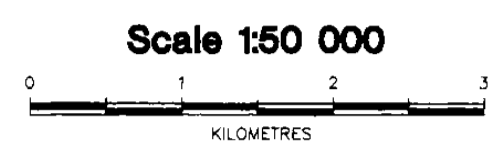


Geological Survey Branch
GEOSCIENCE MAP 1994-2

GEOLOGY OF THE GERMAMSEN LANDING AREA
 NTS 93N/10(N1/2); 93N/16(S1/2)
 Geology by F. Ferri, D.M. Melville, R.L. Arksey



- LEGEND**
- INTRUSIVE ROCKS**
- Tv Sub-volcanic felsic andesites, locally vesicular, fragmental; associated with monzonites to quartz monzonites, pink to beige, sikes and irregular bodies.
- CRETACEOUS**
- Kgb Gabbro, green to dark green, sil-like bodies
- JURASSIC OR YOUNGER**
- ug Hornblende-pyroxene gabbro, grey, massive, slight foliation
- UPPER PALEOZOIC OR YOUNGER**
- uPw Wolf Ridge Gabbro: foliated biotite-hornblende-pyroxene gabbro, dark green to green, with related pegmatite
- QUATERNARY**
- Qal Unconsolidated sands, silts, gravels; fluvial-glacial
 - Tv0 Pyroxene-phylic basalt, dark grey, massive or fragmental; local flows or dikes
- MIDDLE TO UPPER TRIASSIC**
- Ttp2a Basalt and agglomerate, maroon to dark green or grey, vesicular, typically agnathic, locally augite phytic
 - Ttp2b Agglomerate and tuff to tuffaceous siltstone, grey green to maroon, locally well bedded; minor basalt and agglomerate as in Ttp2a
 - Ttp2c Volcanic sandstone and conglomerate, dark grey to grey, massive to thickly bedded
 - Ttp2d Aphanitic to augite and feldspar-phyric basalt to basaltic andesite, grey-green to maroon, massive flows, agglomerate, and tuff, locally magmatic, minor dark grey argillite and limestone (a) and gabbro
 - Ttp2e Agglomerate, lapillstone and tuff with lesser basalt to basaltic andesite flows, gabbro and argillite (a) as above
 - Ttp2f Tuff, tuffaceous siltstone, grey to green, massive to well bedded
 - Ttp2g Basalt and agglomerate, maroon to grey or brown, massive, augite-feldspar phytic, minor tuff
 - Ttp2h Tuff and agglomerate, lesser volcanic sandstone and conglomerate, grey to dark grey, massive to thickly bedded and micaceous siltstone, argillite to calcareous argillite, and massive basalt
- SLATE CREEK SUCCESSION**
- Ttsa Argillite, slate, calcareous argillite, siliceous argillite, dark grey to grey, very thin to moderately bedded; lesser polymict volcanic sandstone, conglomerate and tuff, limestone, chert, massive bedded quartz-zircon sandstone and siltstone at base
- PERMAN TO TRIASSIC**
- Ptsw Evans Creek Limestone: grey limestone, massive with faint partings, finely recrystallized
- NINA CREEK GROUP**
- PENNSYLVANIAN TO PERMAN**
- Ppna Massive and siliceous basalt, dark grey to green, minor volcanoclastic chert, siliceous argillite and gabbro
 - Ppnaa Argillite, dark grey to grey, siliceous argillite, volcanoclastic chert (cream, grey, maroon, green), massive to moderately bedded
- MISSISSIPPIAN TO PERMAN**
- MOUNT HORNBLAND SUCCESSION**
- Mpna Argillite, siliceous argillite, dark grey, grey to light grey, massive to poorly bedded, volcanoclastic 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
- MANSON LAKES ULTRAMAFICS**
- Mpml Serpentine, dark green, massive with minor asbestos, talc-serpentine schist, dark to light green; magnetite-magnetite-quartz-serpentine-talc-ankerite schist, grey to brown
- LAY RANGE ASSEMBLAGE**
- Mp1a Tuff, tuffaceous siltstone, volcanic sandstone or conglomerate, blue grey-green, polymict, argillite and siltstone, grey-green to green
 - Mp1b Agglomerate and lapill tuff, grey to green and maroon, augite and feldspar phytic; lesser tuffaceous siltstone, and argillite
- UPPER(?) DEVONIAN TO PERMAN**
- Dpca Big Creek Group: Argillite, block to dark grey, slightly siliceous, massive to poorly bedded, minor quartz wackes, limestone, finely crystalline
 - Dpba Dilliland Tuff: quartz and/or biotite, feldspar felsic tuff, minor argillite, grey
 - Dpbaa Shale, argillite, blue-grey to grey; minor quartz-chert sandstone, massive bedded
- MIDDLE DEVONIAN**
- OTHER LAKES GROUP**
- Do Dolomite, limestone, dark grey to grey, feld, poorly bedded, locally fossiliferous; dolomite, grey, massive, finely crystalline
- ORDOVICIAN TO LOWER DEVONIAN**
- ECO-LAKE GROUP**
- Ode Upper member: dolomite, limestone and sandy dolomite, grey, massive bedded, locally siliceous; minor grey-brown argillite and dark grey to grey quartzite. Lower Member: limestone and dolomite, grey, massive to thin bedded, algal laminar and oolites, locally silicified, minor dark grey argillite
- MIDDLE CAMBRIAN TO ORDOVICIAN (?)**
- RAZORBACK GROUP**
- Coa Shale, silt, grey to dark grey; limestone, argillaceous, thin bedded, grey to black
- LOWER CAMBRIAN**
- MOUNT KISON Limestone**
- Ksl Upper part: limestone, massive, to thickly bedded, grey, slightly argillaceous and dolomitic, may be oolitic. Lower part: limestone, thin bedded, platy, dark grey to grey

NOTES

Geology from geological fieldwork performed by F. Ferri, D.M. Melville and R. Arksey during the summer of 1988. Geology was mapped at a scale of 1:20 000. The geology of the map area is described in *Geology of the GERMAMSEN 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. and Arksey, R.L. (1989). *Geology of the GERMAMSEN LANDING AREA, 93N/10 and 93N/16*; B.C. Ministry of Energy, Mines and Petroleum Resources, Open File 1989-12.

Basemap is a composite of several maps produced by the Surveys and Mapping Branch, Department of Energy, Mines and Resources, Ottawa, 1975. Transverse Mercator projection, Zone 10, North American Datum 1927. The 1976 magnetic bearing is 2°09' east of grid north and is decreasing 3.5' 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).....
 - 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).....
 - Foliation in GERMAMSEN batholith (inclined, vertical).....
 - Bedding-cleavage intersection.....
 - Mineral lincation.....
 - Deformed clast lincation.....
 - Joints (inclined, vertical).....
 - Vein (inclined, vertical).....
 - Drumloid feature.....
 - Syncline.....
 - Anticline.....
 - Fossil locality.....
 - Ultramafite occurrence.....
 - Geochronology sample location (t=biotite, m=monzonite, 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.....
 - Contour interval every 50 metres.....

Table of Mineral Occurrences

Map Number	MINFILE Number	Commodities
1	093N 022	Ag, Pb, Zn, Au
3	093N 024	Au, Ag, Cu, Pb
4	093N 025	Au, Ag, Cu
5	093N 026	Cu, Ag
8	093N 029	Cu, Au, Ag
10	093N 053	Ag, Pb, Zn
12	093N 136	Pb, Ag, Au
15	093N 145	Cu, Ag, Zn, Sb
16	093N 144	Cu, Ag, Au
18	093N 202	Zn, Pb, Cu
22	093N 198	Pb, Ag, Au
39	093N 115	Asbestos
40	093N 116	Ni
44	093N 153	Cu
45	093N 147	Cu

