



GEOLOGY OF THE POLARIS ULTRAMAFIC COMPLEX

NTS 94C/5 AND 12

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MINERAL DEVELOPMENT AGREEMENT, 1985-1990

SCALE 1:16 000

LEGEND

POLARIS ULTRAMAFIC COMPLEX

LATE TRIASSIC (?)

- 8 FELSIC INTRUSIONS: DYKES (LEUCOKRATIC, PALE GREY TO CREAM WEATHERING, MANY THIN, MEDIUM GRAINED) TO LOCALLY PEGMATITE DYKES (NOT SHOWN IN WESTERN HALF OF SHEET)
- 7 GABBROIC ROCKS (DIOMONDY HORNEBLITE GABBRO), EQUIVARIANTAL TO LOCALLY HORNEBLITE, DARK TO MEDIUM BROWN WEATHERING, FINE TO COARSE GRAINED, LOCAL TO LOCALLY PEGMATITE, DARK TO MEDIUM GREY-GREEN OR BLACK WEATHERING, MEDIUM TO COARSE GRAINED
- 6 HORNEBLITE (FINE CLINOPYROXENE 90-95% CLINOPYROXENE, 50-55% HORNEBLITE, 35-40% CLINOPYROXENE, 80-95% HORNEBLITE, 15-20% CLINOPYROXENE, 40-50% CLINOPYROXENE) AND FELDSPATHIC HORNEBLITE: DARK TO MEDIUM GREY-GREEN OR BLACK WEATHERING, MEDIUM TO COARSE GRAINED
- 5 MAFIC OLIVINE WEHRLITE-HORNEBLITES AND OLIVINE CLINOPYROXENITE, CLINOPYROXENITE: MOTTLED BROWN AND PALE GREY-GREEN WEATHERING, MEDIUM TO COARSE GRAINED
- 4 OLIVINE CLINOPYROXENITE (60-70% OLIVINE, 30-40% CLINOPYROXENE) TO OLIVOPYROXENITE (30% OLIVINE, 70% CLINOPYROXENE), MEDIUM TO PALE GREY-GREEN WEATHERING, MEDIUM TO COARSE GRAINED, LOCALLY PEGMATITE
- 3 UNDIFFERENTIATED OLIVINE WEHRLITE TO WEHRLITE, DARK TO MEDIUM BROWN WEATHERING, MEDIUM TO COARSE GRAINED; RARE CLINOPYROXENITE MEGACRYSTS
- 2 WEHRLITE (60-80% OLIVINE, 20-35% CLINOPYROXENE) WITH MINOR OLIVINE CLINOPYROXENITE, DARK TO MEDIUM BROWN WEATHERING, MEDIUM TO COARSE GRAINED, RARE PEGMATITE CLINOPYROXENITE
- 1 OLIVINE WEHRLITE (80-95% OLIVINE, 5-10% CLINOPYROXENE), DARK TO MEDIUM BROWN WEATHERING, GENERALLY MEDIUM GRAINED

HOST ROCKS

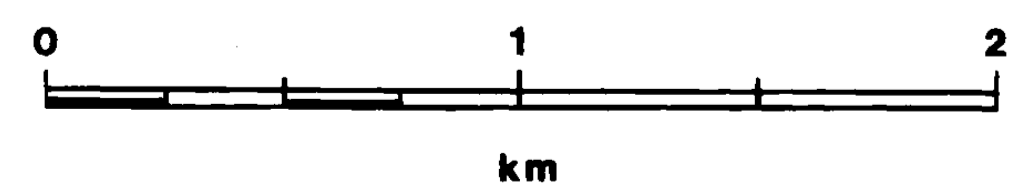
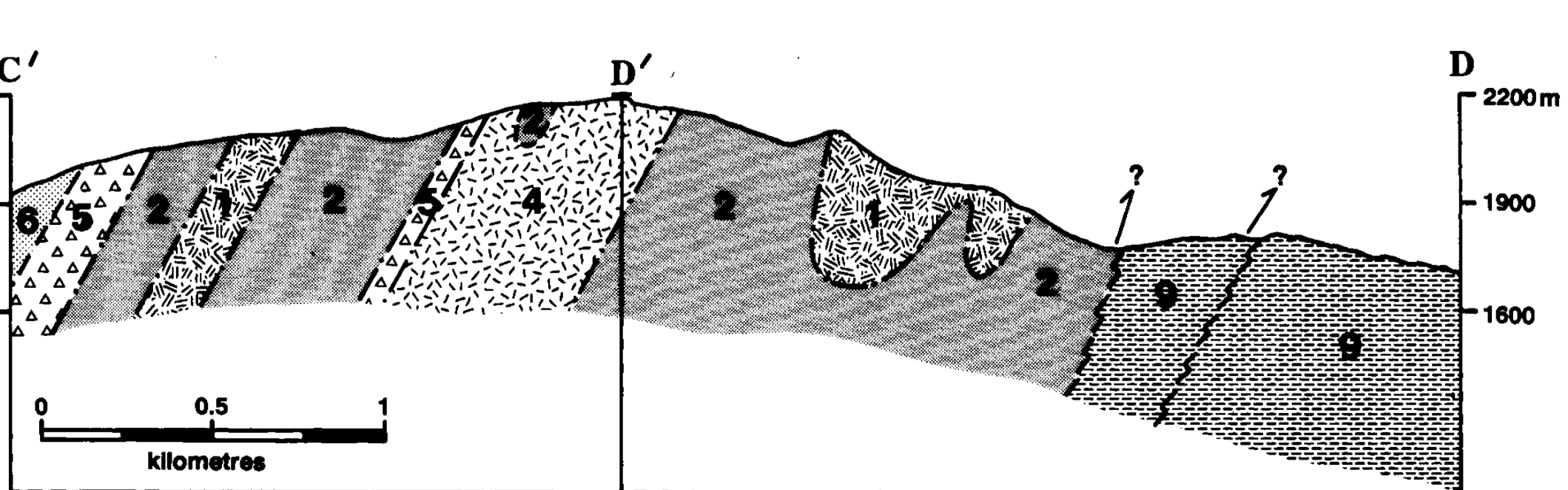
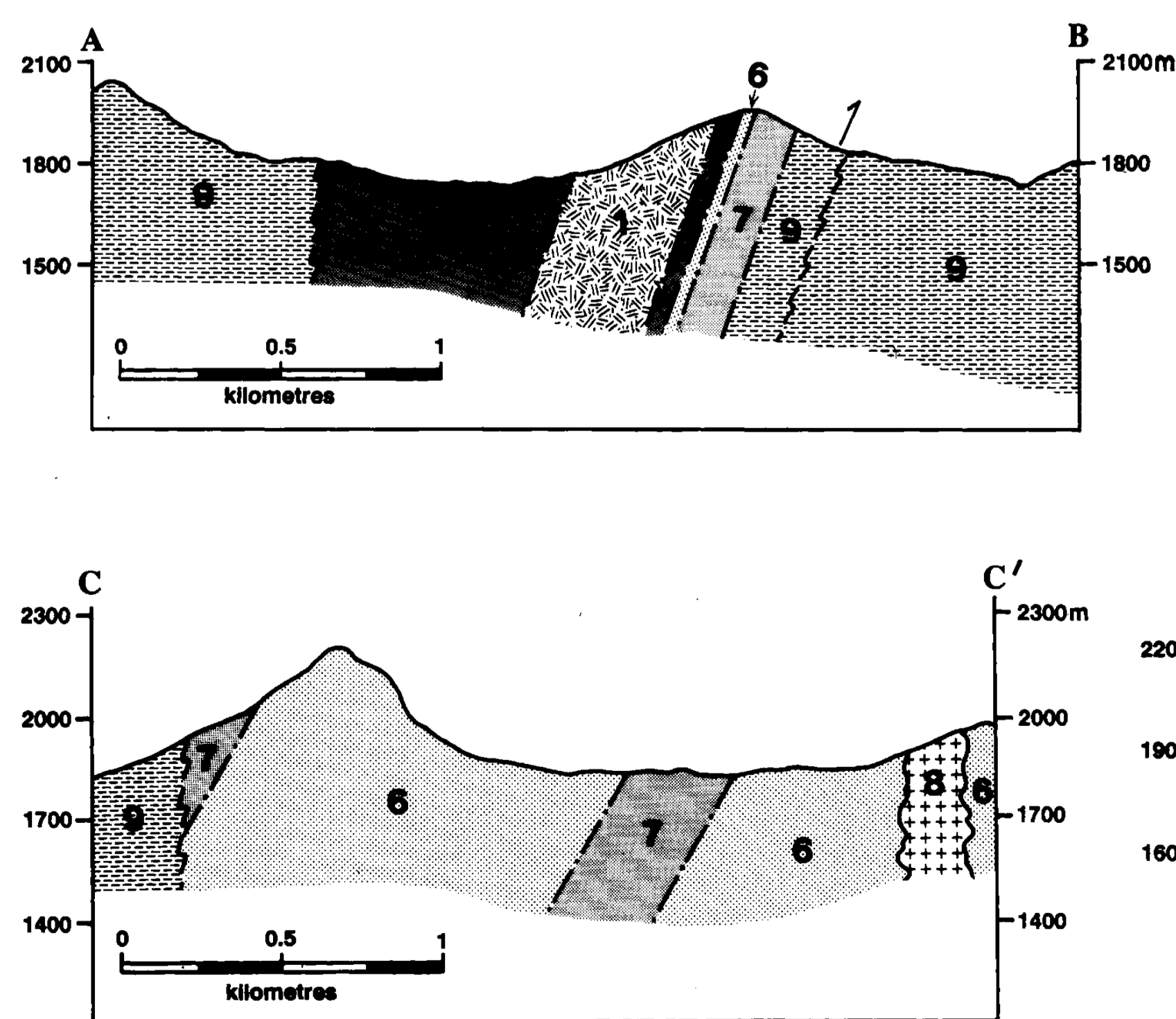
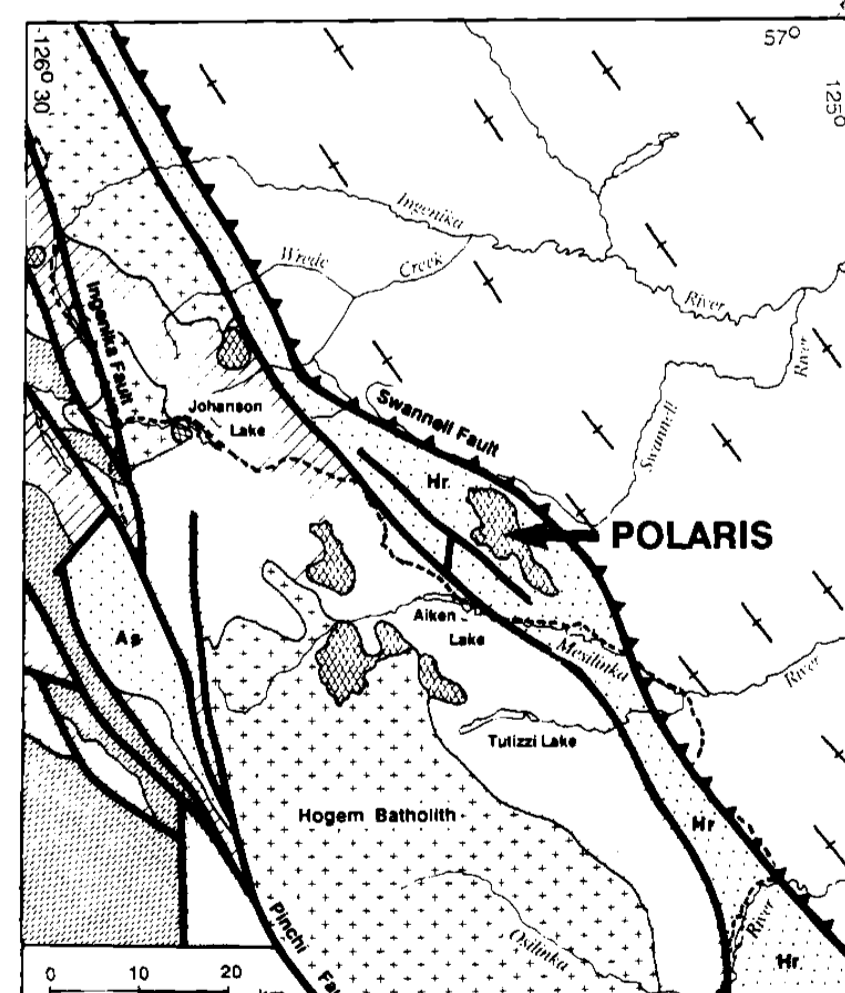
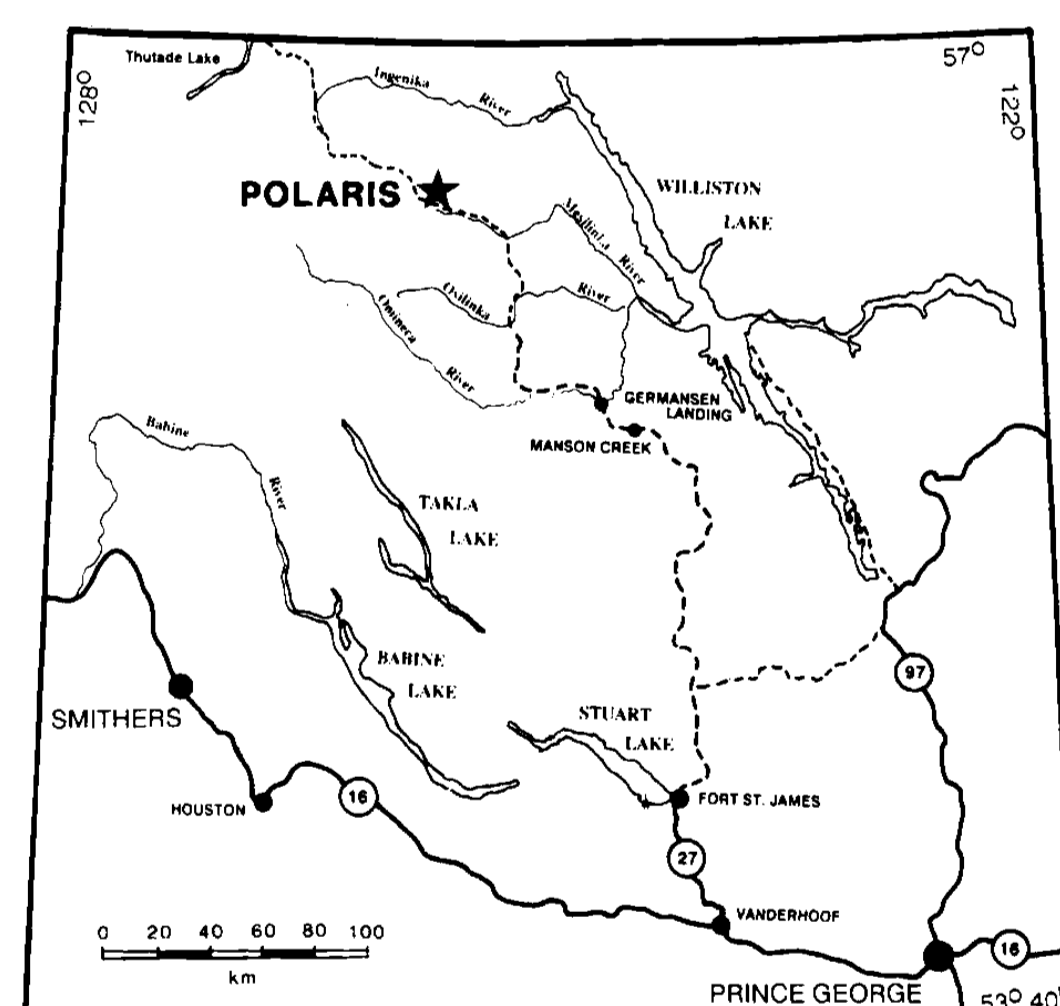
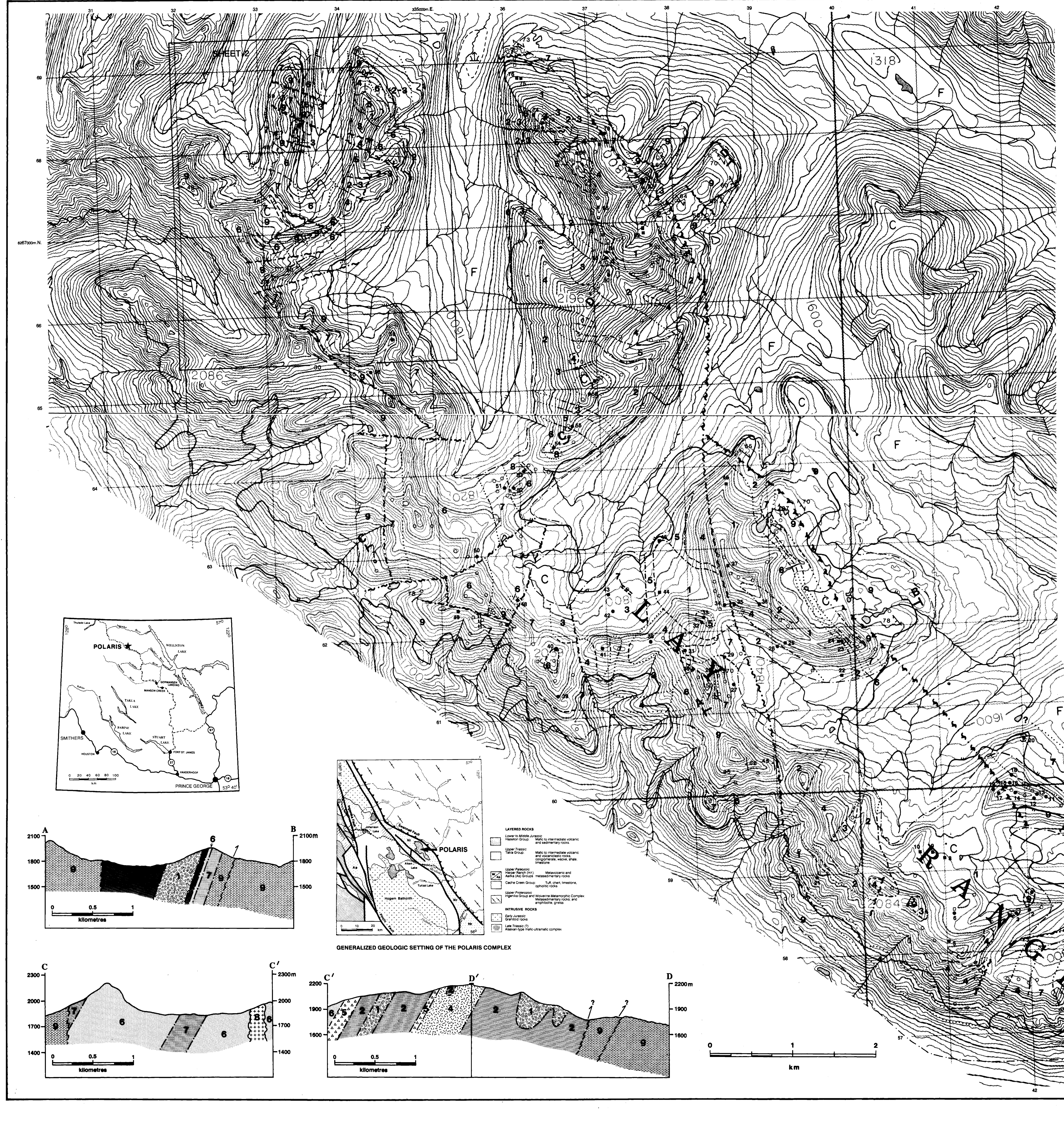
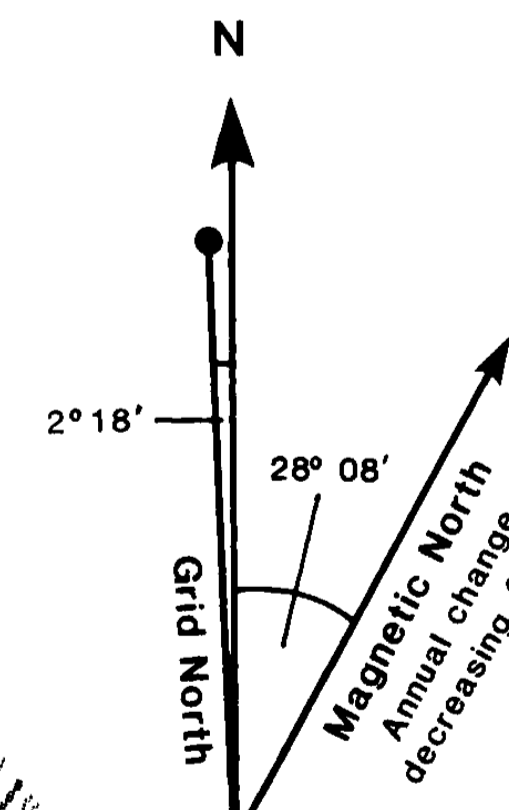
UPPER PALEOZOIC

- 9 LAY RANGE ASSEMBLAGE (HARPER RANCH GROUP), METASEDIMENTARY AND METAVOLCANIC ROCKS INCLUDING GABBRO, GRANITE, AND WEHRLITE, TUFFS AND TUFFS, AND SANDSTONE, PINK LITE, VOLCANIClastic ROCKS AND MINOR METAFELSIC. USUALLY DARK GREY TO GREEN WEATHERING, GENERALLY FINE GRAINED, LOCALLY GRAINED AND CROSS BEDDED

SYMBOLS

- Geological boundaries (defined or approximate, gradational, assumed)
- Bedding attitude (inclined, vertical, tops known)
- Schistosity or foliation attitude (inclined, vertical)
- High-angle fault or shear zone (defined, inferred, reverse fault)
- Limit of extensive outcrop
- Field station locality
- Geochemical sample site
- Chromitite locality
- Chromitite geochemical sample site

(Geochemical results listed in Table 3-5-1 in Nixon et al. (1991): *Geology and Noble Metal Geochemistry of the Polaris Ultramafic Complex, North-Central British Columbia*; Ministry of Energy, Mines and Petroleum Resources, Geological Framework 1992, Paper 1992-1)



- LAYERED ROCKS**
- Lower Paleozoic: Metasedimentary and metavolcanic rocks.
 - Upper Triassic: Tuffaceous and volcanic and volcanoclastic rocks, conglomeratic, sandstone, shale, and siltstone.
 - Upper Paleozoic: Metasedimentary and metavolcanic rocks.
 - Carrie Creek Group: Tuff, chert, limestone, and argillite.
 - Upper Proterozoic: Alouane Metamorphic Complex, metabasaltic rocks, and amphibolite gneiss.
- INTRUSIVE ROCKS**
- Early Jurassic: Gabbroic rocks.
 - Late Triassic (?): Massive type ultramafic complex.

OF 90-13
SHEET 2 OF 2



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

OPEN FILE 1990-13 (SHEET 2 OF 2)

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Energy, Mines and Resources Canada / Énergie, Mines et Ressources Canada
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LEGEND

INTRUSIVE ROCK

JURASSIC (?)



HORNBLENDE DIORITE: GREY BROWN WEATHERING, MEDIUM GRAINED, LOCALLY
SPOTTED

(SEE SHEET 1 FOR ADDITIONAL ROCK UNITS)

SYMBOLS

Magmatic layering (inclined, vertical)



Dykes (MD - Microdiorite; Gb - Hornblende gabbro;
Du - Dunite: Inclined, vertical)



(SEE SHEET 1 FOR ADDITIONAL SYMBOLS)

