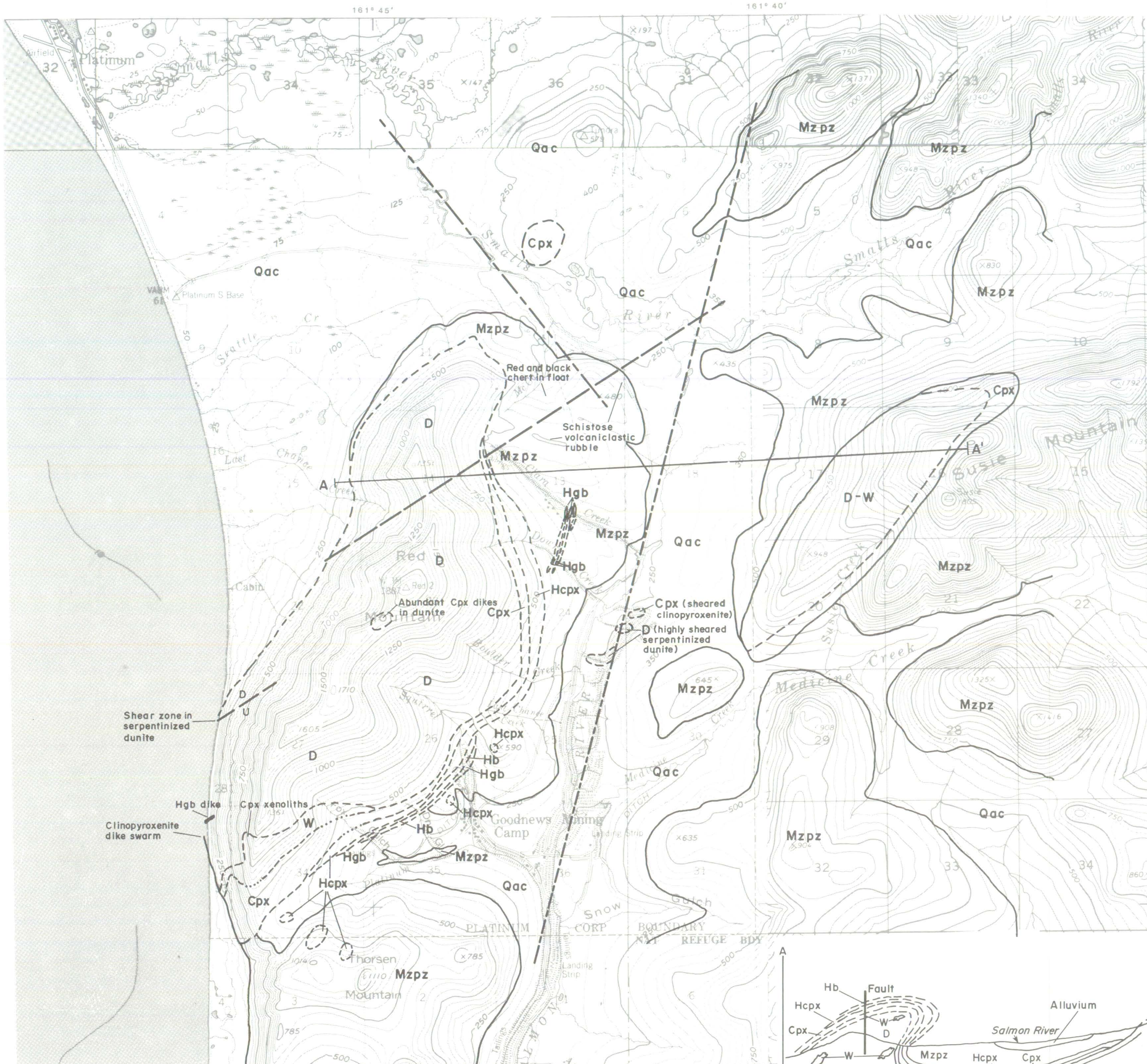
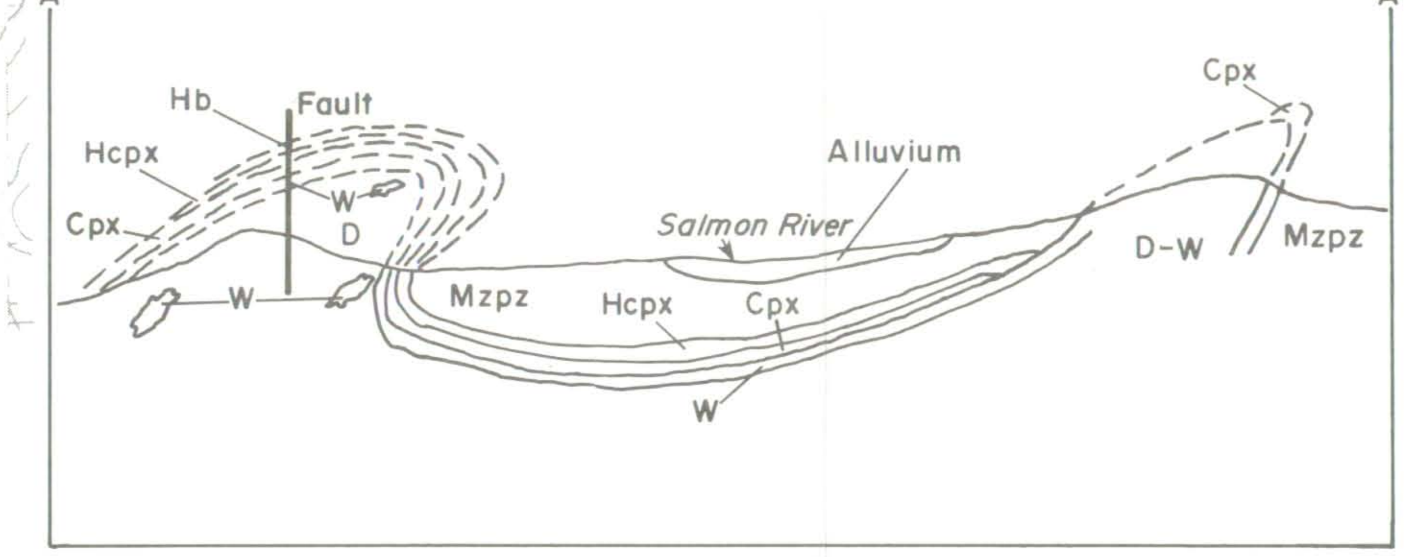


Base adapted from U.S.G.S. Hagemeister Island (D-5 & D-6) 1:63,360 scale quadrangles



Hypothetical cross-section A-A' through the Goodnews Bay complex illustrating one way which the zoning of rocks in the Goodnews Bay may have developed: by diapiric re-emplacement of a stratiform sequence of cumulates, similar to that suggested by Irvine (23, p. 169) for the Union Bay complex.

LEGEND

Qac — Quaternary alluvium and colluvium: unconsolidated glaciofluviatile and fluviatile deposits of gravel, sand, silt and clay. Includes reworked glacial material, alluvium, and colluvium.

Hgb — Hornblende gabbro: coarse to pegmatitic (calcic) plagioclase feldspar and dark brown hornblende. Contains trace to accessory amounts of chalcopyrite and pentlandite. Forms late-stage dikes, usually less than 3 ft wide that in places, cross-cut rocks of both the intrusive complex and of the Gemuk Group.

Hb — Hornblendite: coarse to pegmatitic, dark brown hornblende. Individual crystals to 12 inches. Localized in a narrow band 10 to 50 ft wide at the contact of the intrusive complex with rocks of the Gemuk Group.

D — Dunite: medium- to coarse-grained. Dark green to black on fresh surfaces, orange to light tan on weathered surfaces. Weathering rind usually 0.5 to 2.0 in thick. Variably serpentinized, but serpentine minerals usually constitute at least 20% of the rock. Hair-like serpentine veinlets stand out in slight relief on weathered surfaces. Usually contains 0.2 to 2.0 percent disseminated medium-grained euhedral and subhedral chromite grains. Contains occassional schlieren of more or less massive chromitite from inches to a few feet long. Very rare schlieren and dissemations of magnetite. Microscopic, finely disseminated secondary magnetite is present within the serpentine veinlets and gives the dunite an overall weakly to moderately magnetic character.

W — Wehrlite (olivine-clinopyroxenite): medium-grain. Grayish-green to greenish-tan. Consists of resorbed(?), clinopyroxene-rich wisps and pods a few inches across in an olivine-rich groundmass. Variably serpentinized. Little or no visible chromite. Weakly magnetic. Outcrops limited to Suzie Mountain and southern end of Red Mountain.

Cpx — Clinopyroxenite: dark green, medium-grained, moderately to very strongly magnetic. Gradational unit that grades from hornblende-olivine-magnetite clinopyroxenite to magnetite-hornblende clinopyroxenite. Also occurs as late stage veins or dikes, to 2.0 ft wide, of very coarse-grained clinopyroxene. Commonly contains accessory olivine. Some dikes have centers of hornblendite.

Hcpx — Hornblende clinopyroxenite: light grayish-green to dark green. Medium-grained, equigranular. Trace to accessory sulfide minerals. Weakly magnetic. Hornblende content increases toward outer margins of the complex.

Mzpz — Undifferentiated rocks of Mesozoic and Paleozoic ages (Gemuk Group): interbedded metasedimentary and metavolcanic rocks of the Gemuk Group. (9, 20). Includes chert, argillite, volcaniclastic rocks, and metavolcanic rocks. Contains abundant late hornblende near the contact with the intrusive complex.

—— – – Lithologic contact, dashed where approximate or inferred

.··. Gradational contact

D/U — — Fault, showing movement, dashed where approximate

— — — Fault, from airphoto interpretation

FIGURE 2. -- Geologic map of the Goodnews Bay ultramafic complex