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**Scottie Creek Deposit:**

Scattered small bodies of serpentized dunite and peridotite occur east of highway 97, 16 km north of Cache Creek, British Columbia.

The Scottie Creek chromite deposit occurs in sheared, serpentized dunitic harzburgite with minor harzburgite lenses, 5 to 10 m in size and irregularly shaped. The harzburgite lenses contain 15-20% opx which is medium-grained and subhedral. A 3 to 4 m cap of Tertiary flow banded vesicular rhyodacite overlies the serpentinite outcrop. (Fig. 2-10).

**Dunitic harzburgite:**

Dunitic harzburgite is fine to medium-grained and equigranular with a pale greenish-brown weathered surface and a dark green fresh surface. Olivine grains remain distinguishable as granular anhedral which crumble from the friable weathered surface whereas orthopyroxene is more resistant.

Shearing is penetrative with a curved fracture pattern. Later jointing is subplanar crosscutting the irregular foliation and multiple quartz-carbonate veins up to 2 cm wide. Intense deformation and later carbonate alteration has resulted in a pock-marked weathered surface over entire outcrop areas. Small cave-like depressions in both vertical and sub-horizontal outcrops range from 4 cm to 1 m in depth and diameter.

Dunitic harzburgite in the northeast corner of the outcrop area has been brecciated in an east-west trending zone up to 3 m wide. Opalescent quartz veins form the breccia matrix which holds 2 to 10 cm subangular dunitic harzburgite fragments.

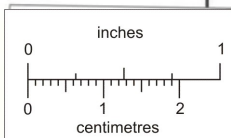
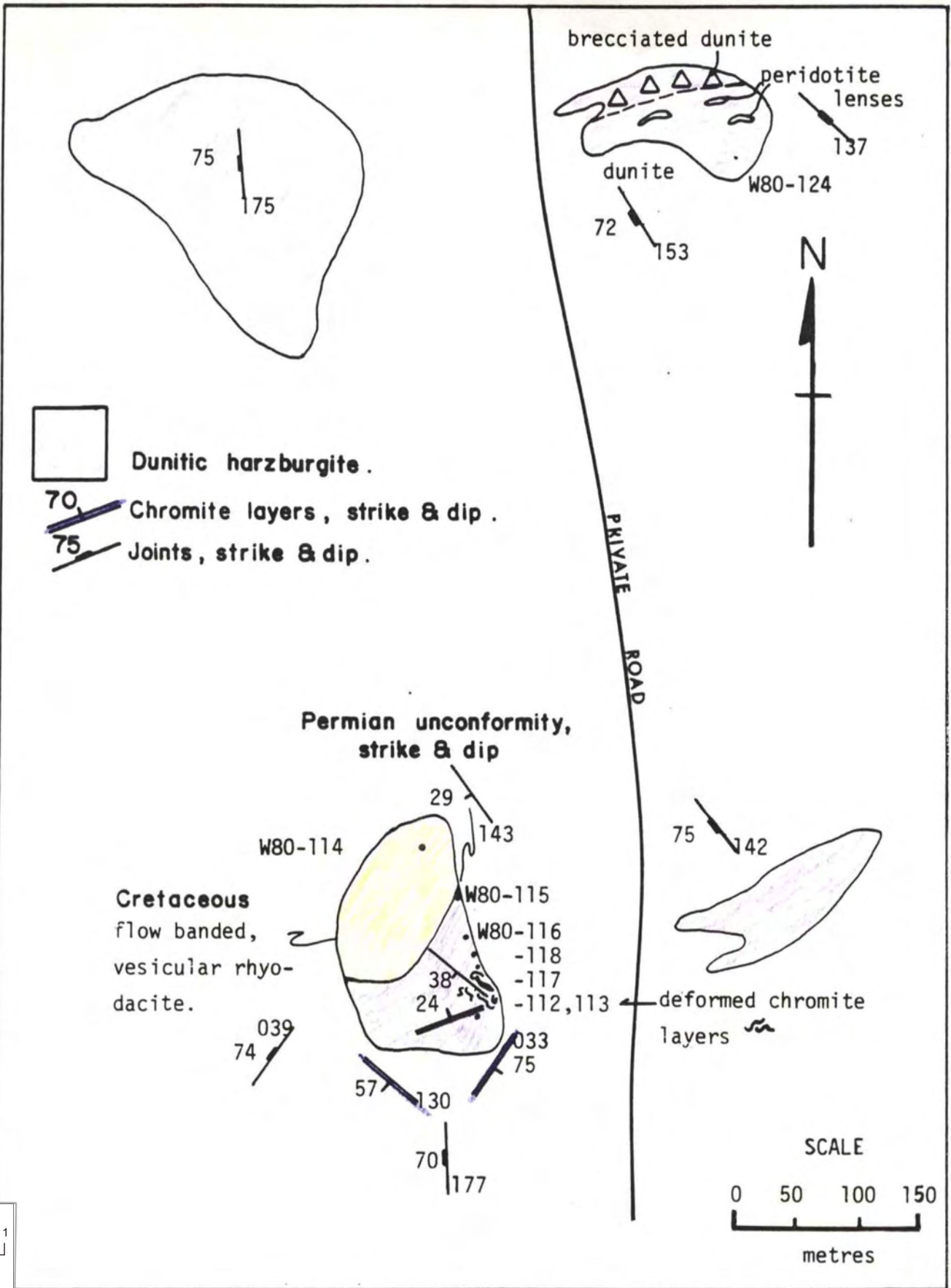
### Chromite:

Chromite is concentrated in the southwesterly part of the ultramafic outcrop area. In the northern part of the area chromite occurs only in trace amounts and is mostly fine-grained and sub to euhedral. At the main chromite showing two adits have been driven, one about 15 m in length and the second about 3 m in length. Chromite at the adits occurs in disseminated and layered forms. Disseminated chromite forms 5 to 8 percent dunitic harzburgite and the chromite is medium-grained and subhedral. In some cases disseminated chromite forms nodules which have been deformed into irregular lensoid to slightly sigmoidal shapes. Several nodules may occur in line defining a crude layering. Nodules are generally 0.5 to 2 cm in size. Wispy chromite layers are most common and range from 1 to 2 cm thick and 10 to 20 cm long. These are usually defined by 25 to 35 percent subhedral chromite with sharp borders against enclosing dunitic harzburgite. Zones of parallel wispy chromite layers define a disrupted primary layering.

The main chromite layer is defined by a 1 m thick zone with 50 to 60 percent medium-grained subhedral to euhedral chromite. The main layer thins to 15 cm and is terminated by a shear zone. The overall exposed length of the main chromite zone is 2 m. Wispy chromite layers occur adjacent and perpendicular to it. This juxtaposition exemplifies the deformed nature of this ultramafic block.

Scattered distribution and variable orientation of chromite and wispy chromite layers in the Scottie Creek Deposit suggest discontinuous and structurally disrupted chromite mineralization.

Fig.2-10. Geology and sample locations, Scottie  
Creek Deposit.



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