

Sample: 5060-5400' B : TS C8582

Location:

Duroon-1

Rock Name:

Porphyritic 'olivine' basalt

Hand Specimen:

A hard medium-grained grey-green and black basaltic rock.

Thin Section:

An optical estimate of the constituents gives the following:

	<u>%</u>
Plagioclase	50
Pyroxene	30
Brown mesostasis and alteration products	20
Opakes	2

Altered phenocrysts of a ferromagnesian mineral and phenocrysts or xenocrysts of plagioclase are embedded in an ophitic to subophitic mixture of plagioclase laths and clinopyroxene with a brown interstitial mesostasis material.

The identity of the altered ferromagnesian mineral grains is not certain, but their shape and the presence of irregular cleavage remnants makes it very probable that they were formerly olivine. The replacing material is a greenish brown "iddingsite" with variable grain size. Some green "bowlingite" also occurs, especially in the cores of the phenocrysts.

Small amounts of opakes have apparently been exsolved during the transformation.

The feldspars phenocrysts/xenocrysts are up to 3 mm in diameter; they are zoned plagioclase and have prominent sieve textures. The "mesh" of the sieve texture is made up of clinopyroxene and opakes, with some development of a pale brown clay. The outer rims (0.08 mm) are relatively clear suggesting that this area is in equilibrium with the surrounding minerals. It seems likely that these rather irregular grains are xenocrysts; the sieve texture supports this proposal.

The feldspar of the groundmass is little altered and is probably labradorite. Laths are commonly less than 0.5 mm long. More granular, interstitial feldspar is zoned but twinning is less well developed.