



■ Fig. 9. Locations of stops 1-3 A to D along the shore of the Saidenbach reservoir. The simplified geological map was taken from Massonne (2001).

(2000), who concluded that they are breakdown products of K-cymrite. On the basis of this assumption and geothermobarometry with garnet, omphacite, and phengite components as applied to eclogite E25d from stop 1-1, Massonne and Bartsch (2004) proposed a P-T path, which started at UHP conditions of somewhat more than 3.0 GPa and ended close to 2.0 GPa and 700 °C (Fig. 8G).

The P-T conditions derived here and by Willner et al. (1997) for the GEU are compatible with a continent-continent collisional scenario in which one continental plate was thrust under the other. This process led to thickened continental crust, which was eclogitized at and close to its base. The eclogites of stop 1-2 provide evidence for this event. During the burial of rocks located

in the lower crust of the lower plate, heating may occur from temperatures of 600–650 °C (0.8 GPa) to around 700 °C, and Ca-amphibole in basic rocks (calculated modal content of E174c at 620 °C and 0.8 GPa in vol.%: 8.9 % epidote, 54.7 % amphibole, 1.9 % biotite, 2.4 % garnet, 25.6 % plagioclase, 3.0 % quartz, 2.8 % titanite, 0.8 % ilmenite) breaks down to form anhydrous phases and H₂O or melt (see “melt in” curve of Fig. 8E). In the latter case and before reaching the peak pressure conditions (1.8 GPa, 715 °C), the solidus curve is crossed again (Fig. 8G). Thus, the symplectite inclusions in omphacite of eclogite E174c could be the result of enclosed melt, the albite component of which was consumed by the overgrowing omphacite. Consequently, mainly K-feldspar and quartz remained in these inclusions.

Stop 1–3 (Day 1). HP and UHP Rocks at the Saidenbach Reservoir

Go the same way back to Forchheim. However, before reaching Forchheim stop at the small bridge crossing Saidenbach brook. From here one has good access to the Saidenbach reservoir by walking on forest roads. To visit the coesite-bearing eclogites at the northern shore of the reservoir (see Fig. 9), take the trail on the north-western side of the brook. Walk for somewhat less than 2 km to reach stop A of the tour along the shore of the reservoir provided that (1) the water level is at least a few metres below maximum and (2) a permit was granted by the responsible person for the reservoir (office directly north of the dam). Chances for (1) are best in the late summer and early autumn. In case the water level is at or close to maximum, alternative stops in the adjacent forests can be considered, especially to see the diamondiferous quartzofeldspathic rocks, which are called saidenbachite (Massonne, 2003) according to the type locality.