

Carbonatite Metasomatism in Depleted Upper Mantle: Evidence from Peridotites in CCSD-PP1 Drill Hole

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The Chinese pre-pilot hole (PP1) is located at Zhimafang village, Donghai of the Sulu UHP terrane, east China. Ultrahigh-pressure peridotites of 115 m thick within gneiss recovered from the PP-1 are composed of abundant lherzolite, harzburgite, and minor wehrlite and dunite. Peridotite near to the contacts with gneiss is strongly serpentinized. More than 90 vol% peridotites contain garnet and phlogopite; some contain magnesite and Ti-clinohumite. All peridotites contain lower