

**PETROLOGY OF UHP METAMORPHIC ROCKS FROM THE MAIN HOLE
(0 - 2050 m) OF CHINESE CONTINENTAL SCIENTIFIC DRILLING PROJECT**

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The main hole of the Chinese Continental Scientific Drilling Project (CCSD) in southern Sulu recovers more than 80 % core samples of eclogite, orthogneiss, paragneiss, ultramafic rock and minor schist at depth interval of 100 - 2050 m. Recovered eclogite cores are distinguished to quartz-, rutile-, phengite-, kyanite-rich and normal eclogites. Ultramafic cores contain garnet + olivine + clinopyroxene + orthopyroxene ± Ti-clinohumite ± phlogopite assemblages. The gneisses and schists contain an amphibolite-facies paragenesis, but their zircons have coesite, garnet, omphacite (or jadeite) and phengite inclusions, indicating these rocks together with eclogite and ultramafics have been subjected to *in-situ* UHP metamorphism. When the data from surface outcrops and shallow drill holes are considered together, we suggest that a huge supracrustal rock slab (> 50 km long × 100 km wide × 5 km depth) was subducted to a depth > 100 km, and then exhumed to the surface. Using available geothermobarometers, P-T estimates of 678 - 816 °C and 3.1 - 4.4 GPa for eclogites and 700 - 930 °C and 3.8 to 5.0 GPa for garnet-peridotite were obtained. Such wide P-T ranges and the recognition of a retrograde compositional zoning of garnet, omphacite and phengite suggest that true peak UHP metamorphic compositions have not been well preserved due to re-equilibration during early retrograde metamorphism.