

Petrology of the San Miguel ultramafic body, Acatlan Complex, southern Mexico: an oceanic fragment of the Iapetus or Rheic oceans?

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The San Miguel ultramafic body represents a thrust slice emplaced above a thick clastic sequence (Chazumba Formation) in the Acatlan Complex of southern Mexico. The ultramafic rocks consist of pyroxene, amphibole and olivine that are extensively altered to talc, chlorite and serpentine. Minor mafic components occurring as layers within the ultramafic body and as dykes are made up of plagioclase, K-feldspar, pyroxene and amphibole altered to chlorite. The ultramafic rocks have SiO₂ contents ranging

from 39 to 47%, whereas in the mafic rocks it varies from 46 to 54%. Microprobe and trace element analyses are currently underway and will be presented at the conference. A younger limit for the age of the body is given by the published 175-170 Ma ages on granitic sheets that cut across the ultramafic rocks and most of the structures affecting the unit. The San Miguel ultramafic body is inferred to be a fragment of oceanic lithosphere, and current models indicate that this could have been part of either the Iapetus or Rheic oceans.