

**AMPHIBOLITES AND ASSOCIATED ROCKS OF THE RIO VERDE COMPLEX  
IN THE MEDIAN BELT, CENTRAL HISPANIOLA : THEIR PETROLOGIC,  
STRUCTURAL AND TECTONIC SIGNIFICANCE IN THE PLACEMENT OF  
THE LOMA CARIBE PERIDOTITE**

**Lewis, J.F.<sup>1</sup> and Draper, G.<sup>2</sup>**

<sup>1</sup>Geology Dept., George Washington University, Washington, DC 20052

<sup>2</sup>Geology Dept., Florida International University, Miami, FL 33199

**ABSTRACT**

A complex suite of rocks (here termed the Rio Verde complex) of widely varying metamorphic grade is found contained within the southeastern prongs of the Loma Caribe serpentinized peridotite belt which is the core to the Median Belt in central Hispaniola. The rocks in the complex include amphibolites, basalts, metagabbros, tuffs and metatuffs, cherts, greenschists and quartz-sericite schists and were mapped as part of the Duarte Formation by Bowin (1966). The rocks are bounded to the southwest and the northeast by narrow belts of serpentinized peridotite that in the northeast itself contains blocks of metadiabase of various sizes. Along the southeastern boundary the rocks are juxtaposed along a fault against the basaltic rocks of the Siete Cabezas Formation of apparent Santonian age. This southeastern boundary is partly defined by discontinuous masses of serpentinite. The amphibolites are exposed as blocks up to 4 km across as well as smaller tectonic inclusions and can be seen juxtaposed directly against serpentinite. The amphibolites are massive to well-foliated, show polyphase deformation and are composed dominantly of hornblende-plagioclase-epidote assemblages. The chemistry of the amphibolites suggests they are the metamorphic equivalents of the Peralvillo basalts which lie to the immediate northeast of the serpentinite. Residual heat from the formation of the ophiolite probably provided the heat necessary for the metamorphism. It is assumed that amphibolites were formed by the under-thrusting of the protolith rocks (Peralvillo basalts) beneath the ophiolite in the initial stages of its detachment and emplacement.