THE BONAO FAULT ZONE, HISPANIOLA: A RE-EVALUATION

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ABSTRACT

Previously, the Bonao Fault of central Hispaniola has been interpreted as a generally west-dipping, reverse fault that is emplacing Cretaceous volcanic rocks of the Tireo Formation over the Recent alluvial sediments of the Bonao Valley. New mapping during the course of mineral exploration southwest of Bonao suggests that the Bonao Fault in this region is an east-dipping fault between the Cretaceous Tireo Formation and the Duarte Complex. Kinematic indicators indicate a thrust sense of motion on the fault which is emplacing the Duarte over the Tireo. Field relations suggest that the contact between the Bonao Valley sediments and the Tireo Formation is an onlapping unconformity rather than a fault. It is suggested that the fault was active in early Tertiary time, due to the initiation of underthrusting of the southeastern terranes of Hispaniola. The fault may have become inactive during the Late Tertiary when deformation became localized on the thrust faults of southern Hispaniola.