



Central volcanic domes of the Chiapanecan Volcanic Arc, Mexico: a petrological study.

Sonia Alejandra Torres Sanchez and David Ramirez Turrubiarres

Universidad Autonoma de San Luis Potosí, Area de Ciencias de la Tierra, Facultad de Ingeniería, San Luis Potosí, Mexico
(alelaflaquita@hotmail.com)

The Chiapanecan Volcanic Arc it is located in the central portion of Chiapas in southern Mexico. This volcanic arc it is merge in a geologica complex zone where the interaction of the North American, Caribbean and Cocos plates, near the Motagua-Polochic fault system takes place. The central part of the Chiapanecan Volcanic Arc it is conformed by at least 10 volcanic structures. In this study we focus on five volcanic domes known as La Iglesia, La Mispía, La Lanza, Venustiano Carranza and Santotón. It is described that the volcanic activity in the Chiapanecan Volcanic Arc was effusive accompanied by explosive and phreatomagmatic events.

The main lithology varies from andesitic to dacitic rocks with porphyric texture. Both lithologies are mainly composed of euhedral amphibole, pyroxene subhedral plagioclase, as well as subhedral biotite as accessory mineral. It is possible to recognize mafic microgranular enclaves with ovoidal shapes within the andesitic rocks.

This work aims to understand the petrological composition, the magmatic activity and its relationship with the subduction of the Cocos plate under the North American plate.