

ENGINEERING GEOLOGY OF THE CITY OF ARMENIA, COLOMBIA AND ITS RELATIONSHIPS WITH THE QUINDÍO EARTHQUAKE.

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In Armenia and surroundings there are rocks having ages ranging from Cretaceous to present. The basement of the profile is made up of Cretaceous rocks which are amphibolites and gneisses belonging to the Arquia group. Over such rocks there are deposits from the upper Tertiary from volcanic and fluvio-volcanic origin having a thickness of about 150m. Over such bodies there is a bank of volcanic ashes of Pleistocene-Holocene age of about 15m thick. The volcanic originated deposits are known in a regional context as the Quindío Glacis and are the result of the activity of the volcanoes known as Qundío, Santa Isabel and Ruíz, located on the axis of the Central Cordillera; such Glacis was formed during the upper Tertiary-Quaternary period. Over such deposits are founded the city of Armenia and most of the towns of the main coffee region of Colombia El Eje Cafetero.

The urban zone of Armenia is crossed by two main faults. In the first place the Sylvia-Pijao, or Armenia, fault and in second term The Danubio fault. The Armenia fault is sinistral with inverse component; the Danubio fault is dextral. The Armenia fault is active and it was the source of the earthquake of 25-I-99. Such an earthquake was surfacial with a depth between 10 to 20 km, having a Richter Magnitude of 6.2. It partially destroyed Armenia and other important towns of the Eje Cafetero of Colombia.