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Título:

GEOLOGICAL AND GEOMECHANICAL GENERAL CHARACTERISTICS OF THE CRETACEOUS SEDIMENTARY ROCKS, PART OF THE BASEMENT OF THE ACOCULCO CALDERA COMPLEX

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Sesión:

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Resumen:

General geological and geomechanical characteristics of the basement of the Acoculco Caldera Complex was assigning by a series of fieldtrip descriptions and laboratory measurements. In general, the basement in the region is composed by a sequence of Jurassic to Cretaceous sedimentary rocks; including very folded sandstones, limestones, conglomeratic beds and intrusive granitic bodies. One of the main proposes of the study is to highlights the interaction between properties: for example the relationship of the pore system, microfracturing characteristics and permeability was explored by mercury porosimeter, helium pycnometer and nitrogen permeameter, respectively. Matrix characteristics together with the characteristics of the fractures of the unit rocks will be useful and needed to construct different conceptual models (e.g. fluid and heat transfer trough rock medium), which in turn, and together with other studies, as geophysical studies will help to identify new zones of geothermal interests. Preliminary data shows that matrix permeability is very low even if the data of some specimens shows an increment due to particular characteristics (e.g. microfracturing). Permeability of the rock unit (matrix and fractures) seems to be higher and is strongly related to the physical characteristics evolution of the fractures (e.g. fill, aperture, recrystallization of secondary minerals).