GEOLOGY OF SCOUT FUENTEBELLA GOA, CAMARINES SUR

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ABSTRACT

The study aims to determine the Geology of Barangay Scout Fuentebella, Goa,Camarines Sur and come up with a 1:20 000 scale geologic map for the area. It focuses on the mapping and identifying the secondary geologic structures in the area, determining the different lithologic units of the study area megascopically, and characterizing the different rocks petrographically.

The study area is correlated with the Geology of Caramaon Peninsula which comprises the Tamban Diorite Formation, Isarog Volcanic Complex and Lagonoy Schist Formation. There are different types of schist occurred in the area, in the upper part of the river,quartz sericite schist is dominantly observed, on the other hand, the lower part of the Laki-Laki River is composed of epidote chlorite schist which occurs up to the tamban river.

Tape and compass method was used in geological mapping, global positioning system was used to get the coordinates of every station. The data gathered during fieldworks such as the coordinates of every station was used to map the area using a computer software (QGIS).

The researchers used Simple research method and random sampling techniques.Through Geological mapping, geologic structures like faults, fractures, joints, beddings and foliations were observed. Lithologic units in the area were determined megascopically. The gathered rock samples were brought to the National Institute of Geological Sciences in University of the Philippines for petrographic analysis.

Based on the laboratory result, the rock sample is an Epidote-Chlorite Schist. It is a fine grained metamorphic rock with anhedral to subhedral grains of calcite (10%). quartz (15%), epidote (30%) and chlorite (45%), Schistosity is defined by the parallel arrangement of the crystals. Chlorite is low relief, green under plane polarized and with low birefringent under cross polars. Epidote shows pistachio green with high relief under plane polarized light with second order to anomalous canary yellow interference color. Calcite and quartz are anhedral grains along the schistosity.

The study revealed that the area has fault as a primary structures and foliation, joints and bedding as secondary structures. The fault observed in the study area extends 10meters having a displacement of 0.3 meter. Joints and foliations in the outcrops are also observed.

However, it is recommended to make a detailed interpretation and laboratory analysis for the different rocks found within the place and additional geologic map to determine the extent of lithology in the study area. Further study on the occurrence of the fault is also recommended.