

The Economic Geology of Ijero Ekiti, South Western Nigeria: A Need for Sustainable Mining for a Responsible Socio-Economic Growth and Development

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Abstract : The study area Ijero-Ekiti falls within the Ilesha-Ekiti Schist belt, originating from the long year of the Pan-Africa orogenic events and various cataclysmic tectonic activities in history. Ijero-Ekiti is situated within latitude 7 degree 45N and 7 Degree 55N. Ijero Ekiti is bordered between the Dahomean Basin and the southern Bida/Benue basin on the Geological map of Nigeria. This research work centers on majorly on investigating the chemical composition and as well as the mineralogical distribution of the various mineral-bearing rocks that composed the study area. This work is essentially carried out with a view to assessing and at the same time ascertaining the economic potentials and or the industrial significance of the area to Ekiti-south western region and the Nigeria nation as a whole. The mineralogical distribution pattern is of particular interest to us in this study. In this regard essential focus is put on the mostly the economic gemstones distributions within the various mineral bearing rocks in the zone, some of which includes the tourmaline formation, cassiterite deposit, tin-ore, tantalum columbite, smoky quartz, amethyst, polychrome and emerald variety beryl among others as they occurred within the older granite of the Precambrian rocks. To this end, samples of the major rock types were taken from various locations within the study area for detail scientific analysis as follows: The Igemo pegmatite of Ijero west, the epidiorite of Idaho, the biotitic hornblende gneiss of Ikoro-Ijero north and the beryl crystalline rock types to mention a few. The slides of the each rock from the aforementioned zones were later prepared and viewed under a cross Nichol petro graphic microscope with a particular focus on the light reflection ability of the constituent minerals in each rock samples. The results from the physical analysis viewed from the colour had it that the pegmatite samples ranges from pure milky white to fairly pinkish coloration. Other physical properties investigated include the streak, luster, form, specific gravity, cleavage/fracture pattern etc. The optical examination carried out centers on the refractive indices and pleochroism of the minerals present while the chemical analysis reveals from the tourmaline samples a differing correlation coefficient of the various oxides in each samples collected through which the mineral presence was established. In conclusion, it was inferred that the various minerals outlined above were in reasonable quantity within the Ijero area. With the above discoveries, therefore, we strongly recommend a detailed scientific investigation to be carried out such that will lead to a comprehensive mining of the area. Above all, it is our conclusion that a comprehensive mineralogical exploitation of this area will not only boost the socio-economic potential of the area but at the same time will go a long way contributing immensely to the socio-economic growth and development of the Nation-Nigeria at large.

Keywords : Ijero Ekiti, Southwestern Nigeria, economic minerals, pegmatite of the pan African origin, cataclastic tectonic activities, Ilesha Schistbelt, precambrian formations

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