

PETROLOGY, STRUCTURAL AND MINERALOGY OF THE PRECAMBRIAN ROCKS AROUND OKEMESI-IJERO AREA, SOUTHWESTERN NIGERIA

OLUSIJI SAMUEL AYODELE

Department of Geology and Geophysics, Ekiti State University, Ado Ekiti

ABSTRACT

Petrological, structural and mineralogical structural studies of the area around Okemesi-Ijero were carried out using geological field mapping and petrographic analysis of the rocks for its mineral composition. Rock types such as quartz-biotite-schists, banded-gneiss, granite-gneiss, biotite-gneiss, calc-gneiss, porphyritic granites, charnockites, massive and schistose quartzites and mica schists. Structural assessment of the rocks revealed folds, fractures, faults and veins as product of Precambrian deformations. The rose plots showed fractures on the granites are more intersected and long, while those on the quartzites are shorter. Other lithologies such as schists, gneisses and migmatites have very few fractures because of their ductile nature. Petrographic studies of the rocks revealed the modal composition of minerals in the rocks such as quartz (>70%), albite (22%), microcline (30%), muscovite (26%), plagioclase feldspar (5-15%) and hornblende (4-5%). However, mineralization in the studied area is structurally controlled by the folds, fractures, faults and veins which provided the structural framework for epigenetic mineralization in the studied area.

KEYWORDS: *Okemesi-Ijero; Lithologic Units; Rose Plots; Photomicrographs; Minerals*

Received: Mar 10, 2017; **Accepted:** Mar 26, 2017; **Published:** Mar 30, 2017; **Paper Id.:** TJPRC: IJEEGSJUN20176