Ground magnetic study of some parts of Ilesa south eastern schist belt was carried in order to delineate the different rock types and other geological structures associated with the study area. The intensities and characteristic nature of the magnetic anomalies as expressed on all the profiles are indicative of the different rock types producing them. Qualitative and quantitative interpretation of individual magnetic anomaly and geological knowledge of the survey area yielded information on the depth of burial, extent, geological contacts, structures and magnetic properties of rock units. In addition, the existence of a NE-SW trending anomaly, most probably a fault is traced using the linear trend analysis, which agrees reasonably well with the geological direction of the inferred Iwaraja fault. However, preliminary interpretation suggests that this inferred fault is found on the Amphibolite Schist Complex and a significant distance away from the original location as published by the Geological Survey of Nigeria.