Petrographic Assessment of Granitic Rocks In Minna, In North Central Nigeria.

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Minna is situated in the North Central part of Nigeria Basement complex, surrounded by rugged terrain. There is need to carry out geological assessment and establish attributes and benefit of the granitic rocks in the area. The rock of Older Granite suite constitutes about 80% of rocks in Minna and its environ, elongated in a NW SE direction in an uninterrupted ridge pattern and flat laying in the South-West, around Paiko, it occurred as batholith. The rock types in the area are mainly porphyritic Granite with some migmatite, porphyritic and medium grained biotite granite and biotite muscovite granite. Other rock in the area include mica, Schist, and quartzite. Eight granitic masses have been mapped, some which lie partly outside Minna. Petrographic study of rock samples from the study area was carried out under cross and plain polarized light microscope using petrological microscope. Granite predominate the area with granodiorite and diorite forming small suits. The intense regional deformation which accompanied and preceded the emplacement of the Older Granite result in NE SW trend of non-penetrating joint, some which are healed joints. Quartz Filled faults have been examined in most of the outcrop. The vein quartz is between 1cm and 35cm wide. The foliation is present near the top of the NE and NN granite ridge of Minna.

The structural potential of the granitic rock in the study area does not favor good aquifer and hence failed water boreholes exist in the area. The batholiths and granitic ridge constitute source of local rise in temperature and promote run off that cause flooding, which also restricts land use and urban development to the South Western part of the study area. The granitic ridge in the NW and NN part of Minna is been mined for road construction, flat laying granitic rocks favors shallow foundation for construction work. The study shows that the granitic rock of Minna and its environs is of insignificant benefit bur rather of great impact to the inhabitant of the area.