

Preface

Since the book on the Geology of Nigeria by C.A. Kogbe, published by Elizabethan Publishing Company, appeared in 1976, no other attempt has been made to review, collate and publish the advances made in the geology of Nigeria in a comprehensive format. Yet over the years, many studies, evaluations and re-evaluations have been undertaken in many aspects of the geology of Nigeria. Kogbe's book on the Geology of Nigeria remained the only reference book in the aspect of understanding the regional geology of Nigeria.

Some aspects of the geology and stratigraphy of Nigerian sedimentary basins are available in Whiteman (1982) and Ofoegbu (1990). Nigeria is the 8th largest producer of crude oil, which is bowelled in her sedimentary basins. As at now, current production of all Nigeria's crude oil is derived from the Niger Delta basin. The geology of the Niger Delta has been the most studied because of the petroleum occurrence in the basin, yet several reports of potentials in the other onshore basins have been made. Some stratigraphic re-evaluations have also been undertaken in the study of these sedimentary basins. These re-evaluations are scattered in different published literatures, and were prior to this work not collated nor synthesized.

Abundant mineral deposits occur in all the components of Nigerian geology (Basement, Younger Granites, Sedimentary Basins) but the unavailability of a detailed geological textbook that can bring forward the advances made so far and the complexity of the Nigerian Mineral Act as well as the low technical capacity to properly assess the reserves, physico-chemical properties and industrial applications of these mineral resources have led to the inability to properly harness the mineral resources of Nigeria. The dominance of oil on the Nigerian economy has not helped matters. A proper knowledge of the geology and accurate inventory of the mineral resources of Nigeria and the dissemination and documentation of this information in the form of a book as has been attempted here are necessary to attract public and private sector investors to the minerals sector of the Nigerian economy which in turn should lead to the establishment of small and medium-scale enterprises. Such enterprises will resuscitate economic activities that will lead to economic growth, employment generation, poverty reduction and social transformations.

This work is generally a review and an assemblage of several separate works on different aspects related to the geology of Nigeria with some minor new data generated in the course of carrying out this project. It is therefore clear that most parts

and indeed most of the chapters derive from previous works by other authors and in such cases, these have been clearly stated and the respective previous works and the authors duly acknowledged. It is important, however, to mention at this stage that the chapter on the Basement Complex benefited immensely from the work of Dada (2006) while the chapters on the Younger Granites and Cenozoic Volcanism were derived majorly from Bowden and Kinnaird (1984), Kinnaird (1985) and Wright (1985). Compilation on the Benue Trough came mainly from Obaje et al. (2004); the Chad and Dahomey Basins from Okosun (1995); the Sokoto Basin from Kogbe (1981b), the Bida Basin from Adeleye (1989) and Akande et al. (2005) and the Niger Delta from Stacher (1995). The works of Offodile (1981) and Woakes et al. (1987) contributed immensely to the discussion on the Mineral Resources of Nigeria.

It is not coincidental that most of the mines and minerals illustrated in figured photographs came from Nasarawa State. The reason can mainly be attributed in part to my academic location at the Nasarawa State University in Keffi over the past five years and the fact that Nasarawa State can be taken as a microcosms for the study of Nigerian geology. All the rock types that make up the components of Nigerian geology (Basement, Younger Granites and Sedimentary rocks) are all represented in Nasarawa State; so also are 80% of all the minerals that occur in the different geological environments in Nigeria.

His Excellency, the Executive Governor of Nasarawa State, Alhaji Aliyu Akwe Doma, *Garkuwan Doma*, is the Chief Executive of the State that is “Home of Solid Minerals”. He is also very enthusiastic about developing and harnessing the solid mineral resources of Nasarawa State to accelerate the economic development of the region. When we wrote our first monograph on the Geology and Mineral Resources of Nasarawa State, His Excellency called me personally to say he read every page of the book and gave us a pat on the back with lots of encouragements. Through that action of the Governor of Nasarawa State, I was encouraged to start this project and to expand the scope to cover the whole of Nigeria.

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Keffi, Nigeria

Nuhu George Obaje



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Obaje, N.G.

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