

# **Comparative Study of the Eocene Agbada and Oligocene Ogwashi-Asaba Formations of the Niger Delta Basin**

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## **ABSTRACT**

The Eocene to Recent Agbada Formation of the Niger Delta is the known hydrocarbon bearing reservoir. Occurrence of this formation is entirely in the subsurface. Acceptable geological interpretations must be backed up with studies which involve integration of several data sets. This study seeks to establish relationships between the Agbada Formation and Ogwashi-Asaba Formation so that the later can be used as analogue for proper characterization and prediction of the subsurface. Field observation and lithologs from exposures show that the Ogwashi-Asaba Formation consists of a succession of interbedded lignite, shales, claystone, siltstone, sandstone, and conglomerate. This cyclic alternation of sandstones, claystones and shales as observed on the surface of the Oligocene Ogwashi-Asaba Formation are conspicuous on well logs and core data from the subsurface Agbada Formation. The depositional environment of these Formations have been interpreted as paralic or marginal marine. More detailed Sedimentological and stratigraphic as well as geochemical studies which will involve integration of several other data set would be carried out. Subsurface well logs and cuttings together with surface samples obtained during geologic fieldwork would be subjected to a comparative analysis. A link between the two formations would be established with more scientific evidence which would bring about formulation of a predictive model.