# International Conference on
# Hydrology & Ground Water Expo

**September 10-12, 2012   Hilton San Antonio Airport, USA**

## Predicting the yields of deep wells of the deltaic formation, Niger delta Nigeria

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The study examined the spatial characteristics of boreholes of ten selected locations with the opinion of appraising the sustainability of groundwater resource in the Deltaic Formation, Niger Delta Nigeria. Data on Borehole Parameters (Depth of Hole, Screen Length, Yield of Well and Drawdown) were obtained from the Rivers State Ministry of Water Resources, Port Harcourt, Rivers State. Both Descriptive and Inferential Statistical methods were employed in the analyses of the data while the relationship between the well yield and other borehole parameters was also modelled. The result showed that the aquifers of the study area are very thick, deeply located, highly porous and saturated; emphasizing high yield potentials. It was also revealed that the basin contains adequate water to sustain her population as indicated by the high mean yield (30,056lit/m) recorded for the study area. Finally, the result of the correlation statistics showed that the yield of well increases with depth of hole (r = 0.82), rate of drawdown (r = 0.62) and length of screen (r = 0.63); and that the rate of drawdown increases as the length of screen increases (r = 0.99). The study concluded by emphasizing the indispensability of adequate knowledge of hydrogeology in groundwater exploration and development particularly in regions of complex geological heterogeneity such as that of the Deltaic Formation

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