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Edge detection of lithological structures Using Analytical Signal Technique on gravity data; a case of Gombe arm of Benue Trough

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The study was carried out to map out litho-structures in the Gombe arm of Benue trough by interpreting gravity data of the study area using the Analytical signal method. The bouguer and analytic maps were drawn and represented in the work to show the distribution of the anomalies in the study area. The method displays the gravity anomalies of an area through the amplitudes of the directional analytic signals. The study area showed high anomalies in the northeastern part and southern part of the study area i.e. Dukku and Akko, which was attributed to the presence of metamorphic rocks which caused positive anomalies and sedimentary rocks in the areas which caused the negative anomalies.

Key words: Edge detection, Lithological structure, gravity data, Analytical signal.

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