



## **The characteristics of satellite gravity and magnetic anomaly and its tectonic significance in Lower Congo Basin, West Africa**

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In the main part of Lower Congo Basin there are very few coherent reflections below the salt because of diffractions and scattering from complex post-salt structures caused by gravity sliding of the youngest section. The overall objective of the study is to map regional structure from gravity and magnetic data and to reveal the structure to potential exploration leads. The regional tectonic interpretation in Lower Congo Basin was presented based on the series of the processing of satellite-derived gravity data and magnetic data. The processing method includes the preferential filtering for the separation of gravity anomaly, variable dip angle reduce-to-pole for magnetic anomaly based on variable dip angles, tectonic feature enhancement for potential data. In accordance with the principles of structure division method of gravity and magnetic data, the regional geological map and other data, the final unit division and faults recognitions are summarized to support the important information for delineating oil and gas prospect area.