Materials Science and Nanotechnology

## 3D Euler deconvolution of aeromagnetic data and pseudogravity transforms for mapping of structures and mineralized zones in Osi NE, Southwestern Nigeria

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3D Euler deconvolution of aeromagnetic data and pseudo-gravity transforms over Osi NE, Southwestern Nigeria was carried out. It was aimed at identification of the structures and the prospective mineralized zones in the area. This work involved the qualitative and quantitative analysis of aeromagnetic data, pseudo-gravity transforms and geological information using Oasis Montaj™ and Rockwork15™ software. The 3-D Euler Deconvolution of the acquired potential field data and the information obtained from geological maps was employed in the interpretation work. The identified faults and lineament features generally coincide with the river channels which indicate a structural control of the drainage system in the study area. The rose diagram of the extracted faults and lineament features showed a predominance of NE-SW and NW-SE trends typical of the post-Pan African lineaments while the other identified structures and prospective mineralized zones explain the reasons for artesian mining in the study area.

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