

IM4DC

Action Research Report

SUMMARY

Researcher:

Evans Okan (PhD Student)
[Supervisor: Anton Kepic]

School/Centre:

Department of Exploration Geophysics

University/Institutions:

Curtin University

Key themes:

Operational Effectiveness

Key countries:

Nigeria, Australia

Completion:

June 2015

Research aims:

This ongoing PhD research aimed to model the expected seismic response of significant IOCG deposits, such as Olympic Dam and Prominent Hill. It includes evaluation of the modelled geophysical with respect to real seismic data and other geophysical data for relative exploration merit.

For further information on this action research:

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Final report available on request from:
admin@im4dc.org

The Feasibility of Using 3D Seismic Reflection Surveys to Discover IOCG Deposits in the Gawler Craton

Gravity and magnetic modelling of three deposits (Hillside, Olympic Dam and Vulcan) indicate that the petrophysics and structural models are valid as they match real potential field data well. The modelled seismic response in the case of all three deposits matches real data and has the hypothesised characteristics. Thus, the seismic method appears to be a valid exploration method to find IOCG deposits.

The PhD Student Evans Okan is a Nigerian National with a scholarship from the Federal University of Petroleum Resources, Effurun, Nigeria.