

IM4DC

Action Research Report

SUMMARY

Researcher:

Van Anh Cuong Le (PhD Student)
[Supervisor: Brett Harris]

School/Centre:

Department of Exploration Geophysics

University/Institutions:

Curtin University

Key themes:

Operational Effectiveness

Key countries:

Vietnam, Australia

Completion:

June 2015

Research aims:

This ongoing PhD research is focused on the cooperative inversion of co-located seismic reflection and magnetotelluric data which has potential significance for mine development, minerals exploration, water resource assessment and environmental assessments.

For further information on this action research:

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

Published papers:

Takougang, Eric M. Takam, Brett Harris, Anton Kepic, and Cuong VA Le (2015). Cooperative joint inversion of 3D seismic and magnetotelluric data: With application in a mineral province. *Geophysics* 80: 175-187. doi: 10.1190/geo2014-0252.1

Van Anh Le Cuong , Harris Brett , Takam Takougang Eric , Pethick Andrew (2015). Application of seismic attributes for constraining Magnetotelluric Inversion. *ASEG Extended Abstracts 2015*, 1-4.

Cooperative Inversion of Co-located Seismic Reflection and Magnetotelluric Data

The cooperative inversion of co-located seismic reflection and magnetotelluric data is a key and increasingly important area of Geophysical research. The Pawsey centre supercomputer is being used to run inversion of geophysical data (i.e. the new Cray Cascade system located in Perth). The methods potentially have significance for mine development, minerals exploration, water resource assessment and environmental assessments. As part of this Action Research, novel inversion schemes were developed and applied to large industry scale 3D seismic and magnetotelluric data sets (from a gold mining district).

The PhD Student Van Anh Cuong Le is a Vietnamese National with an Australian Development (Australian Aid) scholarship.