3D EM at Work
Selected Papers

James Macnae

The Australian Society of Exploration Geophysicists organised the 3D EM-3 symposium, "3D EM at Work", which was the third in a series of symposia on Three-Dimensional Electromagnetics sponsored by the Gerald W. Hohmann Memorial Trust. The meeting was held in Adelaide on February 20 and 21, 2003, under the chairmanship of Bob Smith and Mike Asten, and focussed on practical outcomes of electromagnetic methods in three dimensions. Many papers from the symposium were submitted to the technical program committee of James Macnae and Guimin Liu, subjected to peer review, and following revision and editing were compiled by the ASEG onto a symposium CD. Since this CD received very limited circulation outside the attendees to the conference, and several contributions were of considerable significance, I am delighted that a selection of papers relevant to the interests of ASEG members have been included in this issue of *Exploration Geophysics*.

The full CD is available from the ASEG Business Office, whose address is at the beginning of this journal. Alternatively, see the ASEG Website for more details. The fully refereed papers on the CD are listed below, but there are numerous other files on the CD, including copies of more than 20 presentations given at the Symposium.

PROCEEDINGS OF THE 3DEM-3 SYMPOSIUM, ADELAIDE, FEBRUARY 2003
THREE-DIMENSIONAL ELECTROMAGNETICS III (CD-ROM)

Refereed Papers

Richard Smith, R., Hyde, C., Lee, T., and Almond, R., *Impulsive Moments At Work.*

Xie, G., Lin, C.C., Li, J., and Liu, J., *GILD EM Modeling In Nano-Geophysics And Nano-Materials Using Magnetic Field Integral Equation.*

Sasaki, Y., 3-D Electromagnetic Modeling And Inversion Incorporating Topography.

Uchida, T. and Sasaki, Y., *Stable 3-D Inversion Of MT Data And Its Application For Geothermal Exploration.*

Jiracek, G.R., *Current Status Of The Rayleigh Scattering Approach In Three-Dimensional Electromagnetic Modeling.*

Broxholme, K., Heinson, G., Busuttil, S., and Lilley, F.E.M., *Two-Dimensional Magnetotelluric Responses Of Three-Dimensional Bodies.*

Adepelumi, A.A., Flexor, J.M., Fontes, S.L., and Schnegg, P.A., *Three-Dimensional Magn*etotelluric Modeling Of The Serra Da Cangalha Impact Crater, Northeastern Brazil.

Chen, C-S, Li, J., Lin, C.C., and Xie, G., *Magnetotelluic And Flow Modeling And Joint Inversion For Geophysical Exploration.*

Li, S. and Zhou, Q., *Development Of Practical 2-D Induction Log Inversion.*

Travassos, J., Machado, A.F., and Menezes, P.T.L., *Three-Dimensional Magnetotelluric Modeling Of The Central Portion Of Parana Basin.*

Zhdanov, M.S. and Golubev, N., *Three-Dimensional Inversion Of Magnetotelluric Data In Complex Geological Structures.*

Fang, S., Gao, G., and Torres-Verdin, C., *3D Electromagnetic Anisotropy Modeling Using Integral Equations.*

Singer, B., Mezzatesta, A., and Wang, T., *Integral Equation Approach To Modeling 3-D Electromagnetic Field. Examples Of Application To Borehole Problems.*

Chen, J. and Oldenburg, D., *3D Inversion Of Magnetic Induced Polarization Data.*

Sattel, S. and Reid, J., *The Modelling Of AEM Anomalies With Dipoles In A Layered Earth.*

Christiansen, A.V. and Auken, E., *Layered 2-D Inversion Of Profile Oriented Data.*

Gao, G., Fang, S., and Torres-Verdin, C., *A Novel Approximation In 3D Electromagnetic Anisotropy Modeling.*

Kurz, G., Igel, J., and Schulz, R., *3D Electromagnetic Modeling In Frequency Domain – Studies Of Underground Measurements In A Salt Mine.*

Son, J., Song, Y., and Suh, J.-H., *High Frequency 3D EM Modeling Using Vector Finite Elements.*

Weaver, J., Agarwal, A.K., and Lilley, F.E.M., *The Relationship Between The Magnetotelluric Tensor Invariants And The Phase Tensor Of Caldwell, Bibby, And Brown.*

Yi, M-J., Kim, J.H., Lee, S.K., *Cho, S.J. and Song, Y., Application Of 3-D Resistivity Tomography To Delineate Subsurface Structures.*

Yin, C., *Electrical Anisotropy And Seafloor EM Exploration – A Forward Modelling Problem.*