

Staff Profile

Name: Dr. Michael Finnemore

Position: Director of Southern Geophysical Ltd
Senior Geophysicist

Qualifications & Affiliations:

Tertiary Qualifications

- Master of Science in Exploration Geophysics, 1998, Leeds University (MSc)
- Doctor of Philosophy in Geology, 2004, University of Canterbury (PhD)

Industry Training and Qualifications

- New Zealand Driver License
- Site Safe Civil Passport
- First aid

Key Skills:

- Primary interests are in the development of new geophysical equipment and processes, particularly for active source seismic reflection surveying.
- Geophysical Survey Manager for ETH field programmes in New Zealand, 2004 and 2008.
- Numerous peer-reviewed technical reports for New Zealand civil, infrastructure mineral and petroleum companies.
- Participated in many Antarctic field programmes and have over 970 days on the Antarctic continent. Acted as a tutor in 2004 and 2008 for the University of Canterbury graduate certificate in Antarctic studies.
- Have co-supervised three MSc thesis students.

Work Experience:

- 2004-present Director/Geophysicist Southern Geophysical Ltd
Christchurch
- 2004-present Technical Manager, Canterbury Seismic Instruments
Christchurch
- 1998-2002 Geophysical Contractor, University of Canterbury and
Atlantic Richfield Company
- 1993-1997 Geophysics/Electronics, Department of Geological
Technician Sciences, University of Canterbury, Christchurch

- 1991-1992 Manager / Applied Research Laboratories Electronic Engineer
University of Texas
- 1989-1990 Winter-Over Researcher, Bartol Research Institute and
(Amundsen-Scott South, University of Leeds Pole Station,
Antarctica)

Sample of publications and projects:

Publications (2000 - present)

- Carpentier, S F A; Green, A G; Langridge, R; Boschetti, S; Doetsch, J; Finnemore, M.; Flower structures and Riedel shears at a step over zone along the Alpine Fault (New Zealand) inferred from 2-D and 3-D GPR images. *Journal of Geophysical Research*117.B2 (February 2012): Citation B02406.
- Carpentier, S F A; Green, A G; Doetsch, J; Dorn, C; Kaiser, A E; Finnemore, M.; Recent deformation of Quaternary sediments as inferred from GPR images and shallow P-wave velocity tomograms; northwest Canterbury Plains, New Zealand *Journal of Applied Geophysics* 81 (June 2012): 2-15.
- Dorn, C; Green, A G; Jongens, R; Carpentier, S; Kaiser, A E; Finnemore, M.; High-resolution seismic images of potentially seismogenic structures beneath the northwest Canterbury Plains, New Zealand. *Journal of Geophysical Research*115.B11 (2010):
- Dorn, C; Carpentier, S; Kaiser, A E; Green, A G; Horstmeyer, H; Finnemore, M.; First seismic imaging results of tectonically complex structures at shallow depths beneath the northwest Canterbury Plains, New Zealand. *Journal of Applied Geophysics*70.4 (April 2010): 317-331.
- Campbell, Fiona M; Kaiser, A; Horstmeyer, H; Green, A G; Ghisetti, F; Finnemore, M; Processing and preliminary interpretation of noisy high-resolution seismic reflection/refraction data across the active Ostler fault zone, South Island, New Zealand. *Journal of Applied Geophysics*70.4 (April 2010): 332-342.
- Kaiser, A E; Green, A G; Campbell, F M; Horstmeyer, H; Manukyan, E; Finnemore M; Ultrahigh-resolution seismic reflection imaging of the Alpine Fault, New Zealand. *Journal of Geophysical Research*114.B11 (2009):
- A. Kaiser, F. Campbell, W. Stratford, H. Horstmeyer, R. Langridge, M. Finnemore, J. Ernst, D. Nobes, A. Green. Shallow imaging of the northern Alpine Fault zone from high resolution 3D seismic reflection data.. 33rd International Geological Congress, Oslo, Abstract 1343542, 2008.
- F. Campbell, A. Kaiser, W. Stratford, H. Horstmeyer, M. Finnemore, L. Marescot, D. Nobes, A. Green. Investigating the structure of the ostler fault zone, south island, New Zealand, using high-resolution seismic reflection. 33rd International Geological Congress, Oslo, Abstract 1341848, 2008.

- C. Dorn, F. Campbell, A. Kaiser, H. Horstmeyer, A. Green, S. Carpentier, M. Finnemore, D. Nobes, J. Campbell. Seismic and GPR imaging of the Springfield fault system, Canterbury plains, New Zealand. The 33rd International Geological Congress, Oslo, Abstract 1358003, 2008.
- S. Carpentier, C. Dorn, Kaiser, A Campbell, F Campbell, J Green, A Horstmeyer, H Nobes, D Finnemore, M. Seismic and GPR Imaging of the Springfield Fault System, Canterbury Plains, New Zealand. Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract NS23A-1145, 2008
- F. Buech, T.R. Davies, J.R. Pettinga & M. Finnemore, J.B. Berrill. The Little Hill field experiment: Seismic response of an edifice. In Proceedings of the New Zealand Society for Earthquake Engineering Conference, Palmerston North, 2007.
- Jol, H.M., Goodsell, B., Nobes, D.C., Finnemore, M., Cussins, T. Preliminary results from high frequency GPR surveys and a 3D grid: Davis Snowfield, Franz Josef Glacier, New Zealand. In Slob, Evert, Yarovoy, Alex & Rhebergen, Jan (eds), GPR 2004: Proceedings of the Tenth International Conference on Ground Penetrating Radar, Delft, pp. 773-776, 2004.
- Finnemore, M. 2004. The Application of seismic reflection surveying to the Characterisation of Aquifer Geometry and related active tectonic deformation, North Canterbury. PhD Thesis. Department of Geological Sciences, University of Canterbury, Christchurch. 300 p.
- Horgan, H., Bannister, S.C., Naish, T.R., Wilson, G., Pyne, A., Clifford, A., and Finnemore, M., 2003, ANDRILL site investigations/seismic surveys, McMurdo and southern McMurdo Ice Shelf, McMurdo Sound, Antarctica: Institute of Geological & Nuclear Sciences, Science Report, v. 2003/05,47 pp.
- Roering, J.J., Pettinga, J.R., McKean, J., Campbell, J.K., Finnemore, M. 2002. Modelling active fault-related folding and the associated geomorphic response, Hawarden Anticline, Canterbury, New Zealand, AGU, West Pacific Geophysical Meeting Eos, Transactions, Wellington.
- Finnemore, M., Pettinga, J.R. 2000. Shallow seismic reflection study of aquifer geometry in northwest Canterbury: Environment Canterbury, Report U00/28, 40 p.
- Numerous technical reports for New Zealand civil, infrastructure, mineral and petroleum companies.

Contact Details

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