

Appendix 1: Participants

GEMOC PARTICIPANTS 2003

MACQUARIE UNIVERSITY

Department of Earth and Planetary Sciences

Academic Staff

(Teaching and Research)

- Dr Kelsie Dadd (Physical vulcanology, geochemistry, tectonics) 100%
- Dr Nathan Daczko (Structural and metamorphic geology, tectonics, geodynamics) 100%
- Dr Richard Flood (Volcanic geology, application of magnetic fabrics to reconstruction of volcanic terrains) 100%
- Professor W. L. Griffin, Program Leader (Technology development and industry liaison) 80%
- Dr Simon Jackson (Trace element geochemistry, metallogeny) 100%
- Dr Mark Lackie (Rock magnetism, paleomagnetic reconstructions) 30%
- Professor Suzanne Y. O'Reilly, Director (Crust and mantle evolution, lithosphere modelling) 100%

Research Staff

- Dr John Adam 40%
- Dr Elena Belousova 100%
- Ms Tara Deen 100%
- Dr Lev Natapov 100%
- Dr Yvette Poudjom Djomani 100%
- Dr Rhiannon George 100%
- Dr Vladimir Malkovets 100%
- Emeritus Professor Trevor Green 100%
- Professor Simon Turner 100%
- Emeritus Professor John Veevers 30%

- Emeritus Professor Ron Vernon 20%
- Dr Kuo-Lung Wang 100%
- Dr Ming Zhang 100%

Adjunct Professors

- Professor Bruce Chappell (Granite petrogenesis, geochemistry)
- Professor W. L. Griffin
- Dr John Hronsky (WMC Resources Ltd)
- Professor Paul Morgan (University of Northern Arizona, Geophysics and tectonics)
- Professor Mike Etheridge
- Professor Else-Ragnhild Neumann
- Professor Xisheng Xu

Visiting Professors

- Professor Tom Andersen (University of Oslo)
- Professor Jean-Yves Cottin (University Jean-Monnet, St Etienne)
- Dr Yong-Joo Jwa
- Associate Professor Ian Metcalfe (Tectonic reconstructions in Asia: Gondwana breakup)
- Professor Nicholas Fisher (Statistics, quality management)
- Dr Phil Schmidt (see CSIRO)

Visiting Fellows

- Dr Gilles Chazot (University of Clermont-Ferrand)
- Associate Professor Ian Metcalfe (Tectonics, Asian terrain reconstructions, Gondwana breakup)

Honorary Associates

- Dr Natsue Abe
- Dr Kari Anderson
- Ms Sonja Aulbach
- Dr Graham Begg
- Dr Phillip L. Blevin (Igneous metallogeny, ore deposit studies)
- Ms Rosa Maria Bomparola

- Professor Hannes Brueckner
- Dr Robert Bultitude
- Dr Gilles Chazot
- Mr David Clark (CSIRO)
- Professor Kent Condie
- Dr Richard Glen
- Dr Karsten Gohl (Seismic studies and RV Sonne Cruise program)
- Dr Michel Grégoire (Geochemistry)
- Dr Jingfeng Guo (Mineral exploration in Asia; mantle sulfides, sapphire origin)
- Dr Bram Janse (Diamond exploration)
- Dr Mel Jones
- Dr Felix Kaminsky
- Associate Professor Ian Metcalfe
- Dr Bertrand Moine
- Dr Geoff Nichols
- Dr Boris Panov
- Dr Mark C. Pirlo
- Dr Peter Robinson
- Dr Chris Ryan (CSIRO)
- Dr Stirling Shaw (Granitoids and crustal genesis)
- Dr Simon Shee
- Dr Zdislav Spetsius
- Dr Nancy van Wagoner
- Dr Steve Walters (Crustal terranes)
- Dr Xiang Wang
- Mr Bruce Wyatt (Mantle petrology, diamond exploration)
- Ms Chunmei Yu
- Professor Jin-Hai Yu
- Professor Jianping Zheng (Geochemistry, China lithosphere)

Professional Staff

- Ms Manal Bebbington (rock preparation) 50%
- Ms Eloise Beyer (Geochemist) 40%
- Ms Suzy Elhlou (Scientific Officer) 100%
- Dr Oliver Gaul (Research Officer) 80%

Dr Stuart Graham (Geochemist until July 2003) 100%
Ms Sally-Ann Hodgekiss (Research Officer, Design consultant) 50%
Dr John Ketchum (Geochemist) 100%
Ms Carol Lawson (XRF, Laboratories) 100%
Ms Valeria Murgulov (Geochemist) 40%
Ms Leigh Newton (Administrator) 100%
Dr Norman Pearson (Manager, GAU) 100%
Dr Ayesha Saeed (Geochemist) 100%
Dr Kirsty Tomlinson (Geochemist) 100%
Mr Peter Wieland (Geochemist) 100%
Mr William Powell (Research Assistant) 40%

FORMAL COLLABORATORS

University of Wollongong

Professor Allan Chivas (DEST Systemic Infrastructure partner)

Monash University

Dr Peter Betts
Dr David Giles
Dr Bruce Schaefer

University of Newcastle

Dr W. Collins (DEST Systemic Infrastructure partner)

University of Sydney

Dr G. Clark (DEST Systemic Infrastructure partner)
Dr Dietmar Muller

University of Western Sydney

Professor Peter Williams (DEST Systemic Infrastructure partner)

CSIRO Division of Exploration and Mining

Dr Anita Andrew (Stable isotopes)
Mr D. Clark (Paleomagnetism, magnetic modelling)

Dr N. Evans (PGE geochemistry and Re/Os systematics)
Dr Brent McInnes (Cu/Au metallogeny)
Dr C. G. Ryan (Proton microprobe, fluid analysis)
Dr P. Schmidt (Rock magnetism, terrane evolution)
Ms Tin Tin Win (Hydrothermal systems, mantle petrology)

Australian National University (Research School of Earth Sciences)

Professor Brian Kennett
Professor Gordon Lister

AGSO

Dr Barry Drummond (Geophysics)
Dr L. Wyborn (Crustal evolution, metallogeny through time, implementation of GPS/GIS)

Geological Survey of Western Australia

Dr D. Nelson (zircon U-Pb/Hf isotopes)
Dr I. Tyler (zircon U-Pb/Hf isotopes)

OTHER COLLABORATORS ON PROJECT BASIS

Dr Bernard Bingen (Geological Survey of Norway, Trondheim)
Professor J.-L. Bodinier (Université Montpellier, France)
Professor Chen-Hong Chen, (National Taiwan University)
Professor Chen Daogong (University of Science and Technology of China, Hefei)
Dr Sun-Ling Chung (National Taiwan University)
Mr B. Doyle (Kennecott Canada)
Dr Yuriy Erinchek (VSEGEI)
Professor Weiming Fan (Resource and Environment Department, Chinese Academy of Sciences)

Professor A. Giret (Université Jean Monnet, St Etienne)

Mr K. Kivi (Kennecott Canada)

Dr T.-L. Knudsen (Geologisk Museum, Norway)

Dr Lai Shaocong (Northwestern University, Xi'an)

Dr L. M. Larsen (Greenland Geological Survey)

Dr J.-P. Lorand (Museum National d'Histoire Naturelle)

Professor Fengxiang Lu (China University of Geosciences at Wuhan)

Professor Ma Hongwen (China University of Geosciences at Beijing)

Professor Boris Panov (Donetsk State Technical University)

Professor S. R. Paterson (University of Southern California)

Dr Patrice Rey (University of Sydney)

Dr Peter Robinson (Geological Survey of Norway, Trondheim)

Dr Z. Spetsius (ALROSA, Mir)

Professor O. T. Tobisch (University of California, Santa Cruz)

Associate Professor Wang Xiang (Nanjing University)

Professor P. F. Williams (University of New Brunswick)

Professor Xue Jiyue (Nanjing University)

Professor Yuan Xuecheng (China Geological Survey)

Professor Zhou Xinmin (Nanjing University)

Technology Partners

Agilent Technologies (Hewlett Packard)

New Wave Research

Spectro Instruments

Nu Instruments

Appendix 2: Publications

A full list of GEMOC Publications is available at

<http://www.es.mq.edu.au/GEMOC/>

231. Gohl, K. and Uenzelmann-Neben, G. 2001. The crustal role of the Agulhas Plateau, southwest Indian Ocean: evidence from seismic profiling. *Geophysical Journal International*, 144, 632-646.
232. Dadd, K.A. and van Wagoner, N.A. 2000. Magma composition and viscosity as controls on peperite texture: an example from Passamaquoddy Bay, southeastern Canada. *Journal of Volcanology and Geothermal Research*, 2397, 1-18.
233. McCammon, C.A., Griffin, W.L., Shee, S.H. and O'Neill, H.St.C. 2001. Oxygen fugacity constraints on metasomatic processes in ultramafic xenoliths from the Wesselton kimberlite, South Africa. *Contributions to Mineralogy and Petrology*, 141, 287-296.
234. O'Reilly, S.Y., Griffin, W.L., Poudjom Djomani, Y.H. and Morgan, P. 2001. Are Lithospheres Forever? Tracking changes in sub-continental lithospheric mantle through time. *GSA Today*, 11, 4-10.
235. Moine, B.N., Grégoire, M., O'Reilly, S.Y., Sheppard, S.M.F. and Cottin, J.-Y. 2001. High field strength element (HFSE) fractionation in the upper mantle: evidence from amphibole rich composite mantle xenoliths from the Kerguelen Islands (Indian Ocean). *Journal of Petrology*, 42, 2145-2167.
236. Davies, R.M., O'Reilly, S.Y. and Griffin, W.L. 2001. Multiple origins of alluvial diamonds from New South Wales, Australia. *Economic Geology*, 97, 109-123.
237. Lorand, J.-P. and Alard, O. 2001. Platinum-group element abundances in the upper mantle: new constraints from *in situ* and whole-rock analyses of Massif Central xenoliths (France). *Geochimica et Cosmochimica Acta*, 65, 2789-2806.
238. Adam, J. and Green, T. 2001. Experimentally determined partition coefficients for minor and trace elements in peridotite minerals and carbonatitic melt, and their relevance to natural carbonatites. *European Journal of Mineralogy*, 13, 815-827.
239. Green, T.H. and Adam, J. 2002. Pressure effect on Ti- or P-rich accessory mineral saturation in evolved granitic melts with differing K_2O/Na_2O ratios. *Lithos*, 61, 271-282.
240. Luguet, A., Alard, O., Lorand, J.P., Pearson, N.J., Ryan, C. and O'Reilly, S.Y. 2001. Laser-ablation microprobe (LAM)-ICPMS unravels the highly siderophile element geochemistry of the oceanic mantle. *Earth and Planetary Science Letters*, 189, 285-294.
241. Jackson, S.E. 2001. The application of Nd:YAG lasers in LA-ICP-MS. Principles and Applications of Laser Ablation-Mass Spectrometry in the Earth. In Sylvester, P., (ed.) *Laser-Ablation-ICPMS in the Earth Sciences, Principles and Applications. Mineralogical Association of Canada Short Course Series (St John's Newfoundland, 2001)* 29-46.
242. Jackson, S.E., Pearson, N.J. and Griffin, W.L. 2001. *In situ* isotope ratio determination using LA-magnetic sector-ICP-MS. Principles and Applications of Laser Ablation-Mass Spectrometry in the Earth Sciences. In Sylvester, P., (ed.) *Laser-Ablation-ICPMS in the Earth Sciences, Principles and Applications. Mineralogical Association of Canada Short Course Series (St John's Newfoundland, 2001)* 29, 105-120.
243. Morgan, P. 2001. Heat Flow. **Encyclopedia reference.** <http://www.apnet.com/epst/>
244. Grégoire, M., Jackson, I., O'Reilly, S.Y. and Cottin, J.-Y. 2001. The lithospheric mantle beneath the Kerguelen Islands (Indian Ocean): petrological and petrophysical characteristics of mantle rock types and correlation with seismic profiles. *Contributions to Mineralogy and Petrology*, 142, 244-259.
245. Belousova, E.A., Griffin, W.L., Shee, S.R., Jackson, S.E. and O'Reilly, S.Y. 2001. Two age populations of zircons from the Timber Creek kimberlites, Northern Territory, Australia, as determined by laser-ablation ICPMS analysis. *Australian Journal of Earth Sciences*, 48, 757-766.
246. Chappell, B.W. and White, A.J.R. 2001. Two contrasting granite types: 25 years later. *Australian Journal of Earth Sciences*, 48, 489-500.
247. King, P.L., Chappell, B.W., Allen, C.M. and White, A.J.R. 2001. Are A-type granites the high-temperature felsic granites: evidence from fractionated granites of the Wangrah Suite. *Australian Journal of Earth Sciences*, 48, 501-514.
248. White, A.J.R., Allen, C.M., Beams, S.D., Carr, P.F., Champion, D.C., Chappell, B.W., Wyborn, D. and Wyborn, L.A.I. 2001. Granite suites and supersuites of eastern Australia. *Australian Journal of Earth Sciences*, 48, 515-530.
249. Vernon, R.H., Richards, S.W. and Collins, W.J. 2001. Migmatite-granite relationships: origin of the Cooma Granodiorite magma. *Physics and Chemistry of the Earth (A)*, 26, 267-271.
250. Poudjom Djomani, Y., Griffin, W.L., O'Reilly, S.Y., Natapov, L., Erinchek, Y. and Hronsky, J. 2001. Lithospheric boundaries on the eastern Siberian Platform. *Preview ASEG*, 93, 94-95.

251. **Griffin, W.L., Wang, X., Jackson, S.E., Pearson, N.J., O'Reilly, S.Y., Xu, X. and Zhou, X.** 2002. Zircon chemistry and magma mixing, SE China: *In-situ* analysis of Hf isotopes, Pingtan and Tonglu igneous complexes. *Lithos*, 61, 237-269.
252. **Abe, N. and Arai, S.** 2001. Comments on "Garnet-bearing spinel harzburgite xenolith from Arato-yama alkali basalt, southwest Japan." by Yamamoto et al. *Japanese Magazine of Mineralogical and Petrological Sciences*, 30, 190-193.
253. **Grégoire, M., McInnes, B.I.A. and O'Reilly, S.Y.** 2001. Hydrous metasomatism of sub-arc mantle, Lihir, Papua New Guinea Part 2: Trace element characteristics of slab-derived fluids. *Lithos*, 59, 91-108.
254. **Kaminsky, F.V., Zakharchenko, O.D., Griffin, W.L., Channer, D.M.DeR and Kharchatryan-Blinova, G.K.** 2000. Diamond from the Guaniamo Area, Venezuela. *The Canadian Mineralogist*, 38, 1347-1370.
255. **van Wagoner, N.A., Leybourne, M.I., Dadd, K.A., Baldwin, D.K. and McNeil, W.** 2002. Late Silurian bimodal volcanism of southwestern New Brunswick, Canada: Products of continental extension. *Geological Society of America Bulletin*, 114, 400-418.
256. **Clark, D.A. and Lackie, M.A.** 2003. Palaeomagnetism of the Early Permian Mount Leyshon Intrusive Complex and Tuckers Igneous Complex, North Queensland, Australia. *Geophysical Journal International*, 153, 523-547.
257. **Blevin, P.** 2002. The petrographic and compositional character of variably K-enriched magmatic suites associated with Ordovician porphyry Cu-Au mineralisation in the Lachlan Fold Belt, Australia. *Mineralium Deposita*, 37, 87-99.
258. **Graham, S., Lambert, D.D., Shee, S.R. and Pearson, N.J.** 2002. Juvenile lithospheric mantle enrichment and the formation of alkaline ultramafic magma sources: Re-Os, Lu-Hf and Sm-Nd isotopic systematics of the Norseman melnoites, Western Australia. *Chemical Geology*, 186, 215-233.
259. **Arai, S., Kida, M., Abe, N. and Yurimoto, H.** 2001. Petrology of peridotite xenoliths in alkali basalt (11 Ma) from Boun, Korea: an insight into the upper mantle beneath the East Asian continental margin. *Journal of Mineralogical and Petrological Sciences*, 96, 89-99.
260. **Aulbach, S., Stachel, T., Viljoen, K.S., Brey, G.P. and Harris, J.W.** 2002. Eclogitic and websteritic diamond sources beneath the Limpopo Belt - is slab melting the link? *Contributions to Mineralogy and Petrology*, 143, 56-70.
262. **Andersen, T., Griffin, W.L. and Pearson, N.J.** 2002. Crustal evolution in the SW part of the Baltic Shield: The Hf isotope evidence. *Journal of Petrology*, 43, 1725-1747.
263. **Wang, X., Griffin, W.L., O'Reilly, S.Y., Zhou, X.M., Xu, X.S., Jackson, S.E. and Pearson, N.J.** 2002. Morphology and geochemistry of zircons from late Mesozoic igneous complexes in coastal SE China. *Mineralogical Magazine*, 66, 235-251.
264. **Arai, S., Abe, N., Hirai, H. and Shimizu, Y.** 2001. Geological, petrographical and petrological characteristics of ultramafic-mafic xenoliths in Kurose and Takasgima, northern Kyushu, southwestern Japan. *The Science Reports of Kanazawa University*, 46, 27-56.
265. **Belousova, E.A., Griffin, W.L., O'Reilly, S.Y. and Fisher, N.I.** 2002. Apatite trace-element compositions: relationship to source rock type. *Journal of Geochemical Exploration*, 76, 45-69.
266. **Win, T.T., Davies, R.M., Griffin, W.L., Wathanakul, P. and French, D.H.** 2001. Distribution and characteristics of diamonds from Myanmar. *Journal of Asian Earth Sciences*, 19, 563-577.
267. **Pearson, N.J., Alard, O., Griffin, W.L., Jackson, S.E. and O'Reilly, S.Y.** 2002. *In situ* measurement of Re-Os isotopes in mantle sulfides by laser ablation multicollector-inductively coupled plasma mass spectrometry: analytical methods and preliminary results. *Geochimica et Cosmochimica Acta*, 66, 1037-1050.
268. **Spetsius, Z.V., Belousova, E.A., Griffin, W.L., O'Reilly, S.Y. and Pearson, N.J.** 2002. Archean sulfide inclusions in Paleozoic zircon megacrysts from the Mir kimberlite, Yakutia: implications for the dating of diamonds. *Earth and Planetary Science Letters*, 199, 111-126.
269. **Belousova, E.A., Griffin, W.L., O'Reilly, S.Y. and Fisher, N.I.** 2002. Igneous zircon: trace-element composition as an indicator of source rock type. *Contributions to Mineralogy and Petrology*, 143, 602-622.
270. **Ryan, C.G.** 2000. Quantitative Trace Element Imaging using PIXE and the Nuclear Microprobe. *International Journal of Imaging Systems and Technology, Special Issue on "Advances in Quantitative Image Analysis"*, 11, 219-230.
271. **Ryan, C.G., McInnes, B.I.A., Williams, P.J., Dong, G., Win, T.T. and Yeats, C.J.** 2001. Imaging fluid inclusion content using the new CSIRO-GEMOC nuclear microprobe. *Nucl. Instr. Meth. B181*, 570-577.
272. **Ryan, C.G., Jamieson, D.N., Griffin, W.L., Cripps, G. and Szymanski, R.** 2001. The new CSIRO-GEMOC nuclear microprobe: first results, performance and recent applications. *Nucl. Instr. Meth., B181*, 12-19.

Appendix 2: Publications

273. **Ryan, C.G.** 2001. Developments in dynamic analysis for quantitative PIXE true elemental imaging. *Nucl. Instr. Meth.*, B181, 170-179.
274. **Ryan, C.G., van Achterbergh, E., Griffin, W.L., Pearson, N.J., O'Reilly, S.Y. and Kivi, K.** 2001. Nuclear microprobe analysis of melt inclusions in minerals: windows on metasomatic processes in the earth's mantle. *Nucl. Instr. Meth.*, B181, 578-585.
275. **Ryan, C.G., van Achterbergh, E., Yeats, C.J., Win, T.T. and Cripps, G.** 2002. Quantitative PIXE trace element imaging of minerals using the new CSIRO-GEMOC Nuclear Microprobe. *Nucl. Instr. Meth.*, B189, 400-407.
276. **Ryan, C.G., van Achterbergh, E., Yeats, C.J., Driberg, S.L., Mark, G., McInnes, B.M., Win, T.T., Cripps, G. and Suter, G.F.** 2002. Quantitative, high sensitivity, high resolution, nuclear microprobe imaging of fluids, melts and minerals. *Nucl. Instr. Meth.*, B188, 18-27.
277. **Kemp, A.I.S., Gray, C.M., Ellis, D.J., Anderson, J.A.C. and Ferguson, D.J.** 2002. Delamerian Glenelg tectonic zone, western Victoria: characterisation and synthesis of igneous rocks. *Australian Journal of Earth Sciences*, 49, 201-224.
278. **Boland, J., Ord, A., Williams, P.F. and Vernon, R.H.** 2001. Preface. In: Boland, J.N. and Ord, A., (ed.) *Deformation Processes in the Earth's Crust (Hobbs Volume)*, *Tectonophysics*, 335, vii-xii.
279. **Vernon, R.H. and Paterson, S.R.** 2001. Axial-surface leucosomes in anatexitic migmatites. In: Boland, J.N. and Ord, A., (eds.). *Deformation Processes in the Earth's Crust (Hobbs Volume)*. *Tectonophysics*, 335, 183-192.
280. **Abe, N.** 2001. Petrochemistry of serpentinized peridotite from the Iberia Abyssal Plain (ODP Leg 173); its character intermediate between sub-oceanic and sub-continental upper mantle peridotite. In: Wilson, R.C.L., Whitmarsh, R.B., Taylor, B. and Froitzheim, N., (eds.). *Non-volcanic rifting of continental margins: a comparison of evidence from land and sea*. *Geological Society of London, Special Publication No. 187*, 143-159.
281. **Williams, P.F. and Vernon, R.H.** 2001. Origin of a vertical lineation in conjugate transcurrent shear zones at Broken Hill, Australia. In: Boland, J.N. and Ord, A. (eds.). *Deformation Processes in the Earth's Crust (Hobbs Volume)*. *Tectonophysics*, 335, 163-182.
282. **Paterson, S.R. and Vernon, R.H.** 2001. Inclusion trail patterns in porphyroblasts from the Foothills Terrane, California: a record of orogenesis or local strain heterogeneity? *Journal of Metamorphic Geology*, 19, 351-372.
283. **Veevers, J.J.** 2001. *Atlas of Billion-year earth history of Australia and neighbours in Gondwanaland*. North Ryde, GEMOC Press, 80pp.
284. **McInnes, B.I.A., Grégoire, M., Binns, R.A., Herzig, P.M. and Hannington, M.D.** 2001. Hydrous metasomatism of oceanic sub-arc mantle, Lihir, Papua New Guinea: Petrology and geochemistry of fluid-metasomatised mantle wedge xenoliths. *Earth and Planetary Science Letters*, 188, 169-183.
285. **O'Reilly, S.Y.** 2001. Journey beneath southern Africa. *Nature*, 412, 777-790.
286. **Pirlo, M.** 2002. The silica heat flow interpretation technique: application to continental Australia. *Journal of Volcanology and Geothermal Research*, 115, 19-31.
287. **van Achterbergh, E., Griffin, W.L., Ryan, C.G., O'Reilly, S.Y., Pearson, N.J., Kivi, K. and Doyle, B.J.** 2002. A subduction signature for quenched carbonatites from the deep lithosphere. *Geology*, 30, 743-746.
288. **Andersen, T., Griffin, W.L., Pearson, N.J. and Andresen, A.** 2003. Sveconorwegian rejuvenation of lower crust in south Norway. *Norges Geol. Unders. Bulletin*, 9, 51-53.
289. **Andersen, T., Griffin, W.L. and Pearson, N.J.** 2002. Crustal evolution in the SW part of the Baltic Shield: the Hf isotope evidence. *Journal of Petrology*, 43, 1725-1747.
290. **Alard, O., Griffin, W.L., Pearson, N.J., Lorand, J.-P. and O'Reilly, S.Y.** 2002. New insights into the Re-Os systematics of sub-continental lithospheric mantle from *in situ* analysis of sulphides. *Earth and Planetary Science Letters*, 203, 651-663.
291. **Stevenson, J.A., Clarke, G.L., Daczko N.R., Belousova E. and Klepeis, K.A.** 2002. New Triassic and Jurassic ages for the Tuhua Sequence metasediments of Western Fiordland, New Zealand from LA-ICPMS U-Th-Pb analysis of zircon and their implications for provenance. *New Zealand Journal of Geology & Geophysics*, (2002), 1-22.
292. **Griffin, W.L., Spetsius, Z.V., Pearson, N.J. and O'Reilly, S.Y.** 2002. *In-situ* Re-Os analysis of sulfide inclusions in kimberlite olivine: New constraints on depletion events in the Siberian lithospheric mantle. *Geochemistry, Geophysics, Geosystems*, 3, (11), 1069, doi: 10.1029/2001GC000287.
293. **Neumann, E.R., Wulff-Pedersen, E., Pearson, N.J. and Spencer, E.R.** 2002. Mantle xenoliths from Tenerife (Canary Islands): Evidence for reactions between mantle peridotites and silicic carbonatitic melts including Ca metasomatism. *Journal of Petrology*, 43, 825-857.

294. **Griffin, W.L., O'Reilly, S.Y., Natapov, L.M. and Ryan, C.G.** 2003. The evolution of lithospheric mantle beneath the Kalahari Craton and its margins. *Lithos*, 71, 215-241.
295. **Vernon, R.H. and Paterson, S.R.** 2002. Igneous origin of K-feldspar megacrysts in deformed granite of the Papoose Flat Pluton, California, USA. *Electronic Geosciences*, 7, 31-39.
296. **Brueckner, H.K., Carswell, D.A. and Griffin, W.L.** 2002. Paleozoic diamonds within a Precambrian peridotite lens in UHP gneisses of the Norwegian Caledonides. *Earth and Planetary Science Letters*, 203, 805-816.
297. **Deen, T. and Gohl, K.** 2002. 3-D tomographic seismic inversion of a paleochannel system in central New South Wales, Australia. *Geophysics*, 67, 1-8.
298. **Xu, X., O'Reilly, S.Y., Griffin, W.L. and Zhou, X.** 2003. Enrichment of upper mantle peridotite: petrological, trace-element and isotopic evidence in xenoliths from SE China. *Chemical Geology*, 198, 163-188.
299. **Griffin, W.L., Fisher, N.I., Friedman, J.H., O'Reilly, S.Y. and Ryan, C.G.** 2001. Cr-pyrope garnets in the lithospheric mantle. II. Compositional populations and their distribution in time and space. *Geochemistry, Geophysics and Geosystems*, 3 (12), 1073, doi: 10.1029/2002GC000298.
300. **Griffin, W.L., Belousova, E.A., Shee, S.R., Pearson, N.J. and O'Reilly, S.Y.** 2003. Crustal evolution in the northern Yilgarn Craton: U-Pb and Hf-isotope evidence from detrital zircons. *Precambrian Research*, 127, 19-41.
301. **Yu, J., O'Reilly, S.Y., Griffin, W.L., Xu, X. and Zhou, X.** 2003. The thermal state and composition of the lithospheric mantle beneath the Leizhou Peninsula, South China. *Journal of Volcanology and Geothermal Research*, 122, 165-189.
302. **Yu, J., Xu, X., O'Reilly, S.Y., Griffin, W.L. and Zhang, M.** 2003. Granulite xenoliths from Cenozoic Basalts in SE China provide geochemical fingerprints to distinguish lower crust terranes from the North and South China tectonic blocks. *Lithos*, 67, 77-102.
303. **Griffin, W.L., O'Reilly, S.Y., Abe, N., Aulbach, S., Davies, R. M., Pearson, N.J., Doyle, B.J. and Kivi, K.** 2003. The origin and evolution of Archean lithospheric mantle. *Precambrian Research*, 127, 19-41.
304. **Pisarevsky, S.A. and Natapov, L.M.** 2003. Siberia and Rodinia. *Tectonophysics*, 375, 221-245.
305. **Xu, X., Deng, P., O'Reilly, S.Y., Griffin, W.L., Zhou, X. and Tan, Z.** 2003. LAM-ICPMS U-Pb single zircon dating of the Guidong Complex (SE China) and its petrogenic significance. *Chinese Scientific Bulletin*, 48, 17, 1892-1899.
306. **Johnson, S.E., Fletcher, J.M., Fanning, C.M., Vernon, R.H., Paterson, S.R. and Tate, M.C.** 2003. Structure, emplacement and lateral expansion of the San Jose tonalite pluton, Peninsular Ranges batholith, Baja California, Mexico. *Journal of Structural Geology*, 25, 219-232.
307. **Vernon, R.H., Collins, W.J. and Richards, S.W.** 2003. Contrasting leucosomes in metapelitic and metapsammitic migmatites in the Cooma Complex, Australia. *Visual Geoscience*, 8, 45-54.
308. **Paterson, S.R., Pignotta, G. and Vernon, R.H.** 2004. Evaluating the quantitative significance of enclave shapes and orientations. *Journal of Structural Geology*. (in press)
309. **Morgan, P.** 2004. Colorado Plateau and southern Rocky Mountains uplift and erosion. (in press)
310. **Abe, N., Takami, M. and Arai, S.** 2003. Petrological features of spinel lherzolite from Oki-Dogo Island: an implication for variety of the upper mantle peridotite beneath SW Japan. *Island ARC*, 12, 219-232.
311. **Jackson, S.E. and Gunther, D.** 2003. The nature and sources of laser induced-isotopic fractionation in laser ablation-multi collector-inductively coupled plasma-mass spectrometry. *Journal of Analytical Atomic Spectrometry*, 18, 205-212.
312. **Gagnevin, D., Ethien, R., Bonin, B., Moine, B., Feraud, G., Gerbe, M.C., Cottin, J.-Y., Michon, G., Tourpin, S., Mamias, G., Perrache, C. and Giret, A.** 2003. Open-system processes in the genesis of silica-oversaturated alkaline rocks of the Rallier-du-Baty Peninsula, Kerguelen Archipelago (Indian Ocean). *Journal of Volcanology and Geothermal Research*, 123, 267-300.
313. **Adam, J. and Green, T.** 2003. The influence of pressure, mineral composition and water on trace element partitioning between clinopyroxene, amphibole and basanitic melts. *European Journal of Mineralogy*, 15, 831-841.
314. **Veevers, J.J.** 2003. Pan-African is Pan-Gondwanaland: oblique convergence drives rotation during 650-500 Ma assembly. *Geology*, 31 (6), 501-504.
315. **Clarke, D.B., McCuish, K.L., Vernon, R.H., Maksaev, V. and Miller, B.V.** 2002. The Port Mouton Shear Zone: intersection of a regional fault with a crystallizing granitoid pluton. *Lithos*, 61, 141-159.
316. **Green, T.H. and Adam, J.** 2003. Experimentally-determined trace element characteristics of aqueous fluid from partially dehydrated mafic oceanic crust at 3.0 GPa, 650-700°C. *European Journal of Mineralogy*, 15, 815-830.

Appendix 2: Publications

317. **Kurosawa, M., Jackson, S.E. and Sueno, S.** 2002. Trace element analysis of NIST SRM 614 and 616 glass reference materials by laser ablation microprobe-inductively coupled plasma-mass spectrometry. *Geostandards Newsletter – The Journal of Geostandards & Geoanalysis*, 26, 75-84.
318. **Gaul, O.F., O'Reilly, S.Y. and Griffin, W.L.** 2003. Lithosphere structure and evolution in southeastern Australia. *Geological Society of Australia Special Publication*, 22, 179-196.
319. **Wang, K., O'Reilly, S.Y., Griffin, W.L., Chung, S. and Pearson, N.J.** 2003. Proterozoic mantle lithosphere beneath the extended margin of the South China block: In situ Re-Os evidence. *Geology*, 31 (8), 709-712.
320. **Brueckner, H.K., Van Roermund, H.L.M. and Pearson, N.J.** 2004. An Archean (?) to Paleozoic Evolution for a garnet peridotite lens with sub-Baltic Shield Affinity within the Seve Nappe Complex of Jamtland, Sweden, Central Scandinavian Caledonides. *Journal of Petrology* 45, 415-437.
321. **Davies, R.M., Griffin, W.L., O'Reilly, S.Y. and Andrew, A.** 2003. Unusual mineral inclusions and carbon isotopes of alluvial diamonds from Bingara, eastern Australia. *Lithos*, 69, 51-66.
322. **Poudjom Djomani, Y.H., O'Reilly, S.Y., Griffin, W.L., Natapov, L., Erincheck, Y. and Hronsky, J.** 2003. Upper mantle structure in Eastern Siberia: Evidence from gravity modelling and mantle petrology. *Geochemistry, Geophysics, Geosystems*, 4 (7), 1066, doi:10.1029/2002GC000420.
323. **Anderson, K.L., Lackie, M.A., Clark, D.A. and Schmidt, W.** 2004. Return to Black Mountain: Palaeomagnetic Reassessment of the Chatsworth and Ninmaroo Formations, Western Queensland, Australia. *Geophysical Journal International*. (in press)
324. **Anderson, K.L., Lackie, M.A. and Clark, D.A.** 2004. Palaeomagnetic Results from the Palaeozoic basement of the Southern Drummond Basin, Central Queensland. *Geophysical Journal International*. (in press)
325. **Lorand, J.-P., Delpech, G., Gregoire, M., Moine, B., O'Reilly, S.Y. and Cottin, J.-Y.** 2004. Platinum-group elements and the multi-stage metasomatic history of Kerguelen lithospheric mantle (south Indian Ocean). *Chemical Geology*. (in press)
326. **Griffin, W.L., Graham, S., O'Reilly, S.Y. and Pearson, N.J.** 2004. Lithospheric evolution beneath the Kaapvaal Craton: Re-Os systematics of sulfides in mantle-derived peridotites. *Chemical Geology*. (in press)
327. **Pirlo, M. and Giblin, A.** 2004. Application of groundwater-mineral equilibrium calculations to geochemical exploration for sediment-hosted uranium: Observations from the Frome Embayment, South Australia. *Geochemistry: Exploration, Environment, Analysis*, 4, 1-15.
328. **Daczko, N. and Pearson, N.J.** 2004. Trace element partitioning during high-P partial melting and mineral reactions in lower crustal gneisses, northern Fiordland, New Zealand. *Journal of Metamorphic Geology*. (in press)
329. **Moine, B.N., Gregoire, M., O'Reilly, S.Y., Delpech, G., Sheppard, S.M.F., Lorand, J.-P., Renac, C., Giret, A. and Cottin, J. Y.** 2004. Carbonatite melt in oceanic upper mantle beneath the Kerguelen Archipelago. *Lithos*. (in press)
330. **Zheng, J., O'Reilly, S.Y., Griffin, W.L., Zhang, M., Lu, F. and Liu, G.** 2004. Nature and evolution of Mesozoic-Cenozoic lithospheric mantle beneath the Cathaysia block, SE China. *Lithos*, 174, 41-65.
331. **Delpech, G., Gregoire, M., O'Reilly, S.Y., Cottin, J.Y., Moine, B., Michon, G. and Giret, A.** 2004. Feldspar from carbonate-rich silicate metasomatism in the shallow oceanic mantle under Kerguelen Islands (South Indian Ocean). *Lithos*. (in press)
332. **Powell, W., Zhang, M., O'Reilly, S.Y. and Tiepolo, M.** 2004. Mantle amphibole trace-element and isotopic signatures trace multiple metasomatic episodes in lithospheric mantle, western Victoria, Australia. *Lithos*. (in press)
333. **Andersen, T., Griffin, W.L., Jackson, S.E., Knudsen, T.-L. and Pearson, N.J.** 2004. Mid-Proterozoic magmatic arc evolution at the southwest margin of the Baltic Shield. *Lithos*, 73, 289-318.
334. **Andersen, T. and Griffin, W. L.** 2004. Lu-Hf and U-Pb isotope systematics of zircons from the Storgangen intrusion, Rogaland Intrusive Complex, SW Norway: Implications for the composition and evolution of Precambrian lower crust in the Baltic Shield. *Lithos*, 73, 271-288.
335. **Wang, K.-L., Chung, S.-L., O'Reilly, S.Y., Sun, S.-S., Shinjo, R. and Chen, C.-H.** 2004. Geochemical constraints for the genesis of post-collisional magmatism and the geodynamic evolution of the northern Taiwan region. *Journal of Petrology*, 45, 975-1011.
336. **Nairn, I. A., Shane, P.R., Cole, J.W., Leonard, G.J., Self, S. and Pearson, N.J.** 2004. Rhyolite magma processes of the AD1315 Kaharoa eruption episode, Tarawera volcano, New Zealand. *Journal of Petrology*. (in press)
337. **Reid, A.J., Wilson, C.J.L., Belousova, E. and Pearson, N.J.** 2004. Mesozoic plutons of the Yidun Arc, SW China: U/Pb geochronology and Hf isotopic signature. *Ore Geology Review*. (in press)

338. **Lorand, J.-P., Alard, O., Luguët, A. and Keyas, R.R.** 2003. Sulfur and selenium systematics of the subcontinental lithosphere mantle: Inferences from the Massif Central xenolith suite (France). *Geochimica et Cosmochimica Acta*, 67(21), 4137-4151.
339. **Zheng, J., Griffin, W.L., O'Reilly, S.Y., Lu, F., Wang, C., Zhang, M., Wang, F. and Li, H.** 2004. 3.6 Ga lower crust in central China: new evidence on the assembly of the North China Craton. *Geology*, 32, 229-232.
340. **Luguët, A., Lorand, J.-P., Alard, O. and Cottin, J.-Y.** 2004. A multi-technique study of platinum-group elements systematic in some Ligurian ophiolitic peridotites, Italy. *Chemical Geology*. (in press)
341. **Yu, J.-H., Xu, X., O'Reilly, S.Y., Griffin, W.L. and Zhang, M.** 2004. Granulite xenoliths from Cenozoic basalts in SE China provide geochemical fingerprints to distinguish lower crust terranes from the North and South China tectonic blocks – Reply. *Lithos*, 73, 134-144.
342. **van Achterbergh, E., Griffin, W.L., Ryan, C.G., O'Reilly, S.Y., Pearson, N.J., Kivi, K. and Doyle, B.J.** 2004. Melt inclusions from the Slave lithosphere: Implications for the origin and evolution of mantle-derived Carbonatite kimberlite. *Lithos*. (in press)
343. **Davies, R.M., Griffin, W.L., O'Reilly, S.Y. and McCandless, T.E.** 2004. Inclusions in diamonds from the K14 and K10 Kimberlites, Buffalo Hills, Alberta, Canada: Diamond growth in a plume? *Lithos*. (in press)
344. **Graham, S., Pearson, N.J., Jackson, S., Griffin, W.L., and O'Reilly, S.Y.** 2004. Tracing Cu and Fe from source to porphyry: *in situ* determination of Cu and Fe isotope ratios in sulfides from the Grasberg Cu-Au deposit. *Chemical Geology*. (in press)
345. **Jackson, S.E., Pearson, N.J., Griffin, W.L. and Belousova, E.A.** 2004. The application of laser ablation-inductively coupled plasma-mass spectrometry (LA-ICP-MS) to *in situ* U-Pb zircon geochronology. *Chemical Geology*. (in press)
346. **Aulbach, S., Griffin, W.L., O'Reilly, S.Y. and McCandless, T.E.** 2004. Genesis and evolution of the lithospheric mantle beneath the Buffalo Hills Terrane, Alberta. *Lithos*. (in press)
347. **Shaw, S.E., Todd, V.R. and Grove, M.** 2003. Jurassic peraluminous gneissic granites in the axial zone of the Peninsular Ranges, southern California. *Geological Society of America Special Paper*, 374, 157-183.
348. **Griffin, W.L., O'Reilly, S.Y., Doyle, B.J., Pearson, N.J., Coopersmith, H., Kivi, K., Malkovets, V. and Pokhilenko, N.** 2004. Lithosphere Mapping beneath the North American Plate. *Lithos*. (in press)
349. **Graham, S., Lambert, D. and Shee, S.** 2004. The petrogenesis of Carbonatite, melnoite and kimberlite from the Eastern Goldfields Province, Yilgarn Craton. *Lithos*. (in press)
350. **Todd, V.R., Shaw, S.E. and Hammarstrom, J.M.** 2003. Cretaceous plutons of the Peninsular Ranges batholith, San Diego and westernmost Imperial Counties, California: Intrusion across a Late Jurassic continental margin. *Geological Society of America Special Paper*, 374, 185-235.
351. **Condie, K., Cox, J., O'Reilly, S.Y., Griffin, W.L. and Kerrich, R.** 2004. Distribution of high field strength and rare earth elements in mantle and lower crustal xenoliths from the southwestern United States: the role of grain-boundary phases. *Geochimica et Cosmochimica Acta*. (in press).
352. **Aulbach, S., Griffin, W.L., Pearson, N.J., O'Reilly, S.Y., Doyle, B.J. and Kivi, K.** 2004. Mantle formation and evolution, Slave Craton: from HSE abundances and Re-Os isotope systematics of sulfide inclusions in mantle xenocrysts. *Chemical Geology*. (in press).
353. **Poudjom Djomani, Y., O'Reilly, S.Y., Griffin, W.L., Natapov, L.M., Pearson, N.J. and Doyle, B.J.** 2004. The integration of geophysics and geochemistry reveals the nature of the lithosphere beneath the Slave craton (Canada). *Preview ASEG*. (in press).
354. **Zheng, J., Griffin, W.L., O'Reilly, S.Y., Lu, F., Yu, C., Zhang, M. and Li, H.** 2004. U-Pb and Hf-isotope analysis of zircons in mafic xenoliths from Fuxian kimberlites: evolution of the lower crust beneath the North China Craton. *Contributions to Mineralogy and Petrology*. (in press).
355. **Beyer, E.E., Brueckner, H. K., Griffin, W.L., O'Reilly, S.Y. and Graham, S.** 2004. Archean mantle fragments in Proterozoic crust, Western Gneiss Region, Norway. *Geology*. (in press).
356. **Veevers, J. J.** 2004. Gondwanaland from 600-570 Ma assembly through 320 Ma merger in Pangea to 160 Ma breakup: Supercontinental tectonics via stratigraphy and radiometric dating. *Earth Science Reviews*. (in press).
357. **Matsumoto, T., Honda, M., McDougall, I., Yatsevich, I. and O'Reilly, S.Y.** 2004. Isotope fractionation of neon during step heating extraction?: A comment on "Re-interpretation of the existence of a primitive plume under Australia based on neon isotope fractionation during step heating" by Gautheron and Moreira (2003). *Terra Nova* 16, 23-26.

Appendix 3: Visitors

GEMOC VISITORS 2003 (Excluding Participants in Conferences and Workshops) Macquarie

Dr Chris Adams (Institute of Geological & Nuclear Sciences, New Zealand)
Prof. Tom Andersen (University of Oslo)
Dr Graham Begg (Western Mining Resources Limited, Perth)
Mr Robert Bills (Western Mining Resources Limited, Perth)
Dr Jon Blundy (University of Bristol, U.K.)
Mr Nigel Brand (Anglo American, WA)
Mr Mathieu Choukroun (PhD student, Universite St Etienne, France)
Dr Richard Glen (Geological Survey of NSW, New South Wales, Australia)
Dr Chris Hatton (De Beers South Africa)
Dr Yong-Joo Jwa (Gyeongsang National University, Korea)
Mr Chris Lay (New Wave Research Co. Ltd)
Prof. T. M. Mahadevan (DST-DCS Newsletter Editor, India)
Dr Suzanne McEnroe (Geological Survey of Norway, Trondheim)
Mr Malcolm Norris (Western Mining Resources Limited, Perth)
Dr Chris Oates (Anglo American, Canada)
Prof. Boris Panov (Donetsk State Polytechnic University, Ukraine)
Dr Peter Robinson (Geological Survey of Norway, Trondheim)
Dr Bruce Schaefer (Monash University, Melbourne, Australia)

Dr Simon Shee (DeBeers Exploration Australia Ltd)
Dr Steve Walters (GeoDiscovery Group, Queensland, Australia)
Dr Xiaolin Xiang (Chinese Academy of Sciences, P. R. China)
Prof. Xisheng Xu (Nanjing University, P. R. China)
Ms Chunmei Yu (China University of Geosciences)
Prof. Jianping Zheng (China University of Geosciences)

EXTERNAL USERS OF THE GEOCHEMICAL ANALYSIS UNIT FACILITIES IN 2003

(Note: this does not include commercial or contract work through Macquarie Research Limited)

Dr Chris Adams, Institute of Geological & Nuclear Sciences, Lower Hutt, New Zealand
Prof. Tom Andersen, University of Oslo, Norway
Mr Manish Arora, Faculty of Dentistry, University of Sydney
Dr Tim Baker, School of Earth Sciences, James Cook University, Townsville
Ms Rosa-Maria Bomparola, Univeristà degli Studi di Siena, Italy
Dr Graziella Caprarelli, Dept of Environmental Sciences, University of Technology, Sydney
Mr Michael Carew, School of Earth Sciences, James Cook University, Townsville
Mr Raynald Ethien, Universite Jean Monnet, St Etienne, France
Mr Mathew Greentree, School of Earth and Geographical Sciences, University of Western Australia

Mr Bryce Healy, Department of Geology, University of Newcastle
Dr Florence Le Hebel, Dept of Geosciences, University of Sydney
Ms Panatree Lomthong, Dept of General Science, Kasetsart University, Bangkok, Thailand
Dr Suzanne McEnroe, Geological Survey of Norway
Dr Terry Mernagh, Geoscience Australia, Canberra
Dr Bruce Mountain, Institute of Geological and Nuclear Sciences, Taupo, New Zealand
Dr Niels Munksgaard, School of Science, Charles Darwin University
Ms Kylie Prendergast, School of Earth Sciences, James Cook University, Townsville
Mr Anthony Reid, School of Earth Sciences, Melbourne University
Dr Peter Robinson, Geological Survey of Norway
Mr Florian Schröter, Dept of Geosciences, University of Sydney
Dr Keith Sircombe, School of Earth and Geographical Sciences, University of Western Australia
Ms Tin Tin Win, CSIRO Exploration and Mining, North Ryde
Dr Xiaolin Xiong, Guangzhou Institute of Geochemistry, China Academy of Sciences, Guangzhou, China
Ms Chunmei Yu, China University of Geosciences
Prof. Jianping Zheng, China University of Geosciences

Appendix 4: Abstract titles

TITLES OF ABSTRACTS FOR CONFERENCE PRESENTATIONS IN 2003

Full abstracts available at
<http://www.es.mq.edu.au/GEMOC/>

GEOLOGICAL SOCIETY OF AMERICA 38TH NORTHEASTERN SECTION MEETING, HALIFAX, NOVA SCOTIA, CANADA, 27-29 MARCH 2003

Emplacement-related microstructures in the deformed carapace of a tonalite pluton: evidence for fast chamber construction

S. E. Johnson¹, R. H. Vernon² and
P. Upton¹
1. Dept. of Geological Sciences,
University of Maine, Orono, USA,
2. GEMOC, Macquarie

Evidence for fast magma chamber construction: the deformed carapace of the San Jose tonalite pluton, Mexico

S. E. Johnson¹, R. H. Vernon² and
P. Upton¹
1. Dept. of Geological Sciences,
University of Maine, Orono, USA,
2. GEMOC, Macquarie

5TH INTERNATIONAL SYMPOSIUM ON APPLIED ISOTOPE GEOCHEMISTRY, HERON ISLAND, QUEENSLAND, AUSTRALIA, 26-30 MAY 2003

In-situ determination of high precision isotope ratios by Laser Ablation-Multicollector-Inductively Coupled Plasma Mass Spectrometer (LA-MC-ICP-MS): Application to Cu and Fe isotopes in ore minerals

S. E. Jackson¹, S. Graham¹ and
D. Gunther²
1. GEMOC, Macquarie, 2. Laboratory
for Inorganic Chemistry, ETH
Honggerberg, Zurich, Switzerland

ALICE WAIN MEMORIAL WEST NORWAY ECLOGITE FIELD SYMPOSIUM 2003, SELJE, WESTERN NORWAY, 21-28 JUNE 2003

Origin of Western Gneiss Region garnet peridotites: refertilisation of Archean lithosphere? Evidence from the Almklovdalen peridotite body

E. E. Beyer, W. L. Griffin, S. Y. O'Reilly
and N. J. Pearson
GEMOC, Macquarie

8TH INTERNATIONAL KIMBERLITE CONFERENCE, VICTORIA, CANADA, 22-27 JUNE 2003

The lithospheric mantle beneath the Buffalo Head Terrane, Alberta: xenoliths from the Buffalo Hills kimberlites

S. Aulbach¹, W. L. Griffin^{1,2},
S. Y. O'Reilly¹ and T. E. McCandless³
1. GEMOC, Macquarie, 2. CSIRO
Exploration and Mining, North Ryde,
3. Ashton Mining Canada Inc., North
Vancouver, Canada

Origins of eclogites beneath the Central Slave Craton

S. Aulbach¹, W. L. Griffin^{1,2},
N. J. Pearson¹, S. Y. O'Reilly¹, K. Kivi³
and B. J. Doyle⁴
1. GEMOC, Macquarie, 2. CSIRO
Exploration and Mining, North Ryde,
3. Kennecott Canada Exploration Inc.,
Thunder Bay, Canada, 4. Kennecott
Canada Exploration Inc., Vancouver,
Canada

Inclusions in diamonds from the K10 and K14 kimberlites, Buffalo Hills, Canada: Diamond growth in a plume?

R. M. Davies^{1,2}, W. L. Griffin^{2,3},
S. Y. O'Reilly² and T. E. McCandless⁴
1. American Museum of Natural
History, New York, USA, 2. GEMOC,
Macquarie, 3. CSIRO Exploration and
Mining, North Ryde, 4. Ashton Mining
of Canada, Canada

Geochemical characteristics of microdiamonds from kimberlites at Lac de Gras, Central Slave Craton

R. M. Davies^{1,2}, W. L. Griffin^{2,3},
S. Y. O'Reilly² and B. J. Doyle⁴
1. American Museum of Natural
History, New York, USA, 2. GEMOC,
Macquarie, 3. CSIRO Exploration and
Mining, North Ryde, 4. Kennecott
Canada Exploration Inc., Canada

Geochemistry and Ar-Ar dating of upper Holocene volcanic rocks from Kerguelen islands (Indian Ocean)

R. Ethien^{1,2}, G. Feraud³, M. C. Gerbe¹,
J. Y. Cottin¹, S. Y. O'Reilly² and A. Giret¹
1. Dpt. de Petrologie, Minerlogie et
Geochimie, UMR-CNR "Magma set
Volcans", Universite Jean Monnet-
Saint-Etienne, France, 2. GEMOC,
Macquarie, 3. CNRS, "Geosciences
Azur", Universite de Nice Sophia-
Antipolis, France

Mineralogical and geochemical characteristic of a unique mantle xenolith from the Udachnaya kimberlite pipe

S. Kuligin¹, V. Malkovets¹,
N. Pokhilenko¹, M. Vavilov¹,
W. L. Griffin^{2,3} and S. Y. O'Reilly³
1. Institute of Mineralogy and
Petrography SB RAS, Russia, 2. CSIRO
Exploration and Mining, North Ryde,
3. GEMOC, Macquarie

Geochemical and isotopic evidence of a kimberlite-melnoite-carbonatite genetic link

S. Graham¹, D. Lambert^{1,3} and S. Shee^{1,4}
1. VIEPS, Monash University,
Australia, 2. GEMOC, Macquarie,
3. NSF, USA, 4. De Beers Australia
Exploration Limited, Australia

Lithospheric mapping beneath the North American plate

W. L. Griffin^{1,2}, S. Y. O'Reilly¹,
B. J. Doyle³, K. Kivi³ and
H. G. Coopersmith
1. GEMOC, Macquarie, 2. CSIRO
Exploration and Mining, North Ryde,
3. Kennecott Canada Exploration Inc.,
Vancouver, Canada, 4. Great Western
Diamond Co., Fort Collins, USA

Appendix 4: Abstract titles

Peridotites from the Grib kimberlite pipe, Arkhangelsk, Russia

V. G. Malkovets^{1,2,3}, L. A. Taylor², W. L. Griffin³, S. Y. O'Reilly³, N. J. Pearson³, N. P. Pokhilenko¹, E. M. Verichev⁴, N. N. Golovin⁵ and K. D. Litasov⁶

1. Institute of Mineralogy and Petrography, Novosibirsk, Russia, 2. Planetary Geosciences Institute, University of Tennessee, Knoxville, USA, 3. GEMOC, Macquarie, 4. Arkhangelskgeolrazvedka, Arkhangelsk, Russia, 5. Arkhangelskgeoldobycha, Arkhangelsk, Russia, 6. Dept. Mineral. Petrol. Econ. Tohoku University, Sendai, Japan

Cratonic conditions beneath Arkhangelsk, Russia: Garnet peridotites from the Grib kimberlite

V. Malkovets^{1,2,3}, L. Taylor², W. L. Griffin³, S. Y. O'Reilly³, N. Pearson³, N. Pokhilenko¹, E. Verichev⁴, N. Golovin⁵ and K. Litasov⁶

1. Institute of Mineralogy and Petrography, Russia, 2. Planetary Geoscience Institute, Univ. of Tennessee, USA, 3. GEMOC, Macquarie, 4. Arkhangelskgeolrazvedka Ltd, Russia, 5. Arkhangelskgeoldobycha Ltd, Russia, 6. Institute of Mineralogy, Petrology and Economic Geology, Tohoku University, Japan

Eclogites from the Grib kimberlite pipe, Arkhangelsk, Russia

V. Malkovets^{1,2,3}, L. Taylor², W. L. Griffin³, S. Y. O'Reilly³, N. Pokhilenko¹, E. Verichev⁴, N. Golovin⁵, K. Litasov⁶, J. Valley⁷ and M. Spicuzza⁷

1. Institute of Mineralogy and Petrography, Russia, 2. Planetary Geoscience Institute, Univ. of Tennessee, USA, 3. GEMOC, Macquarie, 4. Arkhangelskgeolrazvedka Ltd, Russia, 5. Arkhangelskgeoldobycha Ltd, Russia, 6. Institute of Mineralogy, Petrology and Economic Geology, Tohoku University, Japan, 7. University of Wisconsin, Madison, USA

Taking the pulse of the Earth: lithosphere events tracked by *in-situ* geochronology

S. Y. O'Reilly and W. L. Griffin
GEMOC, Macquarie

Magnesium isotopic composition of olivine from the lithospheric mantle

N. J. Pearson¹, W. L. Griffin^{1,2}, S. Y. O'Reilly¹ and G. Delpech¹

1. GEMOC, Macquarie, 2. CSIRO Exploration and Mining, North Ryde

Pyropes and chromites of the Snap Lake/King Lake kimberlite dyke system in relation to the problem of the southern Slave Craton lithospheric mantle structure and composition

N. Pokhilenko^{1,2}, W. L. Griffin^{3,4}, N. Shimizu⁵, C. McLean¹, V. Malkovets^{2,3}, L. Pokhilenko² and E. Malygina²

1. Diamond Resources Ltd, Canada, 2. Institute of Mineralogy and Petrology, Russia, 3. GEMOC, Macquarie, 4. CSIRO Exploration and Mining, Australia, 5. Woods Hole Oceanographic Institution, USA

Geophysical analysis of the lithosphere beneath the Slave Craton

Y. H. Poudjom Djomani¹, S. Y. O'Reilly¹, W. L. Griffin^{1,2} and B. J. Doyle³

1. GEMOC, Macquarie, 2. CSIRO Exploration and Mining, North Ryde, 3. Kennecott Canada Exploration Inc., Vancouver, Canada

Diamond inclusions from Snap Lake, NWT Canada

P. Promprated¹, L. Taylor¹, C. Floss², V. Malkovets¹, M. Anand¹, W. L. Griffin³, N. Pokhilenko⁴ and N. Sobolev⁴

1. Planetary Geosciences Institute, Dept. Geological Sciences, Univ. of Tennessee, Knoxville, 2. McDonnell Center of Space Science, Washington Univ., St. Louis, MO 63130, 3. GEMOC, Macquarie, 4. Inst. of Mineralogy and Petrography, Russian Academy of Sciences, Novosibirsk, Russia

Trace element analysis of diamond by LAM ICPMS: preliminary results

S. Rege¹, R. M. Davies^{1,2}, W. L. Griffin^{1,3}, S. E. Jackson¹ and S. Y. O'Reilly¹

1. GEMOC, Macquarie, 2. Department of Earth and Planetary Sciences, American Museum of Natural History, New York, USA, 3. CSIRO Exploration and Mining, North Ryde

Late Vendian aerial alkaline volcanism in Winter Coast kimberlite area (Arkhangelsk Diamondiferous Province)

V. S. Shchukin¹, S. M. Sablukov², L. I. Sablukov², E. A. Belousova³ and W. L. Griffin³

1. JSC Arkhangelsk Diamonds, Russia, 2. Central Research Institute of Geological Prospecting (TsNIGRI), Russia, 3. GEMOC, Macquarie

Diamond formation and mantle metasomatism: A trace element perspective

T. Stachel¹, S. Aulbach^{2,3}, G. P. Brey², J. W. Harris⁴, I. Leost², R. Tappert^{1,2} and K. S. (Fanus) Viljoen⁵

1. University of Alberta, Canada, 2. Universitat Frankfurt, Germany, 3. GEMOC, Macquarie, 4. University of Glasgow, UK, 5. De Beers GeoScience Centre, South Africa

Melt inclusions from the deep Slave lithosphere: Constraints on the origin and evolution of mantle-derived carbonatite and kimberlite

E. van Achterbergh^{1,2}, W. L. Griffin^{1,2}, S. Y. O'Reilly¹, C. G. Ryan², N. J. Pearson¹, K. Kivi³ and B. J. Doyle⁴

1. GEMOC, Macquarie, 2. CSIRO Exploration and Mining, North Ryde, 3. Department of Geosciences, National Taiwan University, Taipei, Taiwan R. O. C., 4. Department of Geology, National Museum of Natural Science, Taichung, Taiwan R. O. C.

Natural trace element distribution between immiscible silicate and carbonate melts imaged by nuclear microprobe

E. van Achterbergh^{1,2}, C. G. Ryan², W. L. Griffin^{1,2} and S. Y. O'Reilly¹
1. GEMOC, Macquarie, 2. CSIRO Exploration and Mining, North Ryde

Geochemical characteristics of mantle xenoliths from Penghu Islands, Taiwan Straits, SE Asian Margin

K. Wang¹, S. Y. O'Reilly¹, W. L. Griffin^{1,2}, S. Chung³ and W. Juang⁴
1. GEMOC, Macquarie, 2. CSIRO Exploration and Mining, North Ryde, 3. Department of Geosciences, National Taiwan University, Taipei, Taiwan R. O. C., 4. Department of Geology, National Museum of Natural Science, Taichung, Taiwan R. O. C.

The Brockman Creek kimberlite, East Pilbara, Australia

B. A. Wyatt¹, M. Mitchell², S. R. Shee², W. L. Griffin³, N. Tomlinson⁴ and B. White⁵
1. De Beers Exploration Inc., Canada, 2. De Beers Australia Exploration Limited, Australia, 3. GEMOC, Macquarie, 4. GeoScience Centre, De Beers, South Africa, 5. University of Melbourne, Australia

MAGMAS TO MINERALISATION: THE ISHIHARA SYMPOSIUM, MACQUARIE UNIVERSITY, NORTH RYDE, AUSTRALIA, 22-24 JULY 2003

Metallogeny of granite rocks

P. Blevin
GEMOC, Macquarie

Paleozoic granite metallogeny of eastern Australia

P. Blevin
GEMOC, Macquarie

Granites of the southern New England orogen

C. J. Bryant¹, B. W. Chappell² and P. Blevin²
1. Dept. of Geology, Australian National University, Canberra, Australia, 2. GEMOC, Macquarie

From Tuttle and Bowen onwards

B. W. Chappell
GEMOC, Macquarie

Causes of variation in granite suites

B. W. Chappell
GEMOC, Macquarie

High and low-temperature granites

B. W. Chappell
GEMOC, Macquarie

Towards a unified model of granite petrogenesis

B. W. Chappell
GEMOC, Macquarie

Granites of the Lachlan Fold Belt

B. W. Chappell
GEMOC, Macquarie

Mesozoic granites and associated mineralisation in South Korea

Y.-J. Jwa
GEMOC, Macquarie

Gravity and granites

M. A. Lackie¹, B. T. Bailey^{1,2} and M. A. Edmiston^{1,3}
1. GEMOC, Macquarie, 2. Gmomic Exploration Services, Townsville, QLD, 3. Coffey Geosciences, North Ryde, NSW

THIRD STATE OF THE ARC CONFERENCE (SOTA III), MOUNT HOOD, OREGON, 16-21 AUGUST 2003

Experimentally-determined trace element characteristics of aqueous fluid from partially dehydrated mafic oceanic crust at 3.0 GPa, 650-700°C

T. H. Green and J. Adam
GEMOC, Macquarie

THE 5TH HUTTON SYMPOSIUM ON THE ORIGIN OF GRANITES AND RELATED ROCKS, TOYOHASHI, JAPAN, 2-6 SEPTEMBER 2003

Lithium isotopes and granite petrogenesis

C. Bryant¹, B. W. Chappell², V. Bennett¹ and M. McCulloch¹
1. Research School of Earth Sciences, ANU, Canberra, 2. GEMOC, Macquarie

Towards a unified model for granite genesis

B. W. Chappell
GEMOC, Macquarie

Silica-oversaturated volcano-plutonic association in the Rallier du Baty Peninsula, Kerguelen Island: time and space relations and magma genesis

R. Ethien¹, M. C. Gerbe¹, J.-Y. Cottin¹, G. Feraud², S. Y. O'Reilly³ and B. Moine¹

1. Universite Jean Monnet & UMR CNRS "Magmas et Volcans", Saint Etienne, France, 2. Universite de Nice-Sophia Antipolis, Geosciences Azur, Nice, France, 3. GEMOC, Macquarie

A reconnaissance Lu/Hf investigation of the New England batholith Eastern Australia

R. H. Flood and S. E. Shaw
GEMOC, Macquarie

Preservation of zircon U-Pb ages through high-grade metamorphism and magma genesis

I. S. Williams¹, B. W. Chappell², D. W. Maidment¹ and I. S. Buick³
1. Research School of Earth Sciences, ANU, Canberra, 2. GEMOC, Macquarie, 3. Department of Earth Sciences, La Trobe University, Bundoora, VIC

Appendix 4: Abstract titles

13TH V. M. GOLDSCHMIDT

CONFERENCE, KURASHIKI, JAPAN,
7-12 SEPTEMBER 2003

LA-ICP-MS: a mature technology?

S. E. Jackson
GEMOC, Macquarie

Paleozoic upper mantle of the southern frame of the Siberian platform: Structure and composition

V. G. Malkovets¹, A. A. Gibsher¹,
Y. D. Litasov², S. Y. O'Reilly³ and
W. L. Griffin³

1. Institute of Mineralogy and Petrography, Novosibirsk, Russia,
2. Institute of Geology, Novosibirsk, Russia, 3. GEMOC, Macquarie

New data on mantle metasomatism beneath the Deves, France

S. Touron^{1,2}, S. Y. O'Reilly¹, C. Renac²,
C. Chazot³ and J. Y. Cottin²

1. GEMOC, Macquarie, 2. Universite Jean Monnet St-Etienne, France,
3. CNRS, Clermont-Ferrand, France

Proterozoic mantle lithosphere beneath the extended margin of the South China block: In situ Re-Os evidence

K.-L. Wang¹, S. Y. O'Reilly¹,
W. L. Griffin^{1,2}, S.-L. Chung³ and
N. J. Pearson¹

1. GEMOC, Macquarie, 2. CSIRO Exploration & Mining, North Ryde,
3. Department of Geosciences, National Taiwan University, Taiwan, R. O. C.

Re-Os isotopes in sulfides of mantle peridotites from SE China: age constraints and evolution of lithospheric mantle

X. Xu^{1,2}, W. L. Griffin², S. Y. O'Reilly²
and N. J. Pearson²

1. State Key Laboratory for Mineral Deposits Research, Department of Earth Sciences, Nanjing University, Nanjing, China, 2. GEMOC, Macquarie

Trace element partitioning between natural clinopyroxene, garnet and plagioclase under liquid condition

J. Yu¹ and S. Y. O'Reilly²

1. Dept. Earth Sciences, Nanjing University, Nanjing, China,
2. GEMOC, Macquarie

SGTSG FIELD MEETING KALBARRI 2003, KALBARRI, WESTERN AUSTRALIA, 22-26 SEPTEMBER 2003

Extension along the Australian-Pacific transpressional transform plate boundary near Macquarie Island

N. Daczko^{1,2}, K. L. Wertz^{1,2}, S. Mosher¹,
M. F. Coffin^{2,3} and T. Meckel^{1,2}

1. Department of Geological Sciences, University of Texas at Austin,
2. Institute for Geophysics, University of Texas at Austin, 3. Ocean Research Institute, University of Tokyo & Institute for Frontier Research on Earth Evolution, Japan Marine Science & Technology Centre

AMERICAN GEOPHYSICAL UNION FALL MEETING, SAN FRANCISCO, USA, 8-12 DECEMBER 2003

Constraints on the mechanism and timing of sediment recycling beneath the Tonga-Kermadec arc from Be isotopes

R. George¹, S. Turner¹, J. Morris²,
C. Hawkesworth¹ and J. Ryan³

1. GEMOC, Macquarie, 2. Department of Earth & Planetary Sciences, Washington University, Saint Louis, USA, 3. Department of Geology, University of South Florida, Tampa, USA

U-series isotopes and the time scales of magmatic processes

C. J. Hawkesworth¹, D. W. Peate²,
S. P. Turner³ and R. M. George³

1. University of Bristol, Bristol, UK, 2. Danish Lithosphere Centre, Copenhagen, Denmark, 3. GEMOC, Macquarie

Calculating Upper Mantle Heat Flow Values Using Xenolith P-T Data and Temperature-Dependent Thermal Conductivity Estimates

P. Morgan¹ and S. Y. O'Reilly²

1. Northern Arizona University, Dept. Geology, USA, 2. GEMOC, Macquarie

Constraints on melting processes beneath subduction zones from U-Pa disequilibria

M. Regelous¹, S. P. Turner²,
C. J. Hawkesworth², T. Elliot¹ and
K. Rostami²

1. Dept. of Earth Sciences, University of Bristol, UK, 2. GEMOC, Macquarie

Navajo garnetites and rock-wall interaction in the mantle

D. Smith¹ and W. L. Griffin²

1. University of Texas at Austin, USA,
2. GEMOC, Macquarie

Extreme Pb-Ra disequilibria observed in arc lavas: Implications for the time scales of magma degassing

S. Turner

GEMOC, Macquarie

Appendix 5: Funded research projects

GRANTS AND OTHER INCOME FOR 2003

Funding Source	Investigators	Project Title	Amount
Macquarie University Host Institution Support	O'Reilly	GEMOC Matching	\$100,000
Macquarie University Vice Chancellor's Special Fund	O'Reilly	Geodynamic Modelling	\$100,000
ARC Discovery	O'Reilly, Griffin, Gohl, Morgan, Cottin, Neumann, Xu	How has the continental lithosphere evolved? Processes of assembly, growth, transformation and destruction	\$329,926
ARC Discovery	Walter	Palaeobiology of hydrothermal mineral deposits	\$73,317
ARC Discovery	Belousova	Crustal evolution in Australia: Ancient and young terrains	\$101,695
ARC Discovery	Veevers	Mapping under ice – crustal evolution in Antarctica & the assembly of Gondwanaland	\$61,419
ARC LIEF	O'Reilly, Griffin, Braun et al.	An inference engine for complex earth systems (ANU lead institution)	\$190,000
ARC SPIRT	O'Reilly, Griffin, Hronsky, WMC	Lithospheric architecture of Australia: relevance to location of giant ore bodies (with industry contribution)	\$125,601
ARC	Turner	Federation Fellowship	\$296,934
DEST SII	O'Reilly	Advanced technology for a clever geoscience future in Australia	\$1,900,000
MURF	Wang	Geochemical characteristics of mantle xenoliths from Taiwan and Penghu Islands, SE China: Implications for mantle process and geodynamics	\$83,685
MURF	Malkovets	Evolution of the upper mantle beneath the Siberian Craton and the Siberian Platform	\$69,998
MURDG	Wang	Lithosphere extension in East Asia: tectonic and geochemical consequences	\$19,900
MURDG	Jackson	Isotopic fractionation of the ore minerals (Cu, Zn, Fe): Mechanisms and significance	\$13,000
MURDG	Green	Behaviour of antimony, molybdenum and tungsten in Earth's crust-mantle system - an experimental examination of their geochemical character	\$4,024

Appendix 5: Funded research projects

Funding Source	Investigators	Project Title	Amount
MURDF	Etheridge	Risk and value management in mineral exploration	\$130,451
RIBG	O'Reilly	A high pressure asher	\$61,126
Capital Equipment	Lackie	Upgrade of teaching PC lab	\$16,133
Capital Equipment	Lackie	Real-time differential GPS total station	\$85,300
EPS	GEMOC	GAU Maintenance contribution	\$30,000
PGRF	Aulbach	Depletion and metasomatic processes in the lithosphere mantle	\$1,500
PGRF	Touron	Mapping geochemical domains in the mantle beneath the Massif Central (France)	\$4,000
PGRF	Rege	Trace elements in diamond	\$4,000
IPRS	Delpech	Isotopic characteristics of lithosphere processes beneath the Kerguelen Plateau	\$18,009
IPRS and MUIPRA	Guo	An integrated geophysical investigation of the Hunter-Mooki and Peel Faults	\$38,809
IPRS and MUIPRA	Aulbach	Depletion and metasomatic processes in the cratonic mantle	\$38,809
IPRS and MURAAACE	Touron, O'Reilly	Geochemical fingerprinting of the Massif Central (France) mantle	\$38,809
IPRS and iMURS	Rege, O'Reilly	Trace elements in diamonds: genetic and forensic implications	\$38,809
APA	Murgulov	Crust-mantle evolution and metallogeny, E. Australia	\$18,009
8IKC Conference Travel Grant	Aulbach	The lithospheric mantle beneath the Buffalo Head Terrane, Alberta: Xenoliths from the Buffalo Hills kimberlites	\$2,765
8IKC Conference Travel Grant	Rege	Trace element analysis of diamond by LAM ICPMS: preliminary results	\$2,765
8IKC Conference Travel Grant	Graham	Geochemical and isotopic evidence of a kimberlite-melnoite-carbonatite genetic link	\$2,765
EURODOC	Touron	Isotopic studies of the French Massif Central ultrabasic-basic xenoliths: source of the Tertiary-Quaternary volcanism, mantle metasomatism and 4D Mapping of the continental lithosphere	\$6,250
EURODOC	Delpech	Isotopic studies of Kerguelen ultrabasic-basic xenoliths: characterisation of the sources of magmatism and metasomatism beneath an oceanic plateau	\$6,250

Funding Source	Investigators	Project Title	Amount
MUECRG	Griffin, University of Oslo, Norwegian Geological Survey	Where was Baltica? Testing continental reconstruction with <i>TerraneChron</i> [™] (including industry contribution)	\$85,308
MUECRG	Griffin, O'Reilly, Walter, BHP	Proterozoic crustal evolution: Baseline development of a global comparative library of Event Signatures linked to mineral endowment (including industry contribution)	\$100,000
MUNS	Daczko	Melt escape and trace-element partitioning during high-pressure partial melting in the lower crust, northern Fiordland, New Zealand	\$18,615

FUNDED RESEARCH PROJECTS FOR 2004

Funding Source	Investigators	Project Title	Amount
Macquarie University Host Institution Support	O'Reilly	GEMOC Key Centre Contribution	\$120,000
ARC Discovery	O'Reilly, Griffin, Gohl, Morgan, Cottin, Neumann, Xu	How has the continental lithosphere evolved? Processes of assembly, growth, transformation and destruction	\$285,000
ARC Discovery	Belousova	Crustal evolution in Australia: Ancient and young terrains	\$99,345
ARC Discovery	Turner	The time scales of magmatic and erosional cycles	\$100,000
ARC Discovery	Alard	Toward the use of metal stable isotopes in geosciences	\$140,000
ARC Linkage International	O'Reilly, Griffin, Cottin, Gregoire, Xu	How has the continental lithosphere evolved? Processes of assembly, growth, transformation and destruction	\$40,000
ARC Linkage Projects	O'Reilly, Griffin, WMC	Global lithosphere architecture mapping (including industry contribution)	\$190,000
ARC	Turner	Federation Fellowship	\$290,000
ARC	Daczko	The environmental and tectonic implications of volcanoclastic sedimentary deposits on Macquarie Island	\$79,000
DEST SII	O'Reilly	Advanced technology for a clever geoscience future in Australia	\$1,830,000
MUECRG	O'Reilly, Zhang, WMC	Continental flood basalts: geochemical discrimination with relevance to exploration for nickel and platinum-group elements (including industry contribution)	\$60,000
MUECRG	Griffin, O'Reilly, Rio Tinto	Lithosphere Mapping beneath the Dharwar Craton, India (including industry contribution)	\$60,800

Appendix 5: Funded research projects

Funding Source	Investigators	Project Title	Amount
MUECRG	Griffin, Pearson, O'Reilly, Daczko, NSWGS	Testing Ordovician-Devonian tectonic models for the Lachlan group (including industry contribution)	\$50,000
MURIF	Smith, O'Reilly, Parfitt, Esselle	Inversion scattering, remote sensing and data inversion	\$247,681
MURF	Malkovets	Evolution of the upper mantle beneath the Siberian Craton and the Siberian Platform	\$66,949
MURF	Wang	Geochemical characteristics of mantle xenoliths from Taiwan and Penghu Islands, SE China: Implications for mantle process and geodynamics	\$32,482
MURDG	Wang	Lithosphere extension in East Asia: tectonic and geochemical consequences	\$19,555
MURDG	Jackson	Isotopic fractionation of the ore metals (Cu, Fe): Mechanisms and significance	\$16,700
MURDF	Etheridge	Mineral exploration risk	\$100,000
Nu Instruments	Griffin, O'Reilly	Postdoctoral Fellowship from Nu Instruments	\$312,929
Capital Equipment	Lackie	Frequency FM Equipment	\$42,000
Capital Equipment	Flood	Precision lapping & polishing machine	\$90,000
EPS	GEMOC	GAU Maintenance contribution	\$30,000
IPRS and MUIPRA	Guo	An integrated geophysical investigation of the Hunter-Mooki and Peel Faults	\$39,284
IPRS and MUIPRA	Touron	Geochemical fingerprinting of the Massif Central (France) mantle	\$39,284
IPRS and IMUPRA	Rege	Trace elements in diamonds: genetic and forensic implications	\$39,284
RAACE and iMURS	Daczko, Milan	The emplacement, pressure-temperature-time path and structural evolution of lower crust gneisses in Fiordland, New Zealand	\$39,284
APA	Murgulov	Crust-mantle evolution and metallogeny, E. Australia	\$18,484

ARC Research Projects initiated prior to 2003 are available at our website: <http://www.es.mq.edu.au/GEMOC/>
Follow the Annual Report Link to Appendix 5 of the previous Annual Reports.