



Australian Society of Exploration Geophysicists





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SECTION 5

BIOGRAPHIES

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COMPANY OVERVIEW

Velseis is widely regarded as Australia's most experienced seismic contractor, leading the industry in high resolution seismic data acquisition, processing and interpretation.

Operating throughout Australia as well as Internationally, Velseis provides a full suite of integrated seismic services across the entire resource sector including the oil and gas, minerals, coal, and coal seam gas industries.

The Company draws upon 35 years of practical and logistical know-how, along with high-level geophysical expertise, to consistently deliver quality results safely and with exceptional efficiency.



SEISMIC SOURCE CAPABILITY

Explosives

Velseis has over 35 years' experience in highresolution Dynamite surveys. Shot hole drilling services are provided by our Seisdrill division, which has six truck-mounted Bourne 1000R drilling rigs, specifically suited to shot hole drilling. We are licensed to purchase and handle explosives, our pre-loaders are highly experienced, and our QHSE protocols are comprehensive.



Integrated Seismic Technologies

SEISMIC SURVEY DESIGN

Using industry leading 3D design software, along with internally developed proprietary technology, we provide a comprehensive 2D and 3D design service which accommodates the technical, logistical and economic considerations of our clients.

SEISMIC DATA ACQUISITION

With a diverse range of seismic source and recording hardware options along with experienced field personnel, Velseis can provide customised field crews suitable for most projects.



R&D DESIGN DRILLING ACQUISITION PROCESSING INTERPRETATION

www.velseis.com







AHV-IV 380 Renegade (80,000lb)

Velseis has recently expanded its Vibroseis fleet to include INOVA's 80,000 lb Renegade buggies. The Renegade 380 is currently the largest vibrator in Australia and when compared with INOVA's standard 60,000lb vibrator, exhibits superior low frequency sweep characteristics, enhanced broadband capability and deeper stratigraphic imagery.

Vibroseis

IVI Envirovibe (15,000lb) buggies

- Manoeuvrable
- Environmentally friendly (low impact)
- Easily transported

Inova Univib (26,000lb) buggies

- Manoeuvrable
- Environmentally friendly
- Adjustable hold-down for peak force variability

"Renegade Reaches Australian Shores"





Mini-SOSIE

In areas with particular environmental or access restrictions, Mini-SOSIE provides a seismic data acquisition method which is a geophysically viable alternative to Vibroseis. Utilising a Wacker Neuson compactor as an impactive energy source and smaller field crews, this technique is well suited to smaller projects with shallower targets. Mini-SOSIE is also effective as an alternative energy source for areas of a 3D Vibroseis survey where access is not possible for Vibroseis buggies due to environmental, topographical or cultural restrictions.



RECORDING HARDWARE

- 10,000 channels of Sercel 428/408 Telemetry recording hardware
- 6,000 channels of Sercel UNITE RAU eX-3 (wireless) recording equipment
- Up to 40,000 channels of Nodal recording equipment



of mining operations. Velseis work closely with mine planning staff to provide detailed stratigraphic and geotechnical analysis, highlighting faults and other stratigraphic anomalies. The information is used by mine staff for mine design, to prepare for drilling, and to help predict changing roof, floor and seam conditions.

Velseis processing capabilities have rapidly expanded in past few years. With a significant and scalable computing processing facility, along with a world class suite of proprietary and licensed technology, Velseis is processing large 2D, 3D,



SEISMIC DATA PROCESSING

Velseis Processing has provided quality seismic data processing and interpretation services to the oil & gas, coal, and mineral industries for over 25 years. We draw on a history of thousands of projects, and a staff of nearly 400 years' experience to extract valuable insights into the subsurface for our customers. Major oil & gas companies have consistently ranked our services as among the best available, and we have long been acknowledged as worldwide industry leaders in high resolution imaging for coal and minerals.

Our processing and interpretation services have been utilized by Australian Coal and Coal Seam Gas Industries for the past 15 years, and are of significant importance to the economics and safety



SAI GLOBA



and 4D seismic surveys both domestically and internationally. Whether it be land, marine, or transition zone environments, our people and technology are configured to take on the most challenging of projects. Our comprehensive technology catalogue includes solutions for:

- Tomo-statics
- Cross spread noise attenuation
- COV binning
- De-Ghosting
- SRME
- Shallow Water De-multiple
- 5D Interpolation
- Azimuthally Aware Tomography
- HTI correction
- VTI/TTI Pre-Stack Time and Depth Imaging
- RTM
- FWI



HEALTH AND SAFETY

At Velseis, we strive to provide our clients with geophysical information of the highest possible quality. To achieve this aim, our operational procedures are based on rigorous geophysical procedures, and are carried out with strict quality control. This focus on technical excellence runs parallel to a stringent commitment to health, safety and the environment.

Furthermore, we aim to achieve technical products of the highest possible quality, to maintain an incident-free workplace, and to conduct our business with no adverse effects to people, to property, or to the natural environment.



Research And Development

Since its inception, Velseis has based its operations on sound geophysical principles and technical innovation. The company maintains an active R&D division, which carries out targeted research in applied seismology. Current research activities include embedded acquisition systems, multi-component seismology, and optimisation of high-resolution data processing.

R&D publications are available at: http://www.velseis.com/research/recent publications





Jared Abraham is a principal geophysicist with Aqua Geo Frameworks, LLC in Mitchell, Nebraska. Over the past 25 years, his research has focussed on the application of geophysical techniques for mapping water, energy, mineral resources, and engineering and environmental problems. His research interests include the use of airborne geophysical survey techniques to construct 3-D geological and hydrological framework models. Jared received his Masters in Science in geophysics from the Colorado School of Mines in 1999. He received his Baccalaureate in Science in geology from Mesa State College in 1994.

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Cameron Adams is a PhD Student at the Centre for Exploration Targeting (CET), School of Earth Sciences, University of Western Australia. Cam has been awarded a MRIWA postgraduate research scholarship and an ASEG Research Foundation grant for his PhD project titled 'Understanding of the petrophysical properties of altered rocks: implications for geophysical exploration'.

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Shakil Ahmed is a research scientist specialising in the modelling of digital rock physics, numerical reservoir simulation, flow through micro-pore structures, rock-fluid interaction, computational fluid dynamics and multi-phase flow. He has led and been involved in a number of projects. He has been asked to review more than 40 papers over the last five years for many renowned journals. Dr Ahmed is involved with the ARC as an assessor. He is affiliated with the IEAust, SPE, EAGE, ARMA, the Institute of Engineers, Bangladesh (IEB) and the Bangladesh Society of Mechanical Engineers (BSME). *shakil.ahmed@csiro.au*

Zubair Ahmed is a PhD candidate from Department of Exploration Geophysics, Curtin University of Technology, Western Australia. His research area includes rock physics characterisation of unconsolidated sand using laboratory ultrasonic measurement and micro-CT image analysis. His study primarily focusses on effective elastic properties of granular medium using contact based models. Before commencing postgrad study, he worked on seismic data acquisition as a field QC for a national petroleum exploration company. He was also involved with 3D seismic data interpretation team on different petroleum fields to characterise reservoir potentials and new locations for drill wells using inversion and attribute analysis. *zubair.ahmed1@postgrad.curtin.edu.au*

Alan Aitken has over 10 years of research experience in geophysics. Topics of research interest include solid earth geophysics, cryosphere geophysics and environmental geophysics.

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Ruken Alac is a PhD candidate at the University of Sydney. She received her MEngSc in surveying and geospatial engineering from University of New South Wales and BS in geophysical engineering from Istanbul Technical University. She also holds Master of Science and Technology in Spatial Information from University of New South Wales. Her current research interests include modeling, data processing, optimisation problems and data mining. She is currently working with EarthByte Group and the Basin GENESIS Hub. *ruken.alac@sydney.edu.au*

Nikolce Aleksieski is a scientist on the rise and has been in the industry over the past few years. His prior employment as a

supervisor for contaminated land remediation has given him insight into issues associated with mining. His academic background is in geology and geophysics with a postgraduate degree in environmental and sustainability with a research dissertation on impacts to groundwater relating to coal seam gas and shale gas mining. His overarching goal is to promote sustainable mining in Australia. *Nikolcee.Aleksieski@gmail.com*

Carl Altmann is currently an exploration geologist for Origin Energy in Brisbane, Australia. He received his BSc degree in geology, geophysics and environmental geoscience from Adelaide University and his Honours degree in petroleum geoscience from the Australian School of Petroleum. Carl is a member of AAPG and SPE.

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Jade Anderson has a research background in U–Pb geochronology, metamorphism and Proterozoic Australia tectonics.

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David Annetts has been with CSIRO since 2007. A forwardmodeller by inclination, he has researched the application of frequency and time-domain electromagnetic prospecting methods to marine CSEM, CO2 sequestration, uranium and groundwater exploration, and maintains interest in CSIRO's Bayesian Lithological Inversion initiative. *david.annetts@csiro.au*

Mehdi Asgharzadeh is a geophysicist with more than 14 years combined industry work and academic research experiences in exploration geophysics. He has completed an engineering degree in mining exploration (2000), a MSc degree in petroleum geosciences (2004) and a PhD in exploration seismic (2014). He has worked with National Iranian Oil Co. and Schlumberger Australia as a geophysicist and as a researcher with Curtin University.

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Michael Asten is a Professor (retired) and ongoing Adjunct Senior Research Fellow in the School of Earth Atmosphere and Environment, Monash University, Melbourne. He is a past-President of the ASEG, and served a recent three-year term as the Australian Geoscience Council representative on the Australian Academy of Sciences UNCOVER Executive Committee. Professor Asten has published as author or co-author of 186 scientific papers. He has been involved in development of passive seismic (microtremor) methods for 15 years, developing applications for earthquake hazard, regolith characterisation, and engineering tasks. He is a member of two international consortia furthering the use of microtremor methods. *michael.asten@monash.edu*

Jim Austin is interested in the application of structural geology and geophysics to base metal exploration. He's worked with the pmd*CRC, Perilya, Encom Consulting, Pangaea Resources and CSIRO on projects across the Mount Isa Inlier, Broken Hill, Thomson, New Guinea, Musgrave, Arunta, Capricorn, Kimberley and Arnhem Land. He currently leads the Multiphysics team at CSIRO and has been focussed on IOCG, Sedex /BHT and magmatic nickel sulphide systems over the past 6 years. He has published papers on applied geophysics, structural geology and mineral exploration and is currently a member of the ASEG and Society of Economic Geologists. *james.austin@csiro.au* Adam Bailey completed his undergraduate studies in geology and geophysics at the University of Adelaide in 2011, graduating with first class Honours from the Australian School of Petroleum. In 2012 he commenced study towards a PhD at the Australian School of Petroleum, focussing on mapping natural fractures within energy-rich Australian basins. His PhD was awarded in 2016. In 2015 he started with Geoscience Australia as a graduate, and has been with the Onshore Energy Systems section since 2015 where he is working on understanding present-day stress conditions in several Northern Australian basins as part of the exploring for the future program. *adam.bailey@ga.gov.au*

Peter Baillie has been employed by CGG since August 2012, where he is Senior Vice President Business Development in the Multi-Client & New Ventures division, based in Perth, Western Australia. He holds degrees from the University of Tasmania (BSc 1970, geology) and Macquarie University in Sydney (MSc Hons 1988, sedimentology and basin analysis). He held positions in government from 1970 until 1997 (Tasmanian Department of Mines 1970-1993, Western Australia Department of Minerals and Energy 1993–1997). He joined TGS-NOPEC Geophysical Company in 1997 as Chief Geologist Asia Pacific involved in development and marketing of non-exclusive geophysical surveys, and subsequently joined Singapore based Geodata Ventures in 2009. He has been actively involved with many professional associations and has held positions of Secretary of the GSA, Managing Editor of the PESA Journal and President of FESWA. He was President of the AAPG Asia Pacific Region from 2011 to 2014 and President of SEAPEX from 2012 until October 2016. peter.baillie@cgg.com

Roman Beloborodov is a PhD candidate at Curtin University (Perth, WA). He is involved in experimental and theoretical rock physics and currently is working on artificial and natural shale rocks. Roman has a background in engineering geology, hydrogeology, artificial lithogenesis and soil mechanics. His main interest lies in seismic interpretation and inversion for rock properties.

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Romain Beucher is a Postdoctoral Research Fellow at the School of Earth Science at the University of Melbourne. Romain Beucher has expertise in lithospheric scale thermo-mechanical modelling of rifts and passive margins. He also has experience with surface process modelling and is interested in quantifying rock exhumation and relief evolution using low-temperature thermochronology (apatite Fission Track, U-Th/He). He is now working on coupling large-scale basin model with surface processes to study interactions and feedback between erosion and tectonics.

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Frank Bilki is a geologist and GIS/Remote Sensing analyst, and is currently Technical Product Manager for the Micromine exploration and mining application. *fbilki@micromine.com*

Rob Bills holds a Bachelor of Science degree (Monash University 1984) and a Master of Science (James Cook University 1989). He joined Emmerson Resources in September 2007 after a 25 year career in exploration and mining with Western Mining Corporation (WMC), then BHP Billiton. *rbills@emmersonresources.com.au*



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Teagan Blaikie completed her BSc and PhD at Monash University, Melbourne, Australia. She specialised in the geophysical interpretation and modelling of potential field data for understanding the subsurface architecture of volcanoes. Currently, Teagan is working as a postdoc for CSIRO Mineral Resources, but is embedded at the Northern Territory Geological Survey. Her current work focusses on geologically constrained interpretation and modelling of geophysical data to understand the structural architecture of the greater McArthur Basin. *teagan.blaikie@csiro.au*

Richard Blewett is the General Manager of the Minerals Systems Branch at Geoscience Australia. He has responsibility for leading GA's minerals science program and the promotion of Australia as an attractive investment destination for minerals exploration. Richard graduated with 1st class Hons in Geology from Swansea University (Wales) in 1985. Following a year in the seismic industry in South Africa, he completed a PhD in structural geology from Leicester University in the UK (1989). During this time he worked as a geologist in the French Alps, Canadian Appalachians, British Caledonides and Nepalese Himalaya. Richard joined Geoscience Australia in 1990 as a research scientist and for the past twenty seven years has worked in a number of minerals-related mapping projects across many of Australia's mineral provinces. He combined this with work on joint projects in the Sultanate of Oman, China and is currently leading a project of institutional strengthening in India. Richard was the Chief Editor and leader of a major book (2012) on Australia's geology - Shaping a Nation: a Geology of Australia. Richard has been involved in the development of the UNCOVER initiative of the Australian Academy of Science. Since 2012 he has been the leader of the Mineral Systems Branch in the Resources Division at Geoscience Australia, which has carriage of the minerals component of the new Exploring for the Future program. Richard is interested in the management and leadership of science and in geoscience education. He has an MBA in Technology Management from Deakin University (2001).

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Casey Blundell is a PhD candidate with the school of Earth, Atmosphere and Environment at Monash University, Victoria. The focus of her research is in structural geology and geophysics, with application to regional and local mineral systems. Casey is interested in developing her research further to address the broader tectonic regimes governing regional structural evolution through time. *casey.blundell@monash.edu*

Andrej Bona received his MSc in theoretical physics from Czech Technical University in Prague in 1997, and PhD in applied mathematics from University of Calgary in 2002. From 2002 to 2003 he was a post-doctoral fellow at Memorial University in Canada, where he subsequently worked as assistant professor till 2007. He is currently associate professor and Head of Department of Exploration Geophysics, Curtin University. His research interests include seismic anisotropy and imaging. He is an associate editor for Geophysical Prospecting and member of SEG, EAGE and ASEG. *a.bona@curtin.edu.au*

Barry Bourne graduated in geology and geophysics from the University of Western Australia. He is a Fellow of the AIG, on the committee of the ASEG Research Foundation and an active member of the ASEG/SEG. He is also on the external advisory committee for the UWA Centre for Exploration Targeting. Mr Bourne has extensive domestic and international mineral exploration experience. Up until 2013 he was Chief Geophysicist for Barrick Gold and is now a mineral exploration consultant to private and public international exploration groups. Mr Bourne began his career as a geophysicist with the CRA/Rio Tinto Exploration group.

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Cameron Bowker has worked in the petroleum industry for 3 years, having joined Santos Ltd as a graduate reservoir engineer in 2014. He earned a Bachelor of Engineering (Chemical) and a Bachelor of Science (Geology) from the University of Adelaide in 2013. Cameron has an interest in projects which combine engineering and geological principles to deliver new energy resources. This is his focus in his current role in Cooper Unconventional Growth where he has been helping to progress the Cooper Basin Deep Coal Unconventional Gas Play. *cameron.bowker@santos.com*

Trent Bowman Since graduating from Macquarie University with a Bachelor of Science (Honours) in 2011, Trent has been working full time as a geophysicist for GBG Australia, based in Sydney, Australia. This role has exposed him to a broad range of geophysical techniques and processes within the near surface and engineering sectors. In addition to his Bachelor's degree, Trent completed his Masters of Science in geoscience in 2016. *trent@gbgoz.com.au*

Carmen Braz is a PhD candidate at the University of Sydney within the EarthByte Group and Basin GENESIS Hub. Carmen's research interests centre on the surface expression of deep Earth processes and the subsequent effects on basin evolution. This has led Carmen to the focus of her current research, Papua New Guinea, which has seen episodic basin growth within a tectonically active environment. *carmen.braz@sydney.edu.au*

James Brewster has 20 years' experience working with gravity gradiometer instruments and their data. In his current role as senior scientist at Bell Geospace he is responsible for developing new processing, interpretation and quality control methods. This includes both algorithm and software development. He has a BSc degree in physics from the University of Bristol, England and a PhD in materials science from the University of Tennessee, USA. During post-doctoral fellowships at Oak Ridge National Laboratory and the National Center for Physical Acoustics he published research on heat transfer in high energy acoustic systems.

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Gilles Brocard is a researcher in geomorphology and tectonics. He has conducted research on river drainage development, river long profile changes, cosmogenic 10Be and 26Al dating, neotectonics, paleoseismicity and geodynamics in various settings (most notably Alps, Turkey, Puerto Rico, Guatemala), through various post doctoral positions in France, Switzerland, and the United States, successively at the universities of Grenoble, Rouen, Minnesota, Lausanne, and Pennsylvania. His current research at the University of Sydney aims at understanding landscape evolution along Australia's North West Shelf and in New Guinea. *gilles.brocard@sydney.edu.au* **Mark Bunch** is a senior lecturer in Petroleum Geoscience at the Australian School of Petroleum, University of Adelaide. His research concerns formation evaluation and seismic geomorphology. Prior to his present role, Mark spent seven years with the CO2CRC as a Research Associate in reservoir characterisation, during which he worked on geological modelling projects in the onshore Canterbury Basin (NZ), the Gippsland and Otway basins of Victoria, the Surat Basin of Queensland, and the Darling Basin of NSW. Mark holds degrees in geology and geophysics (BSc Hons), hydrogeology (MSc), and a PhD in earth sciences (stratigraphic forward modelling).

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Dane Burkett is the Olympus XRD product specialist working within the Scientific Solutions Business Unit. Dane has recently submitted his PhD at UNSW in the field of geology and geochemistry. He received the university medal for his undergraduate studies and first class honours. Dane's role at Olympus is to develop XRD applications for the Olympus innovative XRD product line, especially within the natural resources sector from oil/gas exploration through to mineral exploration, material handling and mineral processing. He is also working on a range of applications from explosives and forensics, to corrosion analysis and medical applications. *dane.burkett@olympus-ossa.com*

Bronwyn Camac has over 25 years' experience in the oil and gas industry as a geologist in both conventional and unconventional resources. Bronwyn has worked for Comalco Exploration Wiltshire Geological Services, Origin Energy, Beach Energy and now Santos Ltd. Bronwyn gained her PhD in engineering science in 2010, which focussed on using numerical modelling methods to predict fractured rock, and maintains interest in this area supervising various post-graduate projects and application of these techniques in unconventional resources. Currently, Bronwyn is the Manager, Cooper Basin Unconventional Growth, responsible for the commercialisation of the Permian Source Rock (Deep Coal) Play. *bronwyn.camac@santos.com*

Astrid Carlton is a geophysicist with the NSW Department of Planning and Environment in Maitland working on the New Frontiers exploration initiative. Astrid currently reviews geophysical submissions from exploration companies, maintains government and company geophysical databases, works on regional geophysical acquisition and provides geophysical data to customers. Astrid has interpreted and modelled aeromagnetic data in NSW to support mapping projects. Prior to working with the Department, Astrid conducted shallow environmental surveys and unexploded ordnance surveys around Australia, in Hong Kong and in the United Kingdom. *astrid.carlton@industry.nsw.gov.au*

Lidena Carr is a geoscientist for the onshore energy systems project within the Resources Division at Geoscience Australia. She graduated from the Australian National University (ANU) majoring in geology and human ecology with a BA/BSc (Hons) in 2004, and began working as a technical officer at the Research School of Earth Sciences (ANU). In 2007 She joined Geoscience Australia with the then ACRES, in 2009 she moved to the then Onshore Energy and Mineral Division to work as a seismic interpreter and basin analyst. Currently she works within the Onshore Energy Section as part of the Exploring for the Future program.

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Donna Cathro recently joined the Groundwater Branch of Geoscience Australia as a basin analyst. Prior to this role she spent many years working with Frogtech Geoscience within the Basins and Geospatial teams and in the Petroleum and Marine Division of Geoscience Australia. Donna has experience that spans basins the globe including India, Africa, USA and Australia, with projects relevant to the hydrocarbon, CCS, geothermal and water sectors. She received a PhD from the University of Texas, Institute of Geophysics (Austin). *Donna. Cathro@ga.gov.au*

Malcolm Cattach is the CEO and Managing Director of Gap Geophysics Australia and Gap GeoPak. He is also a founder and Executive Director of Gap Explosive Ordnance Detection. He is an Active Member of the ASEG and Associate Member of the SEG. Malcolm's career has been committed to the development and commercialisation of unique Australian geophysical survey technologies. He is the primary developer of the Sub-Audio Magnetics technique that was originally the subject of his PhD. *mcattach@gapgeo.com*

Matthieu Cauchefert graduated with a Masters in Earth Sciences from Universite Pierre et Marie Curie (UPMC), Paris, France. He is now doing a PhD at Curtin University, Department of Exploration Geophysics, Perth, Australia. *matthieu.cauchefert@postgrad.curtin.edu.au*

Bradley Cave is currently undertaking his Honours year at The University of Adelaide under the supervision of Dr Richard Lilly and Dr Stijn Glorie. This consists of examining the apatite and calcite from the Ernest Henry Orebody. This includes completing geochronology on both minerals as well as examining the trace element composition of the minerals. This should provide insight into the evolution of the ore bearing fluids as well as provide information on the ore genesis. *bradcave@mail.com*

Carlos Cevallos is a senior interpretation geophysicist living in Perth Australia. His previous work was at CGG Multi-Physics, the Geological Survey of NSW, Noranda and The University of Queensland. He is a physicist whose interests are to integrate geological and geophysical data and to find new ways to interpret potential field data. He holds a BSc degree from UNAM, Mexico, a MSc degree from CICESE, Mexico, and a PhD degree from Macquarie University, Australia. *cevallos54@hotmail.com*

Asbjorn Norlund Christensen is the owner of Nordic Geoscience Pty Ltd, consulting world-wide on ground and airborne geophysics for resource exploration. He has worked on minerals and petroleum exploration projects in Australia, Asia, Africa and the Americas, and he has managed research teams and technology companies. His areas of interest are: geophysical technology development and deployment, potential fields, and the integrated interpretation of geophysical data for minerals and petroleum exploration. He has an MSc in geophysics from University of Aarhus, Denmark and a PhD in geophysics from Colorado School of Mines, USA. Asbjorn is based in Melbourne, Australia.

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Niels Christensen is professor emeritus in geophysics at the Department of Geosciences, University of Aarhus. He works mainly with electrical and electromagnetic methods, especially their application to hydrogeophysics and other environmental problems. *nbc@geo.au.dk* **David Clark** has a BSc (Hons I) in physics and a MSc in geophysics from Sydney University, and a PhD in Geophysics from Macquarie University. He has worked for CSIRO since 1978, undertaking research into applications of rock magnetism to exploration, magnetic petrology, potential field interpretation and tensor gradiometry. His current position is Principal Research Scientist, affiliated with the CSIRO Superconductive Devices and Systems Group in CSIRO Manufacturing and the CSIRO Magnetics and Gravity Team in CSIRO Minerals. *david.clark@csiro.au*

Roger Clifton started off 50 years ago at BMR in 1968, did field work during the nickel boom, backpacked through Asia and Europe, taught physics at Curtin University, and has spent the past 20-odd years at NT Geological Survey, Recently he participated in a World Record Skydive of Skydivers over Sixty. *Roger.Clifton@nt.gov.au*

David Cohen has undertaken research in geochemical exploration methods in many parts of the world, including use of selective extractions and biogeochemistry. He is also involved in large scale regional geochemical mapping programs, including the NE region of NSW, Cyprus and New Zealand. He is a past president of the (Int'l) Association of Applied Geochemists, and a former Head of the UNSW School of Biological, Earth and Environmental Sciences. He is a Fellow of the Royal Society of NSW, the AIG and the AAG. He has been the AusIMM visiting lecturer to New Zealand.

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Julia Correa holds a BSc in geophysics from Fluminense Federal University, Brazil, and is currently a PhD candidate in exploration geophysics at Curtin University. Before starting her doctorate studies in 2015, she worked as a field geophysicist on seismic acquisition and processing projects offshore Africa. Julia is currently working on the applications of fibre-optics sensing DAS.

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Alexander Costall is a PhD student at Curtin University whose research focusses on groundwater and applied electrical and electromagnetic geophysics. The ultimate aim of the research is to resolve the hydrogeological properties of basin-scale fault structures through high-powered grounded-bipole electromagnetic surveys. Alex is also interested in coastal hydrogeological systems and is an experienced practitioner of ground penetrating radar and electrical resistivity imaging, particularly in coastal environments. *costall.alex@gmail.com*

Tim Craske is a geoscientist with 35 years' experience in exploration in Australia, the Americas and East Africa. He spent 20 years with WMC Resources during which he discovered the Ernest Henry and E1 iron oxide copper-gold deposits in the Cloncurry district, northwest Queensland. He was also involved in the targeting the West Musgraves province for copper and nickel, leading ultimately to the discovery of Nebo-Babel nickel sulphide deposit. Since leaving WMC Tim has worked for junior and major companies, is a Federal Councillor of AIG, and director of Geowisdom and Thinkercafé that develops innovative thinkers, organisations, and disruptive technology. *timcraske50@gmail.com*

David Crook is a geologist with 35 years of experience in exploration, mining and management, predominantly within Western Australia, where he has investigated gold, nickel sulphide, nickel laterite and more recently LCT pegmatites

in teams with an excellent discovery record. So far career highlights include participation in the discovery of the Radio Hill Nickel Mine; ore reserve generation and production at the Gidgee Gold Mine; exploration management for a WA Nickel Laterite Project; and discovery of Australia's first caesium deposit.

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Karol Czarnota completed his undergraduate degree in applied geology from the University to NSW and joined Geoscience Australia as a graduate where he now leads the Mineral Potential Section. He holds an MSc in Petroleum Geoscience from Royal Holloway University London and a PhD in geology and geophysics from Cambridge University. His interests ranging from geomorphology to mantle dynamics and how mineral systems operate within the dynamic Earth. *karol.czarnota@ga.gov.au*

Katarina David is a hydrogeologist with over 20 years working experience. She worked across industry, consulting, government and research organisations. *k.david@unsw.edu.au*

Vladimir David has more than 27 years' experience in mineral exploration and mining industry, as well as in research institutions and government offices. During his employment, he held different responsibilities such as Unit Manager, Chief Geologist, Executive Director Exploration, Principal Geologist, Principal Consultant, Team Leader, Senior Geologist, Geophysicist and Mine Geologist. Vladimir's experience is in design and management of mineral exploration strategies and activities from project generation – grass roots to the advanced prospects stage and pre-feasibility studies. Skills include: ground selection; design and interpretation of geophysical and geochemical surveys; design and supervision of major drilling programs and pre-feasibility studies. *vladdavidzz@hotmail.com*

John Davidson is a senior geoscientist with The Geological Survey of NSW, undertaking basin studies and managing NSW's seismic data collection. Prior to this John spent over 10 years in the petroleum industry as a seismic interpreter with a focus on structural geology in both Australian and overseas basins. John has recently been contributing to the 3-D mapping of NSW project, working in the Sydney-Gunnedah Basin. *john.davidson@industry.nsw.gov.au*

Aaron Davis is a research scientist at CSIRO based in Perth, WA. He specialises in electromagnetic applications for groundwater exploration and detection. *Aaron.davis@csiro.au*

Brooke Davis graduated with a BSc (Hons) from the University of Queensland in 2006. Since graduating, Brooke has worked extensively within the Australian coal mining industry extending more than 9 years in mine geology, exploration and resource modelling and estimation roles. In 2015 Brooke commenced her PhD at the University of Queensland focussing on determining the geological controls on the distribution of P- and F-bearing minerals within coal seams across the Bowen Basin. *b.davis2@uq.edu.au*

Tim Dean has an Honours degree in geophysics from Curtin University and a PhD in physics from the University of New South Wales. He spent more than twelve years working for WesternGeco and Schlumberger in a variety of roles related to surface and borehole seismic acquisition including field operations, software development and research located in Saudi Arabia, England, Norway and Australia. After leaving Schlumberger he worked as a sports technology project advisor at Hawk-eye innovations (a division of Sony). He joined Curtin University's Department of Exploration Geophysics as a Research Fellow in August 2016. *tim.dean@curtin.edu.au*

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BIOGRAPHIES

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