

# PREVIEW

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## From the Co-Chairs of the Conference Organising Committee

Dear Convention Delegates, Sponsors and Exhibitors

Welcome to Sydney and the 21st ASEG/PESA International Conference and Exhibition. On behalf of the Conference Organising Committee of the Australian Society for Exploration Geophysicists and the Petroleum Exploration Society of Australia, we are proud to bring you one of the world's premier geophysical forums.

As Co-Chairs, we wish to thank the Organising Committee for their hard work and enthusiasm in preparing for the conference. We should like to thank Nell Harrison and the staff and principals of Conference Action, our Conference Organiser, for their valuable experience and guidance. The efforts of Ann-Marie Anderson-Mayes in editing *Preview* for this conference are also heartily acknowledged. Without the crucial support of the many volunteers, presenters, sponsors and exhibitors the conference could not succeed.

The technical program will feature presentations from the minerals, petroleum, engineering and environmental fields. In addition to the technical papers, a series of workshops have been organised, and also the SEG/EAGE Distinguished Instructor Short Course (DISC) will be held in conjunction with the Conference.

The conference theme: 'FUTURE DISCOVERIES ARE IN OUR HANDS' reflects our belief that well-applied geophysical strategies are needed to find the next world-class resources and contribute to new wealth creation. The collaboration of two of Australia's premier geoscientific bodies promises to make this conference a standout forum for the resources' geophysics community. In this context we have aimed to deliver



**The Conference Organising Committee** Back row (L to R): Mike Smith, Pat Hillsdon, Phillip Schmidt, John Peacock, Roger Henderson, Bin Guo, David Pratt. Front row (L to R): Max Williamson, Phillip Cooney, Nell Harrison, Mark Lackie.

an informative and thought provoking conference and exhibition.

In addition to enjoying the Conference, we invite you to venture beyond the Convention Centre and sample many of the delights that Sydney has to offer. These include world renowned wines, bars with splendid ambience, excellent restaurants, and other tourist amenities, all presented before the stunning backdrop of the Sydney Harbour.

We would like to express our considerable appreciation and thanks for the support of the Gold Sponsors: BHP Billiton, Rio Tinto and Woodside; the Silver Sponsors: Beach Energy, CGGVeritas, CSIRO, Geoscience Australia, PIRSA, Oil Search and WesternGeco, and our Bronze Sponsors and exhibitors.

We look forward to enjoying the company of old friends and making new ones during your stay in Sydney.

### Co-Chairs

Mark Lackie (*Macquarie University*) and Phillip Cooney (*Metgasco Ltd*)

### The Committee

Bin Guo (*SRK Consulting*) Publicity, International  
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Pat Hillsdon (*Consultant*) Exhibition  
John Peacock (*Fugro Instruments*) Exhibition  
David Pratt (*Near Surface Commodities*) Sponsorship  
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Keith Skipper (*PetroSedex Pty Limited*) Technical Papers  
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## From the Presidents

Welcome to Sydney, Australia and the 21st International Geophysical Conference and Exhibition, jointly hosted by the Australian Society of Exploration Geophysicists (ASEG) and the Petroleum Exploration Society of Australia (PESA). The conference organising committee has arranged a great program and has attracted over 400 technical presentations along with a large complement of industry exhibitors.

The theme of the conference 'Future Discoveries are in our Hands' is a very topical subject at this point in time. Over the past forty years, the world has seen a number of commodity cycles come and go, however the general trend until recently, has been flat demand and in real terms, falling prices.

In spite of current perceptions, the overall rewards for investors in the natural resources sector have been modest compared with other industries. Only the companies with world class deposits were able to sustain reasonable returns in the face of low commodity prices. Investors lost interest and many of the stalwarts began to believe that the rewards for our endeavour hardly justified the financial risks involved. Until recently, the result of this has been declining investment in exploration and development and more importantly, in the human capital needed to deliver the discoveries for the future.

Discoveries are the future of our business and they are the very cornerstone of our standard of living. They are also a key factor in the future standard of living in emerging nations around the world. This has been brought home to us over the past decade where growth in China has caused the demand for commodities to

outstrip our ability to produce them, and a strong upturn in prices. Amid predictions of a 'supercycle' the industry was caught totally unprepared.

So, 'Future Discoveries are in our Hands'. The 'Future' is one of opportunities created by long term sustainable and growing demand for commodities. Also, by the emergence of new industries such as coal bed methane, *in situ* gasification, hot dry rock geothermal, geosequestration and others that will require discoveries of their own.

The 'our Hands' is us, the geophysical and broader earth science community represented by ASEG and PESA. During the ups and downs of the industry, when companies and exploration departments come and go, professional societies like ours represent a constant venue where as professionals we can support one another and exchange ideas. Where we are able to share what we have learned and pass on our knowledge to future generations.

The Sydney conference is a great opportunity for all of us to catch up with old friends and to make new ones. The number of technical papers and exhibitors is testimony to the optimism about a truly exciting and challenging future. We look forward to a stimulating week of participation.

One final thought. The longevity of what we present orally is only maintained if it is written down for future reference. It would be fantastic if conference presenters were to make use of our society's publications for this purpose. It requires a commitment to the written word.

Then, the future won't only be in our hands, we will have shared what's in our hands with the future.



*Phil Harman*  
President of the Australian Society of Exploration Geophysicists



*Shalene McClure*  
President of the Petroleum Exploration Society of Australia



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Rio Tinto's business is finding, mining and processing mineral resources. Major products are aluminium, copper, diamonds, energy (coal and uranium), gold, industrial minerals (borax, titanium dioxide, salt, talc) and iron ore. Activities span the world but are strongly represented in Australia and North America with significant businesses in South America, Asia, Europe and southern Africa.

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**WOODSIDE ENERGY LTD**



Woodside is Australia's largest independent oil and gas producer and a major supplier of liquefied natural gas to Asia. Formed in 1954 as a pioneer oil and gas explorer, Woodside took its name from the small town of Woodside, Victoria, in Australia's south east.

Today, Woodside is based in Perth, Western Australia and employs more than 3000 people. We operate two of Australia's largest resource projects, the A\$27 billion North West Shelf Venture near Karratha in Western Australia and the adjacent Pluto liquefied natural gas project, currently under construction.

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## GEOSCIENCE AUSTRALIA



### Australian Government Geoscience Australia

Geoscience Australia is a prescribed Australian Government agency within the Department of Resources, Energy and Tourism.

Geoscience Australia provides geoscientific information and knowledge which enables government and community to make informed decisions about: resource exploration; environmental management; and natural hazard assessment.

Onshore activities focus on enhancing mineral and energy exploration and environmental land-use planning. Offshore activities include providing pre-competitive data to help identify prospective basins for petroleum exploration and storage of carbon dioxide. Spatial information programs provide key spatial data about Australia with an emphasis on detection of change, natural risk assessment, emergency management, and marine zone stewardship.

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## PIRSA



### Government of South Australia Primary Industries and Resources SA

PIRSA's Minerals and Energy Resources Division facilitates mineral, petroleum and geothermal exploration and development within the State of South Australia. The Division provides a wide range of services including the gathering and value-adding of geoscientific datasets for delivery to the exploration industry and wider public. Many databases, including geophysical data, can be accessed and downloaded via the South Australian Resources Information Geoserver – or SARIG (<https://sarig.pir.sa.gov.au/sarig/frameSet.jsp>).

The Division also plays a role within the community through education and ensuring the responsible development of South Australia's mineral, petroleum and geothermal resources. It is responsible for industry regulation, legislation development and review, policy development and provision of advice.

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## OIL SEARCH LIMITED



### OIL SEARCH LIMITED

Oil Search Limited is an oil and gas exploration and development company that has been operating in Papua New Guinea (PNG) since 1929 and currently has a market capitalisation of around US\$6 billion. It is publicly listed on the Australian and Port Moresby Stock Exchanges and trades in the US through the ADR. The company is PNG's largest oil and gas producer and operates all of PNG's producing oil and gas fields and has a 29% interest in the world scale PNG LNG Project, operated by ExxonMobil. It has exploration activities in PNG, Yemen, Iraq and Tunisia and employees approximately 1000 full-time staff and over 1000 contractors located in PNG, Australia, Yemen and the United Arab Emirates.

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**AWE LIMITED**

AWE is an Australian oil and gas exploration and production company listed on the Australian Stock Exchange (ASX). The company was formed in 1997 and has grown to a significant international petroleum exploration and development entity through exploration success and successful development.

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# MOSAIC OIL

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In 2007, Newmont became the first gold company selected to be part of the Dow Jones Sustainability World Index. Newmont's industry leading performance is reflected through high standards in environmental management, health and safety for its employees and by creating value and opportunity for host communities and shareholders.

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### ORIGIN ENERGY



Origin Energy is a leading Australasian integrated energy company involved in most segments of the energy supply chain. Activities include gas and oil exploration and production, energy retailing and power generation derived from gas and renewable energy sources. Origin Energy holds significant producing assets; operates onshore and offshore processing facilities; and holds a diverse portfolio of exploration permits, including geothermal.

Origin Energy is Australia's largest producer of coal seam gas (CSG) and owns 50% of APLNG, which is developing a CSG to LNG export facility in central Queensland. Gas and liquids production also comes from conventional fields in the Otway, Cooper/Eromanga, Bass, Perth and Taranaki Basins. Origin's exploration portfolio includes permits in the Canterbury Basin NZ, Vietnam, Laos and Kenya.

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### OUTER-RIM EXPLORATION SERVICES

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### ROC OIL COMPANY



ROC listed on the ASX in 1999 and currently has approximately 713 million shares on issue. The Sydney-based company has a strong operating emphasis and a geographical focus on Asia and

Australasia – Australian and Chinese assets provide around 70% of production and 2P Reserves. ROC's value drivers include: a proven team with strong technical and operational abilities (a workforce of approximately 160); a balanced and diversified asset portfolio; exploration in established and frontier regions; and six existing production assets. ROC utilises established relationships with partners, governments and national oil companies to identify and develop opportunities: ROC operates for PetroChina, CNOOC and Sinochem.

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Email: mgerber@rocoil.com.au  
Website: www.rocoil.com.au  
Contact: Matthew Gerber, Manager – Investor Relations & External Affairs

## SANTOS LTD

# Santos

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60 Flinders Street  
Adelaide, SA 5000, Australia  
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Fax: +61 8 8116 5050  
Email: annamarie.van.riet@santos.com  
Contact: Annamarie van Riet, Adviser Public Affairs  
Website: www.santos.com

## VELSEIS PTY LTD



Velseis Pty Ltd is a highly experienced Australian seismic contractor, whose reputation is based upon 30 years of diverse operations throughout the Asia-Pacific region. Velseis offers fully integrated seismic services to the petroleum, coal and mineral industries.

The company's operations encompass seismic design, surveying, shot-hole drilling, data acquisition, processing and interpretation. The extensive experience of Velseis' key personnel ensures reliable and technically innovative solutions tailored to meet the needs of individual clients.

Velseis provides comprehensive seismic acquisition services, designed to accommodate geophysical, logistical, climatic, environmental and safety objectives. The company provides conventional 3D and 2D crews, utilising multi-component, heliportable, and shallow marine recording.

In keeping with its full-service approach, Velseis provides a specialised shot-hole drilling service through its Seisdrill division and has recently purchased new Envirovibe units (light-weight Vibroseis buggies) which offer an alternative energy source for CSG and shallow petroleum targets. In addition, PT Velseis Indonesia provides comprehensive geophysical logging services in South East Asia.

Velseis is an industry leader in the processing of high-resolution seismic data, and is at the forefront of 3D seismic mine-planning imagery. Velseis also has an experienced oil and gas processing division, delivering high-quality 3D and 2D onshore, transition and marine seismic data processing services.

Velseis maintains its competitiveness with a proactive commitment to research and development. The R&D division engages in focussed research projects and provides technical support to production divisions.

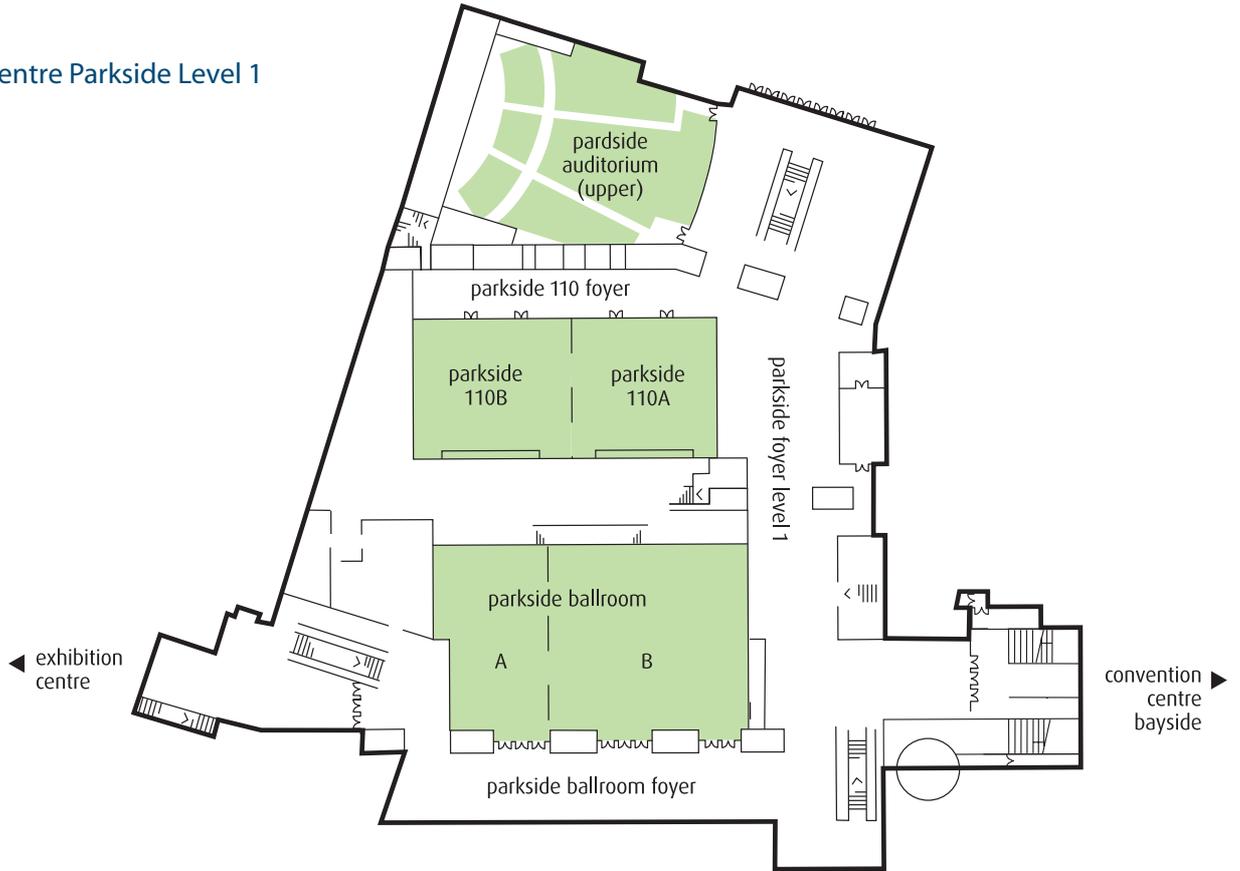
83 Jijaws Street  
Sumner Park, QLD 4074, Australia  
Tel: +61 7 3376 5544  
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Website: www.velseis.com.au  
Email: enquiries@velseis.com.au  
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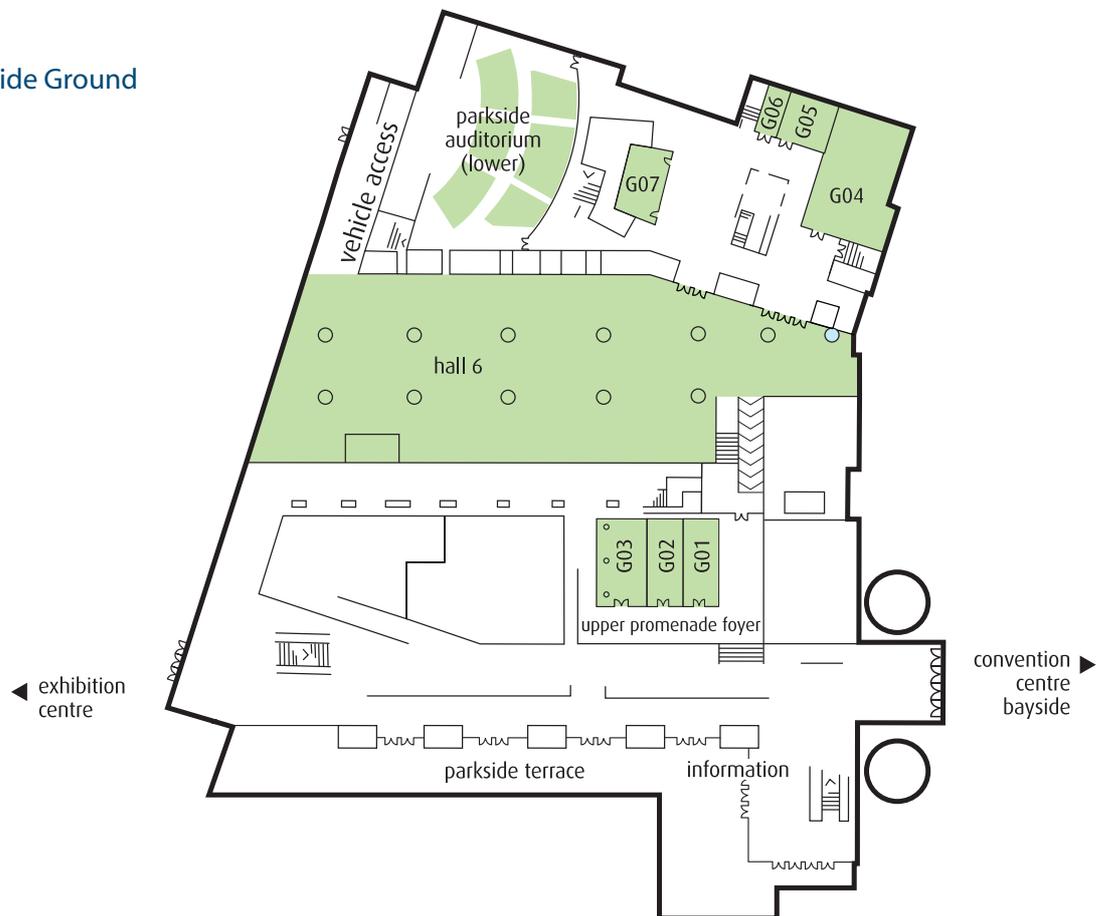
FLOOR PLAN

Convention Centre Parkside Level 1



BREAKOUT ROOMS

Convention Centre Parkside Ground



## Conference Venue

Sydney Convention & Exhibition Centre  
Darling Drive  
Darling Harbour, NSW 2000, Australia  
Tel: +61 2 9282 5000  
Website: [www.scec.com.au](http://www.scec.com.au)

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## Conference Secretariat

For all enquiries please contact:  
Ms Nell Harrison  
ASEG-PESA 2010 Conference Secretariat  
Conference Action Pty Ltd  
PO Box 576, Crows Nest, NSW 1585, Australia  
Tel: +61 2 9431 8699  
Fax: +61 2 9431 8677  
Email: [aseg-pesa2010@conferenceaction.com.au](mailto:aseg-pesa2010@conferenceaction.com.au)

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## Registration Desk

The registration desk will be located in the Parkside Office on Level 1 at the Sydney Convention & Exhibition Centre. Staff at the registration desk will be happy to help with any queries. The anticipated registration desk hours are:

Sunday, 22 August 2010: 1600–2000 hours  
Monday, 23 August 2010: 0700–1730 hours  
Tuesday, 24 August 2010: 0800–1730 hours  
Wednesday, 25 August 2010: 0800–1730 hours  
Thursday, 26 August 2010: 0800–1700 hours

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## Name Badges

All delegates will be given a name badge at registration. This badge will be the official pass to sessions, teas, lunches and official social functions. It is necessary for delegates to wear their name badges at all times when on-site for security reasons.

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## Messages

A message board will be located next to the registration desk throughout the event.

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## Speaker's Support Room

The Speaker's Support Room is located in Parkside G07. Speaker's Support Room hours will be the same as the Registration Desk Hours above.

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## Posters

Posters will be displayed at the back of the Exhibition Area in Hall 5. There are three Poster Sessions at which times the authors have been asked to stand by their posters.

Poster Session 1: Monday, 23 August 2010: 1300–1330 hours  
Poster Session 2: Tuesday, 24 August 2010: 1300–1330 hours  
Poster Session 3: Wednesday, 25 August 2010: 1300–1330 hours

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## The Exhibition

We encourage you all to support our exhibitors and visit the stands throughout the conference. Exhibition Hours are as follows:

Sunday, 22 August 2010: 1700–2000 hours  
Monday, 23 August 2010: 0800–1830 hours  
Tuesday, 24 August 2010: 0800–1830 hours  
Wednesday, 25 August 2010: 0800–1530 hours

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## Internet Café

The Internet Cafe will be located in the Exhibition Area in Hall 5.

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## Catering

Morning Tea, Lunch and Afternoon Tea will be held in the Exhibition Area, Hall 5, Monday 23 August – Wednesday 25 August. Morning Tea, Lunch and Afternoon Tea will be held in the Parkside Foyer on Thursday 26 August.

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## Smoking Policy

The event policy is that there will be 'no smoking' inside the Sydney Convention & Exhibition Centre – smoking is only permitted in the outdoor areas.

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## Car Parking

The following car parking rates apply at the Sydney Convention & Exhibition Centre car park:

### Day Rates

0–1 hours \$8.00  
1–2 hours \$16.00  
2–3 hours \$24.00  
3–4 hours \$28.00  
4 hours or more \$30.00

### Evening Rates

(entry after 5:00 pm and exit before 9:00 am)  
0–1 hours \$7.00  
1–2 hours \$13.00  
2 hours or more \$18.00

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## Credit Cards

Credit cards accepted at the registration desk are Mastercard, Visa and American Express. The majority of hotels, restaurants and shops will accept these major credit cards.

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## Disclaimer of Liability

The Organising Committee, including the Secretariat, and ASEG-PESA will not accept liability for damages of any nature sustained by participants or their accompanying persons or loss of or damage to their personal property as a result of the conference or related events. The conference program is correct at the time of printing, though conference organizers hold the right to make necessary changes to programming. Receipt of delegate and partner registration acts as an acceptance of this disclaimer. Some scheduled events are subject to minimum numbers enrolling by a preset date, and we otherwise reserve the right to amend or cancel the proposed event.

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### Privacy Statement

In registering for this event relevant details will be incorporated into a delegate list (name and organisation only) and may be made available to parties directly related to the event including ASEG-PESA, Organising Committee, accommodation providers (for the purpose of room bookings only), exhibitors and key sponsors. This information will be added to a database for future ASEG and or PESA events. Those delegates that don't wish for the details to be added have acknowledged this at the time of registering.

### Dress Code

Smart casual.

### Climate

The Australian winter is surprisingly mild with the average temperatures in New South Wales ranging from 11 to 25°C (52-77°F). The average rainfall in Sydney in August is 25-100mm or 1-4 inches. It is recommended that delegates bring a rainproof jacket, a thick sweater and a warm jacket. There is no need for ski jackets unless you are travelling to the Snowy Mountain Region on the border of Victoria and New South Wales. Please visit [www.bom.gov.au](http://www.bom.gov.au) for daily weather forecasts.

### Sydney Airport

Located in Mascot NSW, Sydney Airport is approximately 8km from the central CBD. Sydney Airport is easily accessible by all modes of transport including car, train, taxi or bus. All terminals, T1 International, T2 Domestic and T3 Domestic, can be easily found by following signs to the airport - usually displayed by a simple aeroplane symbol. Most major routes will feature the symbol at decision points.

For more detailed information please visit [www.sydneyairport.com.au](http://www.sydneyairport.com.au).

### Public Transport

Sydney's Central Business District is serviced by trains, buses, taxis, monorail and light rail services. The State Transit Website - [www.131500.com.au](http://www.131500.com.au) - has useful information regarding public transport options, including a trip planner function that will provide you with detailed information on how to get to and from your destination.

Taxis in Sydney operate under two pricing structures. From 6:00 am to 10:00 pm the standard fare applies. On the left hand side of the taxi meter, above the word 'rate' you should see the number 1. From 10:00 pm to 6:00 am, a 20% night tariff applies. During these times the meter should be set on rate 2. Please check the meter is set correctly when you begin your journey. Taxi rates are reasonable by international standards.

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## ELECTROMAGNETICS

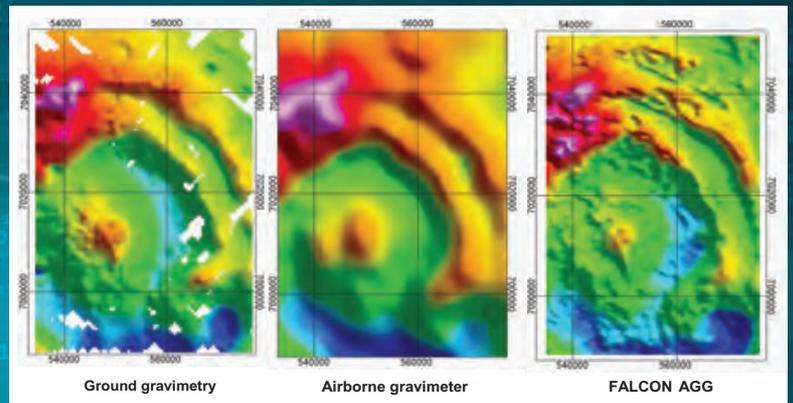
- RESOLVE® Helicopter FEM
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