



appea

the australian petroleum production & exploration association presents

27-30
MAY
BRISBANE

APPEA2019

CONFERENCE AND EXHIBITION



NAVIGATING THE FUTURE
HANDBOOK

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ESTABLISHED IN 1919, CLOUGH'S GLOBAL TRACK RECORD INCLUDES 100 YEARS IN AUSTRALIA AND 53 YEARS IN OIL AND GAS.

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PIONEERING SINCE 1919



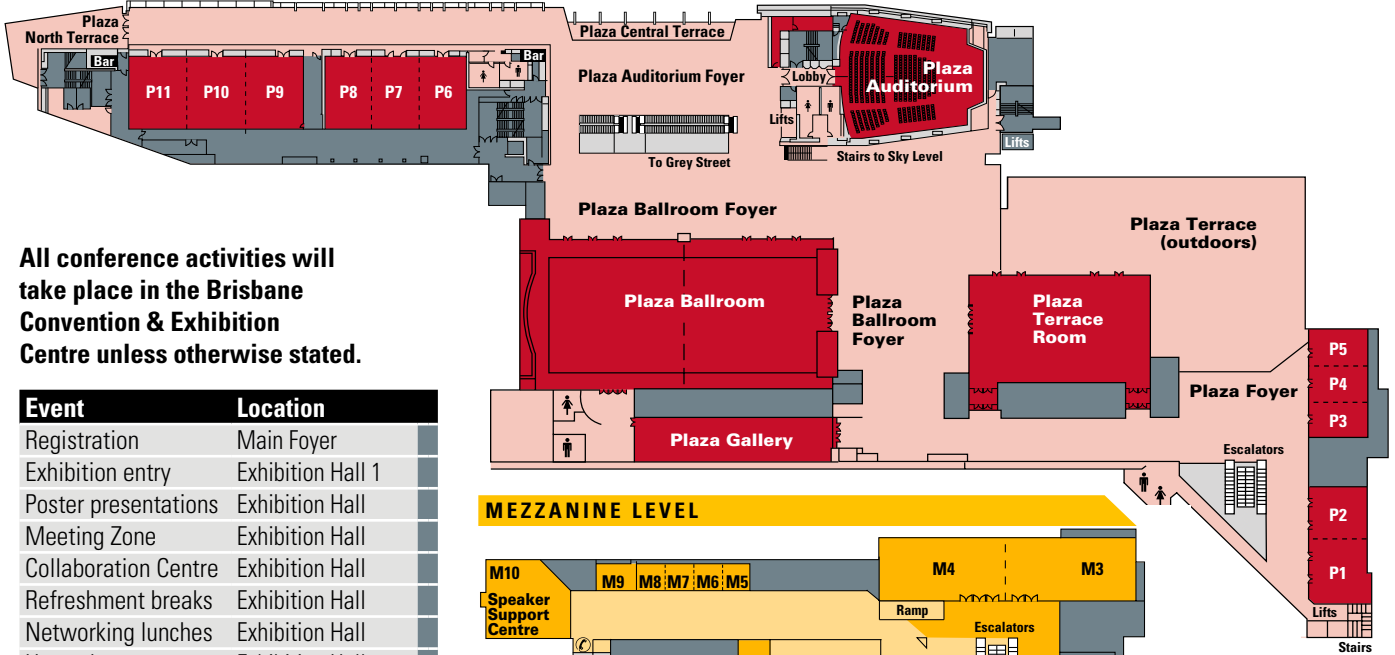


APPEA 2019

CONFERENCE AND EXHIBITION

BRISBANE CONVENTION & EXHIBITION CENTRE

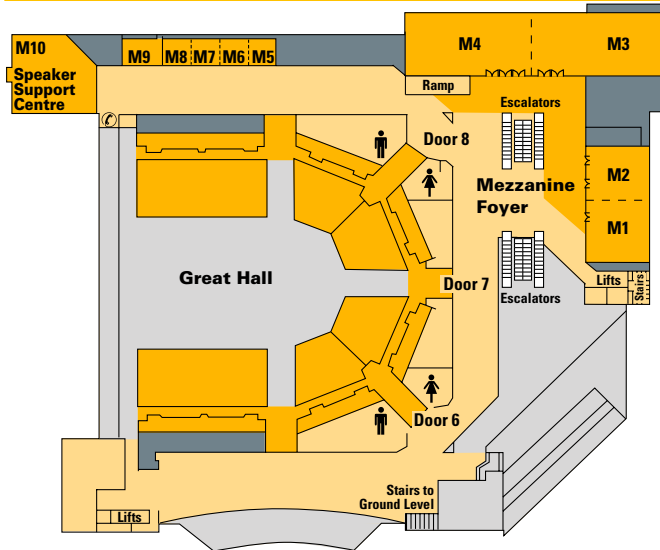
PLAZA LEVEL



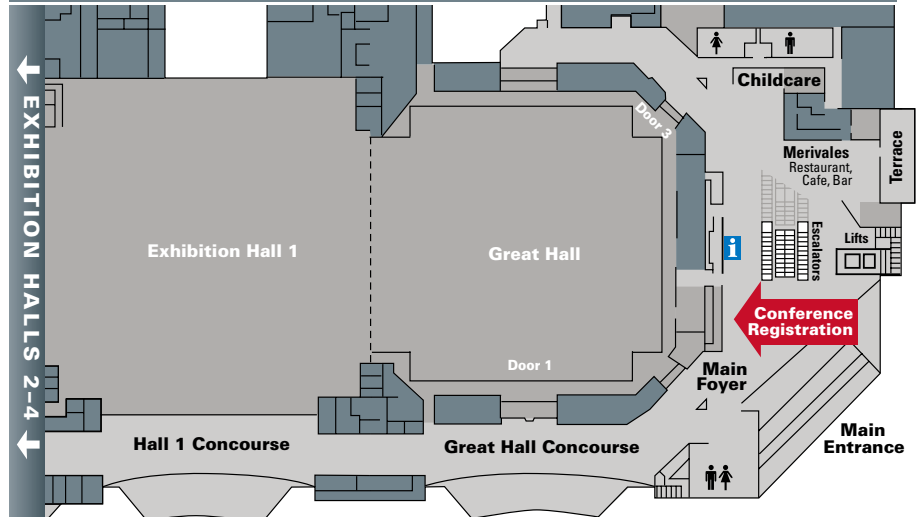
All conference activities will take place in the Brisbane Convention & Exhibition Centre unless otherwise stated.

Event	Location
Registration	Main Foyer
Exhibition entry	Exhibition Hall 1
Poster presentations	Exhibition Hall
Meeting Zone	Exhibition Hall
Collaboration Centre	Exhibition Hall
Refreshment breaks	Exhibition Hall
Networking lunches	Exhibition Hall
Happy hours	Exhibition Hall
Plenary sessions	Great Hall
Concurrent sessions	See program
Speaker Support Centre	M10
Media Room	P4 & P5
Welcome Reception	Exhibition Hall 3
Presenters' Breakfast	P1 & P2
Members' Luncheon	P1 & P2
Conference Dinner	Plaza Ballroom
Authors' Luncheon	P1 & P2
Farewell Drinks (offsite)	The Charming Squire

MEZZANINE LEVEL

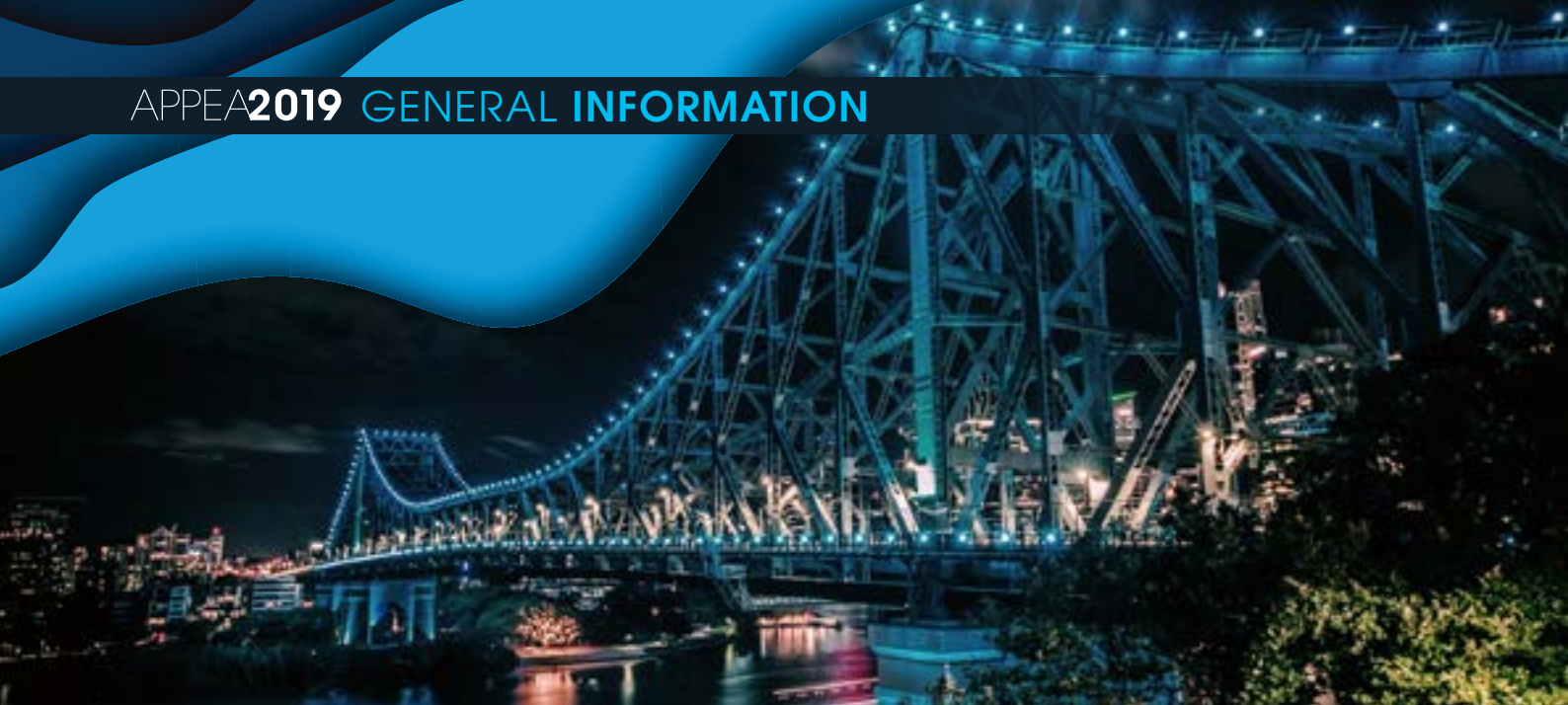


GROUND LEVEL



Acknowledgements

APPEA extends its sincere thanks to all the companies and organisations supporting the APPEA 2019 Conference and Exhibition. In particular, we wish to recognise **Clough** and **Woodside** for their support as principal sponsors. See the inside back cover for a full list of sponsors.



Program

Full details of the program can be found on pages 8–24. Conference plenary sessions will be held in the Great Hall of the Brisbane Convention & Exhibition Centre and will take place in the morning of each full day of the conference and again in the afternoon on the first and final day of the event.

Exhibition

SPONSORED BY **wood.**

The APPEA 2019 Exhibition will be held in Exhibition Halls 1 and 2 of the Brisbane Convention & Exhibition Centre. Following each session, delegates are encouraged to enter the exhibition area to meet with our exhibitors, network in our Collaboration Centre sponsored by **EY**, visit the 2019 Poster Presentations sponsored by **BP Developments Australia**, or secure space to meet with your industry colleagues in the Meeting Zone, sponsored by **KPMG**.

Details of exhibitors are listed on pages 32–38 of this handbook.

Exhibition opening times are:

Tuesday	8:00am–6:00pm (happy hour 5:00pm–6:00pm)
Wednesday	8:00am–6:00pm (happy hour 5:00pm–6:00pm)
Thursday	8:00am–3:00pm

Poster Presentations

SPONSORED BY **bp**

The poster presentations are located in the exhibition halls. A list of posters can be found on pages 27–29 with associated abstracts available on the conference mobile app. Authors will be available to discuss their posters at the ‘Meet the Authors’ session on Wednesday 29 May, 1:00pm–2:00pm.



Registration

The conference registration desk is located in the Main Foyer on the ground level of the Brisbane Convention & Exhibition Centre.

The registration desk is open at these times:

Monday	11:00am–7:00pm
Tuesday	7:30am–5:00pm
Wednesday	7:30am–5:00pm
Thursday	7:30am–3:00pm

Assistance/enquiries

Please see the registration desk if you require any assistance or have any enquiries.

Security

For security reasons, delegates are required to wear their name badges at all times. This policy will be strictly enforced at the conference. Delegates will be refused entry without conference identification. Security will be present and monitoring access to conference activities.

Please note: under no circumstances are the name badges permitted to be transferred to other delegates or individuals without the authorisation of the APPEA Conference Director. Personal business cards are also not permitted to replace the official name card provided by APPEA. If you have misplaced your registration name badge, please see the main registration desk for a replacement — charges may apply.

The annual APPEA Conference and Exhibition is brought to you by the Australian Petroleum Production & Exploration Association (APPEA), the peak industry body for the Australian oil and gas industry.

APPEA Lounge



The APPEA Lounge is located in the exhibition halls at one end of the APPEA Boulevard. We invite you to join us on our lounge to learn more about our association, relax with colleagues and enjoy the atmosphere of the APPEA 2019 Exhibition.

Cloakroom



A cloakroom will be available throughout the event. This is located in the Main Foyer of the Brisbane Convention & Exhibition Centre next to the APPEA 2019 Registration Desk. This cloakroom is operated by the Brisbane Convention & Exhibition Centre.

Speaker Support Centre



The Speaker Support Centre is located in Room M10 on the Mezzanine Level of the Brisbane Convention & Exhibition Centre. Access is available from 2:00pm on Monday 27 May and from 8:00am on Tuesday 28 May and Wednesday 29 May.

All speakers are required to load their presentations in the Speaker Support Centre. Loading times have been pre-organised with APPEA. An APPEA representative will be available in the support centre.

Dress Code



The dress code for all conference sessions is business attire. The conference dinner preferred dress code is cocktail or lounge suit. The dress code for the Welcome reception and for the Farewell cocktails is smart casual.

Publications



Access to abstracts

Abstracts from the conference program are available to view via the APPEA 2019 Conference Mobile App. See page 7 for information regarding the mobile app.

The APPEA Journal and Conference Proceedings

The 2019 edition of *The APPEA Journal and Conference Proceedings* will be available online to delegates three weeks post event (delegates will be emailed a password to access the information). Further information will be posted on www.appeaconference.com.au at this time.

Australasian Petroleum Permit Maps and eBooks

Pre-ordered publications will be mailed out to you post conference. For any questions, please visit the Petrosys stand, located at booth 18 in the Exhibition Hall.

WiFi



A complimentary wifi service is available for all APPEA 2019 delegates. This service is suitable for emails and basic internet work.



Connect to: APPEA2019
Password: thevoice

APPEA offices

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melbourne@appea.com.au

There are conditions for entry to social functions, and tickets (if required) are enclosed in the back of your name badge. Please ensure that you check your name badge and the contents upon collection. With the exception of the Conference Dinner, name badges must be worn to all functions. Business cards are not permitted as replacements for name badges.

Welcome Reception and Farewell Cocktails

Full conference delegates (including student registrations) will need to present their name badge for scanning to enter these events. Physical tickets are not required.

Exhibition staff, partners, guests and day delegates will need to provide a physical ticket to enter these events. These tickets are enclosed in the back of the name badge of the person who has purchased the ticket.

Welcome Reception SPONSORED BY **AVEVA**

Farewell Cocktails SPONSORED BY **LIDIAR GROUP**

Exhibition hall inclusive functions

Tuesday

Daytime catering SPONSORED BY **TRI-STAR PETROLEUM**

Happy hour SPONSORED BY **YOKOGAWA**

Wednesday

Daytime catering SPONSORED BY **KBR**

Happy hour SPONSORED BY **PETROFAC**

Thursday

Daytime catering BROUGHT TO YOU BY **THE APPEA JOURNAL**

Tickets

Tickets will be required for the Conference Dinner — for all other functions entry will be via scanning your name badge. If you have purchased additional tickets, these will be placed in the back of your name badge. You will be required to meet your guests outside the function, and enter together. To purchase additional tickets for social functions please see the registration desk (strictly subject to availability).

Additional Events

Presenters' Breakfast (by invitation only)

SPONSORED BY **BP DEVELOPMENTS AUSTRALIA**

The Presenters' Breakfast will be held on Tuesday 7:30am–8:20am in P1 and P2, Plaza Level, Brisbane Convention & Exhibition Centre.

APPEA Members' Lunch (by invitation only)

SPONSORED BY **CLOUGH AND WOODSIDE**

The APPEA Members' Lunch will be held on Tuesday 12:30pm–2:00pm in P1 and P2, Plaza Level, Brisbane Convention & Exhibition Centre.

APPEA Conference Dinner

SPONSORED BY **BROADSPECTRUM**

The APPEA Conference Dinner will take place on Wednesday at 7:00pm for 7:30pm in Plaza Ballroom, Plaza Level, Brisbane Convention & Exhibition Centre.

APPEA Authors' Lunch (by invitation only)

SPONSORED BY **EXXONMOBIL**

The APPEA Authors' Lunch will be held on Thursday 1:00pm–2:30pm in P1 and P2, Plaza Level, Brisbane Convention & Exhibition Centre.

CHARITY

BlazeAid is a 100% volunteer-based organisation that works with families and individuals



in rural Australia following natural disasters such as fires, floods, cyclones and drought to help clear and rebuild fences and other structures that have been damaged or destroyed.

The highest priority at present is providing assistance and support to the victims in Queensland of the horrendous floods in February 2019. Your kind donations will assist in paying for petrol for the road trains to deliver 800 tonnes of rail line that have been donated from Port Hedland, WA to the flooded areas in North West Queensland. These rail lines will travel 5000km to Queensland to replace the fence posts and cattle yards which will ensure that the posts are not eaten away by white ants or sink into the ground in the future.

BlazeAid is a registered charity in all states of Australia and does not receive government funding. The volunteers work very closely with the farmers to understand their needs and your generous donations ensure they are able to work in a disaster-affected area for many months, not only helping individuals and families, but also helping rebuild the local communities and lifting the spirits of the people affected. To donate, visit blazeaid.com.au



Download the APPEA2019 Mobile App to make the most of your conference experience

- Search **APPEA Conf** in the App Store or Google Play
- Enter your access code (all registered delegates receive this via email)

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Monday 27 May 2019

Registration:
8:30am

APPEA SEMINAR

INDUSTRY EVENT

Seminar:
9:00am–5:00pm

APPEA Introduction to Oil and Gas Industry Seminar

Room S1, Sky Level

This seminar will give a broad understanding of the Australian oil and gas industry.

Attendees will gain an appreciation of the geological, technical and economic aspects of the industry, features of the onshore and offshore environments, as well as the exploration, development and production phases. The seminars offer an invaluable opportunity to understand the key characteristics and global context of Australia's oil and gas industry, and come to grips with its key concepts and terminology. These seminars will also be conducted in Perth, Canberra, Darwin, Melbourne and Brisbane throughout 2019. For further information visit www.appea.com.au/event/intro-to-oil-gas-industry-seminars.

11:00am–7:00pm

CONFERENCE REGISTRATION

Main Foyer, Ground Level

Join fellow delegates and collect your registration packs prior to attending the Welcome Reception at 6pm.

Registration:
from 12:00pm

PESA DEAL DAY

INDUSTRY EVENT

Seminar:
1:00pm–5:00pm

Brisbane Convention & Exhibition Centre

The Petroleum Exploration Society of Australia (PESA) 'Deal Day' Seminar is the annual showcase for acreage and farm-in opportunities in Australia and the neighbouring region in a presented papers format. This event will deliver a comprehensive Farm-in Report, containing all the relevant information on each opportunity. Registration is separate from the APPEA Conference and Exhibition and includes lunch and refreshments.

6:00pm–9:00pm


WELCOME RECEPTION


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Exhibition Hall 3, Ground Level



Join us for a kaleidoscope of colour at the first official social function of APPEA 2019 as we showcase the best Queensland has to offer. The perfect setting to get a taste of the quality networking the next three days will deliver.

 Complimentary to full delegates.
\$95 per person to all other registration categories and additional guests.





 Includes drinks and light refreshments.

 Smart casual attire.

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Tuesday 28 May 2019

- 7:30am–8:20am **Presenters' Breakfast — Technical and Business Program** SPONSORED BY 
 BY INVITATION ONLY
 Room P1 & P2, Plaza Level
- 7:30am–5:00pm **Conference Registration**
 Main Foyer, Ground Level
- 8:00am–6:00pm **APPEA 2019 Exhibition open** SPONSORED BY 
 Exhibition Hall, Ground Level
- 8:00am–6:00pm **APPEA 2019 Technical and Business Poster Presentations open** SPONSORED BY 
 Exhibition Hall, Ground Level
- 8:00am–6:00pm **KPMG Meeting Zone open** SPONSORED BY 
 Need a private place to meet and talk business? With two private meeting rooms, seating up to eight per room, this complimentary service is available for one-hour periods.
 Exhibition Hall, Ground Level

8:30am–10:15am **PLENARY: Navigating the future** SPONSORED BY

Great Hall CHAIR: **Mr Andrew McConville** Chief Executive, APPEA  



The opening session of APPEA 2019 focuses on the conference theme, 'Navigating the future'. This session will set the scene for three days of in depth discussion and debate as the industry considers what it takes to succeed in the new energy market — a market experiencing the most disruptive period in a generation.

Conference Opening Ceremony

Queensland State Government Address

Hon Dr Anthony Lynham MP, Minister for Natural Resources, Mines and Energy


Lead Industry Address: Leveraging opportunities in a growing but competitive market

Mr Ryan Lance, Chairman and Chief Executive Officer, ConocoPhillips

APPEA Chair's Address

Mrs Zoe Yujnovich, Country Chair and Executive Vice President, Shell Australia

PLENARY

10:15am–11:00am **MORNING TEA IN THE EXHIBITION HALL** SPONSORED BY 

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Tuesday 28 May 2019

11:00am–12:30pm

PLENARY: The future's not what it used to be—the new energy landscape

Great Hall **FACILITATOR: Ms Jennifer Hewett**
National Affairs Columnist, The Australian Financial Review

SPONSORED BY
FLUOR



PLENARY

IEA perspectives on the global energy landscape
Mr Paul Simons, Deputy Executive Director, International Energy Agency

Unlocking Australia's natural advantage
Mr Peter Coleman, CEO and Managing Director, Woodside

The role of gas in transforming energy
Mr Frank Calabria, CEO and Managing Director, Origin Energy

No guarantees — setting Australian Energy Policy for 2040
Mr Matt Rennie, Oceania Power & Utilities Leader, EY

12:30pm–2:00pm

NETWORKING LUNCH IN THE EXHIBITION HALL

All delegates are invited to enjoy lunch in the exhibition halls while exploring the exhibits, poster presentations, and Collaboration Centre.

SPONSORED BY
TRI-STAR

12:30pm–2:00pm

APPEA Members' Lunch | BY INVITATION ONLY

Room P1 & P2, Plaza Level

SPONSORED BY
CLOUGH **Woodside**

1:00pm–2:00pm

Hot Topics Discussion in the EY Collaboration Centre (See p31)

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EY Building a better working world

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Tuesday 28 May 2019

2:00pm–3:15pm

TECHNICAL AND BUSINESS PROGRAM SESSIONS 1–4

CONCURRENT 1: Queensland—innovation, development and prospectivity

SPONSORED BY



Room M3 CHAIR: Mr Anthony Roe, Head of Digital Technology & Innovation—MEI, Downer

New deep crustal seismic data acquisition program for NWQs frontier petroleum basins

S Edwards and B Talebi (Department of Natural Resources, Mines and Energy)

A new spatially-continuous basement heat flow map for NW Queensland

C Jorand, K Connors, L Pryer and C Pietrucha (Frogtech Geoscience)

Adavale Basin petroleum plays | A Troup and B Talebi (Department of Natural Resources, Mines and Energy)

Approaches to data-driven exploration in Queensland | T Knight (Dept of Natural Resources, Mines and Energy)

CONCURRENT 2: Fresh applications for reservoir engineering

Room M2 CHAIR: Professor Ray Johnson Jr, Professor of Well Engineering & Production Technology, University of Queensland

Investigation of permeability change in the Bandanna Coal Formation of the Fairview Field using time-lapse pressure transient analysis | A Salmachi (University of Adelaide) and J Barkla (Santos)

Impact of capillary trapping on CSG recovery—an overlooked phenomenon

Y Zhu, Z Chen*, H Xing and V Rudolph (University of Queensland)

An Australian first initiative to re-develop the first commercial onshore oilfield into a CO₂ miscible-EOR project

S Barakat, B Cook*, K D'Amore (Bridgeport Energy), A Diaz (Flow Dynamics UK) and A Bracho (Flow Dynamics Australia)

Panel discussion

CONCURRENT 3: National trends—what have we learnt and where are we going?

Great Hall CHAIR: Mr Ashley Watson, Partner, Piper Alderman

SPONSORED BY



The Australian Government's liquid fuel security review and National Energy Security Assessment

T Wyndham (Department of the Environment and Energy)

From the Northern Territory to Western Australia—fracking, public policy and social licence

M Tannock (Squire Patton Boggs)

Gas markets—a bridge too far? | G Bethune and R Wilkinson* (EnergyQuest)

Sustainability trends in oil and gas | P Tonge (ERM). Presenter: D Dique (ERM)

CONCURRENT 4: Queensland projects from the ground up

Room M4 CHAIR: Mr Simon Gossmann, Groundwater Manager, Arrow Energy

Building regional strength through supporting social and economic activity in Queensland's gasfield communities | T Quinn (Broadspectrum)

Synergies in the role of the Office of Groundwater Impact Assessment and the Independent Expert Scientific Committee on coal seam gas and large coal mining development in environmental assessments

C Pigram* (Independent Expert Scientific Committee), S Pandey* (Office of Groundwater Impact Assessment, Queensland) and P Baker (Department of the Environment and Energy). Presenter: J Esterle (IESC)

Cumulative groundwater impact assessment and management in the Surat Basin—a journey from framework to implementation | S Pandey (Department of Natural Resources, Mines and Energy)

Panel discussion

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Tuesday 28 May 2019

3:15pm–3:45pm

AFTERNOON TEA IN THE EXHIBITION HALL

SPONSORED BY 

3:45pm–5:00pm

TECHNICAL AND BUSINESS PROGRAM SESSIONS 5–9

SPONSORED BY

CONCURRENT 5: Setting the scene: WA basin architecture



Room M4

CHAIR: Dr Andrew Heap, Chief of Division—Resources, Geoscience Australia

Exploration of an unconventional petroleum resource through extensive core analysis and basin geology interpretation utilising play element methodology

J van Hattum* (Theia Energy), A Bond (Finder Energy), D Jablonski (Finder Energy) and R Taylor-Walshe (Theia Energy)

Stratigraphic and structural architecture across the central North West Shelf—implications for Triassic petroleum systems

S Abbott, C Orlov, G Bernardel, C Nicholson, N Rollet, D Nguyen and M Gunning (Geoscience Australia)

Tailored acquisition and processing providing an enhanced subsurface image of the basin architecture, Exmouth Sub-basin, North West Shelf, Australia

A Karvelas (Schlumberger Australia), B J Lim (Schlumberger), L Zhang, H Trihutomo (Schlumberger Australia), O Schenk (Schlumberger GmbH, Germany) and S Tewari (Schlumberger Oilfield UK)

Panel discussion

CONCURRENT 6: How well do you know your wells? Impact, management and evolution

Room M1

CHAIR: Mr Dylan Stringer, Principal Drilling Engineer, Origin Energy

Managing well integrity in Queensland | M Scott (Department of Natural Resources, Mines and Energy)

Impact of in-seam drilling performance on coal seam gas production and remaining gas distribution

F Zhou, G Fernandes, J Luft, K Ma, M Oraby, M Guevara, D Kuznetsov, B Pinder and S Keogh (Arrow Energy)

Roma development drilling—evolution of well design and drilling performance

A Sellars, T Dedigama and M Zaman (Santos)

CONCURRENT 7: Regulation—legislating for success

Room M3

CHAIR: Mr Shaun Ferris, Acting Deputy Director-General, Department of Natural Resources, Mines and Energy

Groundwater management—working with Queensland and EPBC regulation and processes

J Barker* (Department of the Environment and Energy), S Pandey* (Office of Groundwater Impact Assessment, Queensland), J McKeay* and K Birch* (Department of Environment and Science)

CONCURRENT 8: Decommissioning—every end is a new beginning

SPONSORED BY



Room M2

CHAIR: Mr Michael Vandertuin, Decommissioning Business Development Manager, ABB

Engineering and environmental studies for decommissioning of subsea infrastructure

P Raitt (Green Light Environmental), A Selman and C Lanoëlle* (Atteris). Presenter: C Weller (Green Light Environmental)

Decommissioning—a path forward for Australia | S Barrymore and J Ballard (Herbert Smith Freehills)

Rigorous decommissioning decision making with strong stakeholder engagement using comparative assessment | P Gordon, E Poot (Catalyze APAC) and G O'Connor (Catalyze UK)

Panel discussion

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Tuesday 28 May 2019

CONCURRENT 9: Enhancing productivity through digital solutions

SPONSORED BY



Great Hall

CHAIR: Mr Nathan Tungseth, Senior Vice President,
Global Product Group Manager – Onshore Oil & Gas, ABB

A practical guide to IT OT convergence — getting value from your business analytics

R Byfield (Yokogawa Australia)

Big data for smart safety: applying engineering control analytics to predictive safety

H B Tay*, N Marshall*, A McColm, M Wood (Deloitte Risk Advisory)

Digitalisation as a critical tool in resource asset valuations, acquisitions and dispositions

D Hollett and C Phasey (Nova Systems)

Digitalisation driving competitiveness

S Royston (ABB)

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5:00pm–6:00pm

HAPPY HOUR IN THE EXHIBITION HALL

Time to network and debrief on the current topics and key discussions of the day.

SPONSORED BY



YOKOGAWA



Complimentary to delegates and exhibitors.



Includes drinks and light refreshments.



Business attire.

6:00pm onwards

Evening free: Brisbane is a city with an innovative and vibrant edge, a modern, free spirited outlook and a determination to do things just that little bit differently. This is the night to host your clients or take the opportunity to accept invitations from suppliers, clients or fellow delegates to expand your network, reinforce current partnerships and enjoy the vivacious nightlife of this bustling city.





Wednesday 29 May 2019

7:30am–5:00pm **Conference Registration** Main Foyer, Ground Level

8:00am–6:00pm **APPEA 2019 Exhibition open**
Exhibition Hall, Ground Level

SPONSORED BY 

8:00am–6:00pm **APPEA 2019 Technical and Business Poster Presentations open**
Exhibition Hall, Ground Level

SPONSORED BY 

8:00am–6:00pm **KPMG Meeting Zone open**
Exhibition Hall, Ground Level

SPONSORED BY 

An ideal place for up to eight people to meet for an hour, with two private meeting zones.

8:30am–10:30am

PLENARY: Navigating a cleaner energy future — how does the oil and gas industry survive and thrive?

SPONSORED BY

Great Hall

FACILITATOR: Mr Paul Welton

General Manager of Strategy, Planning & Commercial, Chevron Australia





A tale of two gases

Dr Alan Finkel AO, Chief Scientist, Office of the Chief Scientist, Department of Industry, Innovation and Science

The Oil and Gas Climate Initiative — delivering solutions for a sustainable low-emissions future | Mr Gardiner Hill, Vice President Carbon Management, BP and Senior Representative of Oil and Gas Climate Initiative (OGCI)

Riding the green wave: Are oil and gas companies jumping on board? | Ms Marlene Motyka, Principal, Deloitte Transactions and Business Analytics LLP, and US & Global Renewable Energy Leader, Deloitte

Climate change: The investor perspective

Ms Emma Herd, Chief Executive Officer, Investor Group on Climate Change

PLENARY

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Wednesday 29 May 2019

10:30am–11:15am MORNING TEA IN THE EXHIBITION HALL

SPONSORED BY 

11:15am–12:30pm TECHNICAL AND BUSINESS PROGRAM SESSIONS 10–14

CONCURRENT 10: Advancing Australian exploration

SPONSORED BY

Great Hall CHAIR: Ms Lisa Schofield, General Manager, Offshore Resources, Department of Industry, Innovation and Science



Australia — how do we compare as an exploration destination?

M Quinn (IHS Markit)

Australian Government exploration initiatives

Seven government agencies will present on initiatives to encourage exploration in their respective jurisdictions

L Schofield* (Department of Industry, Innovation and Science, Federal Government), T Knight* (Department of Natural Resources and Mines, Queensland), K Erzikov* (Department of Planning and Environment, New South Wales), R McGowan* (Geological Survey of Victoria), B Goldstein* (Department for Manufacturing, Innovation, Trade, Resources & Energy, South Australia), I Scrimgeour* (Department of Primary Industry and Resources, Northern Territory) and J Haworth* (Department of Mines, Industry Regulation and Safety, Western Australia)

CONCURRENT 11: Insights and opportunities for southern basins

Room M2 CHAIR: Mrs Camilla Aamodt, Exploration Manager, Equinor Australia BV

New insights on Upper Cretaceous stratigraphy and sedimentology of the Bight Basin, Australia from IODP Site U1512

C Wainman, P McCabe* and S Holford (University of Adelaide) and the IODP Expedition 369 Scientific Party

Regional paleodepositional environment of the Cretaceous in the Great Australian Bight — a support for frontier exploration

D Klauser-Baumgärtner, T Reichel and J Hansen (Equinor)

The Bight Basin — a tale of three deltaic megasequences

I Strømsøyen, E Schomacker, B Sørderstrøm and B Waagan (Equinor)

The Gippsland Basin: reprocessing reveals new opportunities in a 'mature' basin

P Baillie (CGG), P Carter (PC Energy), J Grahame, J Zhou and N Mudge (CGG)

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Wednesday 29 May 2019

11:15am–12:30pm

TECHNICAL AND BUSINESS PROGRAM SESSIONS 10–14 cont.

CONCURRENT 12: Optimising production from analysis to outcome

SPONSORED BY



Room M3

CHAIR: Mr Brett Shalders, Executive General Manager, EIM

The use of integrated production modelling to assess network efficiency and production system optimisation

Y Fei (University of Adelaide), G Lydyard, A Mantopoulos, D Marques* and M Rondon (Santos)

Multiphase gas compression to boost non conventional production and reserves

R Perry, J Martini (Hicor Technologies) and P Kulkarni (Equinor)

Rigorous gas field production data analysis | C Evans and A Corrie-Keilig* (RISC Advisory)

Panel discussion

CONCURRENT 13: The value of Australian LNG—global influence and emerging markets

Room M4

CHAIR: Dr Josh Stabler, Managing Director, EnergyEdge

The emergence of China as an LNG super user | J Norman (Santos)

Signposts to a robust liquid LNG market

B Cullinane (Deloitte Consulting), S Sakmar (University of Houston Law Centre) and N Hill (Deloitte Touche Tohmatsu)

What's your gas worth: a thrilling or a taxing matter? | K Wee (Deloitte)

Finding a home for Australian LNG in developing power markets | C Henderson (Advisian)

CONCURRENT 14: It's a matter of safety— understanding, improving and regulating

SPONSORED BY



Room M1

CHAIR: Mr Peter Allsopp, Head of Zero Harm - MEI, Downer

What were they thinking? How the brain is wired for Limbic Risk™

R Wentzel and N Wentzel* (The Jonah Group)

Reflections of a contemporary gas regulator in Queensland

B Date (Department of Natural Resources, Mines and Energy)

Eliminating fatalities from the upstream oil and gas industry

C Hawkes (International Association of Oil & Gas Producers)

Current trends in industry safety performance: applying scrutiny to safety issues associated with ageing facilities | D O'Keeffe (NOPSEMA)



12:30pm–2:00pm

NETWORKING LUNCH IN THE EXHIBITION HALL

SPONSORED BY



All delegates are invited to enjoy lunch in the exhibition halls while exploring the exhibits, poster presentations, and Collaboration Centre.

12:45pm–2:00pm

Hot Topics Discussion in the EY Collaboration Centre (See p31) SPONSORED BY



1:00pm–2:00pm

MEET THE AUTHORS Poster Presentation Area, Exhibition Hall

SPONSORED BY



Enjoy the gallery of technical and business posters inside the exhibition and meet the authors to discuss their work. See p27–29 for the full listing of 2019 Poster Presentations.

PROGRAM IS SUBJECT TO CHANGE | *DENOTES PRESENTER IF NOT LEAD AUTHOR

Wednesday 29 May 2019

2:00pm–3:15pm

TECHNICAL AND BUSINESS PROGRAM SESSIONS 15–19

CONCURRENT 15: PESA—2018 in review

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Room M1 CHAIR: Mr Chris Harwood, Federal Treasurer, PESA

PESA Australian exploration review 2018

D Lockhart and D Spring* (Senex Energy)

Australian petroleum production and development 2018

G Bethune (EnergyQuest)

'Back to the Future' a review of Australian reservation and other natural gas export control policies

J Plumb (Carter Newell)

CONCURRENT 16: Australia's potential

Great Hall CHAIR: Dr Tony Knight, Chief Government Geologist,
Department of Natural Resources, Mines and Energy

East coast gas—resource potential at different gas price scenarios (Part 1: Quantification of unconventional gas resource potential) | I Cockerill, J Collins and Z Rasheed (RISC Pty Ltd)

Rock properties and in-situ stress state of the Egilabria Prospect, Lawn Hill Platform, Queensland

A Bailey, L Wang, L Hall and P Henson (Geoscience Australia)

The prospectivity of the Cape Vogel Basin, Papua New Guinea

S Amiribesheli (Discover Geoscience) and A Weller (Searcher Seismic)

Enabling a CCS industry through research at the CO2CRC National Otway Research Facility

M Raab (CO2CRC), C Jenkins (CSIRO Black Mountain), R Pevzner (Curtin University) and A Qader (CO2CRC)

CONCURRENT 17: Fracking the way to fresher findings

Room M3 CHAIR: Professor Andrew Garnett,
Director—UQ Centre for Coal Seam Gas, University of Queensland

Challenges in modelling of hydraulic fracturing in low-permeability coal seams with complex cleat networks and stress regimes | M Aghighi, R Johnson Jr and C Leonardi (University of Queensland)

Pushing the boundaries—development of innovative drilling, completion and production technology to advance a deep coal seam play | R Branajaya, P Archer and A Farley (Strike Energy)

Influence of elastoplastic embedment on CSG production enhancement using graded particle injection

Z You, D Wang, C Leonardi, R Johnson Jr (University of Queensland) and P Bedrikovetsky (University of Adelaide)

CONCURRENT 18: It's a gas

SPONSORED BY



Room M2 CHAIR: Mr Juergen Zimmermann,
Business Development & Technology Manager Microgrids, ABB

Renewables, gas and batteries—reliable and efficient power for industry | T Lukatela (Woodside Energy)

Some economic estimates of gas-fired power generation in a carbon constrained Australia

C McConnell and C Dorgelo (Advisian)

Renewed energy in Asia's upstream | G Farruggio and D Dixon (Rystad Energy)

Moomba reset—breathing new life into a 50 year old asset | V Santostefano (Santos)

PROGRAM IS SUBJECT TO CHANGE | * DENOTES PRESENTER IF NOT LEAD AUTHOR

Wednesday 29 May 2019

2:00pm–3:15pm

TECHNICAL AND BUSINESS PROGRAM SESSIONS 15–19 cont.



CONCURRENT 19: Environmental approvals—the collaborative approach

Room M4

CHAIR: Mr Cameron Grebe, Head of Division, Environment, NOPSEMA

A regulator’s vision and perspectives on key environmental management challenges

C Sim (NOPSEMA)

Good, bad or ugly—all a matter of perspective?

J Lovell (Seafood Industry Australia)

Critical success factors for achieving environmental approvals

P Raitt (Green Light Environmental). Presenter: N Kerp (Green Light Environmental)

Reducing the complexity of environmental approvals—learnings from an industry-wide collaborative effort

M Smith (NERA)

3:15pm–3:45pm

AFTERNOON TEA IN THE EXHIBITION HALL

3:45pm–5:00pm

TECHNICAL AND BUSINESS PROGRAM SESSIONS 20–24

CONCURRENT 20: A new Cooper Basin is born

SPONSORED BY

Room M4

CHAIR: Dr Tony Knight, Chief Government Geologist, Department of Natural Resources, Mines and Energy



Geological and bioregional assessments—enabling future tight, shale and deep-coal gas development—Cooper Basin case study | D Robinson, ME Gunning, T Evans, L Hall, B Sundaram (Geoscience Australia), A Swirepik, A Stacey, R Dann and K Holland (Department of the Environment and Energy)

Old rocks, new tricks—a re-invigorated Cooper Basin offers growth opportunity

B Ovenden (Santos)

Results of hydraulic fracturing design improvements and changes in execution strategies for unconventional tight gas targets in the Cooper Basin, Australia

R Johnson Jr, R Zhong (University of Queensland) and L Nguyen (Real Energy Corporation)

Panel discussion

CONCURRENT 21: Emerging ideas in process safety

SPONSORED BY

ROOM M1

CHAIR: Mr Andrew Wilson, Principal, DuPont



Reducing maintenance burden on established facilities through a targeted risk review of safety critical equipment

B Innes (Upstream Production Solutions)

The hardy perennials of maintenance

N Clegg (Upstream Production Solutions)

Reduced manning with improved safety and reliability—how classification societies and digital solutions can support operators

M Tipping (Lloyds Register) Presenter only: J Baker (Lloyds Register)

Offshore structures—why all offshore facilities should have a demanning requirement

M Keys (Atkins SNC-Lavalin)

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Wednesday 29 May 2019

3:45pm–5:00pm

TECHNICAL AND BUSINESS PROGRAM SESSIONS 20–24 cont.

CONCURRENT 22: Project management 101 — fail to prepare, prepare to fail

Room M2 CHAIR: Mr Carl Titchmarsh, Head of Business Development, West Coast and NT, Clough

Australia’s shale industry — how we can become globally competitive

P Cox (Worley)

Better project delivery — Australia’s value opportunity

A Rodger (Wood Mackenzie)

Industry 4.0 and the digital transformation journey

D Makin and E Boyle (Worley)

Integrated activity planning — a proven approach to optimising operations outcomes

B Farrell and V Mulgund (EY)

CONCURRENT 23: One industry, one workforce, one goal

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Great Hall CHAIR: Ms Libby Ferrari, Manager Indigenous Affairs Australia, BHP

Diversity and inclusion — moving the needle in Indigenous employment and engagement

M Williamson* (Broadspectrum) and M Wilson* (INPEX Operations Australia Pty Ltd)

Enhancing Indigenous partnerships in an increasingly digitised oil and gas sector

M Lynn* (Deloitte Consulting) and D Wirrpanda* (Wirrpanda Foundation)

How diversity can alleviate sharks and bandwagons in the gas sector

J Spanjaard* and S McAlister-Smiley* (Deloitte Touche Tohmatsu)

Panel discussion

CONCURRENT SESSION 24: Environmental monitoring — a dip in the ocean

Room M3 CHAIR: Mr Jarrod Pittson, GM Environment, Woodside

Innovation and technology in marine science: AIMS’ North West Shoals to Shore research program — an update

M Parsons, K Miller, M Thums, J Gilmour, L Ferreira (Australian Institute of Marine Science), R McCauley (Curtin University) and M Meekan (Australian Institute of Marine Science)

Biofouling risk management for the importation of a floating, production, storage and offloading (FPSO) facility and the central processing facility (CPF); the world’s largest semi-submersible platform

N Gust*, A Coutts, P Lewis, R Tigges (Biofouling Solutions), J Prout* and S Carter (INPEX Operations Australia)

Demonstrating an acceptable level of impact: An assessment of noise impacts to fishes from a seismic survey in an Australian marine park | J Edgell, J Colman (ERM Australia), S Jarvis (S2 Services) and O Glade-Wright (Cooper Energy). Presenter: B Parnum (ERM)

Monitoring marine effects of produced formation water discharge in Bass Strait

L Barnes* (Cardno), K Hall* (Esso Australia), C Blount, M Hooper, D van Senden, A Costen, C Scraggs, D Provis and D Pygas (Cardno)



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Wednesday 29 May 2019


5:00pm–6:00pm


HAPPY HOUR IN THE EXHIBITION HALL

This event provides another excellent networking opportunity for all delegates, exhibitors and invited guests. Meet with colleagues and share ideas over a refreshing drink before you prepare for the Conference Dinner.

SPONSORED BY



 Complimentary to delegates and exhibitors.

 Includes drinks and light refreshments.

 Business attire.

7:00pm for
7:30pm–midnight

CONFERENCE DINNER

Plaza Ballroom, Brisbane Convention & Exhibition Centre

Join us as a 'Confetti of Light' rains down on the annual APPEA Conference Dinner — the hottest ticket in town!

Whether you book a single ticket or a table, this event will impress!

SPONSORED BY

 Cocktail/lounge suit.





Thursday 30 May 2019

7:30am–3:00pm **Conference Registration**
Main Foyer, Ground Level

8:00am–6:00pm **APPEA 2019 Exhibition open**
Exhibition Hall, Ground Level

SPONSORED BY **wood.**

8:00am–6:00pm **APPEA 2019 Technical and Business Poster Presentations open**
Exhibition Hall, Ground Level

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8:00am–6:00pm **KPMG Meeting Zone open**
Exhibition Hall, Ground Level

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With two private meeting zones, seating up to eight people, this is not a space to be missed.

8:30am–10:30am

AUSTRALIAN GOVERNMENT ADDRESS

Great Hall Senator The Hon Matt Canavan, Minister for Resources and Northern Australia

PLENARY: Staying the course — east coast gas market challenges and opportunities

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Great Hall **FACILITATOR: Ms Ticky Fullerton**



Esso Australia's long-term contribution to the east coast gas market
Mr Nathan Fay, Chairman, ExxonMobil Australia

State of the east coast gas industry
Mr Rod Sims, Chair, Australian Competition and Consumer Commission

Unlocking the next wave of Australia's natural gas resources
Mr Kevin Gallagher, Managing Director & Chief Executive Officer, Santos

East coast gas — finding balance
Mr Andrew Hodge, Associate Director—Energy, Macquarie Securities

PLENARY

10:30am–11:15am

MORNING TEA IN THE EXHIBITION HALL **BROUGHT TO YOU BY THE APPEA JOURNAL**

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Thursday 30 May 2019

11:15am–1:00pm

TECHNICAL AND BUSINESS PROGRAM SESSIONS 25–28

CONCURRENT 25: Acquisition, processing and interpretation — a job of seismic importance

Room M3 CHAIR: Dr Steve Mackie, Petroleum Advisor, Geosim Consulting

Offshore data acquisition in shallow water — challenges and opportunities

S Molyneux (Molyneux Advisors), S Jarvis (S2 Services) and J Dirstein (Total Depth)

The evolution of FWI and its perceived benefits | T Martin (PGS UK) and A Long* (PGS Australia)

High frequency full waveform inversion as an interpretation solution

L Letki, M Lamont and T Thompson (DownUnder GeoSolutions)

Application of deep learning for seismic horizon interpretation | J Lowell and J Smith* (GeoTeric)

Panel discussion

CONCURRENT 26: Baselines, benefits and bridging — a closer look at environmental engineering

Room M2 CHAIR: Mr Jason King, General Manager – Contracting, Procurement and Logistics, Arrow Energy

The Great Australian Bight Right Whale Study, 1991–2018 — bridging the gap between science and industry to provide baseline data for impact assessment and approvals in oil and gas

C Charlton, R McCauley* and R Ward (Centre for Marine Science and Technology)

Zero Waste Well — the beneficial use of produced water from CSG projects | P Wybrew (Santos)

From the Beetaloo to West Texas — similarities, differences and lessons learned from water management in coal seam and shale field developments on either side of the Pacific

B Webster*, H Churman*, C Benjamin, J Long and B Goebel (GHD)

Towards the development of a baseline for surface movement in the Surat Cumulative Management Area

M Masoudian, C Leonardi*, Z Chen and J Underschultz* (University of Queensland)

Panel discussion

CONCURRENT 27: Community engagement — working with our host communities

Room M4 CHAIR: Mrs Justine Neep, Special Projects Manager, Senex Energy

Gladstone Harbour — a case study of building social license-to-operate in a multi-use area

L Llewellyn, R Brinkman (Australian Institute of Marine Science), E McIntosh (Department of Geography and the Environment), N Marshall (CSIRO), U Pinto (Office of Environment and Heritage), J Rolfe (Central Queensland University) and B Schaffelke (Australian Institute of Marine Science)

Ahead of the game — working with local communities in frontier resource basins

W Squire and J Braithwaite (Department of Natural Resources, Mines and Energy)

360-degree stakeholder management driving successful CO₂ storage research

A De Fina* (CO2CRC), M Chable* and C Wills (Upstream Production Solutions)

Social license has changed. It is time to build trust with society using the tools of today

A Johnston-Billings, L Pogmore* and M Kaiser* (KPMG Australia)

Constructivism: an answer to activism

T Diamond (Australian Mines and Metals Association)

Panel discussion

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Thursday 30 May 2019

11:15am–1:00pm

TECHNICAL AND BUSINESS PROGRAM SESSIONS 25–28 Cont.

CONCURRENT 28: The next chapter of Australian energy

Great Hall CHAIR: Ms Bernadette Cullinane, Partner and National Oil and Gas Leader, Deloitte

Meeting demand in a new era of east coast gas supply | W Pulsford (Poten & Partners)

Australia’s unconventional future—where next? | C Meredith (Wood Mackenzie)

Commercial realities of the proposed LNG import terminals on the east coast of Australia
N Mumford (Mumford Commercial Consulting)

Has the ‘Golden Age of Gas’ bypassed Australia? | J Stabler (Energy Edge)

East coast gas—resource potential at different gas price scenarios (Part 2: Commercialisation of unconventional gas resources) | J Collins, I Cockerill and Z Rasheed (RISC Advisory)

Panel discussion

1:00pm–2:30pm

NETWORKING LUNCH IN THE EXHIBITION HALL BROUGHT TO YOU BY THE APPEA JOURNAL

1:00pm–2:30pm

Authors’ Lunch | By invitation only

SPONSORED BY **ExxonMobil**

Room P1 & P2, Plaza Level, Brisbane Convention & Exhibition Centre

1:45pm–2:30pm

Hot Topics Discussion in the EY Collaboration Centre (See p31)

SPONSORED BY **EY** Building a better working world

2:30pm–4:15pm

PLENARY PANEL: Perceptions of the modern industry

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Great Hall CHAIR: **Mr Brett Woods** Executive Vice President Development, Santos

Bright



Opening comments from facilitator Ms Ticky Fullerton

Onshore gas industry coexistence in Queensland

Dr Damian Barrett, Research Director, Onshore Gas Program, CSIRO Energy and Director, CSIRO Gas Industry Social and Environmental Research Alliance, CSIRO

The face of energy

Mr Peter Bennett, Chief Executive Officer and Managing Director, Clough

Meeting the advocacy challenge

Mr Ian Davies, Managing Director and Chief Executive Officer, Senex Energy

Securing competitive gas supply— a manufacturing perspective

Ms Melissa Perrow, General Manager Energy, Brickworks

It’s time to get emotional with your customers

Ms Christine Corbett, Special Advisor, PwC

CEO’s Closing Conference Address Mr Andrew McConville, Chief Executive, APPEA

PLENARY

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Thursday 30 May 2019


4:15pm–6:15pm


FAREWELL COCKTAILS

The Charming Squire, Grey Street, South Brisbane

The Charming Squire will host delegates for a final farewell after a thought provoking week of technical innovations, discussion and debate, networking and exhibition engagement. Enjoy this last opportunity to connect with new colleagues and old acquaintances as we say so long at Southbank.

 Complimentary to full delegates. \$50 per person to all other registration categories and additional guests.

 Includes drinks and light refreshments.

 Smart casual attire.

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Friday 31 May 2019

2019 AUSTRALIAN OILFIELD GOLF TOURNAMENT

Organised by the AOGT 2019 Committee

The Australian Oilfield Golf Tournament (AOGT) has been a staple feature that follows the APPEA annual conference and is brought to you by a committee of dedicated volunteers from the oil and gas industry.

This one-day tournament at Indooroopilly Golf Club will be a 4-ball Ambrose, with both team and individual registrations available.

Further information: Kylie Carre **t** 0424 582 049 **e** kyliecarre@live.com.au



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The APPEA Journal

YOUR OFFICIAL RECORD OF APPEA 2019

The APPEA Conference continues to distribute world-class information to the industry through *The APPEA Journal*—the official record of this flagship event.

The APPEA Journal (2019) will be published online three weeks after the conference. Delegates who receive the proceedings as part of their package, will be issued a password to access the highly sought after conference material. It will contain peer-reviewed full papers and extended abstracts of oral and poster presentations, all plenary presentations¹, PESA industry reviews¹ and a selection of material from the social functions.

Abstracts from all available presentations will be accessible to view pre-conference via the APPEA 2019 Mobile App.

APPEA is proud to continue to deliver a conference proceedings that is internationally acclaimed and distributed world-wide.

For more information on accessing the 1961–2018 journal articles online, please contact: Georgia Toirkens, **e** gtoirkens@appea.com.au, **t** 02 6267 0908

¹ Where consent has been given.



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We don't just produce energy, we keep advancing it.

Celebrating
100 years

Technical and Business Poster Presentations

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The APPEA Conference technical and business program incorporates an extensive poster series comprising of 49 outstanding papers. The extended abstracts or full papers of these posters will be included in *The APPEA Journal* (conference proceedings) provided online after the conference.

The poster series will be on display within the Exhibition Hall of the Brisbane Convention & Exhibition Centre from 8:00am to 6:00pm Tuesday and Wednesday, and 8:00am to 3:00pm Thursday. Delegates are encouraged to attend the special 'Meet the Authors Session' in the poster area during lunch on Wednesday 29 May, 1:00pm–2:00pm to meet the authors and discuss their work.



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GEOSCIENCE

- G01 How can we reduce the environmental impact of marine seismic surveys?**
A Long, M Bastard, E Asgedom, J F Wisloff and M Christiansen (PGS)
- G02 The Roebuck Basin, Beagle and Barcoo Sub-basin well folio**
D Nguyen, N Rollet, E Grosjean, D Edwards, S Abbott, C Orlov, G Bernardel, C Nicholson*, A Kelman, K Khider and T Buckler (Geoscience Australia)
- G03 Proxy modelling for multi-well simulations—enabling identification of major input variables and reduced computation time over Monte Carlo sampling**
T McCourt (Craigslea State High School), R Blackmore (Cyber and Electronic Warfare Division), I Rodger, S Hurter, H Thompson, M Reilly and D Donovan* (University of Queensland)
- G04 Revisions to the chronostratigraphic framework of the Upper Jurassic Walloon Coal Measures of the Surat Basin, Australia**
C Wainman and P McCabe* (University of Adelaide)
- G05 Integration of biostratigraphy into a sequence stratigraphic framework for the Surat Basin, eastern Australia**
C LA Vieira Filho*, S Hurter, M Reilly* and Z Hamerli (University of Queensland)
- G06 An integrated approach to the Surat Basin stratigraphy**
M Reilly*, S Hurter, Z Hamerli*, and C LA Vieira Filho, A LaCroix and S Gonzalez (University of Queensland)
- G07 Prediction of groundwater impacts from coal seam gas extraction in the Surat Basin**
K Phillipson (Department of Natural Resources, Mines and Energy)
- G08 Well log data analytics—overview of applications to improve subsurface characterisation**
I Emelyanova, C Dyt*, MB Clennell, JB Peyaud and M Pervukhina (CSIRO Energy)
- G09 Coal permeability stimulation by NaClO oxidation**
R Balucan, Z Jing, J Underschultz and K Steel (The University of Queensland)
- G10 Integrating multi-disciplinary data for building fit-for-purpose 3D mechanical earth model**
P Boothby (Chevron), R Puspitasari (Schlumberger), S Thakur* (Chevron), Z Pallikathekathil (Schlumberger) and C Walton (Chevron)
- G11 An integrated approach to determining 4D stress development at Castle Cove**
H Burgin, K Amrouch, P Robion and D Kulikowski (University of Adelaide)
- G12 Effect of the number of water alternating CO₂ injection cycles on CO₂ trapping capacity**
E Al-Khdheewi, S Vialle, A Barifcani, M Sarmadivaleh (Curtin University) and S Iglauer (Edith Cowan University)
- G13 Estimating smectite content from seismic data**
R Beloborodov, M Pervukhina, V Shulakova (CSIRO), D Chagalov, M Josh, MB Clennell (CSIRO), G Ward, M Waugh (Chevron Australia) and J Hauser (CSIRO)
- G14 Variation of vertical stress in the onshore Canning Basin, Western Australia**
A Bailey and P Henson (Geoscience Australia)

ENGINEERING

- E01** **Improving decision making through data analytics to drive best-in-class CSG rig performance**
K Koziol (Easternwell)
- E02** **Coal identification using neural networks with real-time coalbed methane drilling data**
R Zhong, R Johnson Jr, Z Chen and N Chand (University of Queensland)
- E03** **Real-time drilling optimisation — driving drilling excellence**
A Barhate, P Patel (Drill Insight) and E Abrahamsen (Sekal AS)
- E04** **Lined tubing performance in CSG wells operated in Australia**
J Martin and R Carmichael (COHO Resources)
- E05** **A practical fracability evaluation for tight sandstone reservoir with natural interface**
R Feng, R Chen and M Sarmadivaleh (Curtin University)
- E06** **Experimental investigation of fluid thermal effects on fracture brittleness**
A Rezagholilou, H Salemi, N Tarom, P Behnoudfar and M Sarmadivaleh (Curtin University)
- E07** **Walk to work systems as an enabler of reduced maintenance and manning**
D McCarthy (Granherne)
- E08** **Safe autonomous systems require changes in business relationships**
M Shadbolt (Nova Systems)
- E09** **Natural gas separation at CO2CRC's Otway National Research Facility**
A Qader and J Pandit* (CO2CRC)
- E10** **Subsurface engineering of CCUS in Australia (case studies)**
M Bagheri and M Raab* (Cooperative Research Centre for Greenhouse Gas Technologies)
- E11** **Drilling fluid waste treatment using polysaccharide-grafted copolymers**
GP Karmakar and K Chandan (Indian Institute of Technology)
- E12** **Flowing gas material balance — a useful tool to revise subsurface maps**
B Haq (King Fahd University of Petroleum and Minerals)
- E13** **Risk-based asset performance management in CSG production operations**
P Carydias and J Gregory* (Wood)
- E14** **Decision making through Bayesian network for a pipeline in design**
F Ayello, G Liu (DNV GL Columbus) and J Zhang (DNV GL Australia)
- E15** **LNG production revenue enhancement**
M Vines (Esso Australia)
- E16** **Application of computerised radiography in lieu of film radiography to streamline on-site pipe weld quality inspection process**
M Fernando* (McConnell Dowell Constructors) and H Fard* (Bureau Veritas)
- E17** **Managing escape, evacuation and rescue (EER) risk on aging offshore facilities**
N Netscher (ExxonMobil Australia) and J Thompson (Advisian)
- E18** **Asset management — listening to your asset**
D Walker (Yokogawa Australia)

BUSINESS

- B01 Forecasting growth of the Australian unconventional oil and gas services market**
R Carbrey (Rystad Energy)
- B02 SEAR JIP: the value of sharing of lessons learned on subsea integrity and reliability**
A Botto (Wood)
- B03 Blockchain in oil and gas—a collaborative approach**
L Gallacher (Deloitte Consulting) and D Champion (Nottingham Trent University)
- B04 Securing industrial systems in a digital world**
B Dickinson and D Wilkinson (ABB) Presenter only: E Barrett (ABB)
- B05 Oil and gas project management and success—a critical evaluation of oil and gas project management success in Australia**
C Ikediashi and B Bjeirmi (Robert Gordon University)
- B06 The tax profile of different models of infrastructure asset ownership and funding**
M Chang (EY)
- B07 Opportunities for collaboration in the Australian oil and gas industry**
J Peacock* and S Dow* (KPMG Australia)
- B08 Blue hydrogen production: a case study to quantify the reduction in CO₂ emission in a steam methane reformer based hydrogen plant** | N Kritzinger (Fluor Australia), R Ravikumar, S Singhal (Fluor Daniel India Private), K Johnson (Fluor AV) and K Singh (Fluor India) Presenter only: Marc Humm (Fluor Australia)
- B09 From initial advice statement to export—a 10 year retrospective of Queensland's liquefied natural gas industry**
P Downey, J Thomas* and M Stone (Department of Natural Resources, Mines and Energy)
- B10 Darwin Harbour—a partnership approach to understanding and evaluating environmental challenges**
R Brinkman, E Butler (Australian Institute of Marine Science), T O'Connor (Darwin Port) and C Streten* (Australian Institute of Marine Science)
- B11 Competency framework: environmental approval specialists**
P Raitt* and S Fidgeon* (Green Light Environmental)
- B12 Western Australian marine oil pollution risk assessment—identification of protection priorities**
R Morgan (Advisian), E Gifford (WA Department of Transport), A Jacobs (GFC Alliance) and K Swain (Woodside Energy)
- B13 'Lawfare' and the oil and gas industry**
X McMahon and J Williams (Clayton Utz Brisbane)
- B14 The power of digital—workplace tools to modernise safety compliance**
N Shibi and K Ahlgren (Techs4biz)
- B15 Use of concept risk assessment for field development certainty**
C Crowley, D Ashton and D Callus (Atkins Global)
- B16 Northern Gas Pipeline project—a case study in safe, professional gas pipeline construction**
L Richards and T Green (McConnell Dowell Constructors)
- B17 Safe and efficient delivery of logistics solutions to coal seam gas well sites, utilising our 'Well in a Box' methodology**
J King and B Yeong (Arrow Energy)



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The next generation of talent will be the one to Navigate the Future of our industry, using the Internet of Things, Artificial Intelligence, big data, machine learning, and 3-D printing as part of the everyday toolkit.

APPEA 2019 delivers an education program designed to connect high school students with the best of our industry, showcasing the digital revolution that is currently underway.

Proudly supported by Chevron, Santos and Woodside, students will participate in tailored workshops and interactive activities with industry leaders, learn about the many career pathways available to them now and in the coming decades, and have the unrivalled experience of a guided walk through the APPEA Exhibition.

APPEA MENTOR PROGRAM: Cultivating our new oil and gas professionals

The APPEA 2019 Conference Mentor Program sponsored by BHP aims to encourage, enable and empower undergraduate tertiary students by linking them with successful peer role models.

APPEA has a strong commitment to the next generation of oil and gas professionals, and BHP's own graduates will act as mentors to the selected students for their time onsite at APPEA 2019 — sharing their experiences and advice on entering the industry.

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NEW FOR 2019

APPEA 2019 ONSITE CHILDCARE



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Nurturing a partnership between family and work

New for 2019 and proudly sponsored by BHP, APPEA is delighted to offer a complimentary childcare facility for registered APPEA 2019 attendees, onsite at the conference venue.

The childcare accommodates children aged 0–5 years and operate 8:00am–6:00pm, Tuesday 28 – Thursday 30 May during the conference. Attend conference sessions knowing your child is having fun, learning and in safe hands.



EY COLLABORATION CENTRE

Now in its second year, this featured area hosts scheduled 'hot topics' where the industry can explore current industry challenges at the pre-arranged times noted below. This will connect delegates interested in the same topics and provide an opportunity to meet and discuss specific industry issues. Join fellow delegates, APPEA and EY specialists, along with conference speakers (subject to availability) for lively discussion and networking.

HOT TOPICS DISCUSSIONS

Full details on the APPEA Conference website

REIMAGINING THE ENERGY FUTURE

1:00pm, Tuesday 28 May

Participants will discuss the impact on oil and gas companies and what you can do now to prepare for the new energy future.

HOW IS YOUR BUSINESS CLIMATE CHANGING IN A WORLD OF CHANGING CLIMATE?

12:45pm, Wednesday 29 May

This Hot Topic session will explore the current state of climate change reporting for the sector and where it needs to move to, to meet the needs of investors.

IS CULTURE A SPRINGBOARD FOR SUCCESS OR AN ANCHOR WEIGHING YOU DOWN?

1:45pm, Thursday 30 May

Join us for a practical and case-study based perspective on how to drive cultural change in your organisation through coordinated, fundamental change



KPMG MEETING ZONE

Need a place to meet for an hour?

Take advantage of the KPMG Meeting Zone in the Exhibition Hall. You can book one-hour meetings for up to eight people.

The Meeting Zone is open:

Tuesday 28 May 8:00am–6:00pm

Wednesday 29 May 8:00am–6:00pm

Thursday 30 May 8:00am–3:00pm

Please note as the Meeting Zone is located in the exhibition hall, all meeting participants must be registered attendees or registered guests of APPEA 2019. All meeting room bookings are for 55 minutes. This allows for cleaning and tidying before the next meeting commences on the hour.





Exhibitors Additional details for each exhibitor are listed at www.appeaconference.com.au








EXHIBITOR	BOOTH	EXHIBITOR	BOOTH
4cRisk	17	Archimedes Financial Planning	177
W www.4crisk.com.au E aizzeddind@4crisk.com.au		W www.archimedesfinancial.com.au E info@archimedesfinancial.com.au	
Abdex—Fluid Transfer Technology	275	Arrow Energy	134
W www.abdex.com E sales@abdex.com.au		W www.arrowenergy.com.au E info@arrowenergy.com.au	
Alco Gas & Oil Production Equipment	219	Assured Environmental	256
W www.alcogasoil.com E joe.kapusin@alcogasoil.com		W www.assuredenv.com.au E enquiries@assuredenv.com.au	
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