



# INTERNATIONAL ASSOCIATION OF DRILLING CONTRACTORS

AUSTRALASIAN CHAPTER  
ABN 58 181 124 763

FIFTY THIRD ANNUAL GENERAL MEETING

WEDNESDAY 9.30 am

16<sup>th</sup> MAY 2018

ADELAIDE CONVENTION & ENTERTAINMENT CENTRE (Lower Level /Room R5)

North Terrace, ADELAIDE SA 5000

	<p><b><u>Apologies:</u></b></p> <p><b>Diamond Offshore:</b> Robert Speed, Eric Jacobsen, Duncan Coulson and David Johnson <b>Ensco:</b> Fabian Simon, James Dawson <b>Ensign:</b> Michael Pandolfi <b>Hofco:</b> Troy Schefe <b>Noblecorp:</b> Sebastian Van Diemen, Yoga Ranjan <b>Stena Drilling:</b> Andy Green and Rig Manager-Clyde</p> <p><b><u>Attendees:</u></b></p> <p><b>ENSCO:</b> Eric Midden (Chairman-Offshore) <b>Easternwell Group:</b> Luke Smith (Chairman-Onshore) &amp; Megan Scott (Treasurer/Secretary) <b>Gearhart Group:</b> Peter West <b>Ensign Energy:</b> Peter Koutsoukos <b>High Arctic Energy Services:</b> Mike Maguire &amp; Steve Lambert <b>IADC Corporate:</b> Derek Morrow (Regional Director) <b>ARC Equipment:</b> Andy Gainsforth (Vice Chairman) <b>Savanna Energy:</b> Ken Ledger <b>Schlumberger Land Rigs:</b> Justin Shooter for L Foreman <b>IADC-AC Rig Move/Logistics Sub-Committee:</b> Thomas Ingledew and Victor Gado</p> <p><b><u>Invited Guest Speakers:</u></b></p> <p><b>IADC Corporate:</b> Mike DuBose (VP International) <b>Wellsafe:</b> Jamie Wilson (Director) <b>SA Regulator:</b> Michael Malavazos (Director Engineering Operations)</p>	
	<p><b><u>Quorum</u></b></p> <p>It was noted that there is sufficient Members present to constitute a Quorum as per Chapter rules of 50% or more members required to establish quorum.</p>	
	<p><b><u>Introduction &amp; Members Updates</u></b></p> <p>IADC Antitrust Policy and Guidelines provided to members. All members present provided introduction and current update of their operations.</p> <p><b>IADC Corporate</b> Update provided by <b>Mike DuBose</b>. The presentation (PDF) is attached to minutes distribution email.</p>	



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	<p><b><u>Minutes of past meetings and Matters Arising from Previous Meetings</u></b></p> <p><b>Minutes of past meetings/workshops</b> were previously emailed to members, available on IADC website at <a href="http://www.iadc.org/australasia-chapter/meeting-minutes/">http://www.iadc.org/australasia-chapter/meeting-minutes/</a></p> <p>Executive meeting minutes and previous AGM are also included in the AGM pack handed out to attendees today.</p> <p><b>Outcome:</b> <i>Minutes of meetings formally adopted by proposer <b>Andy Gainsforth</b> (ARC/IADC-AC) and seconded by <b>Mike Maguire</b> (High Arctic)</i></p>	
	<p><b>Office Bearers Report as per agenda pack:</b></p> <p>(i) Australian Drilling Industry Training Committee (<b>ADITC</b>). Attended AGM and committee meetings during the year and provide industry updates.  <a href="https://aditc.com.au/">https://aditc.com.au/</a></p> <p>(ii) <b>APPEA's</b> Health, Safety and Environment (<b>HSE</b>) Committee meets quarterly to discuss HSE policy and strategy as directed by the APPEA Board. Derek Morrow represents the IADC on this committee.</p> <p>(iii) Australian Drilling Industry Steering Committee (<b>ADISC</b>), Derek Morrow and/or the Chairman Offshore represent IADC as required/as invited.</p> <p>(iv) <b>NOPSEMA</b> – Participation in joint forums and workshops on topics of interest to the offshore members. </p> <p>(v) <b>AMMA</b> – Resource Industry Employer Group discounted membership continued to be offered to IADC members. </p> <p>(vi) Safer Together Leadership Group, representation issue for IADC-AC on this committee.  <a href="http://www.safertogether.com.au/">http://www.safertogether.com.au/</a></p> <p>Discussion about IADC-AC letter sent requesting Andy Gainsforth (Vice Chairman) to represent IADC-AC members on the Safer Together Leadership Group, which was subsequently denied. Letter is attached to minutes. A second letter request for Vice Chairman to sit on Safer Together as an observer is to be sent.</p>	<p><b>L. Smith</b> to send another letter with the same request but as observer.</p>



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	<p>Discussion about the WA/NT Safer Together Group being implemented based on the QLD model</p> <p><b>Rig Move/Logistics Sub Committee (RMSC) Update</b> by <b>Thomas Ingledew</b> with minutes and 2018 report is available in agenda packs. See attached Secretary report tabled at AGM, title “Moving Forward”.</p> <p>The RMSC has requested funding approval of \$2,000 to build contact database to form Associated membership of IADC RMSC national database. Members present all agreed to funding request, approved. 2018 Budget is to be adjusted accordingly.</p>	<p><b>M Scott</b> - to adjust 2018 Budget to add the RMSC approved funding.</p>
	<p><b><u>Treasurer’s Report (Appendix D – 2017 Financial Report)</u></b></p> <p>The Treasurer’s Report and the Auditor’s Reports for financial year end 31 December 2017 were presented and accepted by all present. Proposed by <b>Mike Maguire</b> (High Arctic) and seconded by <b>Justin Shooter</b> (SLB). All in agreement.</p> <p><b>Outcomes:</b></p> <ol style="list-style-type: none"> <li>1. <i>The Public Officer arrangement by all present to be the IADC-AC Onshore Chairman and utilising RPS’s address in NSW. The Members agreed to retain the Accountant (Sharon Rothwell) and Auditor (Quantify Accounting Solutions – Carmel Saunders);</i></li> <li>2. <i>Renew the Public Liability Insurance policy with QBE/Marsh Advantage Insurance Pty Ltd;</i></li> <li>3. <i>Budget 2018, subject to agreed AGM changed are accepted and</i></li> <li>4. <i>Membership fees: 50% discount to continue for 2018.</i></li> </ol> <p>Any ideas for sponsorship are encouraged to be sent to executive for approval to support:</p> <ol style="list-style-type: none"> <li>1. Discussion about the idea to have a scholarship in place, to be made available for any chapter members children.</li> <li>2. Any sponsorship ideas is for a Social Event to include chapter members, send any ideas to Andy Gainsforth.</li> </ol>	<p><b>M Scott</b> - Annual A12 &amp; A9 returns to be lodged to NSW Office of Fair Trading, following AGM.</p> <p><b>M Scott</b> – Process 2018 invoices at 50% discount based on number of working rigs as advised by chapter members.</p> <p><b>E Midden</b> – USA Scholarship info to be sent for comment.</p> <p><b>A Gainsforth</b> – Event Co-ordinator for Social Event</p>
	<p><b><u>Chapter Bylaws</u></b></p> <p>Changes highlighted in electronic copy shown during AGM. Bylaw changes regarding former chapter members were approved by all members present.</p> <p><i>‘Any former chapter members can remain on executive/chapter at the discretion of the executive, any nominations are to be put forward and voted on during the AGM’.</i></p>	<p><b>M Scott</b> Distribute the updated Chapter Bylaws to members.</p>



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	<p><b><u>Office Bearers for 2018/2019</u></b></p> <p><b>Chairman-Onshore: Luke Smith</b> (Easternwell Energy) Proposed by Eric Jacobsen (Diamond Offshore) and seconded by Ken Ledger (Savanna Energy)</p> <p><b>Chairman-Offshore: Eric Midden</b> (ENSCO) Proposed by Eric Jacobsen (Diamond Offshore) and seconded by Peter West (Gearhart Group)</p> <p><b>Vice Chairman-Onshore: Andy Gainsforth</b> (ARC) Proposed by Eric Jacobsen (Diamond Offshore) and seconded by Justin Shooter (SLB Land Rigs)</p> <p><b>Secretary/Treasurer: Megan Scott</b> (Easternwell Energy) Proposed by Eric Jacobsen (Diamond Offshore) and seconded by Mike Maguire (High Arctic)</p>	<p><b>M Scott</b> Notify IADC of successful officer bearers.</p>
	<p><b><u>Discussion Topics :</u></b></p> <p>(i) <b>SA Regulation Presentation by Michael Malavazos (Director Engineering Operations):</b> Presentation is attached.</p> <p>(ii) <b>Permit to Work by Jamie Wilson (Wellsafe):</b></p> <ul style="list-style-type: none"> <li>❖ History/background of the Permit to Work program.</li> <li>❖ Concerns regarding: <ul style="list-style-type: none"> <li>➢ standard of training provided,</li> <li>➢ manufacturing high number of PTW pads and</li> <li>➢ IP control</li> </ul> </li> </ul> <p>The WPTW system is generated by and for the Australian onshore industry. The Association continues to seek representation from industry members and in 2015 the Board of Directors was intentionally transformed to have a balance with industry, safety and commercial experience. Currently 35 member companies. The Board is audited yearly by an external auditor and audit report is available to all members. Recognising the challenges the industry, the Board is working on a model for membership fee restructuring. To address issues arising from variations in face to face training standards the training was moved into an online training system. PTW system is regularly overused in Queensland and is an ongoing challenge to foster more appropriate level of use.</p> <p>With regards to lower risk activities, and activities in which the continued demonstration of robust risk controls is evident, Jamie challenged all, “Why use a PTW when risk control measures are demonstrably in place and the risks are adequately managed?”</p> <p>The WPTW Association was established to support the onshore industry manage the system and to protect the</p>	



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	<p>intellectual property which had been generously contributed by many industry participants over many years.</p> <p>Jamie reinforced that the Association exists only to support the system for the benefit of the Australian onshore industry. As a member-based organisation IADC members were invited to provide feedback, on any matters, directly to the Association, in order to enable it to make adequately informed decisions. The Board is currently undertaking a project to transform the paper-based system into an electronic PTW process. One member suggested an option might be to look at licencing the IP so as to constrain costs.</p> <p>(iii) <b>Safer Together NT/WA (All):</b> Discussion about program modelled on the Queensland program.</p> <p>(iv) <b>DNRME Fee structure (All):</b> Discussion about how the fees for DRNME (QLD) are calculated, based on number of wells worked over and number of kilometres drilled. Fees do not encourage efficiencies. The more you do, the higher the fees and when operators are expecting more efficiencies and cost reductions, this payment structure is not suitable. All members are to submit letter to DRNME stating that they would be agreeable to a payment structure linked to the day rate, which would be a fairer system.</p> <p>(iv) <b>IADC Equipment List – Land Rigs</b> The IADC Equipment List current templates are only for Submersible Rigs or Jack Ups, which were adopted 9/1993. There is currently no IADC Equipment List Template specific to Land Rigs. The project is approved to draft an equipment template for land rigs which is for only the basic equipment for use. The IADC equipment list templates are sometimes referred in tendering documents therefore would make sense to proceed with this project. Liaise with Mike DuBose to provide the final approval of the IADC template for Land Rigs.</p> <p>(v) <b>Skilled Migration</b> Discussion about the current issue with the recent changes to the 457 visa and the impact to the industry. Eric mentioned the current work around with using the 400 visas (short term of 6 months with no immigration access). Also has sent in an application for 482 visa, so waiting to see if this is approved. May provide a suitable option for the critical shortage for rig crews particularly with the Offshore Companies planning to move rigs back into Australian waters.</p>	<p><b>M Scott</b> Draft letter for members to submit to DRNME for payment structure change</p> <p><b>M Scott</b> Adjust 2018 budget to include funding for IADC Equipment List-Land Rigs</p>
	<p><b><u>IADC-AC Safety Statistics Award 2017</u></b> A presentation was provided of the Safety Statistics Award Program. 2017 Award Presentation is attached. Non-identifying data and the winner notification is thereby provided to IADC-AC at no cost by IADC ISP Program.</p>	<p><b>M Scott</b> Draft and submit Drillbits article for Award program 2017.</p>



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	<p>9 out of 11 Australasia Chapter members submitted data to IADC ISP Program for 2017.</p> <p>The winner – Offshore: <b>Diamond Offshore Drilling</b>, were not present. Award Plaque and Gift to be delivered ASAP.</p> <p>The winner – Onshore:</p> <p><b>High Arctic Energy Services (PNG) Ltd</b></p> <p>Pictured right is <b>Mike DuBose</b>, Executive VP International (IADC) presenting winner plaque to <b>Mike Maguire</b>, President HAES</p> 	
	<p><b><u>Date of Next Meeting</u></b></p> <p>The next AGM will coincide with the APPEA Conference in Brisbane, 27-30 May 2018, the AGM will be held on:</p> <p><b><u>Wednesday, 29 May 2019</u></b></p>	
	<p><b><u>Close and Lunch</u></b></p> <p>Meeting closed at 1.20 pm</p>	<p><i>Lunch provided at Madame Hanoi</i></p>

We confirm the above minutes are true and accurate.

**Luke Smith**  
IADC-AC Chairman-Onshore

**Eric Midden**  
IADC-AC Chairman-Offshore

**Megan Scott**  
IADC-AC Treasurer/Secretary

**Andy Gainsforth**  
IADC-AC Vice Chairman



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2018 AGM Attendees, absent from photo **Peter Koutsoukos** and **Megan Scott**



2018/2019 IADC-AC Executive Committee (L to R), Megan Scott (Treasurer/Secretary), Andy Gainsforth (Vice Chairman), Luke Smith (Chairman-Onshore) and Eric Midden (Chairman-Offshore)

# IADC Australasia Chapter AGM

APPEA Conference

Adelaide, SA

May 16, 2018





## **IADC Mission**

**Catalyzing improved performance for the drilling industry**

## **IADC Vision**

**For the drilling industry to be recognized for its vital role in the global economy and its high standards of safety, environmental stewardship and operational efficiency.**

# Who is IADC?

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Catalyzing improved performance for the drilling industry

## **Advocacy**

Championing better regulation

## **Accreditation & Credentialing**

Enhancing workforce competence

## **Technical Resources**

Providing print, electronic and multimedia tools

## **Conferences**

Networking and sharing best practices

## **Committees**

Collaborating and shaping the industry

## **Chapters**

Connecting the global industry

## **Industry News**

Communicating critical information



# 2017 Highlights – Strategy and Activities

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- Commitment
  - IADC is member-focused, member driven
  - Stay narrow in scope
  - Deliver against IADC's core strategic objectives
- Solid execution and delivery of core member services
  - Projects
  - Advocacy Efforts
  - Drilling Matters
  - Well control training – WellSharp Well Servicing
  - Student Chapters

## 2017 Highlights – Strategy and Activities

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- What we delivered.....
  - Solid execution and delivery of core member services
  - Projects
  - Advocacy engagement – actively monitoring/engaging with regulators to encourage enabling regulations.
  - WellSharp translations – now in 5 languages
  - **[www.drillingmatters.org](http://www.drillingmatters.org)**

## Focus for 2018

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- Strategic objectives driving IADC's advocacy, strategy and programs:
  - Continuous improvement in **safety**
  - Driving out unnecessary **cost** in our industry
  - Sustaining **competency**
- Four external priorities
  - Offshore advocacy
  - Onshore advocacy
  - Well control
  - Giving voice to our industry

# Focus for 2018

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## Primary focus is on Member Service

- Strategic objectives
  - Continuous improvement in **Safety**
  - Driving out unnecessary **cost** in our Industry
  - Sustaining **Competency**
- 2018 Projects
  - DDR Plus
  - WellSharp Well Servicing

# IADC Safety Programs

[www.iadc.org](http://www.iadc.org)



# Incident Statistics Program (ISP)

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**Since 1962, the IADC ISP has tracked safety and accident information for the drilling industry.**

Records data reflecting accident experience; can be compared to other industries.

Identifies causes and trends of drilling industry injuries.

Provides a means of recognizing rig crews for outstanding safety performance.

Participation is voluntary and open to all Drilling Contractors.

- Must be a member and participate in ISP Program to qualify for rig/unit recognition.



# Incident Statistics Program (ISP)

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- 9 Reporting Regions (includes onshore and offshore operations worldwide)
- 94 Companies Participated in 2017

*Drilling Contractors only  
Does not include 3<sup>rd</sup> Party  
Voluntary Participation*

- **2017 Statistics will be posted. [www.iadc.org](http://www.iadc.org) under HSE Heading circa June 1, 2018.**

# HSE Safety Toolbox

Safety Tools | [iadc.org/safety-toolbox](http://iadc.org/safety-toolbox)



## Easy Access To Safety Alerts & Safety Meeting Topics (JSAs)

- Close To 700 Safety Alerts
- 150+ Safety Meeting Topics (JSAs)
- 80+ Safety Posters Archived
- Puts Critical Safety Related Tools Directly in Hands of the Rig Crew
- Available On IADC.org
- Auto-transforms to Fit All Devices
- Search Engine Optimized

# WellSharp™

Well Control Accreditation Program

## Well Servicing / Intervention Courses

# Industry Participation

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A variety of industry representatives actively participated in the development of the new curricula:

- AESC
- BP
- Chevron
- Cudd Energy Services
- Drilling Systems
- ExxonMobil
- Halliburton
- IDS Global Inc
- Lone Star College
- OEG LLC
- Schlumberger
- Shell
- Weatherford
- Well Control School
- Wild Well Control

Workgroups for each course were developed at the beginning of 2016 and proceeded to meet once a week for 18 months. Each workgroup was tasked with developing curriculum and writing test questions for the new curriculum.

# New Well Servicing Track Curricula

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- **Service Company Equipment Operator Courses:**
  - Coiled Tubing Well Control
  - Snubbing Well Control
  - Wireline Well Control
  - Workover Well Control
- **Oil and Gas Operator Representative (“Wellsite Leader”) Course:**
  - Workover and Intervention Well Control
- **Supplement: Subsea Operations**  
(for Wellsite Leader and Workover courses only)

# Service Company Equipment Operator Courses

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## Overview

- 32 hour curriculum for Coiled Tubing, Snubbing, and Wireline courses
- 35 hour curriculum for Workover course
- Designed for service company equipment operators who are primarily responsible for operational processes of well control

# Oil and Gas Operator Representative “Wellsite Leader” Course

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## Overview

- 36 hour curriculum
- Designed for those responsible for the oversight of coiled tubing, snubbing, wireline, and workover operational processes of well control
- Not intended to replace or be equivalent to the Equipment Operator Course(s).

# Assessments

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- Each course has a comprehensive, standardized, proctored knowledge exam that follows the same process as the exams in place for the Drilling Operations Track.
- The Well Servicing courses do not include a skills assessment. However, there are specific Learning Objectives that must be taught through simulation.



# What's Next?

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- *Program successfully launched April 1, 2018.*
- Continue development of WellSharp curricula for:
  - Engineering level course
  - MPD Well Control Course
- WellSharp Plus Supervisor and Driller level courses with a focus on CRM / Human Factors
- Knowledge Retention





# Well Operations in South Australia



International Association of Drilling Contractors, May 2018

# South Australian Context

- Historical Regulatory Perspective
- Australian and International Standards initiative
- Past and Present South Australian well operations
- Some regulatory matters of interest
- Some interesting projects in South Australia

# Regulatory Historical Perspective

## Pre-2000:

- Petroleum Act 1940
- Covered licensing, environment and OH&S
- Prescriptive regulations – tick box regulation
- 1989 OH&S provisions transferred to OH&S Regulations
  - Occupational Health, Safety and Welfare Act 1986
  - Petroleum Work Regulations (old Petroleum Regulations)
  - Now: WHS Act 2012

# Prior to 2000: Prescriptive Regulatory Regime

## 284—Regulation of certain practices

A person **must not**—

- (a) snap-up a tool joint with an automatic cathead or pipe joint breaker—jaw clutch type that automatically disengages its clutch at the completion of a fixed cycle or travel; or
- (b) use the rotary table for the final making-up or initial breaking-out of a pipe connection; or
- (c) handle the spinning chain over the rotary table while it is in motion.

# Prior to 2000: Prescriptive Regulatory Regime

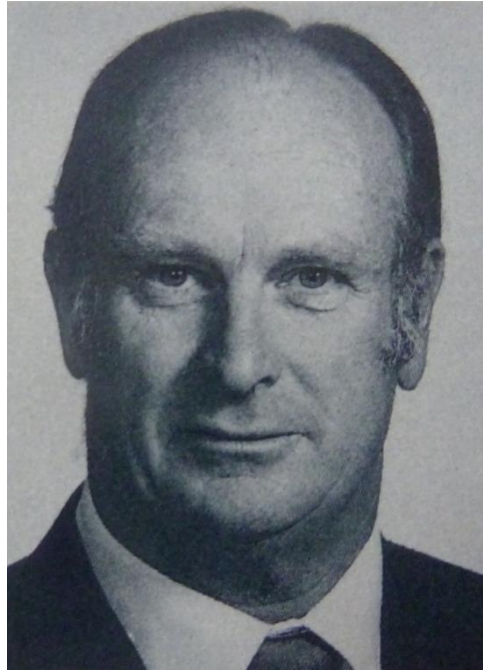
## 286—Blowout preventer closing units

(1) Blowout preventer activating accumulator units, **must be located at least 15 metres from the wellhead** and, without accumulator pump assistance, **must have sufficient** capacity to—

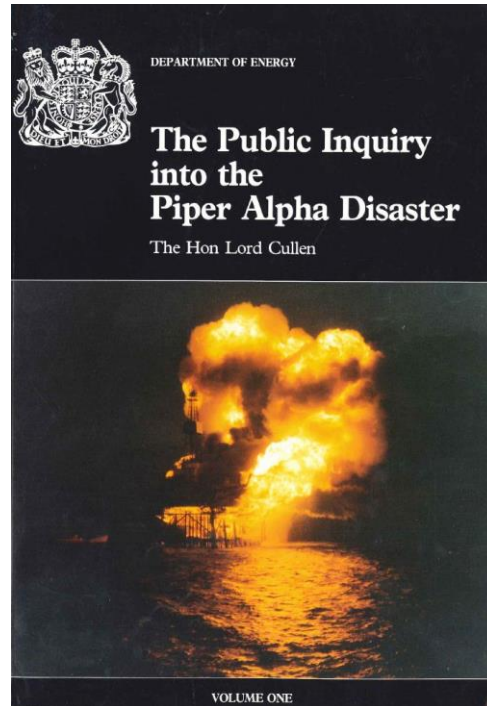
- (a) open or close the hydraulically operated choke line valve;  
and
- (b) close or open the annular type blowout preventer; and
- (c) close or open 2 blowout preventer pipe rams.

## Depended on Regulator Inspection and Verification

Richard (Dick) Hancock



# Regulatory Paradigm Shift





# Regulatory Paradigm Shift

- *Petroleum and Geothermal Energy (PGE) Act 2000*
  - Duty of care
  - Safety Case Philosophy
  - Objective risk based
  - Fitness for Purpose Demonstration Provisions
    - Equipment
    - Facilities
    - Management Systems
  - Licensee responsible to demonstrate can meet objectives

# Regulatory Paradigm Shift

- *Model Work Health and Safety (WHS) Legislation*
  - *1st January 2013*
  - *Replace prescriptive Petroleum Work Regulations with:*
    - *Duty of Care*
    - *Objective risk based/Safety Case Philosophy for MHF*

Longford, 1998  
Moomba Plant, 2004  
Varanus Island, 2008

Gulf of Mexico

Security of Gas Supply

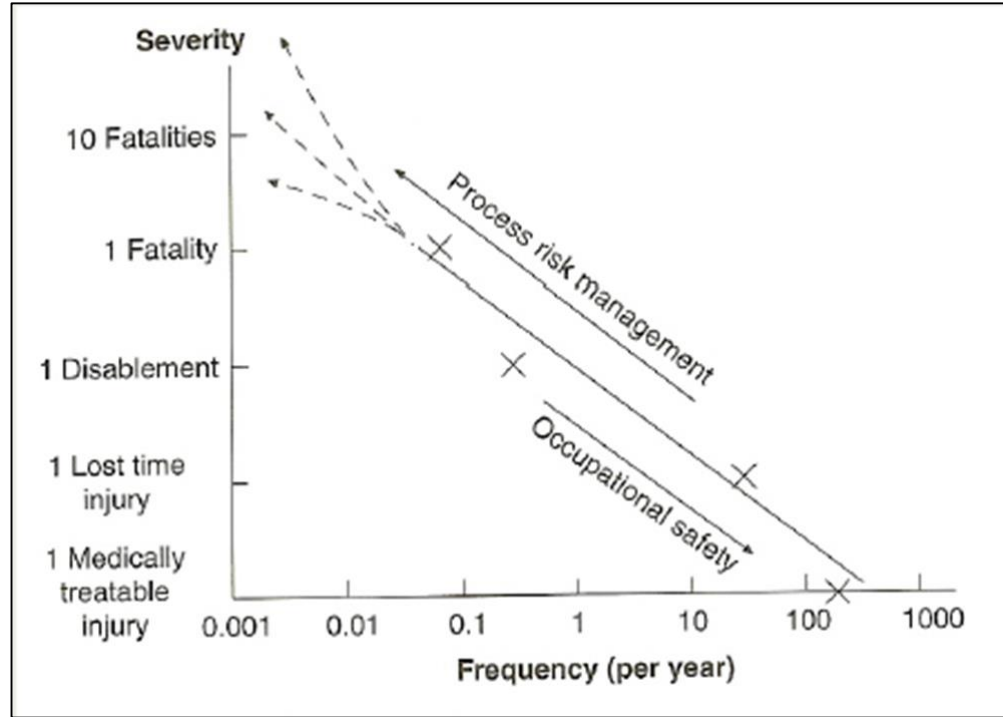


Small Gas Release

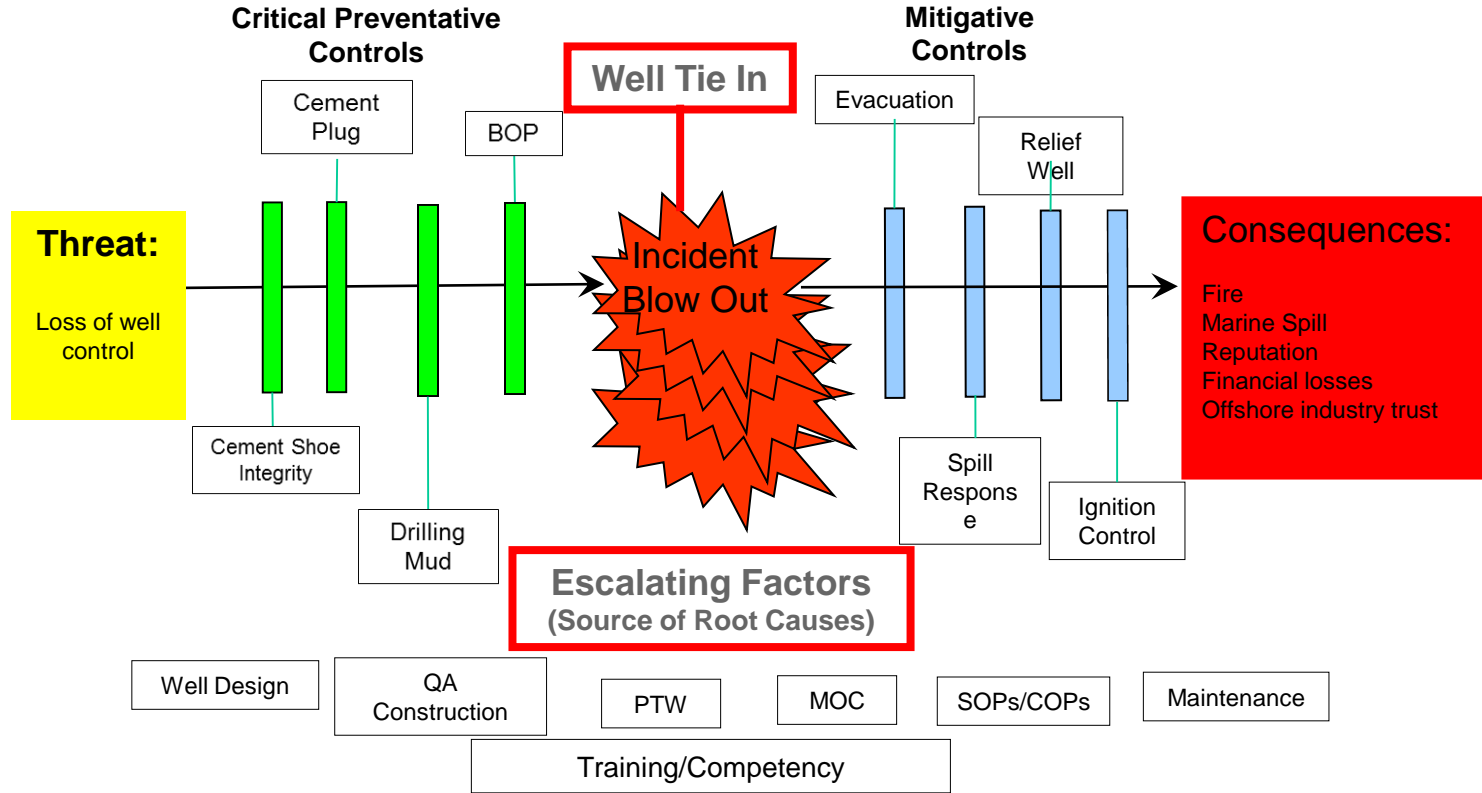
Environment



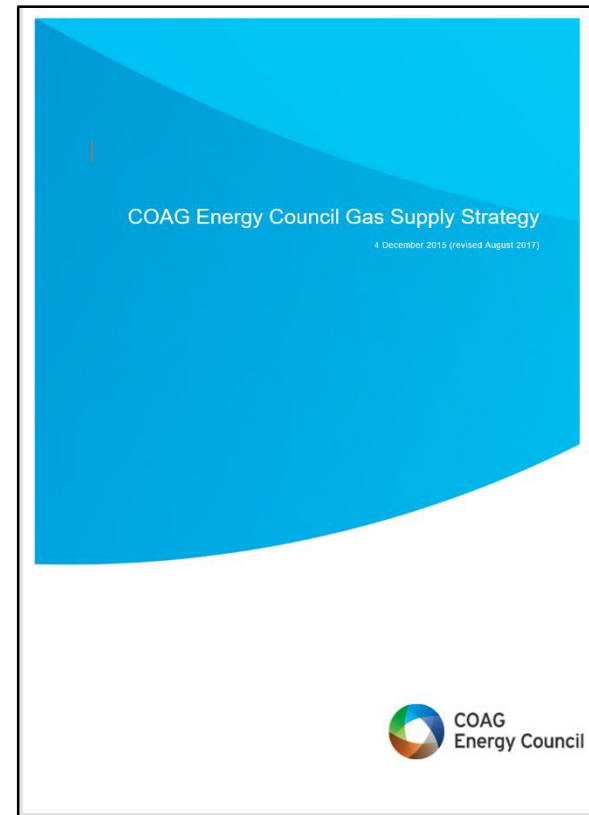
Small leak



# Montara Blow Out



# Commonwealth Government: Standards Initiative



# COAG opportunities for jurisdictional collaborations:

1. Improving information on gas resource, reserves and production potential for onshore and offshore gas, and potential underground gas storage, regardless of unconventional or conventional reservoir-type.
2. Improving public availability and accessibility of rigorous science and factual information on all types of gas sources and extraction methods.
3. Consideration of leading practice regulatory frameworks that effectively manage the risks and address issues for onshore and offshore gas, and underground gas storage.
4. Supporting leading practices in industry for responsible development of onshore and offshore gas and underground gas storage.

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4. Supporting leading practices in industry for responsible development of onshore and offshore gas and underground gas storage.

# Council acknowledges that:

Development of gas from onshore conventional/unconventional and offshore reservoirs...needs to remain internationally competitive...and that it is the primary responsibility of industry to:

- invest in exploration and development to supply gas, and
- protect the environment and maximise benefits by eliminating or minimising adverse impacts on landholders and communities.

Council also recognises that the commercial interests of industry will strive to:

- develop and use cost-effective technological solutions, and
- increase productivity and reliability in production profiles.



# Gas Supply Strategy: Action

- Action 9 Objective:  
Pursue consistent, efficient and good practice regulation across all onshore gas jurisdictions to facilitate ecologically and economically sustainable upstream gas industry.
- Strategy:  
Ensure consistent good industry practice onshore gas standards are deployed across all Australian jurisdictions that will underpin productivity.

# WHY IS THIS IMPORTANT

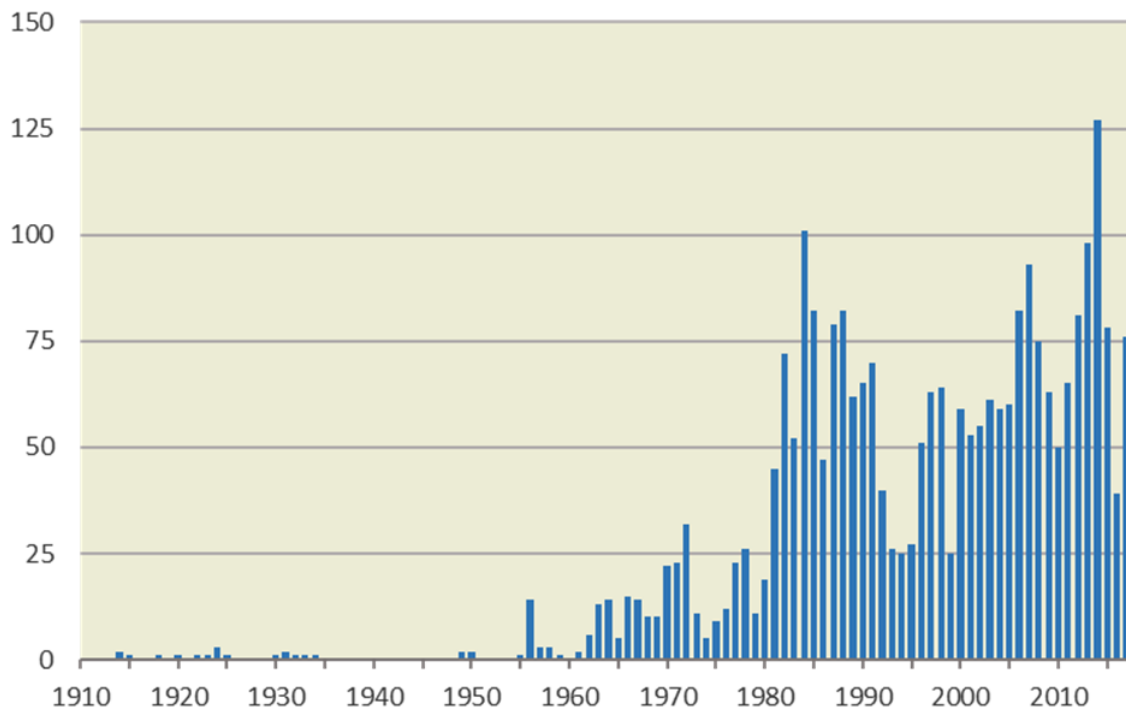
- Objective/risk based regulatory regimes;
- Focus on duty of care;
- Reliant on good industry standards;
- What are such standards and are they fit for purpose?
- Are they consistent across jurisdictions?
- Are they enforced consistently?
- Equipment (e.g. rigs) and licensees operating across borders;
- Are regulatory expectations clear to industry and suppliers?

# TO THIS END

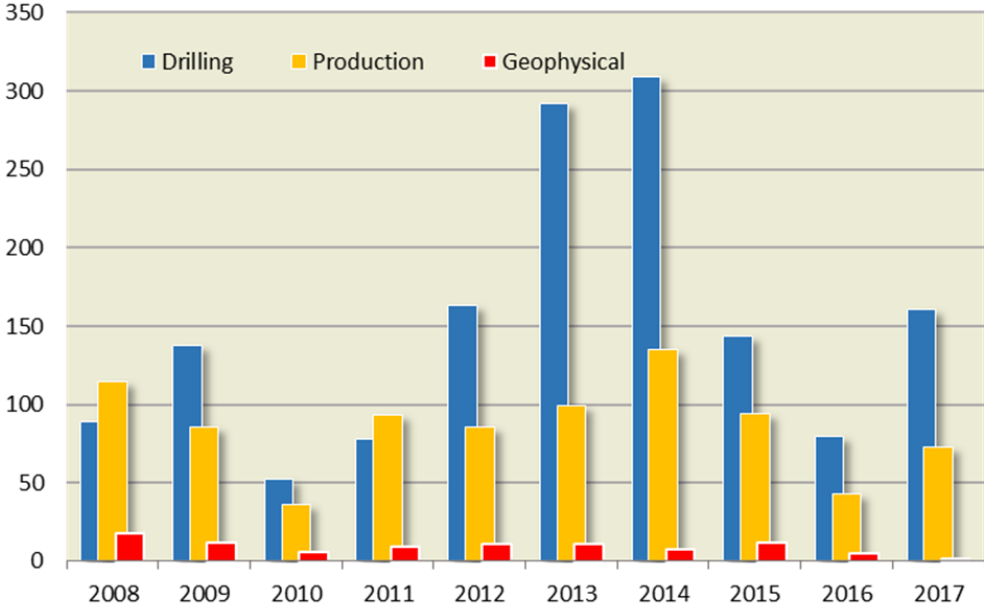
Council is working with industry led growth centre, NERA, in its:

- Australian oil and gas standardisation initiative
  - Mirror committee to ISO/TC 67 (ME092)

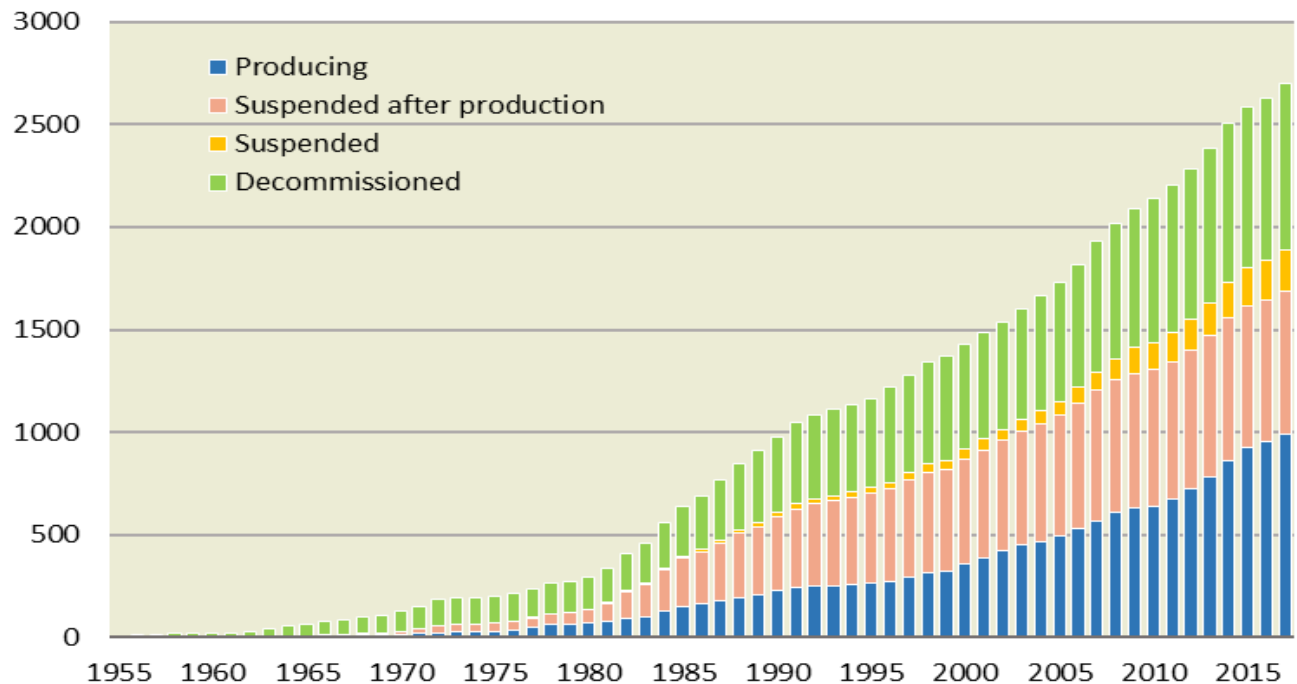
# Wells Spudded in South Australia



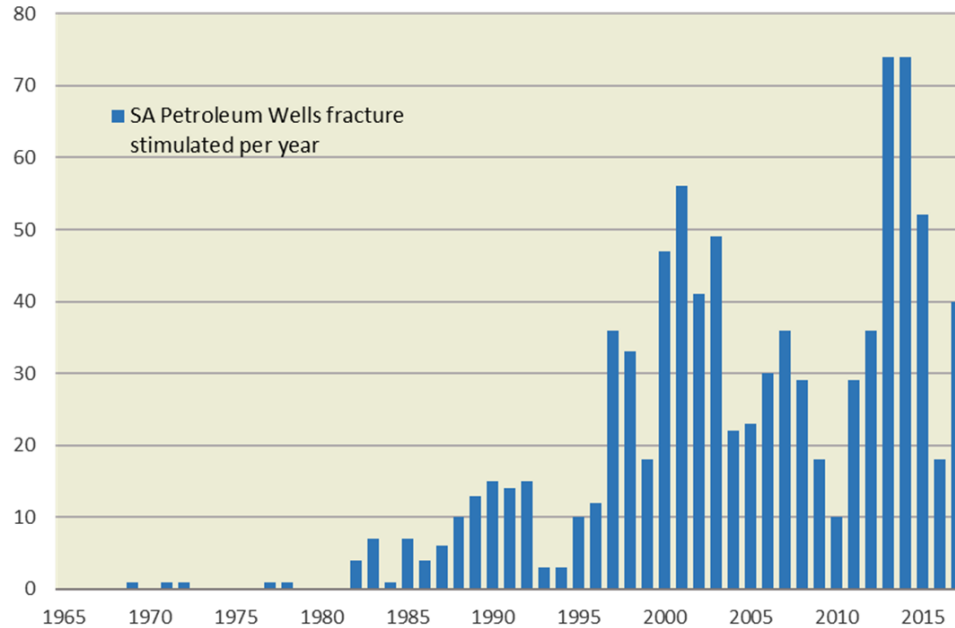
# Drilling Applications



# Cumulative Well Status in South Australia



# Wells Fracture Stimulated: Over 900 without incident!



# Rig Status in South Australia

- Ensign Rigs 950, 965, 970 & 971
- Easternwell Rigs 27 (workover), 101 & 106
- Wild Desert Rigs 6, 16 and 22 (workovers)
- Silver City Drilling Rigs 16 and 20 (Leigh Creek Energy)
- Nitschke Rig 2 (Workover)
- Wild Desert Rigs (workover)
- SLR Rig 183 and 185
- Watsons Rig 6
- TDC Drilling Rig 8 (workover)



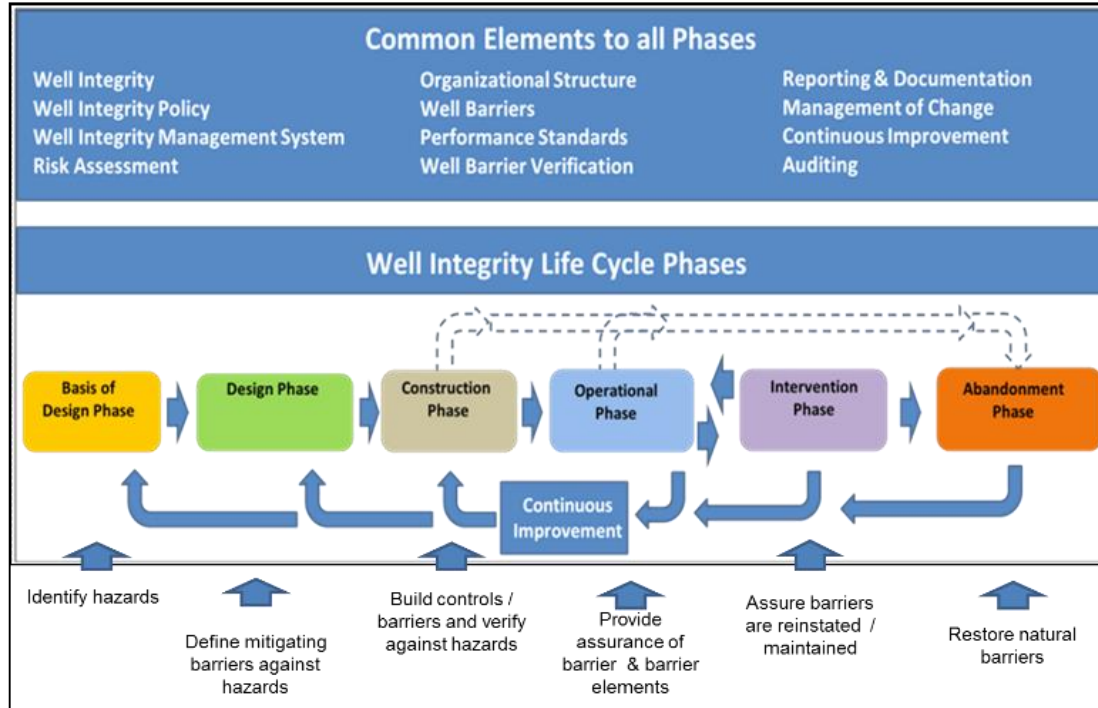
# Well Integrity

To ensure well construction activities satisfy acceptable and fit-for-purpose industry practice relating to safety and environmental protection objectives, ERD routinely reviews and challenges:

- Licensee well design, construction and barrier verification practices;
- General well integrity, ensuring containment of well fluids and isolation of hydrocarbon zones and aquifers through all stages; and
- Ultimately decommissioning of all well assets

# Well Integrity

Well integrity lifecycle phases. Source PetroWiki ([http://petrowiki.org/Well\\_integrity\\_lifecycle](http://petrowiki.org/Well_integrity_lifecycle))



# Cement Integrity Project- Cooper and Eromanga Basin

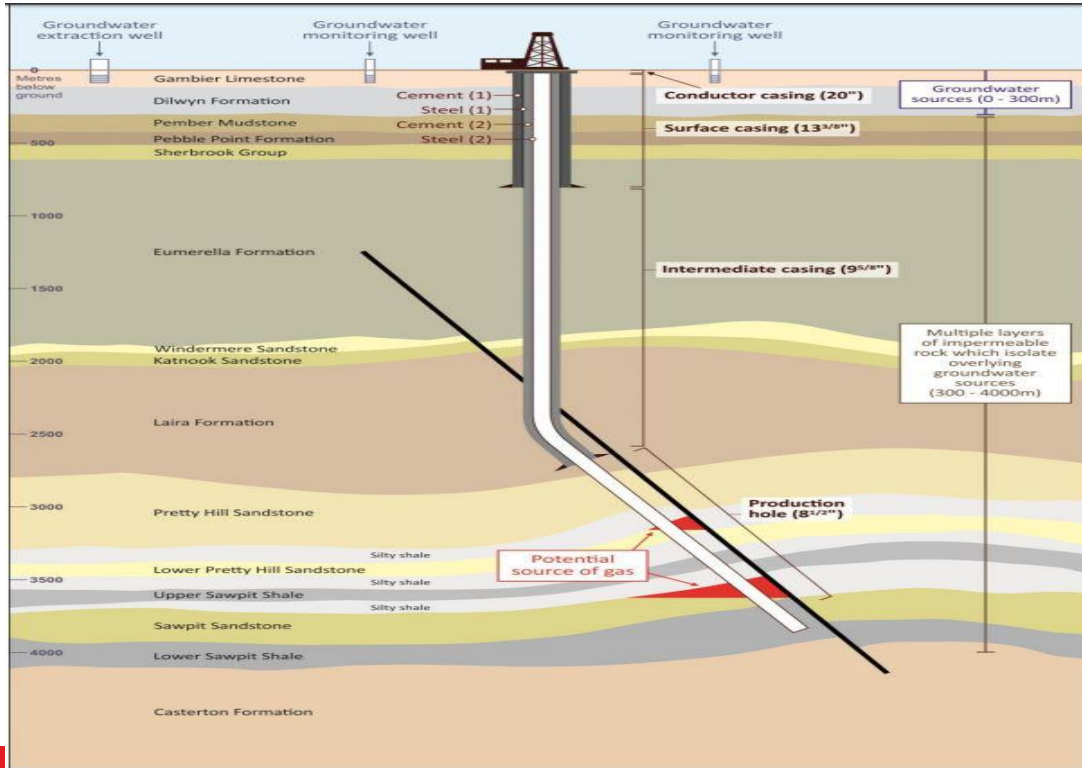
- Review and assess zonal isolation (of aquifers) by cement behind casing of all wells in the Cooper and Eromanga basins in South Australia.
- Identify potential non-compliances with the PGE Act and any insufficient data.
- Build database to enable us to provide assurance that, when cased production wells are decommissioned, decommissioning program will be compliant with legislative requirements.
  - 2,435 wells entered into database.
- 582 wells identified to have no observable annular cement between two or more aquifers that are required to be isolated under the PGE Act.
  - Over 90% of these 582 wells were drilled prior to the year 2000 under the previous *Petroleum Act 1940*.

# Drilling Rig Fitness for Purpose Assessments

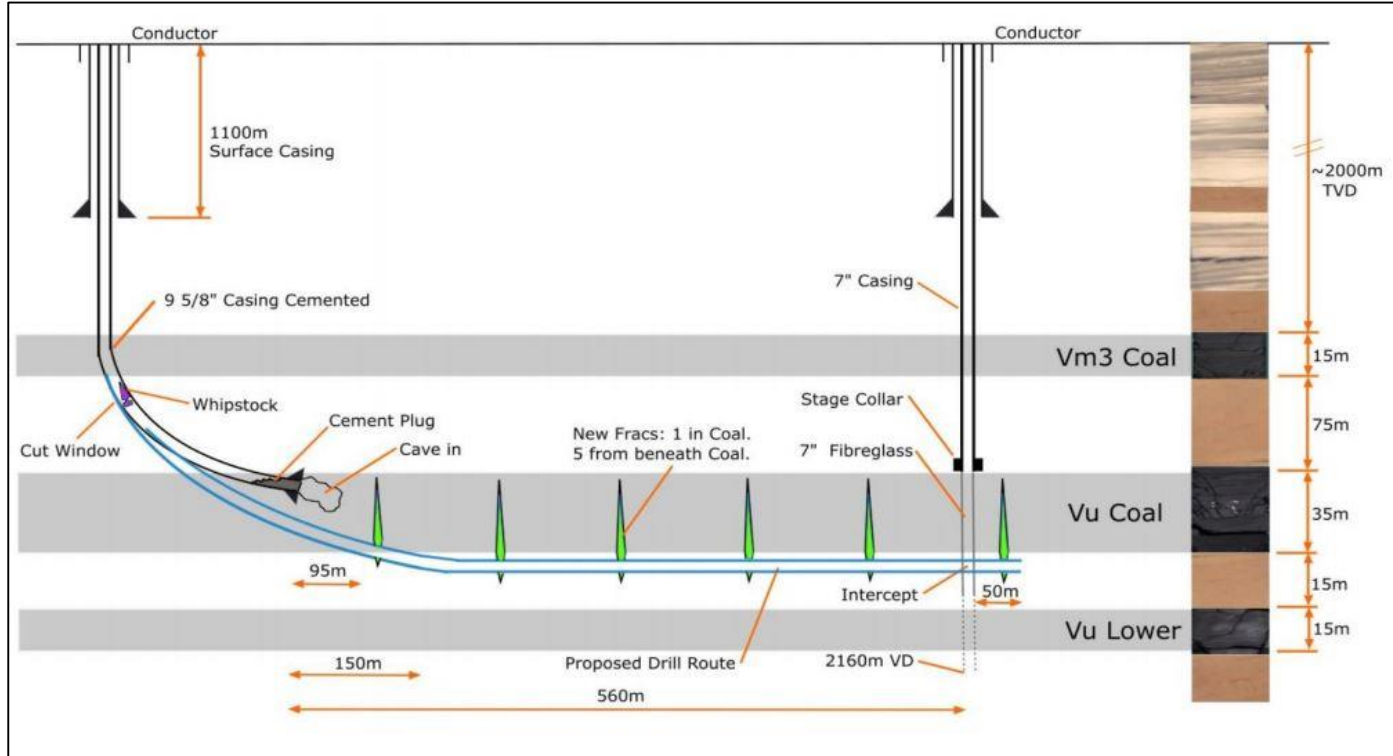
Reviews focus on a variety of operational and technical aspects including:

- rig specifications and certifications;
- hazardous area and electrical compliance;
- operational procedures and risk mitigation measures;
- alignment of health, safety and environment objectives and policies;
- personnel competency;
- third party and internal audits; and
- systems ensuring ongoing validation of FFP.

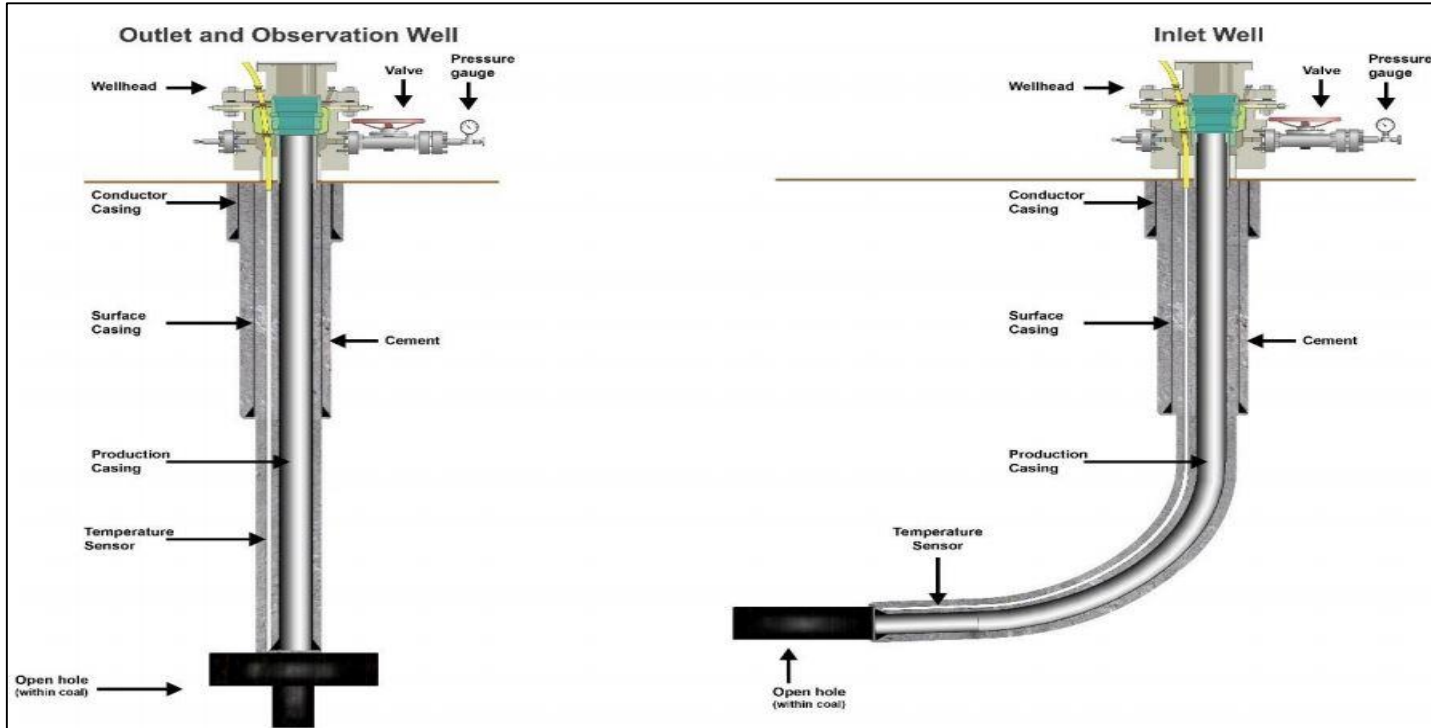
# Haselgrove 3: Ensign 965



# Strike Energy Jaws 1: Ensign 965



# Leigh Creek Energy UCG Trial: Silver City Rig 20



# Leigh Creek Energy UCG Trial: Silver City Rig 20

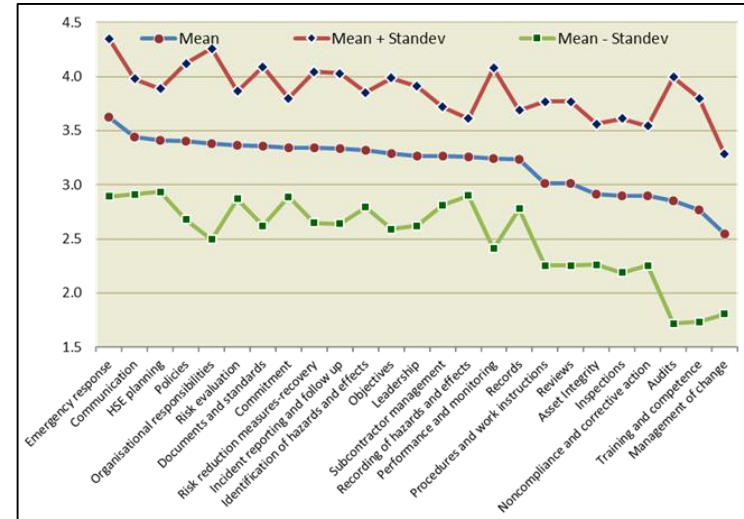
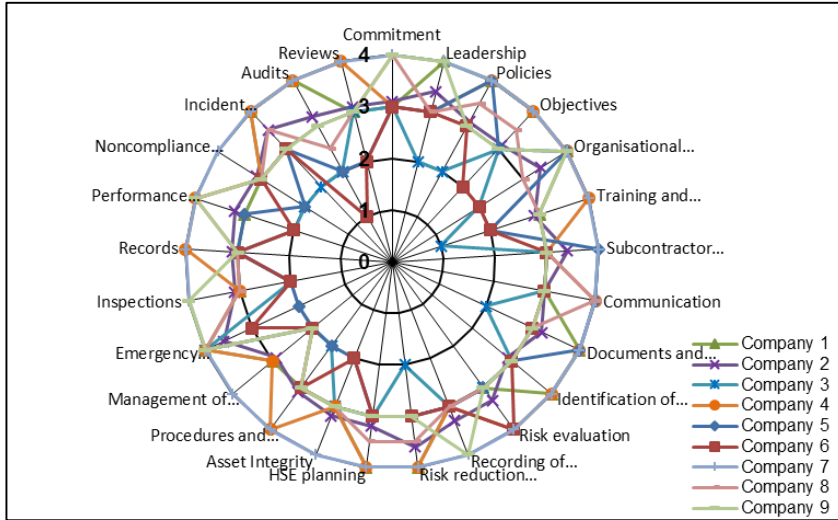
- Well Design – designed for extreme operating conditions (*operating conditions up to approx. 340°C surface temperature, up to 1200°C bottom-hole temperature*)
- Ultra High Temperature Blend cement required extreme conditions expected during gasification operations:
  - *lab tests performed to 360°C wet conditions, 450°C dry conditions, other labs performed dry tests up to 800°C*
- Premium thread production casing selected for wells anticipated to be exposed to extreme heat conditions (*Casing grade is L-80*)



# HSE Self-Assessment

Level		Assessment Criteria
4	HSE in the heart	Division/site recognized as a leader in the particular aspect of the management system
3	HSE in the head	This particular aspect of the management system is being addressed systematically. Reaching the respective targets. Integration with other activities initiated.
2	HSE on paper	Performance and results inconsistent. System being implemented but generally at minimum levels. Plan – Do – Check -Act process understood but not put into practice.
1		Overall, performance is poor. Awareness may be there, but the implementation of this particular aspect of the management system is haphazard or not in evidence.

# HSE Self-Assessment: Results



# Conclusions

- Risk based regulatory regime
- Onus on licensees to demonstrate compliance with good practice
- Australian legislation needs to facilitate good recognised practice
- All this needs to deliver community confidence
- Industry survival depends on community support & trusted regulation
- Keep up the innovative projects

# Thankyou