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2020: An Unprecedented Year; What Did We Learn? More Critically, What for the Future?

Derrick O'Keeffe

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SPE – Perth

8 December 2020

A760133

nipsema.gov.au



Today's Discussion

Setting the scene

What happened next

Crystal Ball

Q&A/ Discussion



Setting the scene



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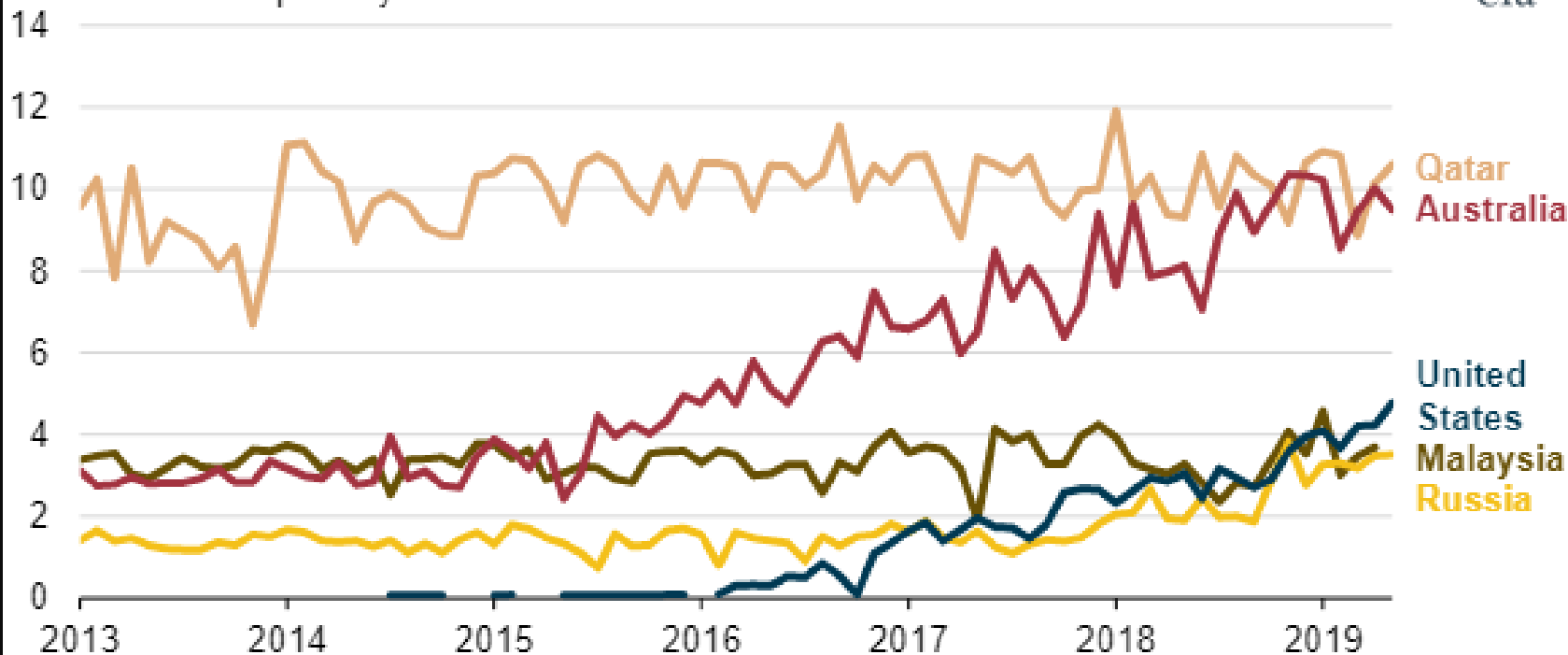
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2017- 2019



Building LNG Export Capacity

Liquefied natural gas exports from selected countries (Jan 2013-May 2019)
billion cubic feet per day



A Year in Review



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Old Normal





Industry Impacts

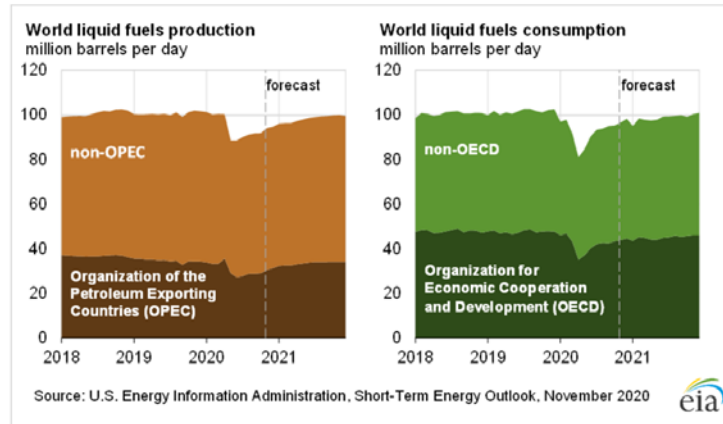


Shell to cut up to 9,000 jobs as oil demand slumps

© 30 September



Royal Dutch Shell has said it plans to cut 7,000 to 9,000 jobs as it responds to challenges including the slump in oil demand amid the Covid-19 pandemic.



What Happened Next?



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What Happened Next?

- Oil price
- C-19: industry response
 - Keeping people safe
 - Essential energy
 - Speed over perfection
- Asset sales/ restructuring
- Financial consequences
- Deferred maintenance; skills and capability



Regulators had a role too....



In relentless pursuit of offshore safety:

A Privileged Perspective

Derrick O'Keeffe – Head of Safety & Well Integrity

 **NOPSEMA** - National Offshore Petroleum Safety and Environmental Management Authority

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Society of Petroleum Engineers
Distinguished Lecturer Program
www.spe.org/dl



Steve Walker Review

Recommendations

- Strategic approach
- Root causes
- Ownership of risk

Review of the Circumstances that
Led to the Administration of the
Northern Oil and Gas Australia
(NOGA) Group of Companies

Steve Walker
June 2020

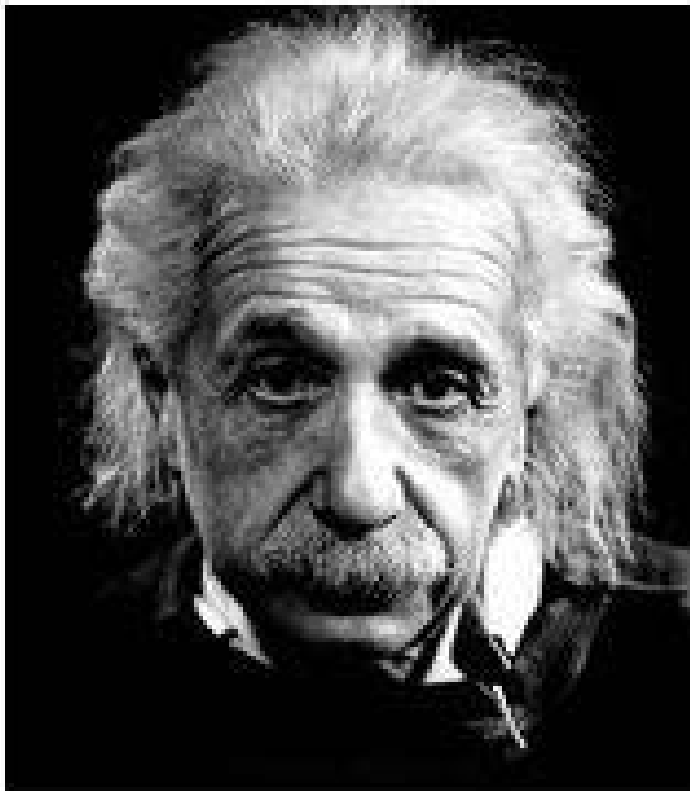


Crystal Ball?



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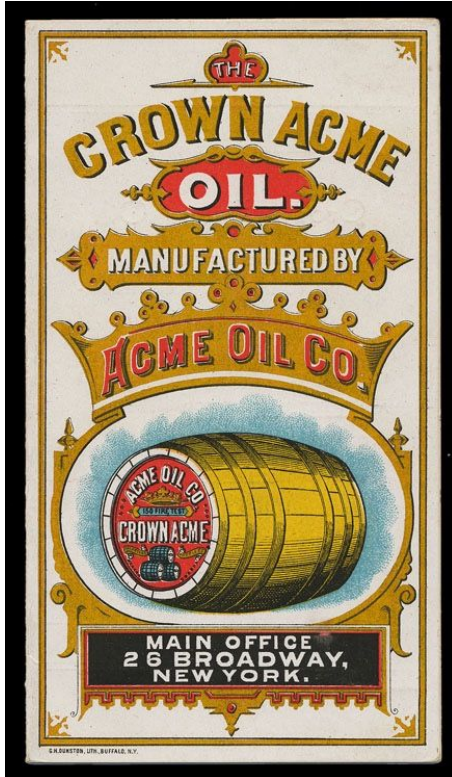
“If I had an hour to solve a problem I’d spend **55** minutes thinking about the **problem** and **5** minutes thinking about the **solution**.”

Albert Einstein

New Normal?



Equipment & Services



Titleholder/operator
/service partner

Control of work

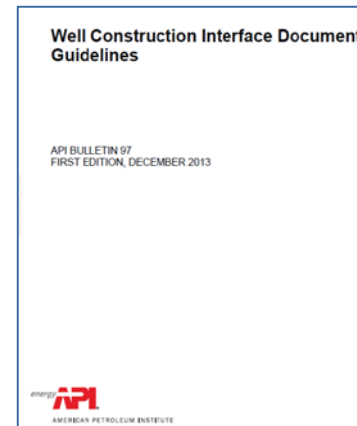
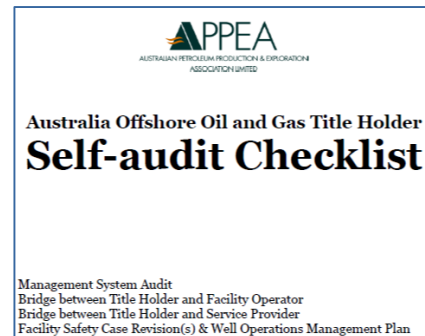
Clarity of
responsibilities

Knowledge of risks



WOMP/Safety Cases

- WOMP – common concerns
- DISC/NOPSEMA WOMP initiative
- Interfaces: Roles and responsibilities
 - APPEA self-audit checklist
 - Industry tools – API Bulletin 97
- Opportunities to improve



Decommissioning Framework Review

S572: “maintain in good condition...”
“remove when not in use”

S270: “plugged and closed off”

SPE Oct 2020: “The potential loss of containment, as a result of delay in well abandonment, presents ongoing risk to safety, environment & ‘licence to operate’.”

1000 wells



IRF/IADC/IOGP – Well Control Problem Statement

Global perspective

- Pathways to address e.g.
 - PP/FG
 - Interfaces
 - Adopt standards

 International Regulators' Forum GLOBAL OFFSHORE SAFETY	
Title: Proposed submission for IRF * Well Integrity: Prevention of Well Control Incidents , the case for industry guidelines	
Problem Statement: Much industry collective effort has gone into defining responses to deal with any loss of well control situation. Recent data and incidents provide a view that a deeper understanding of the underlying hazards and how industry designs for them is worthy of collective action. This will strengthen industry focus towards the Left Hand Side of the "Loss of Well Control" bow tie and thus reduce the likelihood of any loss of well control events taking place. The planned efforts can be split in three broad areas: 1) Well design "inputs" (pore pressure/fracture gradients/geological risks). 2) translation of 1) into efficient and safe well designs 3) definition of safe operating envelopes for Wells activities in the operations and production phases. It is recognized that -whilst some areas like pore pressure/fracture gradient prediction has no universally accepted industry guidelines- in other areas guidance does exist. As such, this effort will likely need some development of new guidance but also target implementation of existing guidance.	
The change we expect to see: <ul style="list-style-type: none">• Systematic industry approach to pore pressure/fracture gradient prediction, likely through the development and adoption of new industry baseline guidance.• Systematic work flows and key technical elements required for translating any new pore pressure/fracture gradient guideline into efficient and safe well designs, likely through development and implementation of new industry baseline guidance.• Systematic implementation of existing relevant guidance on safe well operating envelopes.	
External Organization(s) that could be tasked with leading the change / developing the solution: <ul style="list-style-type: none">• EAGE / IOGP / API / IADC / IWCF	
Key performance indicators: <ul style="list-style-type: none">• Development of industry wide standards or guidelines.• IRF/IOGP collaboration on selection of targeted guidance for shared implementation focus.• Reduced likelihood of well control incidents.	

Questions?



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