

Pursuing Offshore Safety

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Hot topics



- Year in review
- Steve Walker review
- Third party equipment and services
- WOMPs/Safety Cases
- Decommissioning/ P&A
- IRF/IADC/IOGP well control

2020 Hindsight









Year in review



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









Steve Walker Review



Recommendations

- Strategic approach
- Root causes
- Ownership of risk

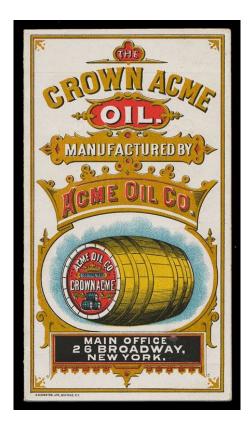


Review of the Circumstances that Led to the Administration of the Northern Oil and Gas Australia (NOGA) Group of Companies

> Steve Walker June 2020

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



Australia Offshore Oil and Gas Title Holder **Self-audit Checklist**

Management System Audit Bridge between Title Holder and Facility Operator Bridge between Title Holder and Service Provider Facility Safety Case Revision(5) & Well Operations Management Plan

> Well Construction Interface Document Guidelines

API BULLETIN 97 FIRST EDITION, DECEMBER 2013



Decommissioning/P&A



Decommissioning Framework Review

S572: "maintain..." "remove when not in use"

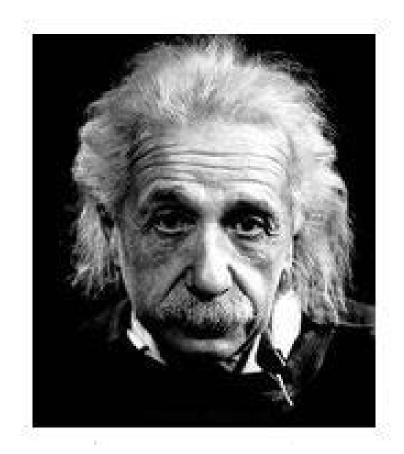
S270: "plugged and closed off"

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







"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

Well Control



IRF/IADC/IOGP – Well Control Problem Statement

Global perspective

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



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 any loss of well control events taking place. The planned efforts can be split in three broad area.

- 1) Well design "inputs" (pore pressure/fracture gradients/geological risks).
- 2) translation of 1) into efficient and safe well designs
- a) 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:

- 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:

EAGE / IOGP / API / IADC / IWCF

Key performance indicators:

- 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.

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Questions?



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