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Safety Indicators: Where do we go from here?

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MONTARA 2009

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A photograph of an offshore oil rig engulfed in a massive fire. Thick black smoke billows from the top of the structure, and bright orange flames are visible on the lower levels. The rig is situated in the middle of a dark blue sea under a grey, overcast sky.

WHAT WILL I COVER?

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Background – Where are we now?

What's going on in industry?

Where do we need to get to?

NO SHORTAGE OF GOOD IDEAS?

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We have done the theoretical work – we know this stuff!

- + “Balanced Scorecard” 1997
- + UK HSE 2006
- + OECD 2003, 2006, 2008
- + CCPS 2008
- + Energy Institute 2010
- + *OGP 2011 – Only specific Upstream guidance*

OGP : Process Safety – Recommended Practice KPIs (Report 456) 2011

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The only specific upstream guidance on KPIs from an international body

Closely follows content of API 754

3 main Issues:

- + Language and concepts
- + Loss of Containment Focus
- + Upstream Major Incidents

OGP 2011 Report 456 Consequences of API heritage:

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- + Language and concepts
 - Loss of *Primary* Containment
 - Pressure Relief Devices
 - Does this language resonate with drilling industry?
- + Upstream Major Incidents not losses of containment
 - Alexander Kielland
 - Ocean Ranger
 - Kolskaya and others

Conclusions on OGP 456

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- + Commend OGP for the effort
- + But it is only a small incremental improvement on API 754
- + Too focussed on a narrow range of consequences – eg loss of containment
- + Does not resonate with Drilling
- + Insufficient focus on other types of Major Incidents

More work needs to be done!

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Abandoning the West Atlas Jack Up over the Montara WHP

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Montara Blowout

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- + Cemented casing shoe not tested
- + No Blow Out Preventer (BOP) in place
- + Mud replaced by (underbalanced) Seawater
- + ***INADEQUATE MANAGEMENT OVERSIGHT***

PTTEP Australasia Line of Sight (LoS) Tool - 1

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Montara Action Plan: “Ensure senior managers have oversight over major accident risks”

- + Essential barriers or controls to major accident events (MAEs) identified with workforce.
- + MAEs chosen:
 - Unignited Blowout
 - Loss of stability
 - Toxic Gas release
 - Large scale fire
 - Unsafe helicopter operating environment

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- + Process similar to HSE 2006/Scottish Power
- + Identify and specify the barriers (with workforce) – record using bowties
- + Identify checks for each barrier and accountabilities
- + Carry out the checks on “health” of barriers

PTTEP Australasia
Line of Sight (LoS) Tool
Unignited Blowout

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- + 12 barriers for the Unignited Blowout MAE
egs:
 - Mud weight and properties as per drilling program
 - Tripping speed verified as per Well Control Manual (WCM)
 - Excess barite and cement on board
 - Diverter and associated valves function tested in accordance with WCM
 - Well barrier verification sheets completed and signed off as per Well Manual

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Line of Sight (LoS) Tool - 3

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- + Currently in use (2 different rig owners – one jack up and one semi)
- + Provides details on health of barriers to all levels of management
- + Status of barriers recorded and reported via IT system and displayed on managers screens
- + Company drilling supervisors and rig owners report no significant additional burden
- + Much greater transparency on “process safety”

WHAT WILL I COVER?

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What do we need to do?

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1. Recognise that OGP RP 456 is not sufficient
 - Too loss of containment focussed
 - Doesn't work well for drilling sector
 - Misses out other major accident event types
2. Revisit OGP Report 456
3. Implement the recommendation on data from the recent National Academy of Sciences report (with **all** relevant stakeholders including the workforce).

The End
But the start of a new era for offshore
indicators?

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