Defining the “New Normal” for Offshore Drilling
Copenhagen – 16 June 2011

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Montara & Macondo Investigations

- BP Deepwater Horizon Accident Investigation Report (8 September 2010)
- The National Commission on the Deepwater Horizon Oil Spill and Offshore Drilling (11 January 2011)
Montara & Macondo Investigations

- Deepwater Horizon Joint (BOEMRE-USCG) Board of Investigation of Deepwater Horizon (due 27 July 2011)
- U.S. Chemical Safety Board Investigation of Deepwater Horizon (date not announced)
- National Academy of Engineering – Analysis of Causes of Deepwater Horizon Explosion, Fire, and Oil Spill to Identify Measures to Prevent Similar Accidents in the Future (summer 2011)
- Petroleum Safety Authority Norway – Preliminary conclusions by the Petroleum Safety Authority Norway (PSA) and action recommended after the Deepwater Horizon accident (June 2011)
- Criminal and Civil Investigations (decades)
## Industry Response

<table>
<thead>
<tr>
<th>Joint Industry Task Force and API</th>
<th>International Association of Oil and Gas Producers (OGP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Equipment</td>
<td>• Prevention</td>
</tr>
<tr>
<td>• Procedures</td>
<td>• Intervention</td>
</tr>
<tr>
<td>• Containment</td>
<td>• Response</td>
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<td>• Response</td>
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</tbody>
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Given effect through

- API standards process
- US regulations and regulatory guidance
- Center for Offshore Safety

- Wells Expert Committee
- OGP guidance
- ISO standards
Equipment

- Testing procedures
- Shearing ability
- Secondary & emergency closing system
- BOP/ ROV interfaces
- BOP Interface to capping components
Procedures & Management

- Well barrier monitoring & testing
- Management of change
- Risk assessment
- Deep water well control
- Gas-in-riser management
- Kick detection & well monitoring
- Definition & competence of the chain of command
- Competence (knowledge, skills, ability & training) of personnel
Containment / capping & Well Design

• Casing load cases
• **Maximum expected well head pressure**
• Cementing design
• **Well head integrity**
• Well safety barrier philosophy
• **Annulus pressure build up mitigation**
• BOP/LMRP interfacing
API Standards Development

- **API RP 65-2** -- Isolating Potential Flow Zones During Well Construction (December 2010)
- **API RP 96** - Deepwater Well Design Considerations (under development)
- **API STD 53** – Blowout Prevention Equipment Systems for Drilling Operations (under development)
  - Five sections common to surface/subsea
  - Dedicated sections for surface & subsea
API Standards Development

- API/IADC Bulletin 97 – Well Construction Interface Document (under development)
ISO Standards Development

- Competence of personnel (DIS 10018)
- Testing of well cements (ISO 10426-2 & API Spec 10B-2)
- Isolating potential flow zones during well construction (API RP 65-2)
- Drill through equipment (BOPs)(ISO 13533/ API Spec 16A)
- BOP equipment systems for drilling wells (API Std 53)
- Well integrity – Umbrella document
ISO Standards Development

- Deep water well design considerations (API RP 96)
- Remotely operated tools and interfaces on subsea production systems (ISO 13628-8/API Spec 17H)
- Guidelines for the development and application of HSE management systems (OGP & IPIECA Guidelines / API RP 75)
- Risk and emergency preparedness analysis (NORSOK Z-013)
• Completed Gap Analysis of IADC Guidelines against API RP 75
• Completed Gap Analysis of IADC Guidelines against BOEMRE’s SEMS Final Rule
• Developing text of proposed amendments to the IADC Guidelines to address identified gaps for consideration at annual Users Group meeting (30 September – Amsterdam)
Other IADC Activities

- WellCAP® curriculum revisions
- Training & Competency
- Deepwater Well Control Guidelines
Regulatory initiatives

- NOPSA – New authorities
- BOEMRE – SEMS 2 & BOP systems
- US Coast Guard/IMO
  - Dynamic positioning systems (FMEA)
  - Lifesaving & firefighting equipment
  - Fire & blast analyses/hardening
  - Gas detection systems
  - Disconnect & Emergency shutdown philosophy
Other concerns

- Manufacturer-recommended maintenance intervals
- Semi-sub stability
- Organizational expertise and capabilities
- Supporting standards / regulations development efforts
Conclusions

- There is a lot going on – the "new normal" is still evolving
- "Final" reports will incite more work
- Active involvement in the many issues challenges staffing levels of many organizations
- Catching up will also be difficult
Global Leadership for the Drilling Industry

http://iadc.org