National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling

Report to the President

www.oilspillcommission.gov
Improving the Safety of Offshore Operations
Safeguarding the Environment
Strengthening Spill Response, Planning and Capacity
Advancing Well Containment Capability
Restoring the Gulf of Mexico
Ensuring financial responsibility
Anticipating the challenges of Frontier Areas and the Arctic
The Macondo well blowout was the product of human error, engineering mistakes and management failures

- Failure to adequately evaluate and manage risk in late-stage well design decisions
- Failure to redesign cement slurry even after tests demonstrated problems
- Failure to stop after “negative pressure test” was unsuccessful three times
- Failure to recognize the temporary well-abandonment procedures risky
- Failure to communicate effectively last minute changes (plan changed four times)
- Failure to respond to early warning signs of hydrocarbon influx
- Failure to trigger BOP until too late
"The sad fact is that this was an entirely preventable disaster. Poor decisions by management were the real cause."-- Fred Bartlit, Chief Counsel

<table>
<thead>
<tr>
<th>Decision</th>
<th>Was There A Less Risky Alternative Available?</th>
<th>Less Time Than Alternative?</th>
<th>Decision-maker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Waiting for More Centralizers of Preferred Design</td>
<td>Yes</td>
<td>Saved Time</td>
<td>BP on Shore</td>
</tr>
<tr>
<td>Not Waiting for Foam Stability Test Results and/or Redesigning Slurry</td>
<td>Yes</td>
<td>Saved Time</td>
<td>Halliburton (and Perhaps BP) on Shore</td>
</tr>
<tr>
<td>Not Running Cement Evaluation Log</td>
<td>Yes</td>
<td>Saved Time</td>
<td>BP on Shore</td>
</tr>
<tr>
<td>Using Spacer Made from Combined Lost Circulation Materials to Avoid Disposal Issues</td>
<td>Yes</td>
<td>Saved Time</td>
<td>BP on Shore</td>
</tr>
<tr>
<td>Displacing Mud from Riser Before Setting Surface Cement Plug</td>
<td>Yes</td>
<td>Unclear</td>
<td>BP on Shore</td>
</tr>
<tr>
<td>Setting Surface Cement Plug 3,000 Feet Below Mud Line in Seawater</td>
<td>Yes</td>
<td>Unclear</td>
<td>BP on Shore (Approved by MMS)</td>
</tr>
<tr>
<td>Not Installing Additional Physical Barriers During Temporary Abandonment Procedure</td>
<td>Yes</td>
<td>Saved Time</td>
<td>BP on Shore</td>
</tr>
<tr>
<td>Not Performing Further Well Integrity Diagnostics in Light of Troubling and Unexplained Negative Pressure Test Results</td>
<td>Yes</td>
<td>Saved Time</td>
<td>BP (and Perhaps Transocean) on Rig</td>
</tr>
<tr>
<td>Bypassing Pits and Conducting Other Simultaneous Operations During Displacement</td>
<td>Yes</td>
<td>Saved Time</td>
<td>Transocean (and Perhaps BP) on Rig</td>
</tr>
</tbody>
</table>
The Compelling Need for a Culture of Safety
Raising Liability Caps and Promoting Financial Responsibility

Changing Legislation
Preventing Accidents: *Changing Government*

U.S. offshore drilling regulations and enforcement practices should be the most advanced in the world
Advancing Safety: *Changing Government*

Adequate, Stable Resources for Regulatory Oversight Funded by Industry

**FIGURE 3.3: MMS Budget and Gulf of Mexico Crude Oil Production, 1984-2009**
Largest environmental cleanup in U.S. History
Exxon Valdez – March 24, 1989
Mitigating Harm: *Containment and Response*

Increased Industry & Government Investment in Spill Response Technology
Mitigating Harm: *Containment and Response*

Better and Readily Deployable Containment Technology

Government In-House Containment Expertise

*Installing Subsea Oil Recovery System on Leak No 2*
Devoting damages and penalties paid by responsible parties to Gulf restoration, including 80 percent of Clean Water Act penalties
Ensuring Restoration: *Promoting Science*

**FIGURE 7.2: Coastal Marine Users**

Better, Science-Based Planning with Actual Plan Implementation
Arctic Boundary as defined by the Arctic Research and Policy Act (ARPA)

All United States and foreign territory north of the Arctic Circle and all United States territory north and west of the boundary formed by the Porcupine, Yukon, and Kuskokwim Rivers; all contiguous seas, including the Arctic Ocean and the Beaufort, Bering and Chukchi Seas; and the Aleutian chain.¹

Acknowledgement: Funding for this map was provided by the National Science Foundation through the Arctic Research Mapping Application (armap.org) and Contract #0520837 to CH2M HILL for the Interagency Arctic Research Policy Committee (IARPC).


¹ The Aleutian chain boundary is demarcated by the 'Contiguous zone' limit of 24-nautical miles.
Arctic Recommendations

• World class standards for Arctic operations
• Spill response equipment, testing, personnel training for ice
• Infrastructure for deploying equipment and personnel
• Coast Guard assets and capability
• Comprehensive, integrated ecosystem research to inform decisions
• RCAC for the Arctic
• International coordination, cooperation, exchanges, agreements
Changes in Government

- Restructuring of the three conflicting missions of MMS into separate entities with independent missions.
  - Bureau of Ocean Energy Management
  - Bureau of Safety and Environmental Enforcement
  - Office of Natural Resources Revenue
  Secretary creates Offshore Energy Safety Advisory Committee

- President Obama proposed raising fees on offshore drillers to help hire more than 100 inspectors to oversee the industry.

- NIH study on human health effects $17.8 million

- NRDA assessment and restoration plans for Gulf of Mexico
Changes in Industry

• Industry developing well containment systems: Marine Well Containment Co

  – Industry consortium developing new system that would take two to three weeks to deploy on a well site. It is designed for water depths of up to 8,000 feet and to handle up to 60,000 barrels of oil. A similar solution is proposed by Helix Energy Group.

  – System scheduled to be completed next year will be able to operate in up to 10,000 feet of water and handle up to 100,000 barrels of oil per day.

• API discussing industry-led safety institute and enhanced industry standards.
National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling

Report to the President

www.oilspillcommission.gov