



# After Deepwater Horizon: Safety in U.S. Waters

Lars Herbst, Gulf of Mexico Regional Director

# Agenda



- History of Major Milestones in Regulating Oil & Gas Development
- Regulatory Reviews Following Deepwater Horizon
- Permitting Process and Activity Levels following Deepwater Horizon
- Meeting the Regulatory Challenges of Deepwater

# Major Milestones in Regulating



January 1969

Santa Barbara Blowout & Spill, US Pacific

Outcome: National Environmental Policy Act of 1970

June 1979

Ixtoc I Blowout & Spill, Mexico

Outcome: MexUS agreement establishing procedures for bilateral responses to pollution incidents

March 1980

Kielland semi-submersible rig, Norway – North Sea

Outcome: reform gave the Norway Petroleum Directorate overall responsibility for offshore safety

# Major Milestones in Regulating



July 1988

Piper Alpha Explosion & Fire, UK – North Sea

Outcome: Safety regulation was moved from UK Department of Energy to Health and Safety Executive

April 1989

Exxon Valdez Tanker Spill, Alaska

Outcome: Oil Pollution Act of 1990

August 2009

Montara Blowout, Australia

Outcome: consolidated regulatory framework under NPSA

April 20, 2010



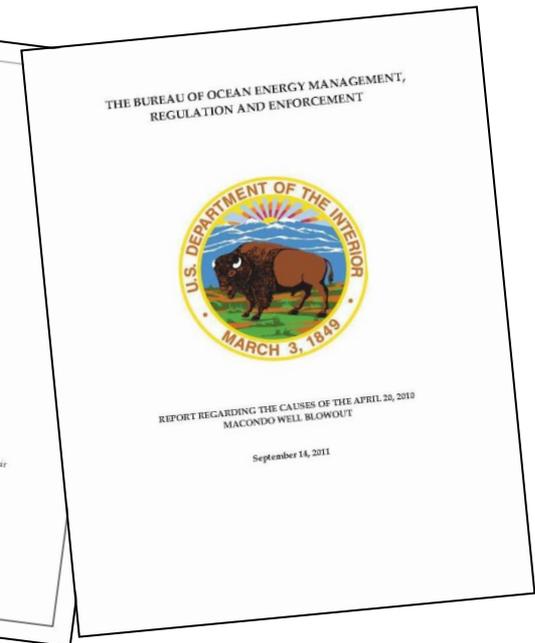
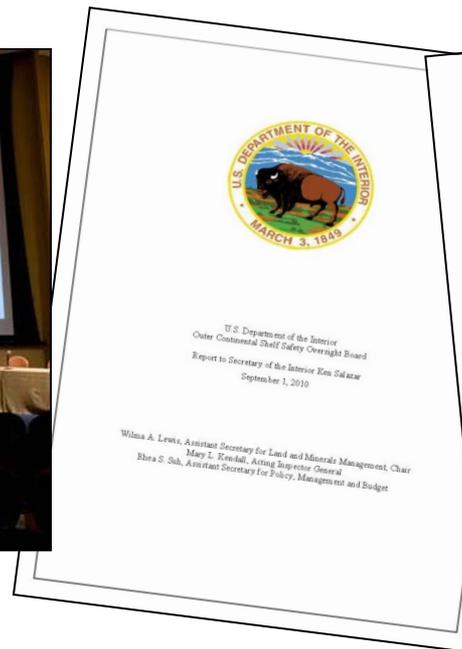
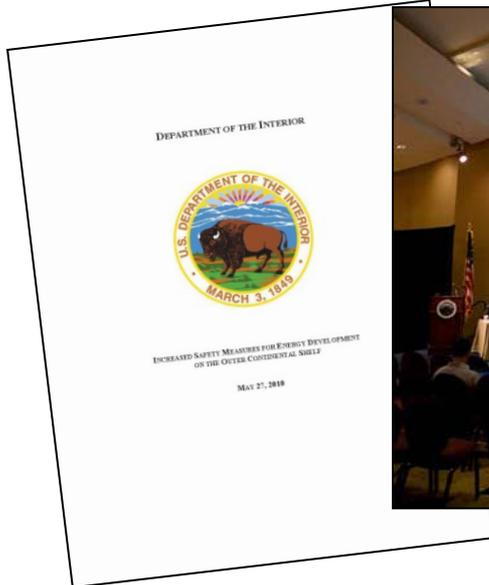
- **Deepwater Horizon Explosion and Oil Spill:** The events of April 20, 2010 which took place in deepwater Gulf of Mexico have forever impacted the regulatory framework of deepwater oil and gas operations.



# DOI Regulatory Reviews



- May 27, 2010: 30-Day Safety Report
- BOEMRE Director's Forums on Offshore Drilling
- Sept. 1, 2010: OCS Safety Oversight Board Report
- Sept. 14, 2011: Joint Investigation Team Final Report



# Reorganization



- June 2010 – Minerals Management Service renamed Bureau of Ocean Energy Management, Regulation and Enforcement
- October 2010 – Office of Natural Resources Revenue
- October 2011 – Bureau of Ocean Energy Management
- October 2011 – Bureau of Safety and Environmental Enforcement



- BSEE is responsible for regulatory, safety, environmental and conservation compliance for the development of the nation's offshore oil and gas and renewable energy resources.
- Functions:
  - regulations
  - inspection and enforcement program
  - permitting
  - safety management
  - environmental compliance and enforcement
  - oil spill response planning

# Interim Final Rule



- *also called **Drilling Safety Rule***
- Addresses both well bore integrity and well control equipment and procedures, including blowout preventers.
- Operators are now required to obtain independent third-party inspection and certification of the proposed drilling process.
- An engineer must certify that blowout preventers meet new standards for testing and maintenance and are capable of severing the drill pipe under anticipated well pressures.

# NTL – N10 Subsea Containment



- NTL 2010-N10: *Statement of Compliance with Applicable Regulations and Evaluation of Information Demonstrating Adequate Spill Response and Well Containment Resources*, effective 11-8-10.
- Gulf Regional staff have worked with the containment organizations.
- Formats for regional aspects are being established.
- A well containment screening tool has been developed.
- One approved permit has been analyzed with cap and flowback. All other permits approved to date since Deepwater Horizon have been analyzed as cap only designs.

# Safety & Environmental Management System



- All operators must be in compliance with the rule by November 15, 2011.
- Operators' upper management accountable for success of SEMS program
- Key to SEMS is Identification of hazards and their mitigation through hazards analysis and job safety analysis
- Operator personnel are responsible for the management and implementation on any facility regardless of whether that facility is totally operated by a contractor.
- BSEE will begin conducting audits to ensure that these SEMS plans are operative.

## SEMS II



- Implements independent third-party audits of operators' programs.
- Formalizes 'Stop Work Authority' program.

# Future Regulations



- **All future regulations will be developed using the Proposed Rulemaking procedures.**

# Well Permits



## Drilling Permits Update (as of 2/1/2012)



- Deepwater permits requiring subsea containment: Since applicants first successfully demonstrated containment capabilities in mid-February 2011, GOMR has **approved 255 of these permits for 71 unique wells**, with **50 permits pending**, and **12 permits returned** to the operator with requests for additional information, particularly information regarding containment. Twenty of the 50 pending permits are batch set wells for the Mars B and Big Foot deepwater development projects, with 18 of these submitted in December.

# Drilling Permits Update (as of 2/1/2012)



- Deepwater activities not requiring subsea containment: Since the implementation of new safety and environmental standards, **67 of these permits have been approved**, with **2 permits pending**, and **1 permits returned to the operator** with requests for additional information. These activities include water injection wells and procedures using surface blowout preventers on fixed platforms.

## Drilling Permits Update (as of 2/1/2012)

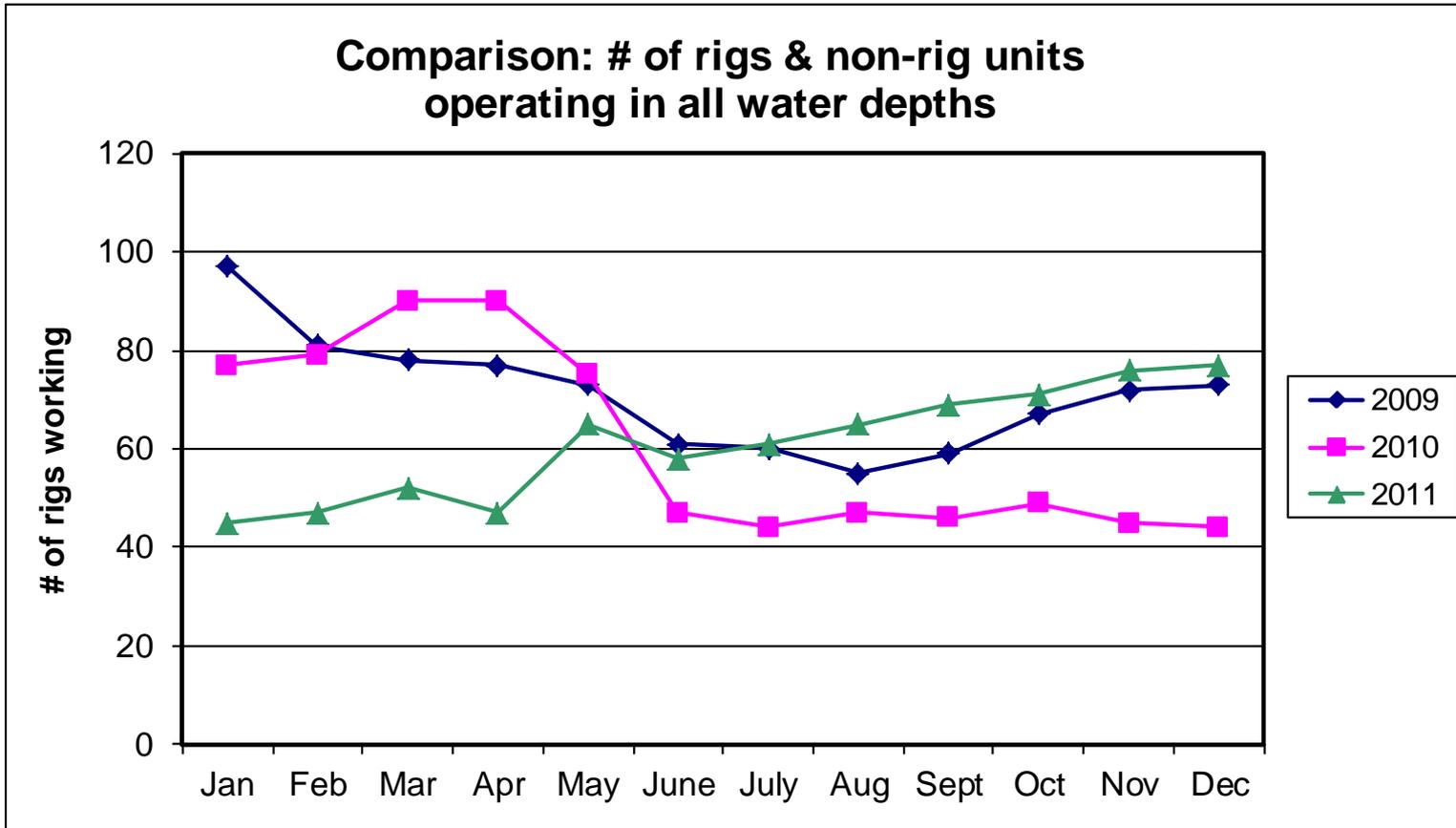


- Shallow water: To date, **104 new shallow water well permits have been issued** since the implementation of new safety and environmental standards on June 8, 2010. There are **11 of these permits pending**; with **10 returned to the operator** for more information.

# Rigs & Non-Rig Units: All Water Depths



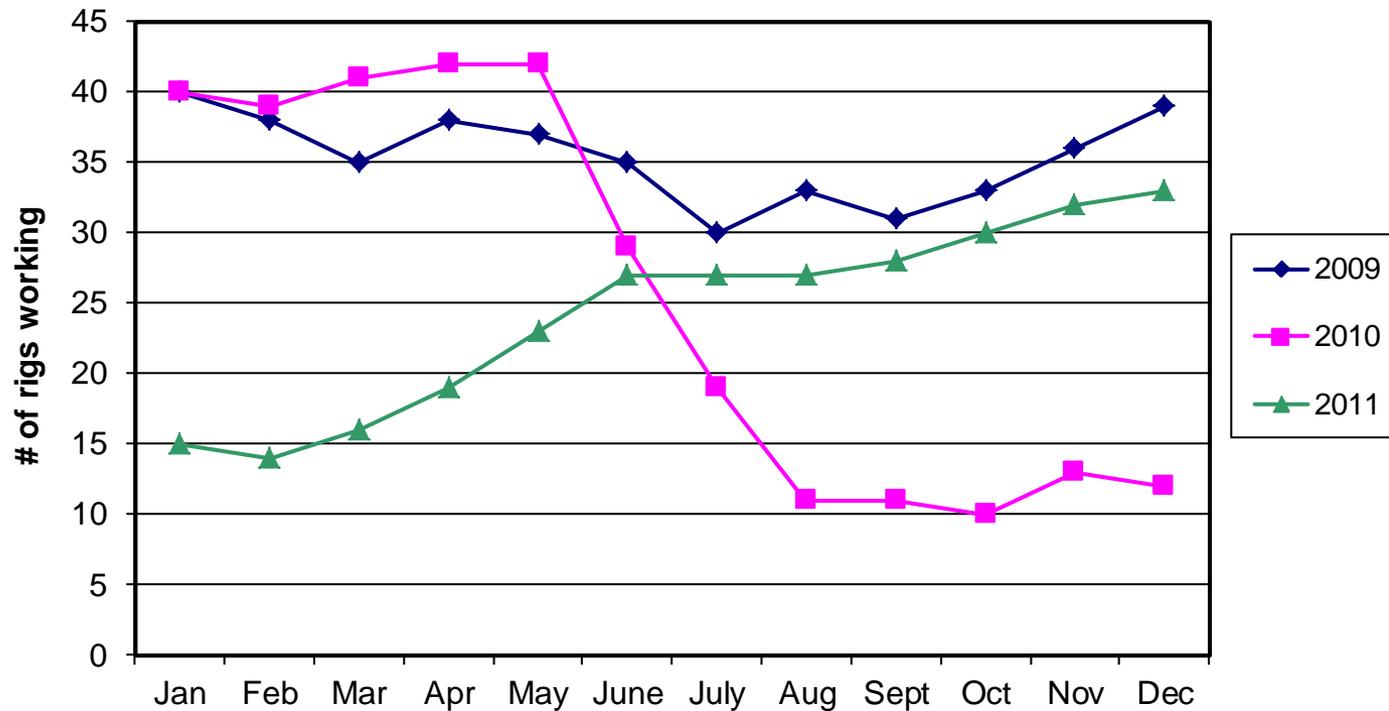
**Comparison: # of rigs & non-rig units operating in all water depths**



# Rigs & Non-Rig Units: Deepwater



**Comparison: # of rigs & non-rig units operating in deepwater**



# Future Activity



## New Deepwater Development Projects:

- Jack- St. Malo
- Mars B
- Big Foot
- Lucius/Hadrian
- Stones
- Who Dat
- Tubular Bells
- Kaskida (appraisal)
- Tiber (appraisal)

## Shelf Deep Gas Development

Davy Jones +

# Preparing for the Future



Utilizing knowledge & lessons learned from:

- Deepwater Operations Plans
- Accident Investigations
- Advisory committees  
(Ocean Energy Safety Advisory Committee)
- Other efforts addressing recommendations from Deepwater Horizon investigations and reviews

# Regulatory Path Forward



The best method of regulating offshore energy draws upon all regulatory approaches including:

- Prescriptive Regulations
- Performance-based Regulations
- Safety & Environmental Management System

# Meeting the Enforcement Challenges



- Specialization of inspectors
  - Witnessing BOP and secondary control systems
  - SCADA system analysis
- Inspector certification
- Environmental enforcement
- Measurement enforcement
- Enhanced aircraft capability
- Potential regulatory changes from accident investigations



Thank you for your attention.