

2005 Offshore Hurricane Readiness and Recovery Conference

July 26-27, 2005
InterContinental Houston Hotel
Houston, Texas

Welcome and Objectives

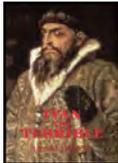
Sandi Fury, Chevron

Conference Sponsors

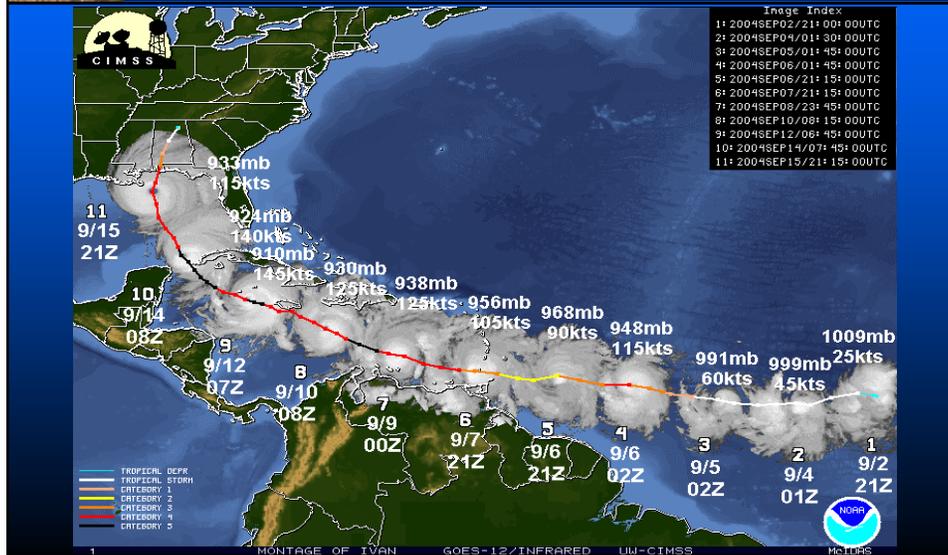
- Co Sponsors:
 - American Petroleum Institute
 - Offshore Operators Committee
 - Minerals Management Service
 - United States Coast Guard
 - United States Department of Energy
 - Office of Pipeline Safety
 - National Ocean Industries Association
 - Offshore Marine Service Association
- Endorsed by:
 - International Association of Drilling Contractors

Conference Expectations

- This is a working technical conference designed to:
 - Advance our understanding of the metocean conditions possible from extreme storm events like Hurricane Ivan
 - Put Ivan into a historical context with regard to resulting environmental forces
 - Assess the performance of Gulf of Mexico infrastructure to Ivan: MODUs, platform rigs, production platforms and pipelines
 - Identify gaps or opportunities for improvements to current design or operational standards that could improve the reliability and performance of infrastructure on the OCS to hurricane events
- We don't expect to have the answers to all of the questions by the end of the conference
- We do expect to leave the conference with a path forward to complete the performance assessment and answer the question "are the current design standards adequate?"



Hurricane Ivan



Industry Assessment

- Industry performance during Ivan was not atypical to historical hurricane performance, despite Ivan's severity
- Minimal release of oil to the environment is a testimony to the performance of safety devices / factors considered in design as well as prudent operational procedures
- Industry demonstrated the ability to move significant numbers of people from harms way through a timely and efficient evacuation
- Good collaboration by Industry in prioritizing use of resources in responding to exposure post Ivan
- Agency responsiveness to industry needs and requests facilitated return to normal operations

Industry Assessment

- Business Impact from Ivan was significant but generally resulted from the failure of a few pieces of infrastructure
- Opportunities have been identified for further consideration to improve reliability and performance of producing assets in the GOM to hurricane conditions

Opportunities for Further Consideration

Metocean

- Closer look at metocean conditions in shallow water
- Re-evaluate 100 yr and other return period wave heights
- Evaluate platform damage versus hindcasted waves
- Further validate deepwater currents

Opportunities for Further Consideration

Structural

- Sponsor a workshop to discuss structural damage caused by Ivan
- Consider need for additional guidance in RPs regarding securing of equipment on platform decks and topsides
- Consider air gap criteria for platform design and assessment
- Review guidance on identification of mudslide prone areas

Opportunities for Further Consideration

Drilling

- Consider establishment of reliability basis for GOM, including hurricane season
- Consider enhancements to API RP 4F to address loading issues and tie-downs associated with drilling structures

Opportunities for Further Consideration

- Pipeline
 - Better understand the factors contributing to pipeline performance during Ivan
 - » Consider geo-technical issues (mudslides, silting, seafloor mapping)
 - Update industry recommended practices based on research findings

Focus of Conference

- Collaboration of Industry and Government technical experts
 - To better understand performance issues and high-grade opportunities for further review
 - Further discussion of JIPs / studies as appropriate to address areas of concern or value added research opportunities
- Actively share derived information throughout industry

Today's Agenda

- Background
 - Work in progress – how did we get where we are?
- Perspective of the regulators
 - Performance of the Industry
 - Opportunities for improvement
- Grounding on the environmental conditions seen during Ivan
 - Metocean conditions and the relevance to current design standards
 - Advances in hurricane forecasting
 - Geotechnical issues associated with Ivan