



Gulf of Mexico OCS Region Update

Agenda



- Regulatory Update
- Gulf of Mexico Activity
- Areas of Concern
- Questions?

Regulatory Update



- Published proposed rulemaking
 - *Oil and Gas Production Safety Systems – Subpart H*
 - Included: safety and pollution prevention equipment lifecycle analysis, production safety systems, subsurface safety devices, and safety device testing
 - Published Aug. 2013; comment period closed Dec. 5, 2013.
 - Comments are being reviewed.
- Advanced Notice of Proposed Rulemaking
 - *improving the safety of helideck and aviation fuel operations on fixed offshore facilities*
 - Published Sept. 23, 2014; comment period extended Dec. 24, 2014.
- In preparation
 - *Well Control*

Proposed Well Control Rule



- Rule will address the myriad systems and processes involved in well control operations, including BOPs.
- Developing the Well Control Rule
 - Analyzed results from investigations and reviews of Deepwater Horizon loss of well control
 - Conducted planning to ensure resources are in place to implement and enforce regulations
 - Hosted a forum to bring together gov't, industry, academia, and stakeholders on this topic.
- Rule in final review. Will be published as a Proposed Rule with opportunity for Public Comment

Aviation Safety on Fixed Platforms



- Published Advanced Notice of Proposed Rulemaking
 - Focuses on improving the safety of helideck and aviation fuel operations on fixed offshore facilities.
 - Seeking comments on whether it should consider incorporating in its regulations certain industry and international standards for the design, construction and maintenance of offshore helidecks, as well as standards for aviation fuel quality, storage and handling.
 - Soliciting information on past accidents or other incidents involving helidecks, helicopters or aviation fuel on or near fixed OCS facilities.

NTLs – Recently Issued



NTL Number	Effective Date	Title
<u>2014-G05</u>	Dec. 2, 2014	Contact with District Offices, Pipeline Section, and Resource Conservation Section Outside Regular Work Hours
<u>2014-G04</u>	Oct. 22, 2014	New Address and Phone Numbers for the Lake Jackson District Office
<u>2014-G03</u>	Oct. 22, 2014.	Release of Well Data and Information
<u>2014-N03</u>	Sept. 30, 2014	eWell Permitting and Reporting System.
<u>2014-P01</u>	Sept. 29, 2014	New Address and Phone Numbers for the California District Office
<u>2014-G02</u>	Sept. 19, 2014	New Address for the Lake Charles District Office

Drilling Rigs Working in U.S. Gulf of Mexico



Platform Rig = 15



Semi-submersible = 13



Drillship = 23

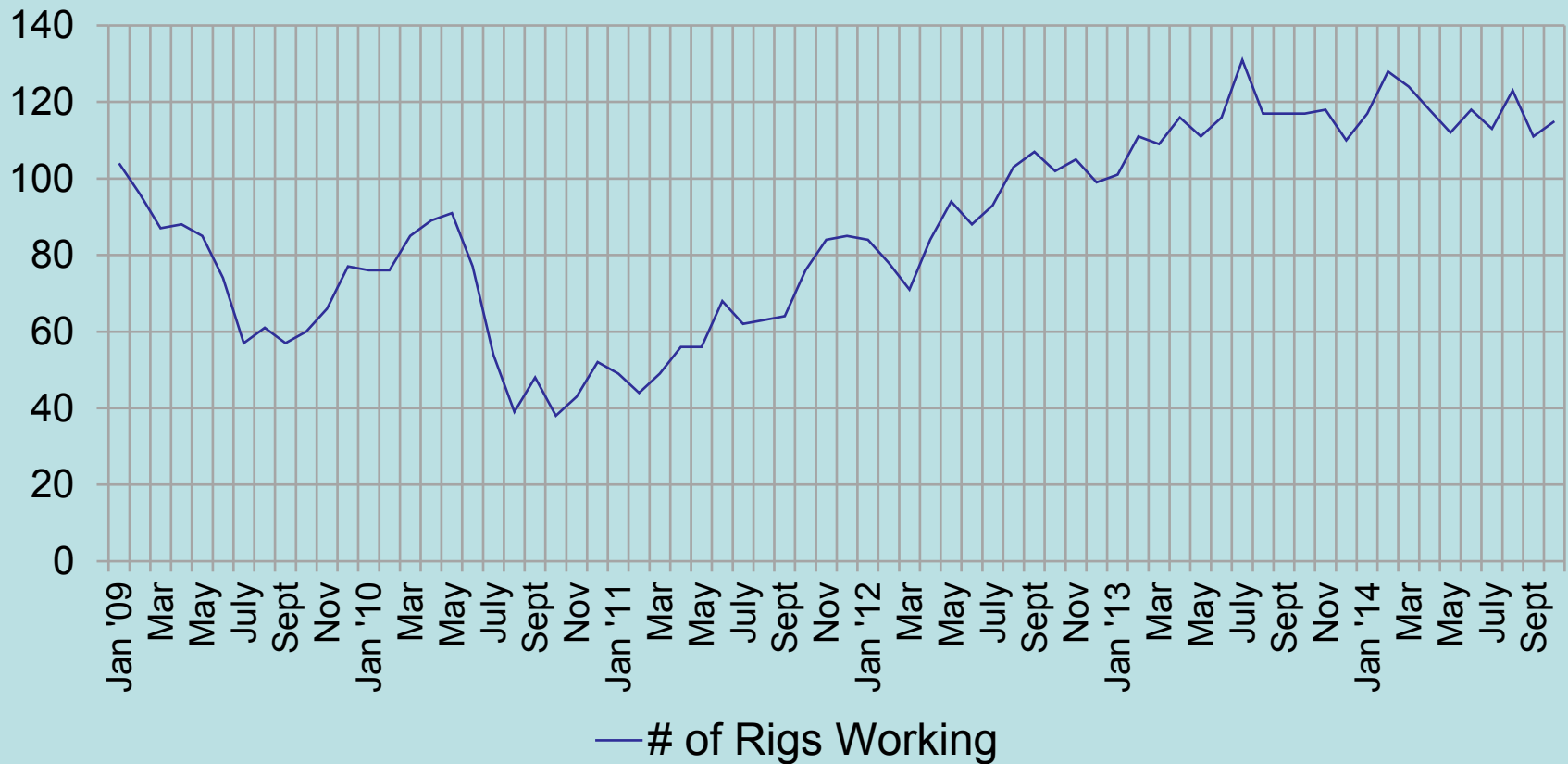


Jack-up rig = 19

Rigs/Units Activity in All Depths - Gulf of Mexico OCS



of Rigs/Units in All Depths - Gulf of Mexico OCS



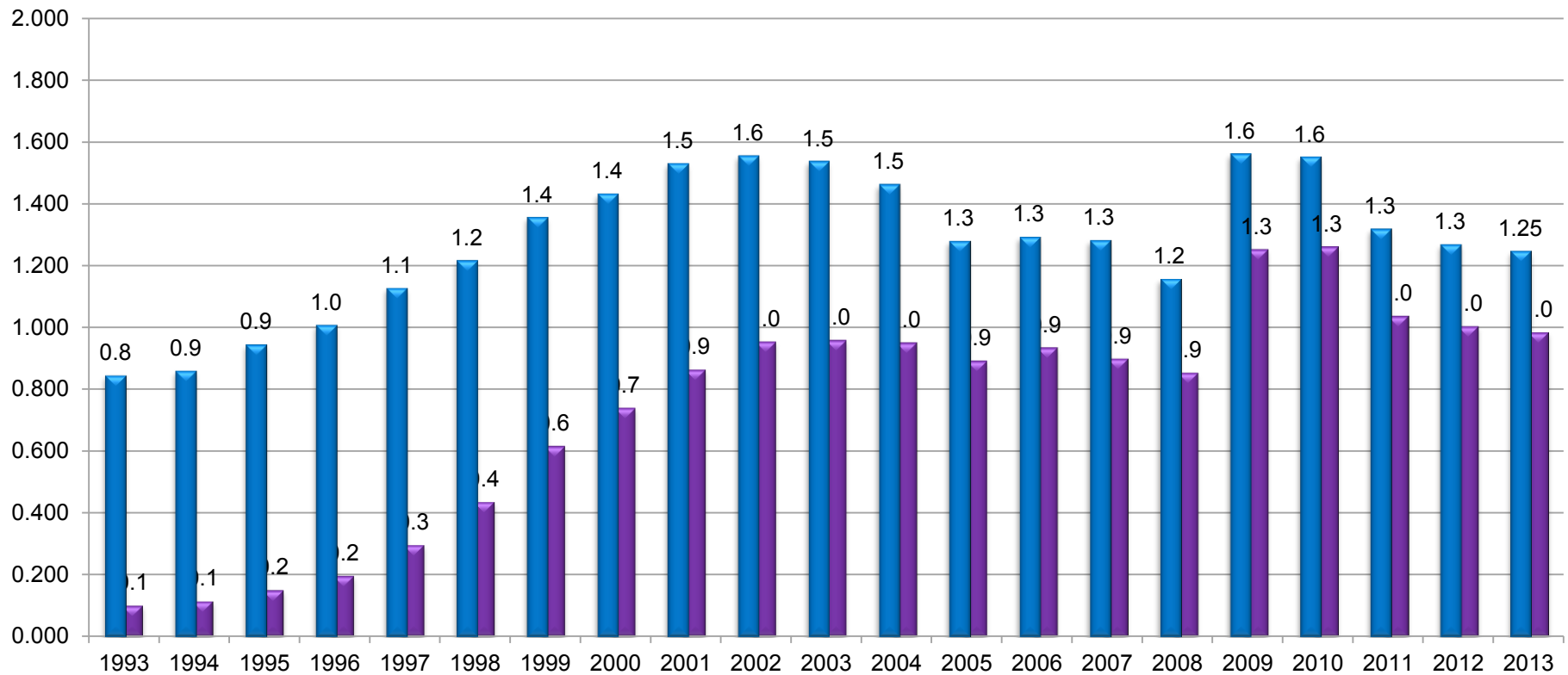
Gulf of Mexico OCS Oil Production

Total vs. Deepwater



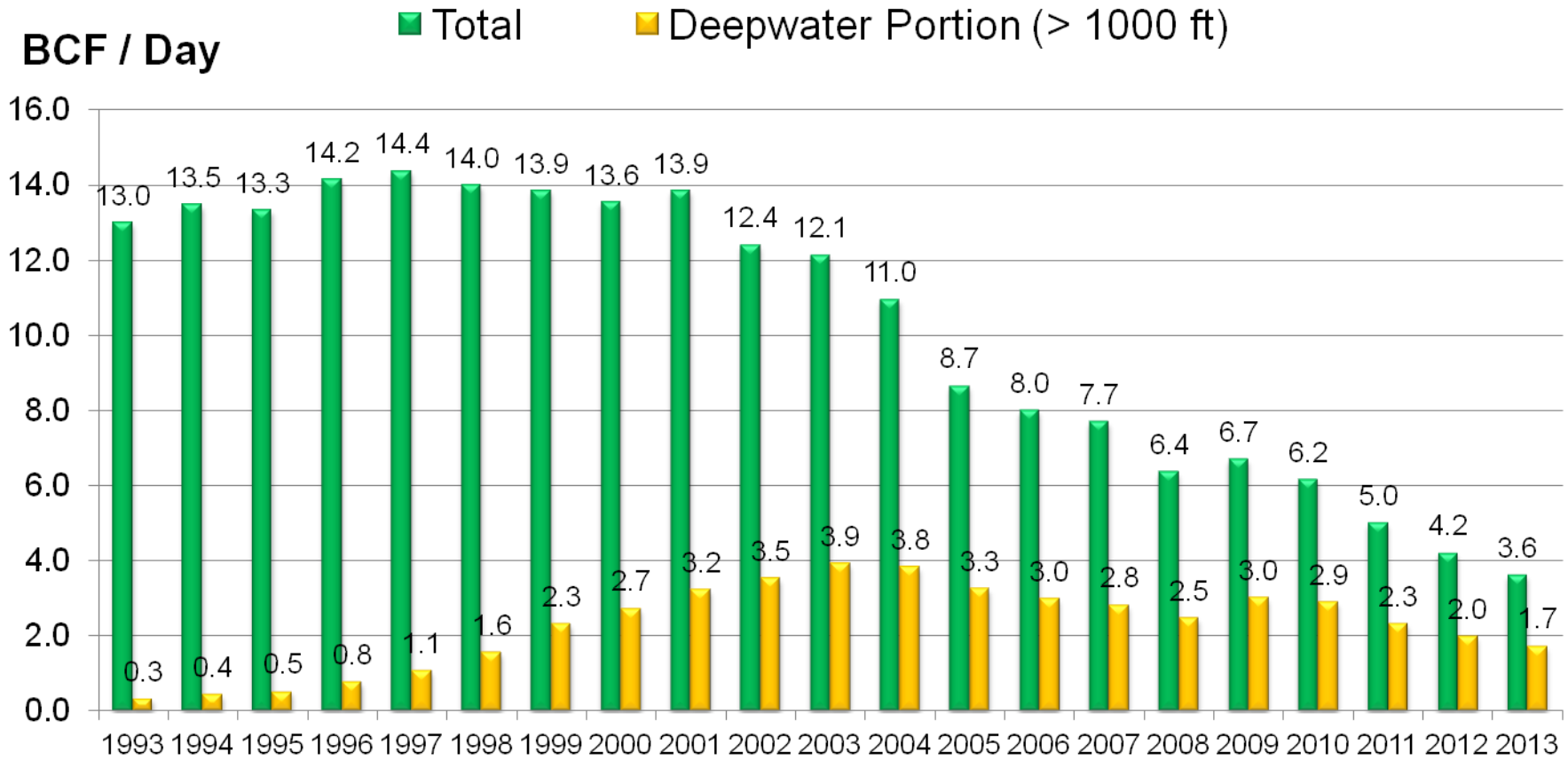
MM Bbls /Day

■ Total ■ Deepwater Portion (> 1000 ft)



Approximate Annual Production – 459 million barrels

Gulf of Mexico OCS Gas Production Total vs. Deepwater



Approximate Annual Production – 1,328 trillion cubic feet

Incident Data



Incidents/Spills by Category: CY 2007 – 2014

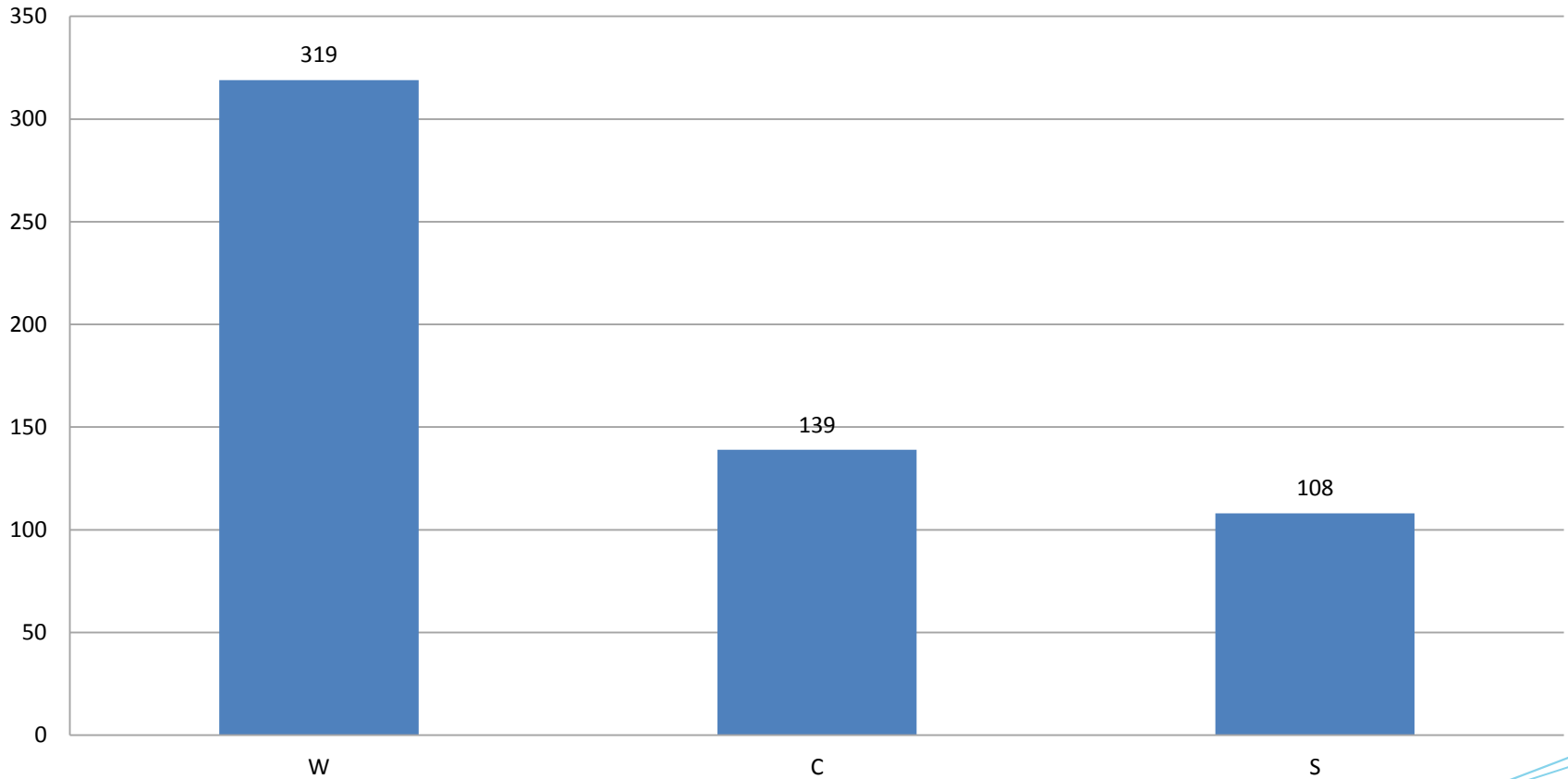
TYPE	2007		2008		2009		2010		2011		2012		2013		2014 ytd
	GOM	PAC	GOM	PAC	GOM	PAC	GOM	PAC	GOM	PAC	GOM	PAC	GOM	PAC	GOM
FATALITIES	5	0	11	0	4	0	12	0	3	0	4	0	3	0	1
INJURIES	423	17	318	14	285	16	273	12	213	18	253	34	226	21	229
LOSS OF WELL CONTROL	7	0	8	0	6	0	4	0	3	0	4	0	8	0	7
FIRES/ EXPLOSIONS	110	8	139	12	133	12	126	4	103	2	134	6	97	6	97
COLLISIONS	20	1	22	0	29	0	8	0	14	0	9	1	19	0	9
SPILLS >= 50	4	0	33	0	11	0	5	0	3	0	8	0	6	0	6
OTHER	268	27	278	36	308	28	155	17	186	15	236	41	272	38	355
INCIDENT TOTAL FOR YEAR	837	53	809	62	776	56	583	33	525	35	648	82	625	65	600
COMBINED TOTAL FOR THE YEAR	890		871		832		616		560		730		690		

SOURCE: BSEE Database

Well Operations Enforcement Actions



GOMR Well Operations INCs by Enforcement Type (2013-2014 ytd)



Well Operations Shut-In INCS

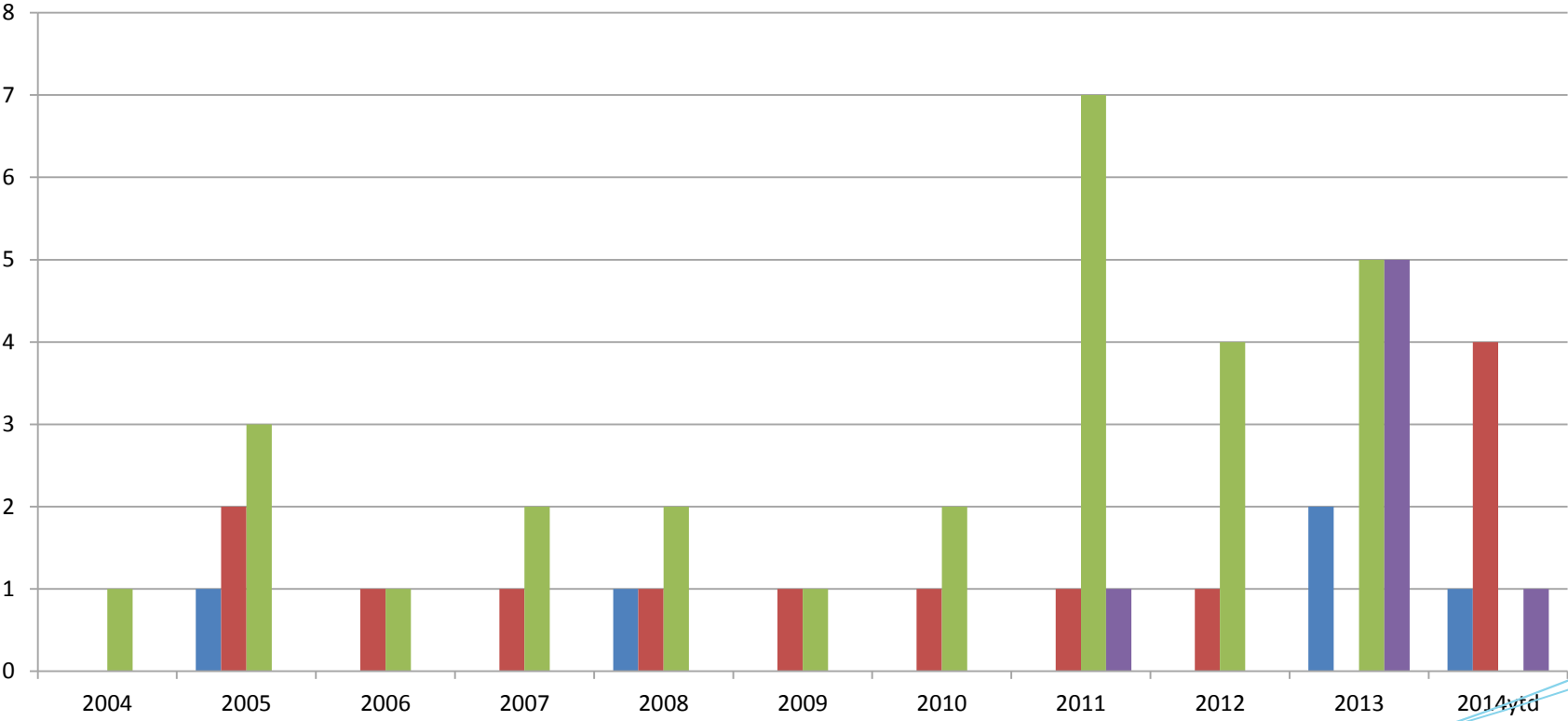


- Approximately 25-percent of the S-INCS associated with drilling from 2013-2014(ytd) were G110s which capture a wide range of unsafe or unworkmanlike compliance issues.
- Approximately 17-percent of the S-INCS associated with drilling from 2013-2014(ytd) were compliance issues associated with the following PINCs:
 - D501 (6 S-PINCs)
 - D425 (5 S-PINCs) 90% Issued to rigs operating in shallow water
 - D412 (4 S-PINCs)
 - D203 (3 S-PINCs)



Shut-In Compliance Trends

■ D203-Accumulator ■ D412-Fluid Return Alarms ■ D425-Gas Detectors ■ D501-BOP Inspection



Dynamic Positioning Issues



- 2014 - 3 Loss of station keeping incidents
 - Two rigs and one production facility
- 2013 - 2 Loss of station keeping incidents
 - Two rigs
- 2012 - 1 Loss of station keeping incidents
 - One rig
- 2011 - 2 Loss of station keeping incidents
 - Two rigs

Forward Looking



- Managed Pressure Drilling/
Dual Gradient Drilling
- Assessing BOP Integrity Risks
- HPHT Wells and Equipment
- Realignment Effort

Managed Pressure Drilling/ Dual Gradient Drilling



- BSEE believes the further development of this technology can prove to be beneficial to many of the complex wells drilled in the deepwater GOM.
- BSEE believes that assurance testing must be completed to demonstrate that barrier integrity is maintained.

Means of Assuring BOP System Integrity



- Testing
 - Pre-Deployment Testing(Stump Test)
 - Deployment Testing(Initial Latch Up)
 - Frequency Based Testing
- Real Time Monitoring System
 - Electrical Component Integrity (Electronic Signals)
 - Hydraulic Component Integrity (Hydraulic Function/No Leaks)
 - Mechanical Components (SPMs, Shuttle valves, Rams, etc.)

Assessing BOP Integrity Risks



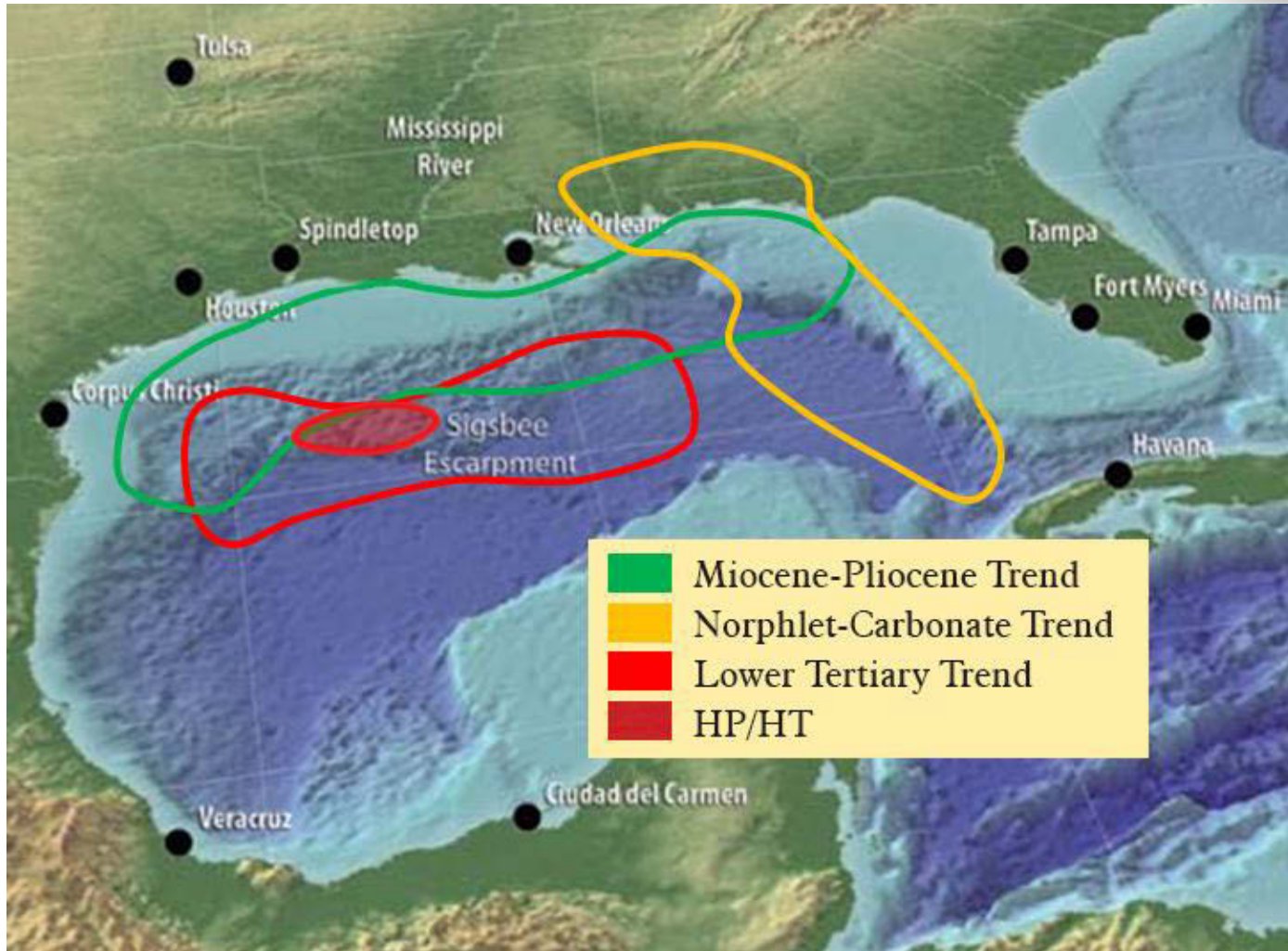
- Barrier Analysis
 - Traditional assessment of Barrier Integrity
 - Multiple Barrier Analysis
 - Assessment Tools (Programmed Logic)
- Reliability Data
 - Component Failure rate (MTTF)

BOP Integrity- What Is Needed



- BOP health monitoring systems need to be further tested and refined
- Results of BOP Health monitoring needs to be married to programmed logic risk assessment tool
- Mean Time To Failure data for BOP components needs to be established and incorporated into programmed logic risk assessment tool
- By accomplishing these tasks a Real Time BOP Integrity/Risk Assessment System could be implemented to reduce well control risks

High Pressure/ High Temperature (HPHT)



HPHT Equipment Needs



- 20 K BOP System
- Riser to handle 20K BOP System
- Rig Derrick and drawworks for 20 K BOP System
- 20 K Wellhead System
- Completion equipment
- Seals

Realignment Efforts



- Enforcement
- Investigations
- Data Stewardship
- National Technology Center



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