

A photograph of an offshore oil rig at sunset. The rig is silhouetted against a bright orange and yellow sky with scattered clouds. The sun is low on the horizon, creating a shimmering reflection on the dark blue water. In the foreground, there are two smaller support vessels, also silhouetted. The overall scene is dramatic and industrial.

Marine Board Spring Meeting

Incident Reporting and Data Analysis

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Washington, DC

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Investigations

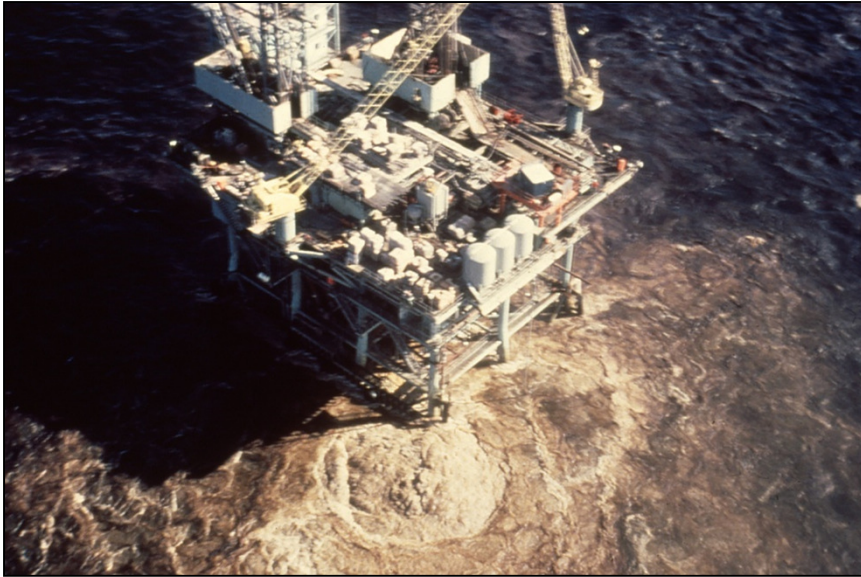
**Data
Collection and
Management**

**Analyses and
Follow-up**

The Big Picture

Messages

1. Incident reporting requirements must be prescriptive.
2. Reporting must be mandatory and verified.
3. Collection and verification must be directed by an independent entity or regulator.
4. Only personal information should be confidential.
5. Objectives and definitions must be clear.
6. Expand incrementally.
7. More analysis of existing data is needed.
8. Cooperate internationally.
9. All major OCS disasters were easily preventable.
10. Act promptly on obvious findings.



Santa Barbara Blowout (1969)

Probability of a Major Oil Blowout (Drilling)

Optimal Barrier Management: $<10^{-5}$



Historically: $<10^{-4}$



Santa Barbara Well Design: $>10^{-2}$

Montara Blowout – 21 August 2009



One compromised barrier

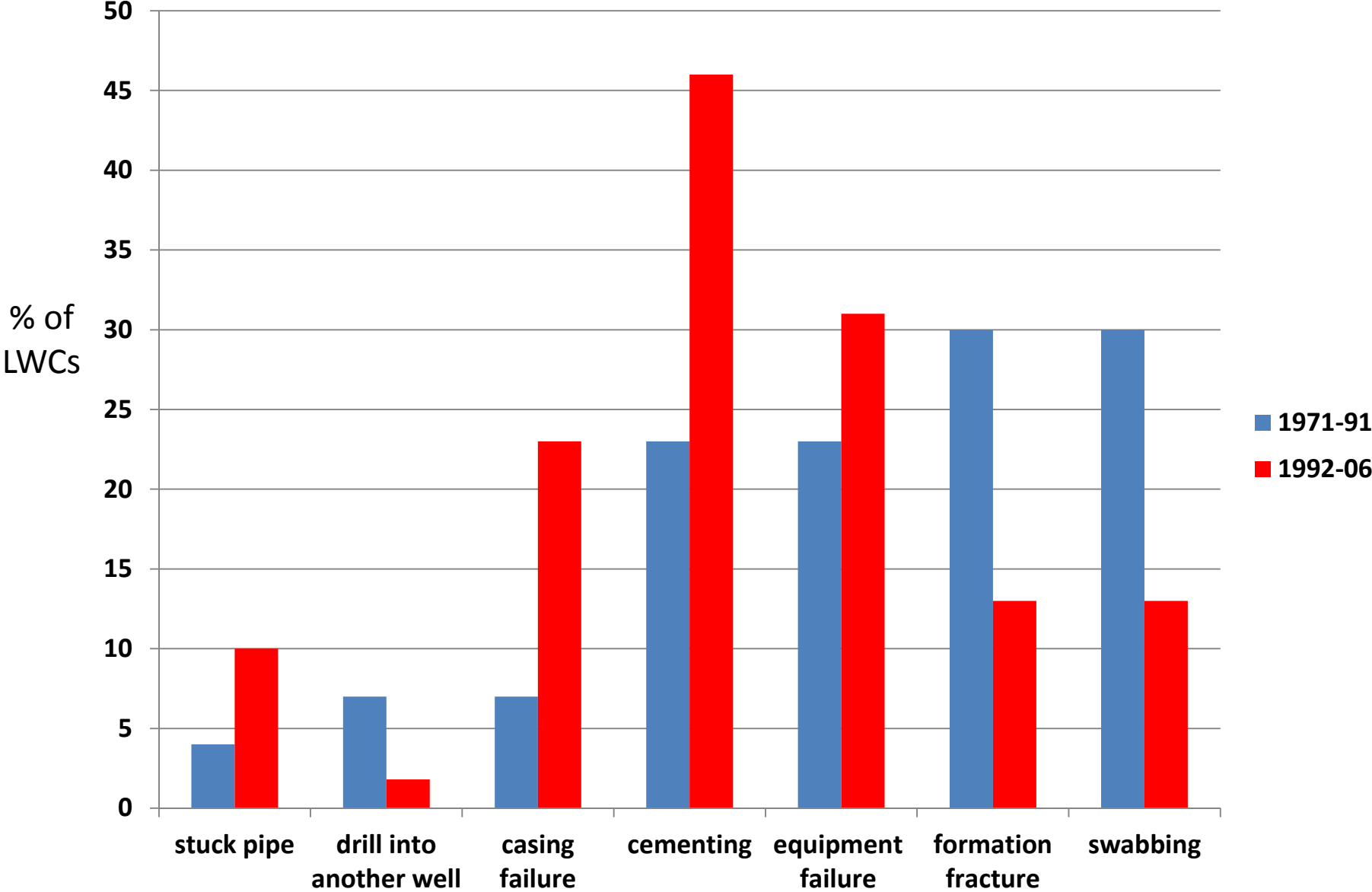


Montara Blowout

Montara and Macondo had similar root causes:

- **Annulus cement barrier did not isolate the hydrocarbons**
- **The shoe track barriers did not isolate the hydrocarbons**
- **Shoe track barrier not properly verified**
- **No secondary barrier in production casing**

Losses of Well Control - Contributing Factors



2006 Revisions to MMS Accident Reporting Rule

- Prior to change, regulations required “all serious accidents, any death or serious injury, and all fires, explosions, and blowouts” to be reported
- 2006 rule (proposed in 2003) broadened the scope to include those incidents that **had the potential to be serious:**

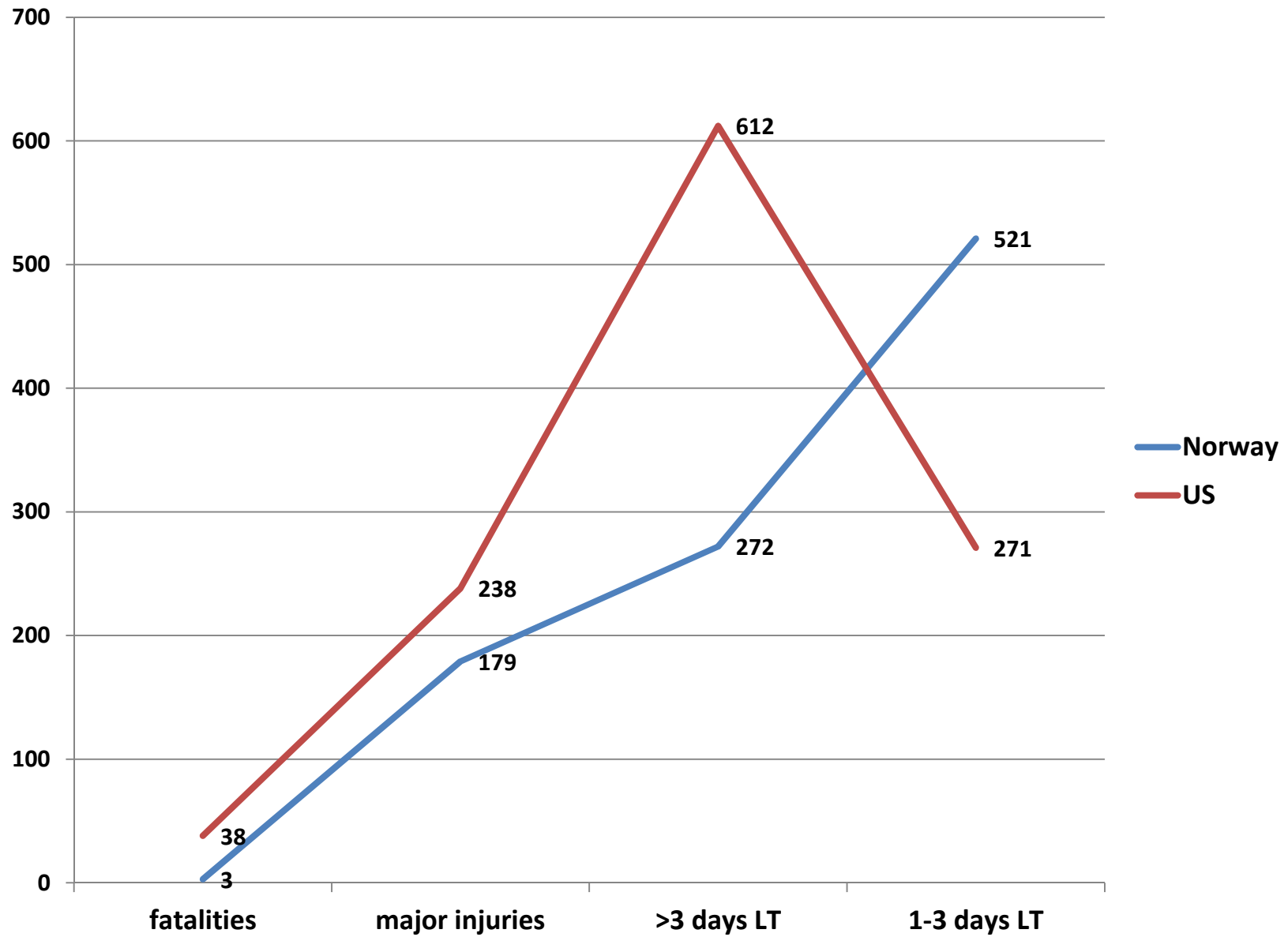
MMS is requiring reporting down to this level to learn more about the causes of all incidents. MMS considers these less serious incidents to be the “near misses” that could have resulted in more serious consequences.

- Trade associations strongly objected; elevated to OMB
 - “Overly prescriptive”
 - “Burdensome”

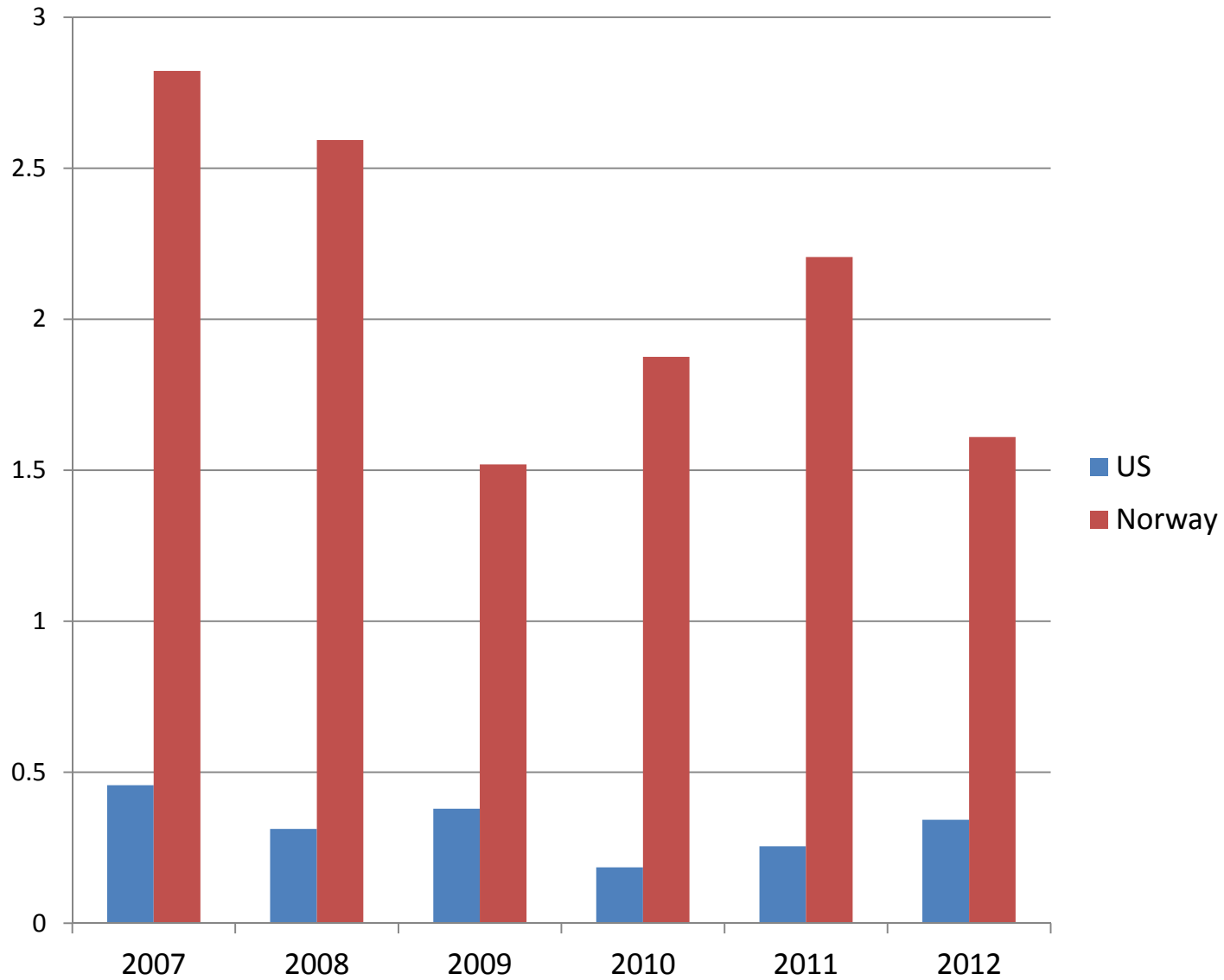
OCS Incidents/Spills by Category: CY 2007 – 2013 (1/14/2014)

TYPE <i>(Click for more info)</i>	2007		2008		2009		2010		2011		2012		2013	
	GOM	PAC	GOM	PAC	GOM	PAC	GOM	PAC	GOM	PAC	GOM	PAC	GOM	PAC
<u>FATALITIES</u>	5	0	11	0	4	0	12	0	3	0	4	0	3	0
<u>INJURIES *** #</u>	423	17	318	14	285	16	273	12	213	18	253	34	226	21
<u>LOSS OF WELL CONTROL ***</u>	7	0	8	0	6	0	4	0	3	0	4	0	9	0
<u>FIRES/EXPLOSIONS</u>	110	8	139	12	133	12	126	4	103	2	131	6	97	6
<u>COLLISIONS ***</u>	20	1	22	0	29	0	8	0	14	0	9	1	19	0
<u>SPILLS ≥ 50 bbls</u>	4	0	33	0	11	0	5	0	3	0	8	0	^	^
<u>OTHER ***</u>	268	27	278	36	308	28	155	17	186	15	236	41	272	38
INCIDENT TOTAL FOR THE YEAR	837	53	809	62	776	56	583	33	524	35	648	82	626	55
COMBINED TOTAL FOR THE YEAR	890		871		832		616		559		730		691	

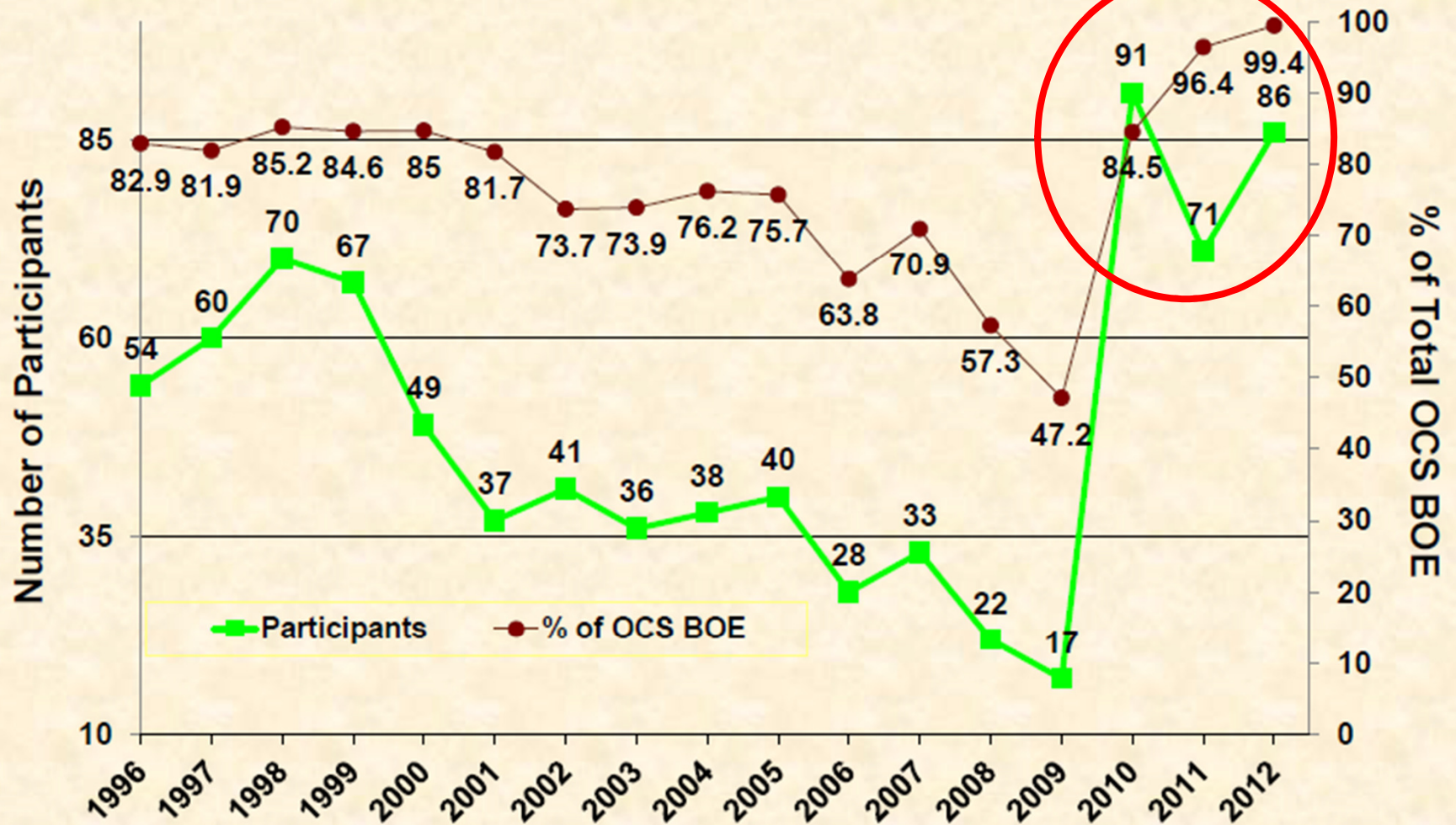
Incident Reports by Category (2007-12 IRF Data)



1-3 Day LTIs per Million Hours Worked

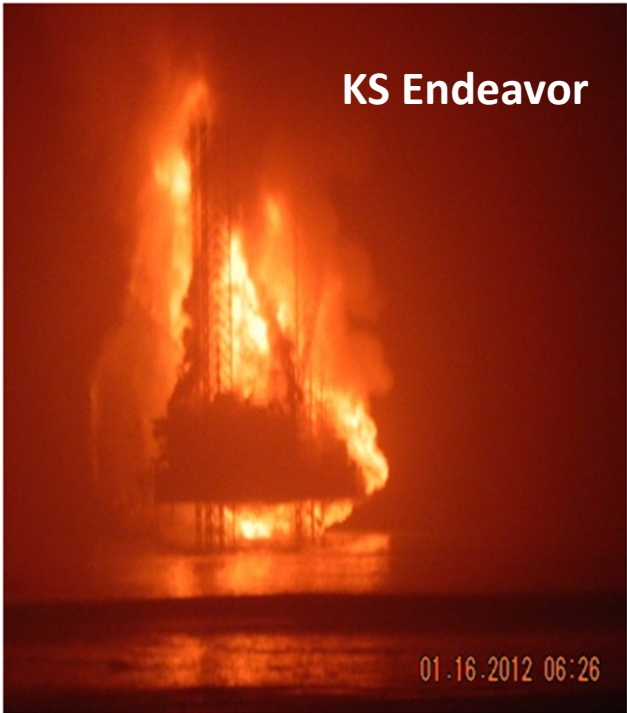


Participation in OCS Performance Data Survey



Bureau of Safety and Environmental Enforcement





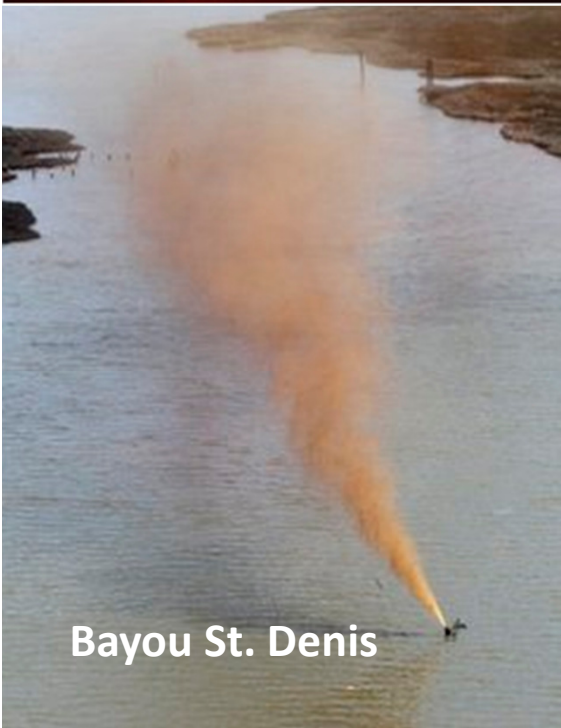
KS Endeavor



Aban Pearl



Russell Peterson



Bayou St. Denis



Jupiter

It should be easier for rival companies to share information on near-misses and more serious incidents. "There's a bit of an embarrassment factor there - nobody wants to share their dirty laundry." Peter Coleman, CEO, Woodside Petroleum

