Gulf of Mexico OCS Region Update

Lars Herbst, Regional Director
Agenda

Regulatory Update

Gulf of Mexico Activity

Offshore Safety Priorities

Questions?
Published proposed rulemaking

*Oil and Gas Production Safety Systems – Subpart H*

Published August 22, 2013, comment period was extended and closed December 5, 2013

Includes: safety and pollution prevention equipment lifecycle analysis, production safety systems, subsurface safety devices, and safety device testing

In preparation, due out in 2014

*Blowout Prevention Systems*

*Arctic (joint with BOEM)*
Upcoming Proposed Rules

Suspensions of Production and Operations

Natural Gas Fluids Measurement

Oil Spill Mechanical Recovery
# Drilling Permits

<table>
<thead>
<tr>
<th>Year</th>
<th>Shallow Water &lt; 500 ft.</th>
<th>Deepwater &gt; 500 ft.</th>
<th>Total Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New Well</td>
<td>Bypass</td>
<td>Sidetrack</td>
</tr>
<tr>
<td>2013</td>
<td>72</td>
<td>51</td>
<td>120</td>
</tr>
<tr>
<td>2012</td>
<td>67</td>
<td>42</td>
<td>108</td>
</tr>
<tr>
<td>2011</td>
<td>71</td>
<td>40</td>
<td>87</td>
</tr>
<tr>
<td>2010</td>
<td>72</td>
<td>32</td>
<td>92</td>
</tr>
<tr>
<td>2009</td>
<td>95</td>
<td>28</td>
<td>70</td>
</tr>
</tbody>
</table>
Rig Activity

# of Rigs in All Depths - Gulf of Mexico OCS


# of Rigs

0 20 40 60 80 100 120 140
Drilling Rigs Working in U.S. Gulf of Mexico

Platform Rig = 24
Semi-submersible = 20
Drillship = 19
Jack-up rig = 25
<table>
<thead>
<tr>
<th>Deepwater Rig &amp; Type</th>
<th>Operator</th>
<th>Quarter Expected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seadrill West Auriga drillship</td>
<td>BP</td>
<td>3rd Qtr. 2013</td>
</tr>
<tr>
<td>Noble Don Taylor drillship</td>
<td>Shell</td>
<td></td>
</tr>
<tr>
<td>Seadrill West Vela – drillship</td>
<td>BP</td>
<td>4th Qtr. 2013</td>
</tr>
<tr>
<td>Stena IceMAX – drillship</td>
<td>Shell</td>
<td></td>
</tr>
<tr>
<td>Diamond Offshore Ocean Onyx – rebuilt semi</td>
<td>Apache</td>
<td></td>
</tr>
<tr>
<td>Atwood Advantage – drillship</td>
<td>Noble Energy</td>
<td></td>
</tr>
<tr>
<td>Maersk Viking – drillship</td>
<td>ExxonMobil</td>
<td>1st Qtr. 2014</td>
</tr>
<tr>
<td>Sevan Louisiana – cylinder hull</td>
<td>LLOG Exploration</td>
<td></td>
</tr>
<tr>
<td>Diamond Offshore Ocean Blackhawk – drillship</td>
<td>Anadarko</td>
<td>2nd Qtr 2014</td>
</tr>
<tr>
<td>Noble Bob Douglas – drillship</td>
<td>Anadarko</td>
<td>3rd Qtr. 2014</td>
</tr>
<tr>
<td>Maersk Valiant – drillship</td>
<td>ConocoPhillips</td>
<td>3rd Qtr. 2014</td>
</tr>
<tr>
<td>Transocean Deepwater Invictus – drillship</td>
<td>BHP Billiton</td>
<td>4th Qtr 2014</td>
</tr>
<tr>
<td>Pacific Sharav – drillship</td>
<td>Chevron</td>
<td>3rd Qtr. 2014</td>
</tr>
<tr>
<td>Diamond Offshore Ocean BlackHornet – drillship</td>
<td>Anadarko</td>
<td>3rd Qtr. 2014</td>
</tr>
<tr>
<td>Noble Sam Croft – drillship</td>
<td>Freeport McMoran</td>
<td></td>
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<tr>
<td>Rowan Resolute – drillship</td>
<td>Anadarko</td>
<td></td>
</tr>
<tr>
<td>Seadrill West Neptune – drillship</td>
<td>LLOG Exploration</td>
<td>4th Qtr 2014</td>
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<tr>
<td>Rowan Reliance - drillship</td>
<td>Cobalt Intl. Energy</td>
<td>1st Qtr 2015</td>
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<tr>
<td>Noble Tom Madden - drillship</td>
<td>Freeport McMoran</td>
<td></td>
</tr>
<tr>
<td>ENSCO DS-9 – drillship</td>
<td>Conoco Phillips</td>
<td>3rd Qtr 2015</td>
</tr>
</tbody>
</table>
Production Facilities

Shallow Water Production Facilities (less than 500 ft)

- Single Caisson
- 4 Pile Caisson

2647

Deepwater Production Facilities (greater than 500 ft)

- Fixed
- SPAR
- TLP
- FPSO

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# New Gulf of Mexico Deepwater Projects

<table>
<thead>
<tr>
<th>Deepwater Project</th>
<th>Operator</th>
<th>1st Production Expected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olympus TLP (Mars B) {**subsea}</td>
<td>Shell</td>
<td>Started production 1st Qtr. 2014</td>
</tr>
<tr>
<td>Mississippi Canyon 806</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jack – St. Malo</td>
<td>Chevron</td>
<td>2014</td>
</tr>
<tr>
<td>Walker Ridge 718</td>
<td></td>
<td></td>
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<tr>
<td>Big Foot</td>
<td>Chevron</td>
<td>2014</td>
</tr>
<tr>
<td>Walker Ridge 29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lucius (oil/gas)/S. Hadrian (gas)</td>
<td>Anadarko/ExxonMobil</td>
<td>2014</td>
</tr>
<tr>
<td>Keathley Canyon 875</td>
<td></td>
<td></td>
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<tr>
<td>Tubular Bells</td>
<td>Hess</td>
<td>2014</td>
</tr>
<tr>
<td>Mississippi Canyon 725</td>
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<tr>
<td>Delta House</td>
<td>LLOG Exploration</td>
<td>2015</td>
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<tr>
<td>Mississippi Canyon 254</td>
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<td></td>
</tr>
<tr>
<td>Olympus TLP (Mars B) {**platform}</td>
<td>Shell</td>
<td>2015</td>
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<tr>
<td>Mississippi Canyon 806</td>
<td></td>
<td></td>
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<tr>
<td>Heidelberg</td>
<td>Anadarko</td>
<td>2016</td>
</tr>
<tr>
<td>Green Canyon 860</td>
<td></td>
<td></td>
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<tr>
<td>Stones (**2nd FPSO in GOM)</td>
<td>Shell</td>
<td>2016</td>
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<tr>
<td>Walker Ridge 508</td>
<td></td>
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</table>
Offshore Safety Priorities

Safety and Environmental Management System (SEMS)

Performance Analysis

Integration of Findings across Performance Improvements Efforts
SEMS

Initial deadline – Nov. 15, 2013

84 Audit Reports were submitted by operators to BSEE
SEMS Audits Summary

Most operators complied with auditing deadlines
Undesirable variation in quality of reports
Demonstrated SEMS in place; set baseline
Good cross-section of activities for facilities selected

What does 15% audited look like for this operator?
SEMS Audits Summary

Most operators complied with auditing deadlines
Undesirable variation in quality of reports
Demonstrated SEMS in place; set baseline
Good cross-section of activities for facilities selected

At least 15% of total facilities audited for Operator XYZ
When you perform an audit at this time, the requirements are the.....

- Same as previous audit cycle
- New SEMS elements (SWA, UWA, etc.)
- New Auditor req’ments (ASPs & ABs)

November 15, 2013
End of First Audit Cycle*

June 4, 2014
SEMS II Effective Date

June 4, 2015
SEMS II Auditing Effective Date

Future Cycles Unique to Each Operator
Performance Analysis

Annual Performance Review (APR) – a discussion between an operator and BSEE based on an analysis of the operator’s yearly performance. Multiple indicators are used in the analysis.

Yearly Discussion Topics –
Compliance History, Idle Iron, Aging Facility Plans, drilling, workover & abandon permitting, contractor issues, SEMS

Total Gulf operator APRs held in 2014: 51
## Incident Investigations

### OCS Incidents/Spills by Category: CY 2007 – 2013

<table>
<thead>
<tr>
<th>TYPE</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
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<tbody>
<tr>
<td></td>
<td>GOM</td>
<td>PAC</td>
<td>GOM</td>
<td>PAC</td>
<td>GOM</td>
<td>PAC</td>
<td>GOM</td>
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<tr>
<td>FATALITIES</td>
<td>5</td>
<td>0</td>
<td>11</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>12</td>
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<tr>
<td>INJURIES</td>
<td>423</td>
<td>17</td>
<td>318</td>
<td>14</td>
<td>285</td>
<td>16</td>
<td>273</td>
</tr>
<tr>
<td>LOSS OF WELL CONTROL</td>
<td>7</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>FIRES/EXPLOSIONS</td>
<td>110</td>
<td>8</td>
<td>139</td>
<td>12</td>
<td>133</td>
<td>12</td>
<td>126</td>
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<td>COLLISIONS</td>
<td>20</td>
<td>1</td>
<td>22</td>
<td>0</td>
<td>29</td>
<td>0</td>
<td>8</td>
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<tr>
<td>SPILLS ≥ 50 bbls</td>
<td>4</td>
<td>0</td>
<td>33</td>
<td>0</td>
<td>11</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>OTHER</td>
<td>268</td>
<td>27</td>
<td>278</td>
<td>36</td>
<td>308</td>
<td>28</td>
<td>155</td>
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<tr>
<td>INCIDENT TOTAL FOR THE YEAR</td>
<td>837</td>
<td>53</td>
<td>809</td>
<td>62</td>
<td>776</td>
<td>56</td>
<td>583</td>
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<tr>
<td>COMBINED TOTAL FOR THE YEAR</td>
<td>890</td>
<td>871</td>
<td>832</td>
<td>616</td>
<td>560</td>
<td>730</td>
<td>691</td>
</tr>
</tbody>
</table>

**SOURCE:** BSEE Database as of 14-Jan-2014
Loss of Well Control in GOM 2009-2013

Well-Related Activity: Total of (1) the number of new wells spud plus (2) the number of wells reentered for the purpose of reworking or abandonment during a calendar year.
Well Control Incidents in 2013

2-05-13 Apache @ Main Pass 295
2-11-13 BP @ Mississippi Canyon 777
2-28-13 Cobalt @ Green Canyon 896
4-10-13 Pisces Energy @ Vermilion 356
4-25-13 Petrobras America @ Walker Ridge 206
7-07-13 ERT/Talos @ Ship Shoal 225
7-23-13 Walter Oil and Gas @ South Timbalier 220
9-17-13 Shell Offshore @ Viosca Knoll 956
12-20-13 Walter Oil & Gas @ South Timbalier 285
MP 295 #1 / ENSCO 87

Apache - 5 February 2013, LWC, Underground

- Water Depth – 218 feet
- Distance to Shore – 20 miles
- Product - Gas
- Exploratory Well
- LWC Occurred- Kick from inclusion in salt
SS 225 B
ERT/ Talos  -  7 July 2013, LWC, Surface

Water Depth – 146 feet
Distance to Shore – 65 miles
Product – Gas and condensate
Development Well
LWC Occurred-
Abandonment procedure
ST 220 A / Hercules 265
Walter Oil & Gas - 23 July 2013, LWC, Surface

- Water Depth – 154 feet
- Distance to Shore – 55 miles
- Days to complete relief well – 74
- Product – Gas
- Development Well
- LWC Occurred – POOH with TCP gun
VR 356/ Rowan Louisiana
En Ven Energy Ventures - 30 January 2014
LWC, Shallow Gas Diversion

- Water Depth – 262 feet
- Distance to Shore – 97 miles
- Product – Gas
- Development Well
- LWC Occurred – POOH for wiper trip
Reporting Requirements
Loss of Well Control (LWC)

The Bureau requires that all loss of well control be reported by immediate oral report, per 30 CFR 250.188(a)(3).

Trends: Over the 8-year timeframe (2006-2013), the GOM averaged 5.25 LWC a year.

2011 was a record low for LWC incidents since the release of the incident reporting rule. However, the lowest incident rate per well drilled was 2006.

**LWC Types (2006-2013)**
- Flow Underground: 8.6%
- Flow Surface: 34.3%
- Diverter Flow: 11.4%
- Surface Equipment Failure: 45.7%
Synopsis of Data

BSEE has 288 unique loss of well control incidents captured in our database from 1956 – 2010. Additionally, BSEE has 18 additional cases in TIMS from 2010-2013 which are not accounted for in this synopsis:

69 of 288 Incidents had a duration of ≥ 5 days (24%)
55 of 69 occurred in water depth < 300 feet (80%)
42 of 69 occurred within 50 miles of shore (61%)
31 fatalities in 5 of the 69 incidents
84 injuries in 7 of the 69 incident
8 incidents were oil blowouts (12%)
  Max duration of the oil blowout – 141 days, 10 relief wells drilled
Integration

Met with shallow water industry August 2013
Renewed emphasis on hot work permits
Source control for shallow water blowouts
Work with IADC on competency issues
Developing awareness within industry
Four fatalities, thirty six injuries, lost platform and 2 drilling rigs, minor amounts of oil on beaches. 53,000 bbls estimated to be spilled.

10th and final relief well killed blowout on April 7th, 1971.
Thank you for your attention.

Website: www.bsee.gov