

**IN THE UNITED STATES DISTRICT COURT FOR  
THE EASTERN DISTRICT OF LOUISIANA**

*In re: Oil Spill by the Oil Rig Deepwater Horizon in the  
Gulf of Mexico on April 20, 2010 (MDL No. 2179)*

Before the Honorable Judge Carl J. Barbier

**REBUTTAL REPORT OF JEFF L. WOLFE**  
*Deepwater Horizon – Seaworthiness, Marine Systems, and  
Safety Condition on April 20, 2010*

Submitted by Transocean Offshore Deepwater Drilling, Inc.

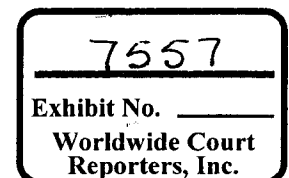
**INTRODUCTION**

This report outlines the findings and conclusions of Jeff L. Wolfe relating to seaworthiness, Marine Systems, and Safety Condition on April 20, 2010. This report also presents the basis and reasoning for the opinions and conclusions reached on these subjects, including the data and information considered in forming such opinions and conclusions.

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## **I. INTRODUCTION**

I have been asked to review certain expert reports submitted by the PSC and BP. This report is intended to be a summary of my expert opinions in rebuttal to those opinions and statements that I believe to be incorrect or incomplete based on my review of the evidence. I reserve the right to expand, supplement, or modify this report and my earlier September 23, 2011 report, which includes my expert opinions and conclusions concerning the seaworthiness, marine systems, and safety conditions present on the *Deepwater Horizon* on April 20, 2010.

With regard to the scope of my analysis, I have not analyzed or opined on the well control event or functionality of the subsea / well control equipment, including but not limited to the drill crew's response and the blowout preventer (BOP).

The statement of my qualifications, my compensation, and my prior testimony can be found in the appendices and text of my initial report. Additional data or information I considered since the filing of my initial report in forming my opinions is listed in the Appendix to this rebuttal report.

## **II. REBUTTAL OPINIONS**

### **A. *Deepwater Horizon* Operating Organization**

Transocean has been criticized for the *Deepwater Horizon's* operating organization, which allegedly led to confusion and somehow caused a delay in the crew's response to the events of April 20, 2010. However, my review of the evidence leads me to conclude the *Deepwater Horizon* operating organization was appropriate and adhered to industry standards and all applicable laws and regulations. In addition, testimony from the individuals on the rig on April 20, 2010 leads me to conclude that the rig crew members clearly understood that the Captain was in charge throughout the emergency response.

#### **1. Applicable International, Flag State, and U.S. Law Supports the Operating Organization Established by Transocean on the *Deepwater Horizon***

Transocean has been criticized for designating the OIM on the *Deepwater Horizon* as the "Person in Charge" (PIC) when the rig was in drilling mode and the Master as the PIC during emergencies and when the rig was in transit. Certain parties argue this created an inappropriate "dual command" structure, which they state violates industry practices and relevant regulations. These criticisms concerning the operating structure on the rig are inappropriate because they are based on a flawed premise that designation as a PIC means the person so designated has assumed a Master's responsibilities under international, flag state (Marshall Islands) and U.S. law applicable to MODUs such as the *Deepwater Horizon*. This opinion also ignores the fact that the *Deepwater Horizon's* operating structure complies with all applicable international, Flag State, and U.S. laws and regulations.

**(a) U.S. Coast Guard Regulations Applicable to Foreign MODUs on the U.S. Outer Continental Shelf Mandate that Operators of MODUs Designate a Person in Charge**

Coast Guard regulations applicable to foreign flag MODUs operating on the U.S. Outer Continental Shelf mandate that the owner or operator designate, by title and in order of succession, the persons on an OCS facility (which is defined to include MODUs) who shall be the "person in charge."<sup>1</sup> It is clear that the person in charge designation is not limited to the Master. A similar requirement exists for U.S. flag MODUs, which states that the owner shall designate an individual to be the master or person in charge of the unit.<sup>2</sup>

**(b) The Marshall Islands Standards Mandated that the Deepwater Horizon be Manned by Both a Master and an OIM While on Location**

The Marshall Islands, as the Flag State administration for the *Deepwater Horizon*, is required by international law to issue an appropriate safe manning document to establish the minimum safe manning for vessels (including MODUs).<sup>3</sup> The determination of the minimum safe manning level for a vessel should be based on all relevant factors, including such factors as the size and type of the vessel, the main propulsion units, the construction and equipment on the vessel, and the waters and operations in which the ship is involved, among others.<sup>4</sup>

MODUs are unique vessels that engage in drilling operations for the exploration for or exploitation of resources beneath the sea-bed such as liquid or gaseous hydrocarbons, sulfur or salt.<sup>5</sup> Supervision of this industrial function on a MODU requires skills and experience very different from that possessed by the vast majority of conventional vessel Masters. For this reason, an Offshore Installation Manager or OIM, is normally required to be on board MODUs when they are "on location" or drilling.

An OIM is a marine position developed in recognition of the drilling function of a MODU or drillship. In order to be able to obtain an OIM license in the Marshall Islands, the applicant is not required to have experience in positions that are traditional maritime positions on a vessel, such as a Mate or Engineer, but rather must have experience in drilling positions, such as supervisory experience as a Driller, Tool Pusher, or Rig Superintendent.<sup>6</sup>

In fact, for MODUs that are not self-propelled, the OIM is the senior position required to be aboard at any time, and no Master is required, even when the MODU is being towed (i.e.

<sup>1</sup> 33 C.F.R. § 146.5 (a) (emphasis added).

<sup>2</sup> 46 C.F.R. § 109.107.

<sup>3</sup> Regulation V/13, International Convention for the Safety of Life at Sea (SOLAS).

<sup>4</sup> Principles of Safe Manning, IMO Resolution A/21/Res.890, Annex 2, Section 3.2.

<sup>5</sup> Regulation IX/1, International Convention for the Safety of Life at Sea (SOLAS).

<sup>6</sup> Marshall Islands Requirements for Merchant Marine Personnel Certification, MI-118, § 3.3.2.3.

underway).<sup>7</sup> For non-DP, self-propelled MODUs, the Marshall Islands requires only an individual with an OIM license to be on board when the unit is "on location," and no Master is required on board.<sup>8</sup>

A dynamically-positioned (DP) MODU, however, is unlike other self-propelled MODUs in that it automatically maintains its position over the well-head exclusively by means of thruster force, and is controlled by a computerized DP control system using a variety of system inputs.<sup>9</sup> For this reason, the Marshall Islands requires that a DP MODU have a licensed Master on board at all times, even when the MODU is on location.<sup>10</sup> In addition, when the MODU is on location, an individual licensed as an OIM is also required to be on board under Marshall Islands manning standards.<sup>11</sup> In other words, the minimum manning standards of the flag state require both a Master and an OIM to be aboard during drilling operations (i.e. when the MODU is on location). This makes sense because an individual with a Master's qualifications is needed to supervise the station-keeping and marine operations of the MODU while an individual with an OIM's qualifications is needed to supervise the drilling operations of the MODU. It would be impractical and unreasonable for a single person to be expected to adequately supervise the myriad of simultaneous marine and drilling activities that occur when the rig is on location. Thus, the Marshall Islands minimum manning standards appear to anticipate and expect the type of organizational structure that Transocean had established on the *Deepwater Horizon*.

I note that even though the OIM was designated as the PIC of drilling operations, the Master was in command of the vessel at all times.<sup>12</sup> It is clear from Transocean's policy that the Master was in charge in an emergency, had overriding authority to deal with issues related to safety and environmental protection, had responsibility for dealing with all marine-related and station-keeping issues on the vessel, and had the ability to request the company's assistance when necessary. This complies with U.S. and international laws, including the ISM Code.

Based on my review of the evidence, the *Deepwater Horizon's* organizational structure complied with all applicable laws and regulations.

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<sup>7</sup> This is true both under United States' requirements, 46 C.F.R. § 15.520(f), and Marshall Islands' requirements, Schedules B and C, Marshall Islands, Office of the Maritime Administrator, Minimum Safe Manning Requirements for Vessels, Marine Notice No. 7-038-2 (Rev. 12/09).

<sup>8</sup> Schedule A, Marshall Islands, Office of the Maritime Administrator, Minimum Safe Manning Requirements for Vessels, Marine Notice No. 7-038-2 (Rev. 12/09).

<sup>9</sup> See Guidelines for Vessels with Dynamic Positioning Systems, IMO MSC/Circ. 645 (Jun. 6, 1994), available at [http://www.imo.org/includes/blastDataOnly.asp/data\\_id%3D10015/MSCCirc645.pdf](http://www.imo.org/includes/blastDataOnly.asp/data_id%3D10015/MSCCirc645.pdf).

<sup>10</sup> Schedule DPV, Marshall Islands, Office of the Maritime Administrator, Minimum Safe Manning Requirements for Vessels, Marine Notice No. 7-038-2 (Rev. 12/09).

<sup>11</sup> *Id.*

<sup>12</sup> The concept of a having a "person in charge" other than the Master for certain types of vessel operations is well-established. For instance, U.S. regulations for oil, hazardous material, or liquefied gas transfer operations require vessels to formally designate a person in charge to oversee and be responsible for such operations. 33 C.F.R. § 155.700. Under the regulations establishing the qualifications of the person in charge, it is apparent that crewmembers other than the Master may serve in the position. *Id.* § 155.710.

**(c) The Manning and the Organizational Structure of Transocean Was Examined and Approved by the Marshall Islands as the Flag State and the U.S. Coast Guard on behalf of the United States**

The *Deepwater Horizon* was subject to boarding by both Marshall Islands inspectors and Coast Guard inspectors many times during its operations on the U.S. Outer Continental Shelf since 2001. As part of these inspections and examinations, the inspectors reviewed the licenses and certifications of the Master, OIM, and other licensed and documented crewmembers of the rig. Further, the Coast Guard specifically reviewed the required written designation of the PIC, which would have listed all personnel designated as PIC.

As the flag state, the Marshall Islands is responsible for establishing the minimum safe manning standards for vessels, and the qualifications and certifications required for crew members to comply with these standards. Certain critics have stated that, due to a clerical error, the Marshall Islands did not require the *Deepwater Horizon* to have a Master when it was on location, and that this somehow enabled Transocean to continue in its failure to clearly state the Master's authority. This misstates the situation because it fails to mention that the Marshall Islands confirmed that "[a]t the time of the explosion that occurred on April 20, 2010, the *Deepwater Horizon* was properly manned under national and international standards for a DPV Unit despite the clerical error on the [Minimum Safe Manning Certificate] by the Maritime Administrator that referred to the *Deepwater Horizon* as a Self-Propelled MODU instead of a DPV unit."<sup>13</sup>

Further, contrary to assertions that the OIM, Jimmy Harrell, and the Master, Captain Curt Kuchta, were not qualified for their respective positions, it should be noted that both the Marshall Islands and the Coast Guard, during regular inspections of the *Deepwater Horizon*, reviewed the licenses of the individuals aboard to determine that they met the required criteria and experience necessary for their positions.<sup>14</sup>

Finally, as stated above, U.S. regulations mandate that the person(s) in charge be formally designated for a MODU such as the *Deepwater Horizon*. This formal designation would be reviewed each time the *Deepwater Horizon* was boarded by the Coast Guard. As a consequence, the U.S. Coast Guard was aware of Transocean's designations of the persons in

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<sup>13</sup> Exhibit 1787, Letter from Republic of the Marshall Islands Re: DEEPWATER HORIZON Casualty Investigation, Sep. 14, 2010 at p. 2; Letter from Republic of the Marshall Islands Re: DEEPWATER HORIZON Casualty Investigation, Aug. 25, 2010 at p. 2.

<sup>14</sup> Republic of the Marshall Islands Report of Safety Inspection for the *Deepwater Horizon*, Dec. 17, 2009, TRN-MDL-01101587 (stating that the required qualified persons were aboard); Exhibit 5580, U.S. Coast Guard Activities Summary Report for Certificate of Compliance Examination on *Deepwater Horizon* conducted on Jul. 27, 2009 (stating that all applicable licenses were reviewed and no discrepancies noted).

charge as they related to the Master and the OIM on the *Deepwater Horizon*, and the U.S. Coast Guard appropriately determined that this structure met the requirements for such designation.<sup>15</sup>

**2. On April 20, the *Deepwater Horizon*'s Organization Structure did Not Cause Confusion Nor did it Cause any Delay to the Bridge Crew's Emergency Response**

On April 20, the *Deepwater Horizon*'s organizational structure did not cause confusion and thus did not cause any delay in the bridge crew's emergency response or contribute in any way to the catastrophic events of the blowout. Transocean policies and procedures clearly designate the Master as the PIC for all emergency situations, and the testimony reveals that the rig crew members understood that the Captain was in charge on April 20, 2010.

The *Deepwater Horizon* Operations Manual clearly stated that the Master had overriding authority and responsibility to make decisions with respect to safety and pollution prevention.<sup>16</sup> In addition, the *Deepwater Horizon* Station Bill clearly established the Master as the person in charge for all emergency situations.<sup>17</sup> When crew or visitors arrived at the rig, they were required to participate in a comprehensive orientation program, which included reviewing the Station Bill and the Master's emergency authority.<sup>18</sup> The Station Bill, which showed at a glance that the Master was the person in charge for emergency situations, was posted conspicuously throughout the rig.<sup>19</sup>

On April 20, 2010, the explosions, loss of power, and fire on the rig created an obvious emergency situation, and the rig crew members recognized the Master as the person in charge of the emergency situation as they were trained to do.<sup>20</sup>

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<sup>15</sup> The legality of this structure is confirmed by the chart in Appendix 6 of Capt. Andrew Mitchell's Expert Report for BP, which acknowledges that operators other than Transocean implement the so-called "dual command structure."

<sup>16</sup> Exhibit 671, *Deepwater Horizon* Operations Manual § 2.1.

<sup>17</sup> Exhibit 1453, *Deepwater Horizon* Emergency Response Manual, Vol. 1, Station Bill, TRN-MDL-00048518.

<sup>18</sup> Deposition of Jerry Canducci, 689:1-13.

<sup>19</sup> See Deposition of David Hackney, 55:2-12; see also Code for the Construction and Equipment of Mobile Offshore Drilling Units, Chapter 14.8.10 ("Muster lists should be exhibited in conspicuous places throughout the unit including the control rooms and accommodation spaces.").

<sup>20</sup> See Deposition of Yancy Keplinger, 112:7-16 ("...the Captain was in charge. Q. How did you know that? A. Emergency situations. Q. How did you know what an emergency situation was on the DEEPWATER HORIZON? A. Well, the fire would be an emergency situation."); Deposition of David Young, 195:22-196:1, 198:9-13 ("Q. Okay. When you -- when you were on the Bridge during the -- during the time of the explosions and fire, who was in charge of the ship? A. The Captain was in charge. . . . A. My understanding of it now, and before, was that the OIM is in charge for the drilling end of the vessel, the Captain is in charge of the emergency situation and the navigation and safety of the vessel.").

**B. The Bridge Crew of the *Deepwater Horizon* was Competent and Responded Appropriately to the Escalating Events of April 20, 2010**

As I discuss in my initial report, given the extreme conditions the *Deepwater Horizon* crew faced on April 20, 2010, an exact timeline of events is difficult to establish. However, the speed with which the catastrophic events unfolded that evening is undeniable. My review of the relevant evidence and testimony leads me to conclude that the bridge crew had a very limited timeframe to react before the explosions, the bridge crew took decisive actions within that timeframe, the bridge crew timely activated the general alarm, and the bridge crew acted properly regarding the emergency disconnect sequence (EDS) and emergency shutdown (ESD).

**1. The Bridge Crew Had Little Time to React Between the Initial Gas Alarms and the Explosions**

Based on my review of the evidence and testimony, the bridge crew had little time to react between the initial gas alarms and the explosions. In addition to my discussion of the evidence on this issue in my initial report, this is corroborated by testimony from individuals in and near the Engine Control Room (ECR).

Paul Meinhart was in the ECR with Brent Mansfield, Doug Brown, and Willy Stoner.<sup>21</sup> He states that he heard almost simultaneously a single gas alarm sound on the alarm panel and overheard a radio transmission from the *Deepwater Horizon* bridge to the *Damon Bankston* telling the *Damon Bankston* to disconnect and move off 500 meters.<sup>22</sup> Meinhart recalls they then received more alarms on the panel before the generators tripped off, and the rig went dark just before the first major explosion.<sup>23</sup>

Michael Williams' testimony also supports a small window between the gas alarms and the major explosion. Mr. Williams was adjacent to the ECR when he heard the multiple gas alarms activating on the ECR alarm panel through a connecting vent. He testified that by the time he stood up from his desk and walked to the door, the explosion occurred.<sup>24</sup>

**2. The Bridge Crew Acted Decisively and Appropriately in the Limited Time Between the Initial Gas Alarms and the Explosions**

The bridge crew appropriately responded to the emergency indicators on April 20, 2010. Because of the compressed time frame and the number of activities occurring almost simultaneously, it is impossible to know the exact sequence of events as they unfolded the night of April 20, 2010. Nonetheless, based on my review of the evidence, the following is a list of

<sup>21</sup> Deposition of Paul Meinhart, 90:24-91:2.

<sup>22</sup> Deposition of Paul Meinhart 278:3-19 (agreeing that the bridge directed the Bankston to move off the rig "immediately or within a few seconds" of receiving the first gas alarm at the panel).

<sup>23</sup> Deposition of Paul Meinhart, 94:16-18, 100:22-101:1, 103:23-104:2.

<sup>24</sup> Deposition of Michael Williams, 71:14-72:5 ("I'm hearing the panel, the local panel beeps, and they're, you know, beep, beep, beep, one behind the other, just as fast as they can hit the acknowledge button, they're steadily beeping. So all this is happening, you know, really fast....As soon as I grabbed for the handle, a big whoosh noise, and the – a huge percussion and explosion that hit me with the door...").



events and corresponding actions that the bridge crew took in the short time between the initial gas alarms and the explosions:

- The rig's alarm control panels, located in the bridge, ECR, and drill floor, received an initial combustible gas alarm from the shaker room.<sup>25</sup>
- Ms. Fleytas received a call from someone on the drill floor. The individual on the other end of the line said there was a well control situation and hung up.<sup>26</sup>
- The bridge crew ordered the *Damon Bankston* to move off 500 meters from the rig.<sup>27</sup>
- The alarm control panels received various alarms from the rig floor, main deck, the sack room, and other locations.<sup>28</sup>
- The *Deepwater Horizon* dynamic position officers assessed the alarms and determined the origins of the alarms.<sup>29</sup>
- Yancy Keplinger noticed alarms in the shaker house, and he called to warn anyone present that they needed to get out.<sup>30</sup>
- Ms. Fleytas attempted to call back the drill floor to get further information, but no one responded.<sup>31</sup>
- Ms. Fleytas received a call from the ECR, and she informed them there was a well control situation.<sup>32</sup>
- Ms. Fleytas hung up the phone after talking to the ECR and then the rig blacked out and the explosion occurred.<sup>33</sup>

### **3. The General Alarm Sounded Within a Short Time of the Initial Gas Alarms and the Explosions**

While witnesses' recollections understandably vary given the magnitude of the conditions they faced, my review of the relevant testimony leads me to conclude that the general alarm sounded within a short time of the initial gas alarms and the explosions.

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<sup>25</sup> Deposition of Paul Meinhart, 278:3-9 (recalling that, at first, a single gas alarm activated on the ECR panel); Transocean Investigation Interview of Andrea Fleytas, TRN-INV-00001469 ("Andrea first heard then saw the shaker house gas alarms on the SIMRAD panel, followed by the Drill Floor gas alarm.").

<sup>26</sup> Transocean Investigation Interview of Andrea Fleytas, TRN-INV-00001469.

<sup>27</sup> Deposition of Paul Meinhart, 278:10-19.

<sup>28</sup> Deposition of Yancy Keplinger, 80:5-81:19.

<sup>29</sup> Deposition of Yancy Keplinger, 85:4-15 (Q. So with all these alarms going off, it's -- the burden is upon you and/or Andrea to figure out what's going on, right? A. Basically, yes. Q. And then while all these alarms are going off, you have to figure out what's going on, where the source of the -- the fire and gas is, right? A. Right. Q. And then you have to decide how to respond, correct? A. Correct.); *id.* at 86:19-20 ("...me and Andrea started pulling up the fire and gas systems to see where these detectors were.").

<sup>30</sup> Deposition of Yancy Keplinger, 86:18-87:12.

<sup>31</sup> Transocean Investigation Interview of Andrea Fleytas, TRN-INV-00001469.

<sup>32</sup> USCG Statement of Andre Fleytas, HCG059-000126.

<sup>33</sup> *Id.*

There have been contentions that the general alarm did not sound at all the night of April 20, 2010. Based on my review of the relevant testimony, I have identified numerous individuals who recall hearing the general alarm and/or the emergency PA announcements from the bridge.<sup>34</sup>

The testimony varies as to exactly when the alarms sounded. Some crew members recall hearing the general alarm before the first major explosion.<sup>35</sup> Some recall the general alarm sounding between the first major explosion and the second major explosion.<sup>36</sup> Some recall the general alarm going off immediately after the second major explosion.<sup>37</sup> Thus, although there is some disparity as to the exact sequence of the alarm activation, there is no credible argument that the general alarm did not sound. Moreover, by all accounts, it sounded close in time to the initial gas alarms and the explosions.

#### **4. The Bridge Crew Acted Properly and Followed Procedures Regarding the Emergency Disconnect Sequence (EDS)**

Certain parties have criticized the *Deepwater Horizon* bridge crew for not activating the emergency disconnect sequence (EDS) prior to the explosions on April 20, 2010. However, as I discuss above, my review of the evidence suggests that the bridge crew had little time to evaluate and react before the explosions, and within that limited timeframe, the bridge crew took appropriate, responsive actions. Because of the limited time the bridge crew had, deviating from established procedures and initiating the EDS before fully assessing the situation and communicating with the drill crew would have been imprudent and improper.

Transocean's procedures state that the drill crew has primary responsibility for initiating an EDS.<sup>38</sup> On the other hand, the bridge crew's primary responsibility is to effectively

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<sup>34</sup> See, e.g., USCG Statements of Tyrone Benton, HCG059-000135; Craig Breland, HCG059-000025; Micah Burgess, HCG059-000086; Jason Cooley, HCG059-000066; Truitt Crawford, HCG059-000134; Eric Estrada, HCG059-000056; Michael Glendenning, HCG059-000088; Anthony Graham, HCG059-000001; Troy Hadaway, HCG059-000133; Christopher Haire, HCG059-000022; Mark Hay, HCG059-000022; Matthew Jacobs, HCG059-000085; Dustin Johnson, HCG059-000055; Jonathan Kersey, HCG059-000071; Lee Lambert, HCG059-000080; Leo Lindner, HCG059-000081; Greg Meche, HCG059-000059; Patrick Morgan, HCG059-000102; Mark Nunley, HCG059-000084; Samuel Pigg, HCG059-000112; Jerry Pitts, HCG059-000068; John Quibedeaux, HCG059-000070; Karl Rhodes, HCG059-000075; Steven Richards, HCG059-000123; Stenson Roark, HCG059-000117; Darin Rupinski, HCG059-000043; Terry Sellers, HCG059-000124; William Terrell, HCG059-000139; Dominick Ussin, HCG059-000051; Paula Walker, HCG059-000104.

<sup>35</sup> See, e.g., USCG Statement of Jonathan Kersey, HCG059-000071; USCG Statement of Leo Lindner, HCG059-000081; USCG Statement of Patrick Morgan, HCG059-000102.

<sup>36</sup> See, e.g., USCG Statement of Truitt Crawford, HCG059-000134; USCG Statement of Christopher Haire, HCG059-000022; USCG Statement of Terry Sellers, HCG059-000124.

<sup>37</sup> See, e.g., USCG Statement of Tyrone Benton, HCG059-000135; USCG Statement of Craig Breland, HCG059-000025; USCG Statement of Lee Lambert, HCG059-000080.

<sup>38</sup> *Deepwater Horizon* Emergency Response Manual, Emergency Disconnect Procedure, Section 12, BP-HZN-IIT-0002662-2696 (Driller responsible for initiating EDS in all cases); Transocean Emergency Disconnect Procedures for Red Alert EDS, TRN-MDL-02995979 to TRN-MDL-02995988 (instructing the driller to "Confirm with DPO that you have a red light; If DPO confirms or fails to reply, immediately activate EDS-1 function; Only if the Captain or OIM instructs not to disconnect, then stand by and wait for further instructions.").

communicate with the drill crew.<sup>39</sup> Initiation of the EDS by the bridge crew without confirming the status of the drill crew's well control efforts could have interfered with activities that the drill crew was taking to shut in the well. In addition, EDS is a last resort when all well control efforts have failed. The bridge crew would be expected to communicate with the drill crew and to confirm the status of ongoing well control efforts before taking actions that could interfere with those efforts. On April 20, in accordance with established emergency procedures and prudent action, the bridge crew was trying to establish communication with the drill floor when the explosions occurred. Following the established emergency procedures is evidence of a well-disciplined, competent crew.

### **5. The Bridge Crew Acted Properly Regarding the Emergency Shutdown (ESD)**

There has been criticism that the bridge crew did not manually activate the emergency shutdown (ESD), which would have shut down the engines and, according to the critics, possibly prevented the engines from acting as a potential ignition source for combustible gas. This critique is misguided and reflects a misunderstanding of the considerations that must be taken into account when responding to an emergency situation aboard dynamically positioned (DP) vessels such as the *Deepwater Horizon*.

Unlike regulations for non-DP MODUS, the 2009 IMO MODU Code cautions that that for DP MODUs, "special consideration may be given" to the need to avoid disconnection or shutdown of dynamic positioning machinery or equipment, "in order to preserve the integrity of the well."<sup>40</sup> This is in line with industry best practices for the design and operation of DP vessels, which recognize that "[a] basic requirement for a DP vessel is to maintain power to thrusters for as long as possible, even in some alarm conditions . . . ."<sup>41</sup>

A DP vessel requires power for its station keeping system and thrusters to maintain its position. If the bridge crew activated the ESD, they would have shut down the engines and left the rig powerless, without the ability to drive away from the well and without key emergency systems such as the fire pumps. Based on these considerations, prematurely activating the ESD without sufficient information and understanding of the situation from the drill crew would have inappropriately limited the options available to deal with the emergency situation. For example, if the bridge had initiated the ESD immediately, the bridge crew could have been unable to disconnect from the well and safely drive away.

On April 20, the bridge crew acted appropriately by first trying to establish communication with the drill crew to obtain necessary critical information before taking unilateral actions that could potentially usurp the responsibility from the well control

<sup>39</sup> See *Deepwater Horizon* Emergency Response Manual, Emergency Disconnect Procedure, Section 12, Subsection 11, BP-HZN-IIT-0002684.

<sup>40</sup> Code for the Construction and Equipment of Mobile Offshore Drilling Units, 2009, Resolution A.1023(26), Section 6.5.2.

<sup>41</sup> See IMCA, Guidelines for the Design and Operation of Dynamically Positioned Vessels, Dec. 2007, at Section 1.6.4, available at <http://www.imca-int.com/divisions/marine/publications/103.html>.

professionals on the drill crew. The bridge crew was actively evaluating the emergency situation in the limited time between the initial alarms and the explosions.

### **C. Maintenance of the *Deepwater Horizon* Complied with All International, Flag State, and U.S. Requirements**

Critics have argued that the maintenance system aboard the *Deepwater Horizon* did not comply with the ISM Code requirements. The ISM Code required that Transocean establish procedures to ensure that the *Deepwater Horizon* was maintained in conformity with relevant rules and regulations and with Transocean requirements. Regular preventative maintenance was conducted, tracked, and recorded for the *Deepwater Horizon* in accordance with Transocean's Rig Maintenance System (RMS). Compliance with the ISM Code's maintenance requirements was verified by auditors acting on behalf of the Republic of the Marshall Islands.<sup>42</sup>

Third party witnesses have verified that the maintenance system aboard the *Deepwater Horizon* was accomplishing the intent of the ISM Code. After the U.S. Coast Guard's Certificate of Compliance inspection of the *Deepwater Horizon*, one of the inspectors recalled that "the rig was in excellent condition."<sup>43</sup> Ronnie Sepulvado, a BP Well Site Leader for the *Deepwater Horizon*, testified that as of April 16, 2010, there were no critical maintenance items that had not been closed out.<sup>44</sup>

Critics have also stated that because the rig had not undergone a conventional dry-docking in nine years, the rig was not properly maintained and was not in compliance with the ISM Code. The *Deepwater Horizon* satisfied all statutory, Flag State, classification society, and U.S. Coast Guard requirements for dry-docking by undergoing regularly-scheduled Underwater In Lieu of Dry-docking (UWILD) examinations.

The UWILD option for MODUs is recognized under international standards,<sup>45</sup> IACS classification society rules,<sup>46</sup> the Marshall Islands,<sup>47</sup> and U.S. Coast Guard requirements.<sup>48</sup> A UWILD for MODUs like the *Deepwater Horizon* is widely accepted under industry standards

<sup>42</sup> See Exhibit 1776, Marshall Islands Safety Management Certificate for *Deepwater Horizon*, Jul. 11, 2007; Exhibit 953, Marshall Islands ISM Code Document of Compliance for Transocean Offshore Deepwater Drilling, Inc.

<sup>43</sup> Email from Callan Brown to Michael Odom and Jay Willimon, May 5, 2010, HCG161-041962.

<sup>44</sup> Deposition of Ronny Sepulvado, 166, 488-91 (Mar. 10-11, 2011).

<sup>45</sup> Code for the Construction and Equipment of Mobile Offshore Drilling Units, 1989, 1.6.1.2 & 1.6.1.5.

<sup>46</sup> See, e.g., ABS Rules for Building and Classing Mobile Offshore Drilling Units (2008), Part 6, Chapter 2, Section 6.3 available at

[http://www.eagle.org/eagleExternalPortalWEB/ShowProperty/BEA%20Repository/Rules&Guides/Current/6\\_MODU\\_2008/Pub06\\_MODU\\_Part6;DNV Rules for Classification of Offshore Drilling and Support Units, DNV-OSS-101, Chapter 3, Section 4, K101, K203, K, 301, available at](http://www.eagle.org/eagleExternalPortalWEB/ShowProperty/BEA%20Repository/Rules&Guides/Current/6_MODU_2008/Pub06_MODU_Part6;DNV%20Rules%20for%20Classification%20of%20Offshore%20Drilling%20and%20Support%20Units,2011-10/oss-101.pdf)

<http://exchange.dnv.com/publishing/Codes/download.asp?url=2011-10/oss-101.pdf>.

<sup>47</sup> See Marshall Islands Mobile Offshore Drilling Unit Standards, MI-293.

<sup>48</sup> 46 C.F.R. §§ 107.261(b), 107.265. The U.S. Coast Guard refers to these examinations as a "Special Examination In Lieu of Dry Dock" (SEILOD), which is synonymous with a UWILD. See U.S. Coast Guard Navigation and Vessel Inspection Circular No. 12-69, Special Examination in Lieu of Dry-docking for Large Mobile Drilling Units (Dec. 12, 1969), available at [www.uscg.mil/hq/cg5/nvic/pdf/1960s/n12-69.pdf](http://www.uscg.mil/hq/cg5/nvic/pdf/1960s/n12-69.pdf).

and best practices. In fact, under relevant ABS requirements, the satisfactory completion of a UWILD may serve as an adequate substitute for conventional dry-docking for periods of up to twenty years or longer.<sup>49</sup>

The *Deepwater Horizon* completed a successful UWILD in September 2009. Accordingly, the *Deepwater Horizon* was in compliance with the requirements of the ISM Code and applicable standards and requirements.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Jeff L. Wolfe', is written over a light gray, textured background.

Jeff L. Wolfe

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<sup>49</sup> ABS Rules for Building and Classing Mobile Offshore Drilling Units (2008), Part 6, Chapter 2, Section 6.3.

**Supplemental Documents, Data and Information Considered**

<b>Exhibit No.</b>	<b>Description</b>	<b>Bates Number</b>
	Drawing - DH00150001 - Haz Area Above Main Deck dwg	TRN-INV-005705540 - TRN-INV-005705541
	Drawing - DH00150002 - Haz Area Drill Floor dwg	TRN-INV-005705540 - TRN-INV-005705541
	Drawing - DH00150003 - Haz Area Main Deck dwg	TRN-INV-005705542 - TRN-INV-005705543
	Drawing - DH00150004 - Haz Area Second Deck dwg	TRN-INV-005705544 - TRN-INV-005705545
	Drawing - DH00150005 - Haz Area Third Deck dwg	TRN-INV-005705546 - TRN-INV-005705547
	Drawing - DH00150006 - Haz Area Midship Section dwg	TRN-INV-005705548 - TRN-INV-005705549
	DNV - DWH Vessel Summary Report	TRN-MDL-01101578 - TRN-MDL-01101581
	DNV Reliability and Vulnerability Analysis of the Deepwater Horizon 2002 - TO-DHTF-00273654	TO-DHTF-00273654 - TO-DHTF-00273973
	DOC-00009931 OFFICIAL Transcript of The Joint USCGMMS Investigation dated 05-26-10 (Smith (Carl), Brown, Forsyth, Ray)	
	DOC-00009932 OFFICIAL Transcript of The Joint USCGMMS Investigation dated 05-27-10 (Harrell, Kuchta, Young, Murray)	
	DOC-00009934 OFFICIAL Transcript of The Joint USCGMMS Investigation dated 05-29-10(Sandell, Meinhart, Burgess, et al)	
	DOC-00009936 OFFICIAL Transcript of The Joint USCGMMS Investigation dated 07-20-10 (Sepulvado (Ron), Skidmore, Lambert)	
	DOC-00009939 OFFICIAL Transcript of The Joint USCGMMS Investigation dated 08-23-10 (Cramond, Johnson, Winslow)	
	DOC-00009940 OFFICIAL Transcript of The Joint USCGMMS Investigation dated 08-24-10 (Winslow, Chaisson)	
	DOC-00009942 OFFICIAL Transcript of The Joint USCGMMS Investigation dated 08-26-10 (Wells, Sims, O'Bryan)	
	DOC-00011171 OFFICIAL Transcript of The Joint USCG-BOEM InvestigationAMPM100810Mini (Smith (Carl), Gisclair)	
	DOC-00019658 OFFICIAL Transcript of the Joint USCG-BOEM InvestigationPM120710Full (Gisclair, Wright)	
	DWH ISM Audit Apr 2008	TRN-MDL-00027240 - TRN-MDL-00027262

# Supplemental Documents, Data and Information Considered

Exhibit No.	Description	Bates Number
	DWH ISM Audit Jun 2007	TRN-MDL-00027956 - TRN-MDL-00027979
	DWH ISM Audit Jun 2009	TRN-MDL-00027217 - TRN-MDL-00027237
	DWH Rig Hardware Assessment - 18-Apr-2010 -	TRN-HCEC-00090955 - TRN-HCEC-00090973
	Emergency Management Procedures Manual - HQS-HSE-PR-01	TRN-MDL-00149758 - TRN-MDL-00149808
	Fire and Equipment Inspections 2006 -	TRN-INV-01975535 - TRN-INV-01975606
	Fire Fighting Systems Inspection 2002	TRN-INV-00101834 - TRN-INV-00101933
	Andrea Fleytas JIT testimony	
	Transocean Health and Safety Policies and Procedures - HQS-HSE-PP-01	TRN-MDL-00046464 - 46973
	Keplinger CG Testimony	
	Transocean Maintenance Procedures - HQS-OPS-PR-01	TRN-MDL-00149843 - 149922
	Marshall Islands - Safety Management Certificate - May 2007	TRN-MDL-00027980
	MBI Testimony - Bertone, Stephen	
	MI - Continuous Synopsis Record 17-Sep-2009	TRN-MDL-01101596
	MI - DWH Annual Safety Inspection 07-Dec-2008	TRN-MDL-01101590 - TRN-MDL-01101592
	MI - DWH ASI Report 17-Dec-2009	TRN-MDL-01101586 - TRN-MDL-01101589
	MI - Minimum Safe Manning Certificate 17-Sep-2009	TO-DHTF-00889992
	MI - Permanent Certificate of Registry 59-10 04-Mar-2010	TRN-MDL-01101597
	Oil Spill Commission - Chief Counsel's Report	
	Personnel Locations - 2nd Deck - TRN-INV-00775600	TRN-INV-00775600
	Personnel Locations - 3rd Deck - TRN-INV-00775609	TRN-INV-00775609
	Personnel Locations - Drill Floor - TRN-INV-00775618	TRN-INV-00775618
	Personnel Locations - Main Deck - TRN-INV-00775581	TRN-INV-00775581
	Wartzila North America Subpoena Response to BP MDL PSC providing copies of materials provided to the Joint Investigative Team.	PSC-MDL2179014036 - PSC-MDL2179014074
	Wartzila North America Vasa 32 Project Guide	PSC-MDL2179014075 - PSC-MDL2179014199
	Reliability and Vulnerability Analysis of the Deepwater Horizon 2002 -	TO-DHTF-00273654 - TO-DHTF-00273973

## Supplemental Documents, Data and Information Considered

Exhibit No.	Description	Bates Number
	Republic of the Marshall Islands DEEPWATER HORIZON Marine Casualty Investigation Report-Low Resolution.	
	Total Safety Fire and Equipment Inspections 2007	TO-DHTF-00713111 - TO-DHTF-00713139
	Total Safety Fire and Equipment Inspections 2008	TO-DHTF-00713074 - TO-DHTF-00713110
	Total Safety Fire and Equipment Inspections 2009	TO-DHTF-00713039 - TO-DHTF-00713073
	Total Safety Fire and Equipment Inspections 2010	TRN-INV-02508138 - TRN-INV-02508151
	USCG Certificate of Compliance 07-Jul-2009	TRN-MDL-01101583 - TRN-MDL-01101585
	Wartsila Engine Manual for Deepwater Horizon	TRN-INV-00854833 - 855618
	MDL Deposition Transcript of Scherie Douglas	
	MDL Deposition Transcript of Stuart Lacy	
	MDL Deposition Transcript of Vincent Price	
	MDL Deposition Transcript of Jay Thorseth	
	MDL Deposition Transcript of Daniel Farr	
	MDL Deposition Transcript of Derek Hart	
	MDL Deposition Transcript of Steven Newman	
	MDL Deposition Transcript of Buddy Trahan	
	MDL Deposition Transcript of David Young	
	MDL Deposition Transcript of Alarie Durkan	
	MDL Deposition Transcript of Leo Lindner	
	MDL Deposition Transcript of Steve Johnson	
	MDL Deposition Transcript of Gregory Meche	
	MDL Deposition Transcript of Bryan Domangue	
	MDL Deposition Transcript of David Young	
	MDL Deposition Transcript of Kris Millsap	
	Joint USCG MMS Investigation Testimony Transcript of Paul Erickson	
	Joint USCG MMS Investigation Testimony Transcript of Alwin Landry	
	Joint USCG MMS Investigation Testimony Transcript of James Wilson	
	Joint USCG MMS Investigation Testimony Transcript of Pat O'Bryan	
	Transocean Internal Investigation Interview of Stephen Bertone	TRN-INV-00000296 - 306
	Transocean Internal Investigation Interview of Craig Breland	TRN-INV-00000481 - 486
	Transocean Internal Investigation Interview of Randy Ezell	TRN-INV-00001422 - 1428



### Supplemental Documents, Data and Information Considered

Exhibit No.	Description	Bates Number
	Transocean Internal Investigation Interview of Andrea Fleytas	TRN-INV-00001465 - 1474
	Transocean Internal Investigation Interview of Jimmy Harrell	TRN-INV-00001856 - 1860
	Transocean Internal Investigation Interview of Jimmy Harrell (phone)	TRN-INV-00001861 - 1864
	Transocean Internal Investigation Interview of Caleb Holloway	TRN-INV-00001930 - 1935
	Transocean Internal Investigation Interview of Paul Meinhart	TRN-INV-00003298 - 3305
	Transocean Internal Investigation Interview of Chris Pleasant	TRN-INV-00003875 - 3887
	Transocean Internal Investigation Interview of Buddy Trahan	TRN-INV-00004789 - 4795
	Transocean Internal Investigation Interview of Daun Winslow	TRN-INV-00005185 - 5188
	Transocean Internal Investigation Interview of David Young	TRN-INV-00005239 - 5245
	MDL Deposition Transcript of Yancy Keplinger	
5032	Interviewing Form, marked as CONFIDENTIAL	TRN-INV-00002645 - 02652
5033	Aug 22, 2009 E-mail from DWH, DPOperator to DWH, Captain Subject: DWH PIC Letter, marked as CONFIDENTIAL	TRN-MDL-02411791 and 11792
5034	Personnel Training Files, marked as CONFIDENTIAL	TRN-INV-00150761, 50762 and 50786
5035	Feb 25, 2005 E-mail string among Lewis Weingarth and rig_dwh. Captain Subject: DP Event Report, marked as CONFIDENTIAL	TRN-MDL-01587834 - 87836
5036	May 6, 2005 Letter from Mike Dow to Yancy, marked as CONFIDENTIAL	TRN-MDL-01587341 - 87346
5037	Deepwater Horizon, Watchstanding and Dynamic Positioning, Bridge Procedures Guide, marked as CONFIDENTIAL	TRN-MDL-01597604 - 97626
5038	Transocean DP Vessel Drift-off and Watch Circle Program Deepwater Horizon 23.0m Operating Draft (6087); 31 pages	
5039	Safety Drill Report, marked as CONFIDENTIAL	BP-HZN-MBI00167544 - 67545
5040	Sept 9, 2003 Letter from Lew Weingarth to Larry McMahan and others, marked as CONFIDENTIAL	TRN-MDL-01585758 - 85761
5041	Transocean Task Specific Think Procedure, marked as CONFIDENTIAL	TRN-MDL-01597103

### APPENDIX

## Supplemental Documents, Data and Information Considered

Exhibit No.	Description	Bates Number
5042	Transocean Deepwater Horizon Failure Modes, Effects and Criticality Analysis, dated June 2009, marked as CONFIDENTIAL	TRN-MDL-00052089 and 52407 - 52434
5043	01.10.10 Turnover from Nathaniel Roche to Yancy Keplinger, marked as CONFIDENTIAL	TRN-MDL-02412174 - 12176
5044	March 9, 2007 Letter from Mike Dow to Yancy, marked as CONFIDENTIAL	TRN-MDL-01586886 - 86891
5045	Deepwater Horizon - Marine Crew Task Specific Think Procedures, marked as CONFIDENTIAL	TRN-MDL-01586100 - 86104
5046	Feb 19, 2010 E-mail from DWH DPOperator to DWH, Captain Subject: Katie's Handover Notes - 19 February 2010, marked as CONFIDENTIAL	TRN-MDL-02420138
5047	Handover Notes Macondo, marked as CONFIDENTIAL	TRN-MDL-02420139 - 20141
49	Wetherbee Notes of Vidrine Interview	BP-HZN-MBI00139573 - 576
	Jimmy Harrell USCG License materials	TRN-INV-03463966 - 967
	Curt Kuchta USCG License materials	TRN-INV-03463969 - 971
	Marshall Islands Licenses and Certificates for Jimmy Harrell, Curt Kuchta, and David Young	TRN-INV-03464178 - 4189
	Transocean Personnel On-Board as of 20 Apr 2010	TRN-MDL-01142033 - 2038
	2010 Transocean Worldwide Training Matrix	TO-DHTF-01318528 - 582
	MDL Deposition Transcript of John MacDonald	
5417	Deepwater Horizon Investigation, Charts dated May 25, 2010 and July 6, 2010, marked as CONFIDENTIAL	TRN-INV-01122946 and TRN-INV-01602249
5418	Interviewing Form of Sean Bayer; Interviewing Form of Jonathan Camacho; Interviewing Form of Stanley Carden; Interviewing Form of Nathan Carroll; Interviewing Form of Michael Cutrer; Interviewing Form of Michael Dicello; Interviewing Form of Mike Dow; Interviewing Form of David Hackney; Interviewing Form of William Jernigan; Interviewing Form of Yancy J. Keplinger; Interviewing Form of Mike Mayfield; Interviewing Form of Paul Meinhart; Interviewing Form of James Musgrove; Interviewing Form of Nathaniel "Nate" Roche; Interviewing Form of David Young, all marked as CONFIDENTIAL	TRN-INV-00000228 - TRN-INV-00000232; TRN-INV-00000594 - TRN-INV-00000598; TRN-INV-00000658 - TRN-INV-00000663; TRN-INV-00000720 - TRN-INV-00000724; TRN-INV-00000992 - TRN-INV-00000997; TRN-INV-00001205 - TRN-INV-00001210; TRN-INV-00001246 - TRN-INV-00001252; TRN-INV-00001748 - TRN-INV-00001752; TRN-INV-00002238 - TRN-INV-00002244; TRN-INV-00002645 - TRN-INV-00002652; TRN-INV-00002988 - TRN-INV-00002995; TRN-INV-00003298 - TRN-INV-00003305; TRN-INV-00003543 - TRN-INV-00003548; TRN-INV-00004126 - TRN-INV-00004130; TRN-INV-00005239 - TRN-INV-00005245

### Supplemental Documents, Data and Information Considered

Exhibit No.	Description	Bates Number
5419	May 25 and 26, 2010 E-mail string among Keith Lamb, Chad Crain, Derek Hart, John MacDonald and others. Subject: Scheduled Interviews Represented By Lawyers.xls, marked as CONFIDENTIAL	TRN-INV-02806138
5420	May 18 and 19, 2010 E-mail string between Derek Hart and John MacDonald. Subject: Statement, marked as CONFIDENTIAL	TRN-INV-02806139
5421	May 12, 2010 E-mail from Beau Breaux to Shane Wells, Perry Hill and others. Subject: 05112010 1400 Operations Action Plan; May 27, 2010 E-mail from Caleb Stevenson to Attasit Korchaiyapruk, Beau Breaux and others. Subject: 05262010 2300 Operations Action Plan; June 7, 2010 E-mail from Natalie Johnson to Attasit Korchaiyapruk, Caleb Stevenson and others. Subject: 06072010 1800 Operations Action Plan; June 17, 2010 E-mail from Caleb Stevenson to Vikrant Shah, Attasit Korchaiyapruk and others. Subject: 06162010 1900 Operations Action Plan; June 23, 2010 E-mail from Natalie Johnson to Vikrant Shah, Attasit Korchaiyapruk and others. Subject 06232010 1700 Operations Action Plan; June 29, 2010 E-mail from Randesha Dawkins to Makini Byron, Natalie Johnson and others. Subject: 06292010 0000 Operations Action Plan; July 31, 2010 E-mail from MC252_Houston_SourceControl_OAP to MC252 IMT SC OAP Dist and others. Subject: 07/30/10 0900 Operations Action Plan; Aug 26, 2010 E-mail from MC252_Houston_SourceControl_OAP to MC252 IMT SC OAP Dist and others. Subject: 08/26/10 1800 Operations Act	TRN-MDL-02733584 and TRN-MDL-02733585; TRN-INV-02661625 and TRN-INV-02661626; TRN-INV-03049203; TRN-MDL-02732820 and TRN-MDL-02732821; TRN-MDL-02722722 and TRN-MDL-02722723; TRN-MDL-02731999 and TRN-MDL-02732000; TRN-INV-02999087; TRN-INV-02975233; TRN-INV-02970752
5422	Excerpt from Share Point 15 November 2010; 60 pages	
5423	Interviewing Form, Interviewee Name: Sean Bayer, marked as CONFIDENTIAL	TRN-INV-00000228 - TRN-INV-00000232
5424	May 25, 26 and 27, 2010 E-mail string among Keith Lamb, Chad Crain, Derek Hart, John MacDonald and others. Subject: Scheduled Interviews Represented By Lawyers.xls, marked as CONFIDENTIAL	TRN-INV-02803304 - TRN-INV-02803306
5425	Interviewing Form, Interviewee Name: Stanley Carden, marked as CONFIDENTIAL	TRN-INV-00000658 - TRN-INV-00000663
5426	June 23, 2010 Stanley Carden Interview documents, marked CONFIDENTIAL	TRN-INV-00000664 - TRN-INV-00000695

Supplemental Documents, Data and Information Considered		
Exhibit No.	Description	Bates Number
5427	Interviewing Form, Interviewee Name: William Jernigan, marked as CONFIDENTIAL	TRN-INV-00002238 - TRN-INV-00002244
5428	June 18, 2010 E-mail string among Jana judkins, John MacDonald, others, Subject: Interview Notes, marked CONFIDENTIAL	TRN-MDL-02521307
5429	June 9 and 10, 2010 E-mail string among Jana Judkins, Simon Watson and others, Subject: Michael Dicello - Interview Draft, marked CONFIDENTIAL	TRN-INV-02392449
5430	Transocean Management System - HSE Management Chart, marked as CONFIDENTIAL	TRN-MDL-02865450
5431	Transocean Management System - HSE Management, marked as CONFIDENTIAL	TRN-MDL-02865410
5432	Transocean Management System - HSE Management, marked as CONFIDENTIAL	TRN-MDL-02865365 - TRN-MDL-02865367
5433	Transocean Emergency Response, marked as CONFIDENTIAL	TRN-MDL-02865605
5434	Aug 4, 2010 E-mail string among DWD, Medic; DWD, CampBoss; DWD, Captain and others, Subject: POB 04-08-2010 and Aug 10 and 11, 2010 E-mail string among Alberto Rispoli, Jim Brekke, Warren Weaver and others, Subject: POB 04-08-2010 - Day Visitor exceeding the Max POB, with Attachments, marked as CONFIDENTIAL	TRN-INV-02983283 - TRN-INV-02983286
5435	May 5 and 7, 2008 E-mail string among John MacDonald, Jr, Rig_DWH, Captain and others, Subject: Optical Gyros - Technical Information Bulletin, with Attachments, marked as CONFIDENTIAL	TRN-MDL-02721029 and TRN-MDL-02721030
5436	Transocean Personnel Designation of OIM and PIC, marked as CONFIDENTIAL	TRN-MDL-02722323 - TRN-MDL-02722328
5437	Sept 19, 23 and 24, 2008 E-mail string among John MacDonald, Jr., Hgr. BargeSupervisor and others, Subject: Watertight Integrity and Compliance, with Attachments, marked as CONFIDENTIAL	TRN-MDL-02723284 - TRN-MDL-02723286
5438	Nov 3, 2010 E-mail string among John MacDonald, John Pertgen, Mike Lindsley and others, Subject: Nautical Institute Proposals, marked as CONFIDENTIAL	TRN-INV-02963910 - TRN-INV-02963912

**Supplemental Documents, Data and Information Considered**

<b>Exhibit No.</b>	<b>Description</b>	<b>Bates Number</b>
5439	June 16, 2010 E-mail string among Derek Hart, Art Nordholm, John MacDonald and others. Subject: Share Point Investigation Tickets #246 - #250, marked as CONFIDENTIAL	TRN-MDL-02521321 - TRN-MDL-02521322
5440	April 28, 2010 E-mail string among Sherri Taylor, Dan Reudelhuber, Steven Walker and John MacDonald. Subject: Deepwater Horizon, marked as CONFIDENTIAL	TRN-INV-02642862
5441	Transocean Weekly Drill Reports dated from Oct 5, 2009 to Oct 11, 2009, marked as CONFIDENTIAL	TRN-INV-02642863 - TRN-INV-02642901
5442	Transocean Weekly Drill Reports dated from Jan 4, 2010 to Jan 10, 2010, marked as CONFIDENTIAL	TRN-INV-02642902 - TRN-INV-02642943
5443	April 27, 2010 E-mail string among Sherri Taylor, Dan Reudelhuber, Steven Walker and John MacDonald. Subject: Deepwater Horizon, marked as CONFIDENTIAL	TRN-MDL-02526400
5444	June 11, 2010 E-mail from Kimberly Geiger to Brian Kennedy and Tom Hamburger. Subject: Following up; E-mail string among Adrian Rose, John MacDonald, Todd Jordan, Bill Pearce and others. Subject: LA times Story - URGENT & CONFIDENTIAL, with Attachments, marked as CONFIDENTIAL	TRN-INV-03485220 - TRN-INV-03485224
5445	Feb 20, 2004 Letter from Captain Mark Canada to Captain Napoleon Smith, marked as CONFIDENTIAL	TRN-INV-03540868 - TRN-INV-03540869
5446	Transocean Emergency Disconnect Procedure, marked as CONFIDENTIAL	TRN-MDL-02070856 and TRN-MDL-02070857
5447	Chapter 6 Summary of Conclusions, marked as CONFIDENTIAL	TRN-MDL-02702988 - TRN-MDL-02703001
5448	April 29, 2011 E-mail string among Alan Spackman, Warren Weaver, Adrian Rose and others. Subject: Marine Board Conclusions and Recommendations, with Attachments, marked as CONFIDENTIAL	TRN-MDL-02703711
5449	Interviewing Form, Interviewee Name: Rex Beard, marked as CONFIDENTIAL	TRN-INV-00000248 - TRN-INV-00000253
5450	Interviewing Form, Interviewee Name: Jonathan Camacho, marked as CONFIDENTIAL	TRN-INV-00000594 - TRN-INV-00000598
5451	Interviewing Form, Interviewee Name: Nathan Carroll, marked as CONFIDENTIAL	TRN-INV-00000720 - TRN-INV-00000724

### Supplemental Documents, Data and Information Considered

Exhibit No.	Description	Bates Number
5452	Interviewing Form. Interviewee Name: Michael Cutrer, marked as CONFIDENTIAL	TRN-INV-00000992 - TRN-INV-00000997
5453	Interviewing Form. Interviewee Name: Michael Dicello, marked as CONFIDENTIAL	TRN-INV-00001205 - TRN-INV-0001210
5454	Interviewing Form. Interviewee Name: Mike Dow, marked as CONFIDENTIAL	TRN-INV-00001246 - TRN-INV-00001252
5455	Interviewing Form. Interviewee Name: David Hackney, marked as CONFIDENTIAL	TRN-INV-00001748 - TRN-INV-00001752
5456	Interviewing Form. Interviewee Name: Yancy J. Keplinger, marked as CONFIDENTIAL	TRN-INV-00002645 - TRN-INV-00002652
5457	Interviewing Form. Interviewee Name: Mike Mayfield, marked as CONFIDENTIAL	TRN-INV-00002988 - TRN-INV-00002995
5458	Interviewing Form. Interviewee Name: Paul Meinhart, marked as CONFIDENTIAL	TRN-INV-00003298 - TRN-INV-00003305
5459	Interviewing Form. Interviewee Name: James Musgrove, marked as CONFIDENTIAL	TRN-INV-00003543 - TRN-INV-00003548
5460	Interviewing Form. Interviewee Name: Nathaniel "Nate" Roche, marked as CONFIDENTIAL	TRN-INV-00004126 - TRN-INV-00004130
5461	Interviewing Form. Interviewee Name: David Young, marked as CONFIDENTIAL	TRN-INV-00005239 - TRN-INV-00005245
5462	Jan 31, 2007 E-mail string among Rene Rodrigues, Mark Milne, John MacDonald, Jr and Manny LaBella. Subject: Rig Awareness Training Manual, with Attachments, marked as CONFIDENTIAL	TRN-MDL-02703795 - TRN-MDL-02703798
5463	Transocean Rig Awareness Training, marked as CONFIDENTIAL	TRN-MDL-02703799 - TRN-MDL-02703817
5464	Transocean Rig Operations, Rig Awareness Training, marked as CONFIDENTIAL	TRN-MDL-02703881 - TRN-MDL-02703943
5465	June 1, 2010 E-mail from John MacDonald to Derek Hart, Subject: Questions, with Attachments, marked as CONFIDENTIAL	TRN-INV-03073902 - TRN-INV-03073904
5466	June 9, 2010 E-mail string between Derek Hart and John MacDonald, Subject: Investigation Tickets, marked as CONFIDENTIAL	TRN-INV-03482877
5467	June 8, 2010 E-mail from John MacDonald to Ursula Gouner, Subject: <a href="http://cspan.org/Watch/Media/2010/05/27/HP/R/33424/BOX+2+OIL+What+Happened+House+Judiciary+and+Joint+Investigation.aspx">cspan.org/Watch/Media/2010/05/27/HP/R/33424/BOX+2+OIL+What+Happened+House+Judiciary+and+Joint+Investigation.aspx</a> , marked as CONFIDENTIAL	TRN-INV-02494905

### Supplemental Documents, Data and Information Considered

Exhibit No.	Description	Bates Number
5468	Transocean Deepwater Horizon Incident - Internal Investigation. Investigation Update - Interim Report dated June 8, 2010, marked as CONFIDENTIAL	TRN-MDL-02726350 - TRN-MDL-02726367
5469	Transocean HSE Alert. marked as CONFIDENTIAL	TRN-INV-02494856 - TRN-INV-02494857
	MDL Deposition Transcript of Jimmy Glen Moore	
5470	Transocean, Introduction. Section 1, marked as CONFIDENTIAL	TRN-MDL-02865451 - TRN-MDL-02865458
5471	May 5, 2010 E-mail string among Arthur Dutton, Jimmy Moore, Mike Holmes, Francois Labesse and others, Subject:grs DWH, with Attachments, marked as CONFIDENTIAL	TRN-MDL-02818996 and TRN-MDL-02818997
5472	Transocean Safety Policies, Procedures and Documentation Risk Management THINK Planning Process. Section 4, marked as CONFIDENTIAL	TRN-INV-00094349
5473	Transocean, Introduction. Section 1, marked as CONFIDENTIAL	TRN-MDL-02865451 - TRN-MDL-02865458
5474	Transocean Management System - HSE Management, Section 2, marked as CONFIDENTIAL	TRN-MDL-02865347 - TRN-MDL-02865450
5475	Transocean Risk Management. Section 4, marked as CONFIDENTIAL	TRN-MDL-02865459 - TRN-MDL-02865602
5476	Transocean Emergency Response, Section 5, marked as CONFIDENTIAL	TRN-MDL-02865603 - TRN-MDL-02865637
5477	Transocean Performance Monitoring, Section 6, marked as CONFIDENTIAL	TRN-MDL-02865616 - TRN-MDL-02865637
5478	Sept 25, 2007 E-mail from Adrian Rose to Steven Newman. Subject: Meeting Presentations - GSF and Total. with Attachments. marked as CONFIDENTIAL	TRN-MDL-00655132 - TRN-MDL-00655156
5479	July 17, 2005 E-mail from Walter Cabucio to Derek Hart, Marty Weber and others, Subject: Task Planning and Risk Management Survey Questionnaire; May 20, 2009 E-mail from Walter Cabucio to Martin Nuttall, Bill Wainwright and others, Subject: 2004 Task Planning and Risk Management Survey Questionnaire. with Attachments. marked as CONFIDENTIAL	TRN-MDL-02823550 and TRN-MDL-02823551
5480	April 1, 2010 E-mail string among Susan Fontenot, Jerry Canducci and others, Subject: Corporate QHSE Incident Review - April 1, 2010, with Attachments, marked as CONFIDENTIAL	TRN-MDL-00547497 - TRN-MDL-00547526

## Supplemental Documents, Data and Information Considered

Exhibit No.	Description	Bates Number
5481	Feb 24, 2009 E-mail among Steven Newman, Adrian Rose, Jimmy Moore and others. Subject: Rig Visit Assignment, with Attachments, marked CONFIDENTIAL	TRN-MDL-02833303, TRN-MDL-02833304, TRN-MDL-02833574 - TRN-MDL-02833582
5482	Lloyd's Register Safety Management Systems and Safety Culture/Climate Reviews: Closing Meeting, NAM Division, Houston, March 26, 2010, marked as CONFIDENTIAL	TRN-MDL-02834327 - TRN-MDL-02834345
5483	Det Norske Veritas ISM Code Certification Ship Audit Report, marked as CONFIDENTIAL	TRN-MDL-02830621 - TRN-MDL-02830629
5484	Aug 16, 2010 E-mail from Scott Hopkins to Jimmy Moore, Subject: ISM Audit Reports - DWH Flag State Inspection Reports, with Attachments, marked as CONFIDENTIAL	TRN-MDL-02832154 - TRN-MDL-02832188
5485	Transocean Corporate Emergency Response Plan, marked CONFIDENTIAL	TRN-INV-00018567 - TRN-INV-00018600
5486	Engineering & Technical Support HSE Meeting December 2009, marked as CONFIDENTIAL	TRN-MDL-02827465 - TRN-MDL-02827484
5487	Sept 7, 2010 Letter from David G. Dickman to Brian F. Poskaitis, Subject: U.S. Coastal State Regulation Compliance, marked as CONFIDENTIAL	TRN-MDL-02831737 - TRN-MDL-02831741
5488	Deepwater Horizon Accident Investigation Report Review, marked as CONFIDENTIAL	TRN-INV-01463636 - TRN-INV-01463640
	MDL Deposition Transcript of William LeNormand	
3600	Basic Operations Manual Book	CAM_CIV_0000244 - CAM_CIV_0000423
3601	E-mail from Carter Erwin Sent 2/22/2010 5:11 p.m. to Lori Johnson, William LeNormand - Subject: RE: Control System Upgrade for HORIZON	CAM_CIV_0098247 - CAM_CIV_0098249
3602	Cameron Controls Daily Report Sheet Dated 5/MAY/2010; Project Title: SUBSEA POD Intervention	CAM_CIV_0046703 - CAM_CIV_0046721
3603	Emergency, Back-Up and Deepwater Safety Systems Automated Disconnect Systems for Shutting in Wells	CAM_CIV_0019820 - CAM_CIV_0019825
3604	1999-2000 Cameron Catalog	CAM_CIV_0019600 - CAM_CIV_0019611
3605	Engineering Bulletin EB 891 D, Dated September 8, 2004; AMF/Deadman Battery Replacement	CAM_CIV_0003275 - CAM_CIV_0003276
3606	Email from subsea Dated April 4, 2006, 11:50 a.m. to Eduardo Villmarin; Subject: RE: Need a Quote	CAM_CIV_0014450 - CAM_CIV_0014452
3607	Cameron Controls Daily Report Sheet Dated July 13, 2007; Project Title: Horizon	BP-HZN-BLY00111439



Supplemental Documents, Data and Information Considered		
Exhibit No.	Description	Bates Number
3608	Email from Richard E. Marques dated Friday December 29, 2006, 11:24 p.m. to John Gillen; Subject: FW: BOP Pod Damage	CAM_CIV_0014512 - CAM_CIV_0014514
3609	Controls Engineering EB 865C Dated 12-06-99; Deadman/AMF System Surface Testing	CAM_CIV_0003233
3610	DEEPWATER HORIZON BOP Subsea Test Well Num.: MC 252 Macondo #1; Date: 02-10-10	TRN-MDL-00106420 - TRN-MDL-00106431
3611	Cameron Controls Daily Report Sheet Dated 9/11/2001; Project Title - DEEPWATER HORIZON	CAM_CIV_0046820 - CAM_CIV_0046823
3612	Cameron Controls Daily Report Sheet Dated 9/17/2001; Project Title: DEEPWATER HORIZON	CAM_CIV_0046824 - CAM_CIV_0046827
3613	E-mail from Carter Erwin Dated 5/31/2006 3:55 p.m.; to William LeNormand; Subject: FW: Transocean DEEPWATER HORIZON	CAM_CIV_0080989 - CAM_CIV_0080990
3614	E-Mail from Carter Erwin Dated 2/22/2010 at 4:41 p.m.; Subject: FW: Control System Upgrade for Horizon; Attachment: CAMERON Drig and Production Sys Quote # 20554964	CAM_CIV_0150775 - CAM_CIV_0150778
3615	Color photograph of PETU with yellow rectangle below Insulation Monitorings	
3616	Color photograph of older PETU used during the top kill procedure	
3617	Cameron Desk Test Procedure for Mark-II Control Pod, Cameron P/N 2020708-21 DEEPWATER HORIZON; Dated May 10, 2010	CAM_CIV_0018112 - CAM_CIV_0018140
3618	Macondo Top Kill Procedures Manual for MC252-1 Re-Run & Function Test Yellow Pod	TDR018-002087 - TDR018-002123
3619	Cameron Controls Daily Report Sheet Dated 28/June/2010; Project Title: SUBSEA Blue POD Intervention	CAM_CIV_0151756 - CAM_CIV_0151762
3620	Factory Acceptance Test Procedure for Subsea Electronic Module (Horizon AMF/Deadman In Current Situation - Test Procedure); Dated May 11, 2010	CAM_CIV_0151942 - CAM_CIV_0151953
3621	Deck Test Procedure for Mark-II Control Pod Cameron P/N 2020708-21 "DEEPWATER HORIZON"	CAM_CIV_0151954 - CAM_CIV_0151975
3622	Cameron Controls Meeting Minutes; Date: August 4, 1999; RE: Progress Meeting	CAM_CIV_0018770 - CAM_CIV_0018772

# Supplemental Documents, Data and Information Considered

Exhibit No.	Description	Bates Number
3623	Operation Control Ticket; Date: 7/10/2007 16:01; Order No. 400129915 and associated documents	CAM_CIV_0016297 - CAM_CIV_0016360
3624	West Engineering Services, Inc. Evaluation of Secondary Intervention Methods in Well Control for US Minerals Management Services; Solicitation 1435-01-01-RP-31174; March 2003	TRN-MDL-00494920 - TRN-MDL-00495005
3625	Email from Craig McCormick to Mike Rogers, et al; Date: 12/21/2006 7:20 a.m.; Subject: RE: DVS shear rams	CAM_CIV_0074063 - CAM_CIV_0074064
3626	Cameron Safety Alert # 4058 Mark III Modular Drilling Control POD SEM (Subsea Electronics Module) Indication Faults; Date: 12 February 2009	CAM_CIV_0012632 - CAM_CIV_0012634
3627	Email from William LeNormand, W to Wallace Jarrett; Date: 9/21/2009 4:58 p.m.; Subject: FW: Pictures of Pie Connector	CAM_CIV_0150654
3628	Email from Michael Fry to William LeNormand; Date: 2/19/2010 12:26 p.m.; Subject: FW: Event Logger readings	CAM_CIV_0150773 - CAM_CIV_0150774
3629	TransOcean 1997-2010 Repairs - HORIZON Only	CAM_CIV_0130486 - CAM_CIV_0130512
3630	Email from Michael Fry to William LeNormand; Date: 2/19/2010 12:26 p.m.; Subject: FW: Event Logger readings	CAM_CIV_0150773- CAM_CIV_0150774
3631	Appendix AA DEEPWATER HORIZON BOP Modifications Since Commissioning	BP-HZN-BLY00000758 - BP-HZN-BLY00000760
3632	Cameron Controls Daily Report Sheet Dated 20/August/2010; Project Title: Subsea Stack Intervention	CAM_CIV_0237695 - CAM_CIV_0237696
3633	Top Well Kill Team Installation of Yellow POD onto HORIZON LMRP from Q4000; Initial Draft 6 May 2010	CAM_CIV_0152391 - CAM_CIV_0152400
3634	Email from William LeNormand to Jason Van Lue Dated 5/15/2010 at 11:03 a.m.; Subject: RE: Distribution between Conduit/Pod/Solenoid Package	CAM_CIV_0151517 - CAM_CIV_0151523
3635	Email from William Stringfellow to Carter Erwin, et al Dated 5/29/2010 at 4:49 a.m.; Subject: PETU Question	CAM_CIV_0028727
3636	Email from Merrick M. Kelley to Geoff Boughton, et al Dated 6/24/2010 at 2:47 p.m.; Subject: REQUEST: Attend Blue Pod Recover Procedure Review at bp office	CAM_CIV_0151579 - CAM_CIV_0151594

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<b>Exhibit No.</b>	<b>Description</b>	<b>Bates Number</b>
3637	Email from William LeNormand to Merrick Kelley Dated 7/11/2010 at 7:31 p.m.; Subject: RE: NEXT STEP - BLUE POD Operations	CAM_CIV_0150536 - CAM_CIV_0150537
3638	Chief Counsel's Report: Automatic Mode Function (AMF)/Deadman	
3639	Cameron Field Service Order No. 130495; Date Prepared: 8-20-06	CAM_CIV_0016118
3640	Cameron Drilling Systems Performance Through Leadership	CAM_CIV_0019538 - CAM_CIV_0019572
	MDL Deposition Testimony of Peter Bjerager	
3149	Curriculum Vitae of Peter Bjerager, Ph.D., M.Sc., Director of Operations DNV; three pages	
3150	DNV Certificate of Conformity, marked as Highly Confidential, Access Restricted, Attorneys Only	CAM_CIV_0004296 - CAM_CIV_0004297
3151	DNV Design Verification Report Independent Review Certificate, marked as Highly Confidential, Access Restricted, Attorneys Only	CAM_CIV_0004298 - CAM_CIV_0004299
3152	Transocean-DNV Fleet Agreement (2005- 2010) Agreement for Periodical Class and Statutory Surveys between Transocean Offshore Deepwater Drilling, Inc. & Det Norske Veritas AS	TRN-MDL-01075563 - TRN-MDL-01075604
3153	Spreadsheet containing log of withheld documents from DNV production pursuant to Parties' document requests; 28 pages	
3154	DNV Deepwater Horizon HAZID Report for Transocean Offshore Deepwater Drilling, Inc., Project no EP026665 Rev C, 2nd August 2010	DNV-SUPPL-000189 - DNV-SUPPL-000208
3155	02 August 2010 Deepwater Horizon HAZID (Rev C) Transocean Offshore Deepwater Drilling, Inc., Pages 18 through and including 39	DNV-SUPPL-000209 - DNV-SUPPL-000230
3156	02 August 2010 Deepwater Horizon HAZID (Rev C) Transocean Offshore Deepwater Drilling, Inc., Pages 40 through and including 52	DNV-SUPPL-000231 - DNV-SUPPL-000244
3157	DNV Deepwater Horizon HAZID Report Transocean Offshore Deepwater Drilling, Inc., Report No: EP026474-1, Rev. 0, 10 November 2010	DNV-SUPPL-000245 - DNV-SUPPL-000269
3158	DNV Deepwater Horizon HAZID Report Transocean Offshore Deepwater Drilling, Inc	DNV-SUPPL-000270 - DNV-SUPPL-000287
3159	DNV Deepwater Horizon HAZID Report Transocean Offshore Deepwater Drilling, Inc	DNV-SUPPL-000288 - DNV-SUPPL-000300

### Supplemental Documents, Data and Information Considered

Exhibit No.	Description	Bates Number
3160	DNV Deepwater Horizon HAZID Report Transocean Offshore Deepwater Drilling, Inc	DNV-SUPPL-000301 - DNV-SUPPL-000315
3161	DNV Non-Conformity and Finding Note, marked as Highly Confidential	003438 - 03441
3162	ISM Certification, Guidance for Planning of Periodical Company Audits;	000025 - 00034
3163	Guidance for Auditors to the ISM Code, 2005-10-18, MTPN0342 Maritime Management Systems	000035 - 00091
3164	Appendix H 3. Company Audit Guide, 2007-06-01	000099 - 00100
3165	String of E-mails dated Dec 4, through Dec 12, 2008 from hddad.Samadpour@dnv.com to David.McKay@dnv.com: Subject: Transocean's Safety Management System with attachment, marked as Highly Confidential	000244 - 00259
	MDL Deposition Transcript of Michael Odom	
5571	Department of Homeland Security United States Coast Guard Certificate of Compliance IMO Number 8764597	HCG161-040009 through HCG161-040017
5572	MMS/USCG RIG Inspection Summary Report Deepwater Horizon	TRN-INV-02265384 and TRN-INV-02265385
5573	U.S. Department of Transportation United States Coast Guard Navigation and Vessel Inspection Circular No. 3-88, Change 1, 20 pages	
5574	ANNEX G: List of Certificates and Expiration Dates, one page	
5575	ANNEX F: Letter from the USCG to the Republic of the Marshall Islands Regarding MODU Code Equivalence, dated Aug 09 2002, four pages	
5576	Congressional Staff, DHS, OMB & Other Misc Q&As, #Q&As-03092, Regulation/Policy to allow CG to Issue 2 Yr Certificate to DH MODU	HCG037-010037 and HCG037-010038
5577	Congressional Staff, DHS, OMB & Other Misc Q&As, #Q&As-03095, Inspection Details for MODUs	HCG037-010037 and HCG037-010038
5578	Congressional Staff, DHS, OMB & Other Misc Q&As, #Q&As-03459, Regulations Regarding Outer Continental Shelf Activities	HCG037-010363 and HCG037-010364

**Supplemental Documents, Data and Information Considered**

<b>Exhibit No.</b>	<b>Description</b>	<b>Bates Number</b>
5579	Congressional Staff, DHS, OMB & Other Misc Q&As, #Q&As-03460, Require All EEZ Entities to be U.S. Flagged; #Q&As-03536, Inspections for Changing Flags on a Vessel; #Q&As-03482, Good Marine Practice	HCG037-010365 and HCG037-010366; HCG037-010410 and HCG037-010411; HCG037-010382 and HCG037-010383
5580	U.S. Department of Homeland Security United States Coast Guard Activity Summary Report, Activity ID 3513781, dated 06/25/2009	DHCIT_TPY-0169163 and DHCIT_TPY-0169164
5581	U.S. Department of Homeland Security United States Coast Guard Activity Summary Report, Activity ID 1410653, dated 08/15/2001	DHCIT_TPY-0169043 through DHCIT_TYP-0169045
5582	U.S. Department of Homeland Security United States Coast Guard Activity Summary Report, Activity ID 1666474, dated 08/13/2002	DHCIT_TPY-0169099 and DHCIT_TPY-0169100
5583	U.S. Department of Homeland Security United States Coast Guard Activity Summary Report, Activity ID 1887481, dated 08/26/2003	DHCIT_TPY-0169112 and DHCIT_TPY-0169113
5584	U.S. Department of Homeland Security United States Coast Guard Activity Summary Report, Activity ID 2192379, dated 08/31/2004	DHCIT_TPY-0169122 and DHCIT_TPY-0169123
5585	U.S. Department of Homeland Security United States Coast Guard Activity Summary Report, Activity ID 2466860, dated 08/16/2005	DHCIT_TPY-0169130 and DHCIT_TPY-0169131
5586	U.S. Department of Homeland Security United States Coast Guard Activity Summary Report, Activity ID 2744163, dated 08/11/2006	DHCIT_TPY-0169138 through DHCIT_TPY-0169140
5587	U.S. Department of Homeland Security United States Coast Guard Activity Summary Report, Activity ID 2990305, dated 08/07/2007	DHCIT_TPY-0169145 and DHCIT_TPY-0169146
5588	U.S. Department of Homeland Security United States Coast Guard Activity Summary Report, Activity ID 3072937, dated 10/04/2007	DHCIT_TPY-0169147 and DHCIT_TPY-0169148
5589	U.S. Department of Homeland Security United States Coast Guard Activity Summary Report, Activity ID 3378271, dated 10/15/2008	DHCIT_TPY-0169155 through DHCIT_TPY-0169157
5590	U.S. Department of Homeland Security United States Coast Guard Activity Certificate of Compliance, IMO Number 8764597	DHCIT_TPY-0232822, DHCIT_TPY-0232826 through DHCIT_TPY-0232829
5591	Vessel Critical Profile for the Deepwater Horizon, eight pages	

**Supplemental Documents, Data and Information Considered**

<b>Exhibit No.</b>	<b>Description</b>	<b>Bates Number</b>
	MMS Inspection Report for Deepwater Horizon dated 1/30/2002	OSE212-038488
	MMS Inspection Report for Deepwater Horizon dated 3/29/2002	OSE212-038489
	MMS Inspection Report for Deepwater Horizon dated 4/22/2002	OSE212-038490
	MMS Inspection Report for Deepwater Horizon dated 5/16/2002	OSE212-038491 - 92
	MMS Inspection Report for Deepwater Horizon dated 6/4/2002	OSE212-038493
	MMS Inspection Report for Deepwater Horizon dated 6/4/2002	OSE212-038494
	MMS Inspection Report for Deepwater Horizon dated 3/24/2003	OSE212-038495
	MMS Inspection Report for Deepwater Horizon dated 4/21/2003	OSE212-038496
	MMS Inspection Report for Deepwater Horizon dated 5/13/2003	OSE212-038497
	MMS Inspection Report for Deepwater Horizon dated 6/6/2003	OSE212-038498
	MMS Inspection Report for Deepwater Horizon dated 7/7/2003	OSE212-038499
	MMS Inspection Report for Deepwater Horizon dated 7/19/2003	OSE212-038500
	MMS Inspection Report for Deepwater Horizon dated 8/6/2003	OSE212-038501 - 02
	MMS Inspection Report for Deepwater Horizon dated 8/6/2003	OSE212-038503 - 06
	MMS Inspection Report for Deepwater Horizon dated 8/8/2003	OSE212-038507
	MMS Inspection Report for Deepwater Horizon dated 8/18/2003	OSE212-038508
	MMS Inspection Report for Deepwater Horizon dated 9/5/2003	OSE212-038509 - 14
	MMS Inspection Report for Deepwater Horizon dated 9/17/2003	OSE212-038515
	MMS Inspection Report for Deepwater Horizon dated 10/20/2003	OSE212-038516
	MMS Inspection Report for Deepwater Horizon dated 11/5/2003	OSE212-038517

**APPENDIX**

**Supplemental Documents, Data and Information Considered**

<b>Exhibit No.</b>	<b>Description</b>	<b>Bates Number</b>
	MMS Inspection Report for Deepwater Horizon dated 12/3/2003	OSE212-038518
	MMS Inspection Report for Deepwater Horizon dated 1/20/2004	OSE212-038519
	MMS Inspection Report for Deepwater Horizon dated 2/20/2004	OSE212-038520
	MMS Inspection Report for Deepwater Horizon dated 3/7/2004	OSE212-038521
	MMS Inspection Report for Deepwater Horizon dated 6/21/2005	OSE212-038522
	MMS Inspection Report for Deepwater Horizon dated 7/21/2005	OSE212-038523
	MMS Inspection Report for Deepwater Horizon dated 8/17/2005	OSE212-038524
	MMS Inspection Report for Deepwater Horizon dated 10/8/2005	OSE212-038525
	MMS Inspection Report for Deepwater Horizon dated 11/22/2005	OSE212-038526
	MMS Inspection Report for Deepwater Horizon dated 11/29/2005	OSE212-038527
	MMS Inspection Report for Deepwater Horizon dated 1/3/2006	OSE212-038528
	MMS Inspection Report for Deepwater Horizon dated 2/15/2006	OSE212-038529 - 30
	MMS Inspection Report for Deepwater Horizon dated 3/29/2006	OSE212-038531 - 34
	MMS Inspection Report for Deepwater Horizon dated 6/12/2006	OSE212-038535
	MMS Inspection Report for Deepwater Horizon dated 7/18/2006	OSE212-038536
	MMS Inspection Report for Deepwater Horizon dated 8/29/2006	OSE212-038537
	MMS Inspection Report for Deepwater Horizon dated 9/26/2006	OSE212-038538 - 39
	MMS Inspection Report for Deepwater Horizon dated 10/11/2006	OSE212-038540 - 43
	MMS Inspection Report for Deepwater Horizon dated 11/14/2006	OSE212-040551
	MMS Inspection Report for Deepwater Horizon dated 12/13/2006	OSE212-038544 - 46

**Supplemental Documents, Data and Information Considered**

<b>Exhibit No.</b>	<b>Description</b>	<b>Bates Number</b>
	MMS Inspection Report for Deepwater Horizon dated 2006-18-04	OSE676-006806 - 07
	MMS Inspection Report for Deepwater Horizon dated 3/7/2007	OSE212-040555 - 56
	MMS Inspection Report for Deepwater Horizon dated 4/6/2007	OSE212-038554
	MMS Inspection Report for Deepwater Horizon dated 4/25/2007	OSE212-038547 - 53
	MMS Inspection Report for Deepwater Horizon dated 6/5/2007	OSE212-038555 - 56
	MMS Inspection Report for Deepwater Horizon dated 7/11/2007	OSE212-038557 - 58
	MMS Inspection Report for Deepwater Horizon dated 8/8/2007	OSE212-038559 - 60
	MMS Inspection Report for Deepwater Horizon dated 9/19/2007	OSE212-038561 - 62
	MMS Inspection Report for Deepwater Horizon dated 10/29/2007	OSE212-038563
	MMS Inspection Report for Deepwater Horizon dated 11/9/2007	OSE212-038564
	MMS Inspection Report for Deepwater Horizon dated 1/11/2008	OSE212-038565
	MMS Inspection Report for Deepwater Horizon dated 2/8/2008	OSE212-038566
	MMS Inspection Report for Deepwater Horizon dated 3/12/2008	OSE212-038567
	MMS Inspection Report for Deepwater Horizon dated 8/15/2008	OSE212-038568
	MMS Inspection Report for Deepwater Horizon dated 10/28/2008	OSE212-038570
	MMS Inspection Report for Deepwater Horizon dated 11/18/2008	OSE212-038571 - 72
	MMS Inspection Report for Deepwater Horizon dated 1/27/2009	OSE212-038573 - 74
	MMS Inspection Report for Deepwater Horizon dated 2/20/2009	OSE240-029533 - 34
	MMS Inspection Report for Deepwater Horizon dated 3/24/2009	OSE212-038577 - 78
	MMS Inspection Report for Deepwater Horizon dated 4/27/2009	OSE212-038579 - 80

**APPENDIX**



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Exhibit No.	Description	Bates Number
	MMS Inspection Report for Deepwater Horizon dated 6/9/2009	OSE212-038581 - 82
	MMS Inspection Report for Deepwater Horizon dated 7/22/2009	OSE212-038583 - 84
	MMS Inspection Report for Deepwater Horizon dated 9/28/2009	OSE212-038585
	MMS Inspection Report for Deepwater Horizon dated 10/20/2009	OSE212-038586
	MMS Inspection Report for Deepwater Horizon dated 11/12/2009	OSE212-038587
	MMS Inspection Report for Deepwater Horizon dated 2/17/2010	OSE212-038588 - 89
	MMS Inspection Report for Deepwater Horizon dated 3/3/2010	OSE212-038590
	MMS Inspection Report for Deepwater Horizon dated 4/1/2010	OSE212-038591
	Transocean Emergency Disconnect Procedures	TRN-MDL-02995979 - 988
	Deepwater Horizon Well Control Response Plan	TRN-MDL-02991874 - 897
	IMCA, Guidelines for the Design and Operation of Dynamically Positioned Vessels, Dec. 2007, at Section 1.6.4, available at <a href="http://www.imca-int.com/divisions/marine/publications/103.html">http://www.imca-int.com/divisions/marine/publications/103.html</a> .	
	46 C.F.R. § 109.107	
	Regulation V/13, International Convention for the Safety of Life at Sea (SOLAS)	
	Principles of Safe Manning, IMO Resolution A/21/Res.890, Annex 2, § 3.2	
	Regulation IX/1, International Convention for the Safety of Life at Sea (SOLAS)	
	Marshall Islands Requirements for Merchant Marine Personnel Certification, MI-118, § 4.5.3.	
	46 C.F.R. § 15.520(f)	
	Schedules B and C, Marshall Islands, Office of the Maritime Administrator, Minimum Safe Manning Requirements for Vessels, Marine Notice No. 7-038-2 (Rev. 12/09)	
	Schedule A, Marshall Islands, Office of the Maritime Administrator, Minimum Safe Manning Requirements for Vessels, Marine Notice No. 7-038-2 (Rev. 12/09)	

### Supplemental Documents, Data and Information Considered

Exhibit No.	Description	Bates Number
	Guidelines for Vessels with Dynamic Positioning Systems. IMO MSC/Circ. 645 (Jun. 6, 1994). available at <a href="http://www.imo.org/includes/blastDataOnly.asp/data_id%3D10015/MSCCirc645.pdf">http://www.imo.org/includes/blastDataOnly.asp/data_id%3D10015/MSCCirc645.pdf</a>	
	Schedule DPV, Marshall Islands, Office of the Maritime Administrator, Minimum Safe Manning Requirements for Vessels. Marine Notice No. 7-038-2 (Rev. 12/09)	
	33 C.F.R. § 155.700.	
	Letter from Republic of the Marshall Islands Re: DEEPWATER HORIZON Casualty Investigation dtd Aug. 25, 2010	
	Republic of the Marshall Islands Report of Safety Inspection for the Deepwater Horizon dtd Dec. 17, 2009,	TRN-MDL-01101587
	Code for the Construction and Equipment of Mobile Offshore Drilling Units, 1989	
	ABS Rules for Building and Classing Mobile Offshore Drilling Units (2008)	
	DNV Rules for Classification of Offshore Drilling and Support Units, DNV-OSS-101	
	Marshall Islands Mobile Offshore Drilling Unit Standards, MI-293	
	46 C.F.R. §§ 107.261(b), 107.265	
	U.S. Coast Guard Navigation and Vessel Inspection Circular No. 12-69, Special Examination in Lieu of Dry-docking for Large Mobile Drilling Units (Dec. 12, 1969), available at <a href="http://www.uscg.mil/hq/cg5/nvic/pdf/1960s/n12-69.pdf">www.uscg.mil/hq/cg5/nvic/pdf/1960s/n12-69.pdf</a> .	
	Email from Michael Odom to Randal Ogrydziak dated May 05, 2010 regarding the Deepwater Horizon Investigation	HCG161-041962
	Code for the Construction and Equipment of Mobile Offshore Drilling Units, 2009, Resolution A.1023(26), Section 6.5.2.	