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**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF LOUISIANA**

**In Re: Oil Spill by the Oil Rig “Deepwater
Horizon” in the Gulf of Mexico, on April
20, 2010**

Relates to: *Claims in the “B1” Bundle*

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* **MDL NO. 2179**
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* **SECTION: J**
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* **HONORABLE CARL J. BARBIER**
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* **MAGISTRATE JUDGE SHUSHAN**
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BON SECOUR FISHERIES, INC.; FORT MORGAN REALTY, INC.; LFBP #1, LLC d/b/a GW FINS; PANAMA CITY BEACH DOLPHIN TOURS & MORE, LLC; ZEKE’S CHARTER FLEET, LLC; WILLIAM SELLERS; KATHLEEN IRWIN; RONALD LUNDY; CORLISS GALLO; LAKE EUGENIE LAND & DEVELOPMENT, INC.; HENRY HUTTO; BRAD FRILOUX; JERRY J. KEE; JOHN TESVICH; and MICHAEL GUIDRY, on behalf of themselves and all others similarly situated,

Plaintiffs,

v.

BP EXPLORATION & PRODUCTION INC.; BP AMERICA PRODUCTION COMPANY; BP P.L.C.,

Defendants.

CIVIL ACTION NO. 12-970

SECTION: J

JUDGE BARBIER

MAGISTRATE JUDGE SUSHAN

**AMENDED CLASS ACTION COMPLAINT
FOR PRIVATE ECONOMIC LOSSES AND PROPERTY DAMAGES**

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INTRODUCTION

On April 20, 2010, a well blowout on the oil rig Deepwater Horizon in the Gulf of Mexico marked the beginning of what would become the most pervasive and devastating environmental disaster in the history of the United States. The uncontrolled blowout caused explosions and a raging fire aboard the Deepwater Horizon; after burning for two days, the rig sank, commencing an oil spill of unprecedented proportion that damaged, depleted, and destroyed marine, estuarine, and coastal environments in the Gulf of Mexico, Louisiana, Mississippi, Alabama, Texas, and Florida (the “Oil Spill”). In the twelve weeks it took to cap the blown-out well, over 210 million gallons of oil gushed unchecked into the Gulf of Mexico, causing widespread and disastrous environmental and economic damage to the people, businesses, and environment of the Gulf of Mexico.

In the months after Deepwater Horizon disaster, hundreds of individual and class actions were filed in state and federal courts on behalf of the thousands of victims of the Oil Spill. By an order entered on August 10, 2010, the Judicial Panel on Multidistrict Litigation transferred all such actions then pending to this Court. *See In re Oil Spill by the Oil Rig “Deepwater Horizon” in the Gulf of Mexico, on April 20, 2010*, 731 F. Supp. 2d 1352 (J.P.M.L. 2010) (the “Transfer Order”). On October 19, 2010, this Court entered its Case Management Order No. 1 (Rec. Doc. 569, hereinafter “CMO No. 1”), wherein it directed the filing of Master Complaints on behalf of the Plaintiffs.

This Class Action Complaint is filed on behalf of those persons (individuals and entities) seeking private (non-governmental) economic loss and property damages who are within the Economic & Property Damages Class defined in the Class Allegations section of this Complaint (“the E&PD Class”). As to all other persons (individuals and entities), the previously filed First

Amended Master Class Action Complaint, Cross-Claim, and Third Party Complaint (Rec. Doc. 1128) continues in effect and is not superseded by this Complaint.

This Complaint asserts claims under federal maritime law, including federal common law and federal statutory law, seeking damages for the E&PD Class defined in the Class Allegations section of this Complaint, including actual, compensatory, and punitive damages, arising from the well blowout, fire, and explosions aboard, and sinking of, the Deepwater Horizon on April 20, 2010, and the subsequent Oil Spill in the Gulf of Mexico.

Plaintiffs state in summary as follows:

1. On April 20, 2010, at approximately 9:45 p.m. CST, an uncontrolled well blowout caused explosions on the Deepwater Horizon, an oil rig vessel engaged in oil exploration drilling operations in the Gulf of Mexico. The explosions ignited a raging fire, fueled by gas spewing onto the vessel from the blown-out well. After burning for two days, the Deepwater Horizon sank to the ocean floor.

2. As the Deepwater Horizon tipped into the sea, the long riser pipe connecting the vessel to the wellhead on the seafloor bent and broke, leaving the pipe leaking oil out of its now-open end as well as through two breaks along its length. An emergency valve, installed on the wellhead for just such a disaster, failed to seal the wellhead, as it should have, causing the blown-out well to spew oil into the Gulf waters.

3. Each day during the course of the Oil Spill, tens of thousands of barrels of crude oil gushed from the wellhead and broken riser, bubbling up to the surface and flattening out into a widening slick of oil, as well as spreading out in vast subsurface plumes. Ultimately almost five million barrels (210 million gallons) of crude oil spilled into the Gulf of Mexico.

4. On the surface, the shifting smear was large enough to be visible from outer space, at times covering tens of thousands of square miles, and spreading with the wind and currents towards the Gulf states' coastlines, where oil made landfall on white sand beaches and in ecologically sensitive marshes and estuaries, damaging the environment and real and personal property throughout the coastal areas of the Gulf states. Below the surface, huge plumes of oil and dispersant chemicals swirled through the entire water column and came to rest on the seafloor at many different depths, damaging ecosystems and privately owned and leased sea beds throughout the Gulf of Mexico.

5. The Deepwater Horizon's well blowout and the subsequent explosions, fire, sinking, and Oil Spill were foreshadowed by a string of disastrous incidents and near misses in Defendants' operations on land and at sea, as well as poor decision-making by Defendants and their employees, as they ignored crucial safety issues, cut corners, and violated federal and state law to save time and money in favor of production and profit and at the expense of worker safety and environmental protection. All the while, Defendants continued to evade and subvert industry regulations.

6. Defendants could have prevented this catastrophe by using proper risk management practices, following deepwater drilling industry standards, following required safety protocols and precautionary procedures, properly maintaining equipment, and using widely available emergency safety technology but, with little regard for the risk to the vessel workers or the environment, Defendants chose to violate or ignore operational discipline, and to save money and time at the expense of safety. Their cost-cutting measures, consistent with their long corporate histories of flagrant disregard for safety, were taken with willful, wanton, and

reckless indifference to the disastrous results to the workers aboard the vessel, the environment, and the economic interests, businesses, and property of Plaintiffs herein.

7. Defendants repeatedly made decisions impacting the safety of the vessel, its workers, the environment, and the health, welfare, and value of the people, businesses, and property of the Gulf states in the direction of short-term gain, through reduced schedule and reduced cost, rejecting adequate and responsible risk-analysis checks and balances to weigh cost and time versus risk and safety. The result was both predictable in outcome and unprecedented in scale. Moreover, because their conduct endangered the health and safety of a large region and population, caused and increased the risk of serious injury and bodily harm, and affected a financially vulnerable population dependent on the Gulf of Mexico, the degree of reprehensibility of Defendants' conduct is at the highest level.

8. The Oil Spill has caused, and continues to cause, devastating environmental and economic damage. For example, there have been thousands of square miles of waters closed to fishing, swimming and/or boating, and thousands of square miles of historic coastal marshes, delicate estuaries, cypress forests, barrier islands, and white sand beaches compromised. Fishermen and marine-related businesses have lost and continue to lose income and their businesses; the tourism industry and hotels, resorts, restaurants, and other tourism-reliant businesses have lost and continue to lose income; and property owners have suffered the loss, damage, and/or diminution of the value of their properties throughout the Gulf Coast Areas.¹

¹ As defined in Paragraph 314 below, the "Gulf Coast Areas" are the States of Louisiana, Mississippi, and Alabama, the counties of Chambers, Galveston, Jefferson and Orange in the State of Texas, and the counties of Bay, Calhoun, Charlotte, Citrus, Collier, Dixie, Escambia, Franklin, Gadsden, Gulf, Hernando, Hillsborough, Holmes, Jackson, Jefferson, Lee, Leon, Levy, Liberty, Manatee, Monroe, Okaloosa, Pasco, Pinellas, Santa Rosa, Sarasota, Taylor, Wakulla, Walton and Washington in the State of Florida.

9. Collectively, the well blowout, the explosions and fire aboard the Deepwater Horizon, the sinking of the rig, the subsequent Oil Spill, the efforts to cap the blown-out well, the clean-up efforts, and the operations surrounding those events and activities comprise the “Deepwater Horizon Incident.”²

10. The filing of this Complaint does not constitute a waiver or dismissal of any actions or claims asserted in the actions arising out of the Deepwater Horizon Incident, nor by it do the Plaintiffs relinquish the right to add or assert, or seek leave to add or assert, additional claims, or name additional parties defendant, depending on further information learned through discovery or investigation, subject to further orders of the Court.

11. More specifically, this Complaint describes the conduct of Transocean Ltd., Transocean Offshore Deepwater Drilling, Inc., Transocean Deepwater, Inc., Transocean Holdings, LLC, Triton Asset Leasing GmbH, Halliburton Energy Services, Inc., and Sperry Drilling Services (formerly Sperry Sun Drilling Services) in connection with the Deepwater Horizon Incident. These Transocean and Halliburton entities are named Defendants in the First Amended Master Complaint, Cross-Claim, and Third-Party Complaint For Private Economic Losses in Accordance with PTO No. 11 [CMO No. 1] Section III (B1) [“B1 Bundle”] (hereinafter the “operative B1 Master Complaint”). (Rec. Doc. 1128.) Plaintiffs and the Class hereby reserve any and all claims they may have against these or any other Transocean and Halliburton entities, including, but not limited to those asserted in the operative B1 Master

² More specifically, the “Deepwater Horizon Incident” refers to the events, actions, inactions, and omissions leading up to and including (i) the blowout of the Macondo well on April 20, 2010, (ii) the explosions and fire aboard the Deepwater Horizon, (iii) the sinking of the Deepwater Horizon on April 22, 2010, (iv) the release of oil, other hydrocarbons, and other substances from the blown-out well and the Deepwater Horizon, (v) the efforts to contain the blown-out well, (vi) response activities, including the VoO Program; (vii) the operation of the Gulf Coast Claims Facility; and (viii) BP’s public statements relating to all of the foregoing.

Complaint, and reserve the right to amend this or other Complaints to assert such claims or name such entities as defendants.

12. This Complaint makes allegations of, and places Defendants on notice that Plaintiffs seek certification of the E&PD Class described and defined herein. Plaintiffs seek to maintain this action as a class action under Rule 23 of the Federal Rules of Civil Procedure, including Rule 23(a)(1)-(4); and (b)(3).

PARTIES

A. Plaintiffs

13. Plaintiffs are individuals and/or entities who have suffered economic and property damages as a result of the Deepwater Horizon Incident, and who bring this action as proposed representatives of the E&PD Class defined herein.

(a) Bon Secour Fisheries

Representative Plaintiff Bon Secour Fisheries, Inc. (“Bon Secour”) is an Alabama corporation with its principal place of business in Bon Secour, Alabama. Bon Secour is a sixth-generation, family-owned company that has been in business for more than 100 years processing and selling seafood, including shrimp and oysters, harvested from the Gulf of Mexico. The Oil Spill caused a drastic decrease in the quantity and quality of available Gulf shrimp, oysters and other seafood products. The lack of adequate supplies of seafood to process and sell caused Bon Secour to lose customers and revenue. Bon Secour continued to process and sell shrimp, oysters and seafood, but the higher post-Spill prices reduced their profits. Thus, Bon Secour has suffered, and continues to suffer, economic damages as a result of the Deepwater Horizon Incident.

(b) **Fort Morgan Realty**

Plaintiff Fort Morgan Realty, Inc. (“Fort Morgan Realty”) is an Alabama corporation with its principal place of business in Gulf Shores, Alabama. Fort Morgan Realty sells real estate and manages approximately 85 beach vacation rental properties along the Gulf Coast in Baldwin County, Alabama. In its vacation rental property management business, Fort Morgan Realty derives income from rental commissions and related fees. Because of the Deepwater Horizon Incident, Fort Morgan Realty experienced economic damage and loss of income caused by multiple vacation cancellations and a severe reduction in tourist-related bookings for the properties it manages.

(c) **GW Fins**

Representative Plaintiff LFBP #1, LLC d/b/a GW Fins (“GW Fins”) is a Louisiana corporation with its principal place of business in New Orleans, Louisiana. GW Fins is a fine-dining seafood restaurant located in historic French Quarter of New Orleans, owned and operated by Gary Wollerman and his partner, Executive Chef Tenney Flynn. GW Fins’ business success turns on its use of the highest quality seafood. As a result of the Oil Spill, the available supply of high-quality Gulf of Mexico seafood decreased, which caused GW Fins to have to pay more to import seafood from other areas. Further, tourists and locals avoided Gulf seafood — and the restaurants that served it — due to the pervasive perception of oil-contamination, which decreased GW Fins revenue. Thus GW Fins suffered, and will continue to suffer, economic damage as a result of the Deepwater Horizon Incident.

(d) **Panama City Beach Dolphin Tours**

Representative Plaintiff PCB Dolphin Tours & More, LLC (“PCB Dolphin”) is a Florida limited liability company with its principal place of business in Panama City Beach, Florida.

Owner Dane Taylor started PCB Dolphin in February of 2010, with the intention of offering dolphin-sighting tours along Florida's Gulf Coast, as well as snorkeling trips to local wrecks, and other marine tourism activities. Just as PCB Dolphin was ramping up for its first season, the Deepwater Horizon Incident brought business to a halt— demand for marine tourism plummeted, and PCB Dolphin's harbor inlet was gated off almost entirely, so PCB Dolphin's boats had to fight heavy traffic of clean-up vessels for passage through the narrow channel that was left open. The Deepwater Horizon Incident effectively destroyed PCB Dolphin's maiden season; Mr. Taylor was forced to try to hold on through 2010 and try to keep PCB Dolphin afloat in hopes that 2011 would be a better year. Thus PCB Dolphin suffered, and continues to suffer, economic damage as a result of the Deepwater Horizon Incident.

(e) **Zeke's Charter Fleet**

Representative Plaintiff Zeke's Charter Fleet, LLC ("Zeke's Charter") is an Alabama limited liability company with its principle place of business in Orange Beach, Alabama. Zeke's Charter is a booking business for a fleet of 30 off-shore and 10 in-shore charter fishing vessels home-harbored at Zeke's Landing Marina on Cotton Bayou, Orange Beach, Alabama. Zeke's Charter's business was negatively impacted by the Deepwater Horizon Incident because Gulf of Mexico fishing areas were closed, and demand for Gulf fishing activities plummeted. Even after some fishing areas reopened, demand for charter fishing stayed low, despite Zeke's Charter's best efforts to drum up business with heavy marketing and discounting. Thus Zeke's Charter suffered, and continues to suffer, economic damage as a result of the Deepwater Horizon Incident.

(f) **William Sellers**

Representative Plaintiff William Sellers is an Alabama resident and, at the time of the Deepwater Horizon Incident, was the owner of residential property located at 28101 Perdido Beach Boulevard, Orange Beach, Alabama. The Oil Spill caused oiling of the waters and beaches visible and accessible from Mr. Sellers property, as well as an unpleasant petroleum-type odor around his property. After and because of the Deepwater Horizon Incident, Mr. Sellers experienced a loss on the sale of his residential property. Also, because of the Deepwater Horizon Incident but prior to the sale, Mr. Sellers suffered a loss of the use and enjoyment of his property.

(g) **Kathleen Irwin**

Representative Plaintiff Kathleen Irwin is a Florida resident and owner of a Gulf-front residential property at 3650 Scenic Highway 98, Destin, Florida. Prior to the Oil Spill, Ms. Irwin enjoyed views of, and access to, the beach and the Gulf of Mexico from her property, and hosted visiting guests and family at her beachfront home. The Oil Spill caused oiling of the waters and beaches visible and accessible from Ms. Irwin's property, fouling her view and preventing her from enjoying the beach and the Gulf waters. Because of the oiling, Ms. Irwin could not invite her young grandchildren to visit and swim in the Gulf. To this day, clean up crews continue to collect tar balls and other Spill-related remnants from the beach in front of Ms. Irwin's property. Thus Ms. Irwin suffered a loss of the use and enjoyment of her Gulf-front residential property as a result of the Deepwater Horizon Incident.

(h) **Brad Friloux**

Representative Plaintiff Brad Friloux is a Louisiana resident and a commercial fisherman and owner/Captain of M/V Big Bad Brad, a 72' Shrimping Boat. Mr. Friloux primarily earns his income by shrimping. Because of the Oil Spill, shrimp fisheries were closed and harmed, depriving Mr. Friloux of his income from shrimping. The Oil Spill also deprived Mr. Friloux of Gulf of Mexico natural resources that he relied upon for subsistence use prior to the Oil Spill. After the Oil Spill, Mr. Friloux attempted to supplement his income by participating in the VoO Program. Although Mr. Friloux worked regularly for the VoO Program from approximately May 15, 2010 to September 28, 2010, he did not receive a formal written off-charter dispatch notification until November 26, 2010, and Mr. Friloux was not fully paid for all his time spent under charter in the VoO Program. Therefore, Mr. Friloux suffered, and continues to suffer, economic loss, loss of subsistence, and VoO Program underpayment due to the Deepwater Horizon Incident.

(i) **Henry Hutto**

Representative Plaintiff Henry Hutto is a Louisiana resident and a commercial fisherman and owner/Captain of M/V Sugar Bear Too, a 35' Shrimping Boat. Mr. Hutto primarily earns his income by shrimping. The Oil Spill negatively affected shrimp fisheries, depriving Mr. Hutto of his shrimping income. The Oil Spill also deprived Mr. Hutto of Gulf of Mexico natural resources that he relied upon for subsistence use prior to the Oil Spill. After the Oil Spill, Mr. Hutto attempted to supplement his income by participating in the VoO Program. Although Mr. Hutto worked as directed for the VoO Program, his vessel was not decontaminated until November 7, 2010, and did not receive formal notice of termination until on or around November 26, 2010, and Mr. Hutto was not fully paid for all his time spent under charter in the VoO Program. Therefore, Mr. Hutto suffered, and continues to suffer, economic loss, loss of subsistence, and VoO Program underpayment due to the Deepwater Horizon Incident.

(j) **Jerry J. Kee**

Representative Jerry J. Kee is an Alabama resident and a commercial fisherman and owner/Captain of M/V Miss Nette, a 19' Flatbottom Skiff. Mr. Kee primarily earns his living by harvesting crabs and finfish from the waters of the Gulf of Mexico. The Oil Spill negatively affected the crab and finfish fisheries, depriving Jerry Kee of his crab and fisheries income. The Oil Spill also deprived Mr. Kee of Gulf of Mexico natural resources that he relied upon for

subsistence prior to the Oil Spill. After the Oil Spill, Mr. Kee attempted to supplement his reduced income by participating in the VoO program. Although Mr. Kee properly executed the Master Charter Agreement, attended training, and remained on stand-by per the Master Charter Agreement, he was not called-up for service or paid for his time spent on stand-by in the VoO program. Therefore, Mr. Kee suffered, and continues to suffer, economic loss, loss of subsistence, and VoO Program underpayment due to the Deepwater Horizon Incident.

(k) **Ronald Lundy**

Representative Plaintiff Ronald Lundy is a Mississippi resident and a subsistence-use fisherman who provides approximately 75% of his household's diet via fishing. Prior to the Deepwater Horizon Incident, Mr. Lundy typically brought home enough seafood to feed his family year-round. Since the Oil Spill, Mr. Lundy has been unable to provide for his family in this manner, because fishing grounds were closed or otherwise negatively impacted by the Oil Spill. Purchasing the equivalent seafood at local stores is too expensive for Mr. Lundy and his family. Thus Mr. Lundy has suffered a loss of subsistence use of Gulf of Mexico resources as a result of the Deepwater Horizon Incident.

(l) **Corliss Gallo**

Representative Plaintiff Corliss Gallo is a Louisiana resident and owner of an undivided interest in the islands of Grand Terre, an ecologically vital and delicate set of barrier islands off the coast of Louisiana. The islands are lined by sand beaches and the center portion of the islands includes marshy wetlands. The Deepwater Horizon Incident damaged Ms. Gallo's property when oil, tar balls, and clean-up and dispersant chemicals from the Oil Spill washed onto the islands of Grand Terre, followed by heavy foot and equipment traffic from disaster response teams, which, without permission from Ms. Gallo, used her property as a staging area for the clean-up effort. Tar balls covered the beaches of the islands, and oil washed into the marshy center portions of the islands as well. The resulting long-term damage to Ms. Gallo's property has significantly devastated the ecology and environmental profile of the islands of Grand Terre, requiring extensive remediation much beyond that which has been attempted thus far. The extensive damage has also reduced the value of Ms. Gallo's property.

(m) **Lake Eugenie Land & Development**

Representative Plaintiff Lake Eugenie Land & Development, Inc. (“Lake Eugenie Land”) is a Louisiana corporation with its principal place of business in Metairie, Louisiana. Lake Eugenie Land owns 50,000 acres of marshland in St. Bernard Parish, Louisiana. The Deepwater Horizon Incident damaged Lake Eugenie Land’s property when oil, tar balls, and clean-up and dispersant chemicals from the Oil Spill repeatedly washed into the wetland property. The resulting long-term damage to Lake Eugenie Land’s property has significantly devastated the ecology and environmental profile of the wetland property, and has also reduced the value of the property. Therefore, Lake Eugenie Land suffered, and continues to suffer, wetland property damage due to the Deepwater Horizon Incident.

(n) **John Tesvich**

Representative Plaintiff John Tesvich is a Louisiana resident and the owner or part-owner and operator of several oyster-related businesses on the Louisiana coast. Mr. Tesvich personally holds approximately 925 acres of oyster leases and is active in the harvesting of oysters. Mr. Tesvich’s involvement in the oyster industry literally stretches from the oyster beds to the consumer, and he has been a leader in the oystering community for many years as the Chairman of the Louisiana Oyster Task Force and head of the Plaquemines Oyster Association.

Mr. Tesvich’s largest operation is Port Sulphur Fisheries, Inc., a Louisiana company that owns approximately 2,000 acres of oyster leases, harvests from those leases for sale, and operates several docks where the company purchases oysters from other harvesters for processing and resale. The Oil Spill has had an immense impact on Port Sulphur Fisheries and its revenues due to oyster-ground closures, damage to oysters, damage to oyster beds, and the decline in the market for Gulf of Mexico oysters.

Mr. Tesvich’s other companies own vessels (oyster and non-oyster), own oyster leases, operate dock facilities, purchase and process oysters, and are otherwise involved in the oyster industry. Mr. Tesvich and his oyster-industry companies have depended on the condition of his oyster leases and strength of his harvesting operations for financial success. Together, the harm to the oysters and oyster reefs of the Gulf of Mexico, and the sullied reputation and marketability of the Gulf of Mexico oyster have caused, and continue to cause economic damage to Mr.

Tesvich and his companies, including Port Sulphur Fisheries, due to the Deepwater Horizon Incident.

(o) **Michael Guidry**

Representative Plaintiff Michael Guidry is a Louisiana resident and a commercial fisherman and owner/Captain of M/V Michael John, a 38' skimmer Shrimping Boat. Mr. Guidry primarily earns his income by shrimping. Mr. Guidry shrimps alone, without any crew, because of the small size of his boat. Because of the Oil Spill, shrimp fisheries were closed, depriving Mr. Guidry of that annual income. Also because of the Oil Spill, Mr. Guidry was not able to hunt for crabs, further depriving him of income. During the fishery closures, Mr. Guidry attempted to supplement his income by participating in the VoO Program. Although Mr. Guidry worked regularly for the VoO Program from June 1, 2010 to September 20, 2010, he did not receive a formal written off-charter dispatch notification until November 26, 2010, and Mr. Guidry was not fully paid for all his time spent under charter in the VoO Program. Therefore, Mr. Guidry suffered, and continues to suffer, economic loss and VoO Program underpayment due to the Deepwater Horizon Incident.

B. Defendants

14. Defendant BP Exploration & Production Inc. (“BP Exploration”) is a Delaware corporation with its principal place of business in Warrenville, Illinois. BP Exploration was a leaseholder and the designated operator in the lease granted by the former Minerals Management Service³ (“MMS”) allowing it to perform oil exploration, drilling, and production-related operations in Mississippi Canyon Block 252, the location known as “Macondo” where the Oil Spill originated. BP Exploration was designated as a “Responsible Party” by the U.S. Coast Guard under the Oil Pollution of 1990, 33 U.S.C. § 2714. This court has personal jurisdiction over BP Exploration, because BP Exploration is registered to do business in Louisiana, does business in Louisiana, and has a registered agent in Louisiana.

15. Defendant BP America Production Company (“BP America”) is a Delaware corporation with its principal place of business in Houston, Texas. BP America was the party to the Drilling Contract with Transocean Ltd. for the drilling of the Macondo well by the Deepwater Horizon vessel. This Court has personal jurisdiction over BP America, because BP America is registered to do business in Louisiana, does business in Louisiana, and has a registered agent in Louisiana.

16. Defendant BP p.l.c. is a British public limited company with its corporate headquarters in London, England. BP p.l.c. is the global parent company of the worldwide business operating under the “BP” logo. BP p.l.c. is one of the world’s largest energy companies with over 80,000 employees and \$239 billion in revenues in 2009. BP p.l.c. operates its various

³ The MMS, a federal entity that divides the Gulf of Mexico’s seafloor into rectangular “blocks,” and then auctions the rights to drill for oil and gas beneath those blocks of seafloor, was reorganized as the Bureau of Ocean Energy Management, Regulation, and Enforcement (BOEMRE) on June 18, 2010; however, it shall be referred to as the MMS throughout this document.

business divisions, such as the “Exploration and Production” division in which BP Exploration and BP America fall, through vertical business arrangements aligned by product or service groups. BP p.l.c.’s operations are worldwide, including in the United States. Defendants BP Exploration and BP America are wholly-owned subsidiaries of BP p.l.c. and are sufficiently controlled by BP p.l.c. so as to be BP p.l.c.’s agents in Louisiana and the U.S. more generally.

17. BP p.l.c. states that it is the leading producer of oil and natural gas in the United States and the largest investor in U.S. energy development. A sampling of BP p.l.c.’s contacts with the U.S. are as follows: (a) BP p.l.c.’s American Depository Shares are listed on the New York Stock Exchange and BP p.l.c. is one of the largest non-U.S. companies listed on the NYSE; (b) roughly 40% of BP’s shares are owned by U.S. individuals and institutions; (c) BP p.l.c. files annual reports with the U.S. Securities and Exchange Commission; (d) approximately 60% of BP p.l.c.’s fixed assets are located in the U.S. or the European Union; and (e) BP p.l.c. reports having 2,000 U.S.-based employees in non-Exploration & Production, non-Refining & Marketing BP entities.

18. Alternatively, if BP p.l.c. contests that it is subject to jurisdiction under Louisiana’s long-arm jurisdiction statute, then this Court may exercise personal jurisdiction over BP p.l.c. pursuant to Rule 4(k)(2) of the Federal Rules of Civil Procedure, the federal long-arm jurisdiction provision, because claims in this action arise under federal law, the exercise of jurisdiction over BP p.l.c. is consistent with the United States Constitution and laws,” and BP p.l.c. has been served with a summons in individual complaints that are the subject of this Second Amended Master Class Action Complaint and has been served with a summons on the original Master Complaint.

19. This Court also has specific jurisdiction over BP p.l.c. pursuant to Louisiana's long-arm specific jurisdiction provision (13 Louisiana Statute § 3201(B)), in combination with Rule 4(k)(1)(A) of the Federal Rules of Civil Procedure. Plaintiffs' causes of action arise out of wrongful conduct committed by BP p.l.c., directly or indirectly by its agents, which caused injury or damage in Louisiana by an offense or quasi offense committed through an act or omission outside of Louisiana. These acts or omissions took place both before the blowout resulting in the Oil Spill and in the negligent conduct of BP, p.l.c. after the blowout in attempting to contain the catastrophic damage caused by the Oil Spill. BP, p.l.c. regularly does or solicits business, or engages in any other persistent course of conduct, or derives revenue from goods used or consumed or services rendered in Louisiana. In addition, BP p.l.c. has had continuous and systematic contacts with Louisiana (and with the United States more generally), and has been served with a summons in individual complaints that are the subject of this Second Amended Master Class Action Complaint and has been served with a summons on the original B1 Master Complaint.

20. In addition, this Court also has personal jurisdiction over BP p.l.c. under agency principles, because BP p.l.c.'s agents, BP America and BP Exploration, do business in Louisiana. BP America and BP Exploration are both wholly-owned subsidiaries of BP p.l.c. In BP p.l.c.'s Annual Report for 2009, in which it presents a consolidated financial statement that includes BP America and BP Exploration, BP p.l.c. states that it "controls" both BP America and BP Exploration, among other subsidiaries, meaning that it has "the power to govern the financial and operating policies of the [subsidiary] so as to obtain benefit from its activities"

21. BP p.l.c.'s direct, joint and/or assumed responsibility and/or liability for safety and well control, both before and/or after the explosions and blowout on April 20, 2010, is

further evidenced by the announcement of the Macondo Project on the BP website hosted and copyrighted by BP p.l.c., the publication of information concerning the casualty and spill on the BP website hosted and copyrighted by BP, the express and/or implied acceptance of responsibility for the safety of BP operations in North America and the Gulf of Mexico in statements by officers of BP p.l.c., the presence (upon information and belief) of a BP p.l.c. officer or employee on the Deepwater Horizon for the celebration that occurred shortly before the explosions and fire, the direct participation of BP p.l.c. employees in the post-casualty investigation, the direct participation of BP p.l.c. officers and employees in the Governmental post-casualty investigations, the direct participation of BP p.l.c. officers and employees in the post-casualty well-control efforts, and the direct participation of BP p.l.c. in the establishment and/or funding of the Escrow Fund and/or Gulf Coast Claims Facility.

22. BP Exploration, BP America, and BP p.l.c. are generally referred to herein collectively as “BP.” As lease operator of the Macondo prospect site, BP was responsible for assessing the geology of the prospect site, engineering the well design, obtaining regulatory approvals for well operations, and retaining and overseeing the contractors working on the various aspects of the well and the drilling operations.

C. Reservation; Joint, Several, and Solidary Liability

23. Transocean Ltd., Transocean Offshore Deepwater Drilling, Inc., Transocean Deepwater, Inc., Transocean Holdings, LLC, Triton Asset Leasing GmbH (collectively “Transocean”), are named Defendants in the operative B1 Master Complaint. (Rec. Doc. 1128.)

24. Halliburton Energy Services, Inc. and its division Sperry Drilling Services (formerly Sperry Sun Drilling Services) (collectively “Halliburton”) are named Defendants in the operative B1 Master Complaint. (Rec. Doc. 1128.) Halliburton provided engineering services, materials, testing, mixing, and pumping for cementing operations on board the Deepwater Horizon, as well as onshore engineering support for those operations. Halliburton was responsible for the provision of technical advice about the design, modeling, placement, and testing of the cement that was used in the Macondo well. Sperry Drilling Services was responsible for mudlogging personnel and equipment on the Deepwater Horizon, including downhole drilling tools. At and before the time of the blowout, Halliburton was engaged in cementing operations to isolate the hydrocarbon reservoirs and seal the bottom of the well against the influx of hydrocarbons like gas and oil, and Sperry mudlogging personnel were partially responsible for monitoring the well, including mud pit fluid levels, mud flow in and out of the well, mud gas levels, and pressure fluctuations.

25. Plaintiffs, on behalf of themselves and the E&PD Class defined herein, reserve all rights, claims, and/or causes of action against Transocean and Halliburton.

26. BP, Transocean, and Halliburton are jointly, severally, and solidarily liable under various principles of federal, maritime, and/or other applicable law, and/or under the Oil Pollution Act.

JURISDICTION AND VENUE

27. Jurisdiction exists before this Court pursuant to Article III, Section 2 of the United States Constitution, which empowers the federal judiciary to hear “all Cases of admiralty and maritime jurisdiction.”

28. The claims presented herein are admiralty or maritime claims within the meaning of Rule 9(h) of the Federal Rules of Civil Procedure. Plaintiffs hereby designate this case as an admiralty or maritime case pursuant to Rule 9(h).

29. In addition, this Court has jurisdiction over this class action pursuant to the Oil Pollution Act, 33 U.S.C. § 2717 (b) (the “OPA”).

30. Jurisdiction also exists over this class action pursuant to The Admiralty Extension Act, 46 U.S.C. § 30101, which extends the admiralty and maritime jurisdiction of the United States to cases of injury or damage, to person or property, caused by a vessel on navigable waters, even though the injury or damage is done or consummated on land.

31. Prosecution and venue of this class action in this district is proper under 28 U.S.C. § 1391 because Defendants do business herein, many Plaintiffs and E&PD Class Members reside and do business herein, and the events or omissions giving rise to the claims asserted herein occurred in this district. Venue is also proper pursuant to the OPA, 33 U.S.C. 2717 (b), as the discharge occurred in this district. Venue is also appropriate in this district consistent with 28 U.S.C. § 1407 and the 2010 Transfer Order of the Judicial Panel on Multidistrict Litigation. *See In re Oil Spill by the Oil Rig “Deepwater Horizon” in the Gulf of Mexico, on April 20, 2010*, 731 F. Supp. 2d 1352 (J.P.M.L. 2010), and this Court’s Pretrial Order No. 20 (Rec. Doc. 904), which allows plaintiffs to directly file their complaints arising out of the Deepwater Horizon Incident in this District.

FACTUAL ALLEGATIONS

32. On April 20, 2010, Defendants' workers on the Deepwater Horizon oil rig vessel lost control of the subsea oil well they had drilled and almost completed. When highly pressurized hydrocarbons⁴ leaked into the well, the vessel's emergency equipment failed to stop the oil and gas from blowing out of the well, which led to explosions and a raging, gas-fueled fire on the Deepwater Horizon, and ultimately the sinking of the vessel and the resulting Oil Spill.

33. As described more fully below, the loss of well control was due to the failure of mechanical and cement barriers to seal off the well against the influx of highly pressurized hydrocarbons from the reservoirs surrounding the bottom of the well. The many indications that hydrocarbons were leaking into the well were misinterpreted and/or overlooked by Deepwater Horizon workers for 51 minutes prior to the blowout. Once the hydrocarbons reached the vessel decks, fire and gas prevention and alarm systems on the vessel failed to warn the crew and prevent ignition of a fire. The vessel's subsea blowout preventer also failed to seal the well and stop the flow of hydrocarbons fueling the fire, which exacerbated the disaster.

34. After the Deepwater Horizon sank, oil and gas gushed out of the blown-out well and into the Gulf of Mexico for over 12 weeks, fouling the environment, damaging and contaminating property, and doing immense and long-lasting damage to the environment and economy of Plaintiffs and the Gulf of Mexico. Meanwhile, BP downplayed the severity of the Oil Spill and was unprepared for the massive clean up effort required.

35. All of these failures — to plan, monitor, control, contain, mitigate, and clean up — sprang from decades-long histories of organizational malfunction and myopia on the part

⁴ A "hydrocarbon" is a compound of hydrogen and carbon, such as any of those that are the chief components of petroleum oil and natural gas.

of the Defendants. As the co-chairman of the National Commission investigating the Oil Spill said: “There is virtual consensus among all the sophisticated observers of this debacle that . . . leading players in the industry made a series of missteps, miscalculations and miscommunications that were breathtakingly inept and largely preventable.”

A. The Process of Deepwater Offshore Drilling

36. Deepwater offshore drilling for hydrocarbons such as oil and natural gas is an immensely complex, technical process, and a relatively new one that has only developed over the last five years. The first challenge is finding the hydrocarbons. Seismic and/or magnetic surveys are taken of the geological formations deep in the Earth’s crust below the sea floor, in the hopes of finding “traps:” rock formations that have trapped a reservoir of hydrocarbons beneath an impermeable layer, preventing them from migrating to the surface and escaping.

37. Upon locating a promising trap of hydrocarbons, drilling vessels such as the Deepwater Horizon are positioned on the sea surface above the proposed well site, and from there begin drilling an “exploratory” well to investigate the viability of the trap. Once the trap is determined to be a worthwhile source of hydrocarbons, the drilling vessel performs “completion” operations to transform the exploratory well into a “production” well that will extract oil or gas from the trap. At this point, wells are sometimes temporarily abandoned — sealed with cement so they are secure against any influx of hydrocarbons from the reservoirs they have penetrated — so they can be reopened by a production vessel at some later date, when the well owner is ready to begin extracting hydrocarbons for production. At the time of the April 20, 2010, blowout, the Deepwater Horizon crew was in the process of preparing the Macondo well for temporary abandonment.

38. An exploratory well begins with a wide-diameter “pilot” hole drilled into the seabed, generally to a depth of about 300 to 400 feet. The pilot hole is then “cased,” or lined

with pipe. “Casing” describes both the actual pipe lining a well, in addition to the act of lining the drilled hole — the well bore — with such pipe.

39. The first section of casing pipe lowered into the pilot hole generally anchors a safety device known as a blowout preventer (“BOP”), which is an appurtenance of the drilling vessel and a part of the vessel’s equipment. The BOP is an assembly of hydraulically-operated rams that can be used to partially or totally seal the well during routine drilling activities as well as in the event of a well control emergency. In the event of an influx of hydrocarbons into the well, closure of the BOP rams can prevent a “kick” — a small leak of hydrocarbons into the well — from escalating into a “blowout” — the uncontrolled release of hydrocarbons from a well into the surrounding environment. A BOP can be activated manually from the drilling vessel, or automatically via the automatic mode function (“AMF”), also known as a “deadman switch,” which closes the device’s most secure rams if both electrical and hydraulic connections to the drilling vessel are severed. BOP functions can also be activated by using remotely operated vehicles (“ROVs”) on the sea floor via the “hot stab” or autoshear functions, which are explained more fully below.

40. The risk of a blowout is one of the most dangerous and common risks in deepwater drilling, hence the installation of the BOP so early in the well drilling process. The reservoirs of hydrocarbons trapped in the rock formations miles beneath the sea floor are often highly pressurized, and managing the pressures in a well is a vital — and often volatile — task during drilling operations. Proper well monitoring will catch small hydrocarbon influxes early, so a kick can be contained and the source of the leak repaired before well control is jeopardized. All workers on a drilling vessel have the authority to call for work on a well to stop if they have a safety concern, including any indication that hydrocarbons are leaking into the well. The BOP

is then a crucial last line of defense for a drilling vessel and its workers if all other attempts to balance well pressure and counter an influx fail, and the well begins to flow out of control.

41. Once the BOP is properly positioned and secured over the pilot hole, the drilling apparatus and additional casing sections are lowered down through the BOP into the well, while a pipe called a “marine riser” connects the wellhead to the drilling vessel at the surface.

42. As the drilling apparatus moves downward drilling out the well bore hole, drilling fluid called “mud” is pumped down the center of the drill pipe. Drilling mud is a thick mixture of barite, water, clay, and chemicals that cools and lubricates the drill bit and suspends and carries rock fragments and other drilling debris to the surface as the mud circulates.

43. Drilling mud is carefully formulated so that its hydrostatic pressure⁵ slightly exceeds that of the ambient pressure conditions in the various rock formations encountered during the drilling process. The weight of the mud pushes back against the pressure of the hydrocarbons in those formations, helping to control against the ever-present risk of kicks and blowouts in the well.

44. As the well bore is drilled deeper and deeper, additional sections of casing are added to line each newly-drilled open hole section with pipe. Each casing section is secured with a plug of cement. If a well is to be temporarily abandoned before production, then when drilling reaches the hydrocarbon reservoir, the cementing contractor temporarily seals the well off from the hydrocarbon reservoir it has penetrated, isolating the oil and gas to prevent it from leaking into the well, and then places a temporary cement plug below the BOP at the top of the well.

⁵ Hydrostatic pressure is the pressure exerted by a fluid due to the force of gravity. The denser a fluid, the higher its hydrostatic pressure. Drilling mud is often very dense (12 to 16 pounds per gallon), so it can counter the highly pressurized hydrocarbons surrounding a well. In comparison, seawater is relatively light, only 8.6 ppg.

45. Assuming the design of the well is stable, and proper testing and analysis confirm the integrity of the cement plugs, casing string, and other well components, the drilling vessel can disconnect from the well, temporarily abandoning it until a permanent oil production platform is put into place on the sea surface above the well to begin extracting oil or gas.

B. The Macondo Lease, and BP's Exploration Plan and Drilling Permit

46. On June 1, 2008, BP acquired a ten-year lease from the MMS to search for and exploit hydrocarbon reservoirs at the Macondo prospect site in Mississippi Canyon Block 252, 48 miles off the coast of Louisiana.

47. Before BP could begin operations at the Macondo site, federal regulations required BP to submit an Exploration Plan ("EP") demonstrating that it had planned and prepared to conduct its proposed activities in a manner that was safe, conformed to applicable regulations and sound conservation practices, and would not cause undue or serious harm or damage to human or marine health, or the coastal environment. 30 C.F.R. §§ 250.201, 250.202.

48. Federal regulations required that the EP be accompanied by "oil and hazardous substance spills information" and "environmental impact analysis information." 30 C.F.R. §§ 250.212, 250.219, 250.227.

49. Among the information required to accompany the EP was a "blowout scenario," described as follows:

A scenario for the potential blowout of the proposed well in your EP that you expect will have the highest volume of liquid hydrocarbons. Include the estimated flow rate, total volume, and maximum duration of the potential blowout. Also, discuss the potential for the well to bridge over, the likelihood for surface intervention to stop the blowout, the availability of a rig to drill a relief well, and rig package constraints. Estimate the time it would take to drill a relief well.

30 C.F.R. § 250.213 (g).

50. The oil and hazardous spills information accompanying the EP was required to include an oil spill response plan providing the calculated volume of BP's

worst case discharge scenario (see 30 C.F.R. 254.26(a)), and a comparison of the appropriate worst case discharge scenario in [its] approved regional [Oil Spill Response Plan] with the worst case discharge scenario that could result from [its] proposed exploration activities; and a description of the worst case discharge scenario that could result from [its] proposed exploration activities (see 30 C.F.R. 254.26(b), (c), (d), and (e)).

30 C.F.R. § 250.219.

51. Federal regulations required BP to conduct all of its lease and unit activities according to its approved EP, or suffer civil penalties or the forfeiture or cancellation of its lease.

30 C.F.R. § 250.280.

52. In February 2009, BP filed its 52-page Initial EP for the Macondo prospect site with the MMS. In the Environmental Impact Analysis section, BP repeatedly asserted that it was “unlikely that an accidental surface or subsurface oil spill would occur from the proposed activities.” In the unlikely event that a spill did occur, BP predicted a worst case discharge scenario of 162,000 gallons of oil per day, an amount it assured the MMS that it was prepared to respond to. BP also claimed the well's distance from the nearest shoreline would preclude any significant adverse impacts from a spill.

53. Based on these assurances, the MMS approved BP's Initial EP for the Macondo prospect on April 6, 2009, including the approval of a “categorical exclusion” from the full environmental analysis normally required under the National Environmental Policy Act. As detailed more fully below, the MMS' approval of BP's Initial EP and the categorical exclusion from environmental analysis were predicated on BP's flagrant misrepresentations about the risk of a surface or subsurface oil spill at Macondo, and its capability to respond to such a spill.

54. After its EP was approved, BP sought a permit from the MMS authorizing it to drill up to a total depth of 19,650 feet at the Macondo site.

55. On or about October 1, 2009, BP E&P, as the Operating Party, and MOEX Offshore 2007, LLC, as a Non-Operating Party, entered into the Macondo Prospect Offshore Deepwater Operating Agreement (“Operating Agreement”). On or about December 17, 2009, BP E&P, MOEX Offshore 2007, LLC, Anadarko Petroleum Corporation Co., and Anadarko E&P Company L.P. executed a “Joinder” of the Operating Agreement. Subsequently, the parties to the Operating Agreement held the following working interest ownership percentages in the lease of the Macondo prospect: BP E&P, 65%; MOEX Offshore, 10%; Anadarko E&P, 22.5%; and Anadarko, 2.5%.^{6, 7}

56. BP contracted with Transocean Holdings, LLC⁸ and its affiliates (collectively “Transocean”) to provide an oil rig vessel to drill exploratory wells at the Macondo prospect site.

57. At the Macondo site, Transocean provided the Deepwater Horizon oil rig vessel and personnel to operate it. At all times relevant to the Oil Spill, Transocean, subject to BP’s

⁶ MOEX Offshore 2007, LLC, along with certain of its affiliates (collectively, “MOEX”), were named as defendants in the operative B1 Master Complaint. (Rec. Doc. 1128.) On May 20, 2011, BP and MOEX reached a settlement in which BP agreed to indemnify MOEX such that any fault found against MOEX would be satisfied by BP.

⁷ Anadarko Petroleum Corporation Co., and Anadarko E&P Company L.P., along with certain of their affiliates (collectively, “Anadarko”), were named as defendants in the operative B1 Master Complaint. (Rec. Doc. 1128.) On October 17, 2011, BP and Anadarko reached a settlement in which BP agreed to indemnify Anadarko such that any fault found against Anadarko would be satisfied by BP.

⁸ Transocean Holdings, LLC is an owner, managing owner, owner pro hac vice, and/or operator of the Deepwater Horizon and participated in the Deepwater Horizon’s offshore oil drilling operations at the Macondo prospect, where the Oil Spill originated. More specifically, Transocean Holdings is party to the contract with BP regarding the lease of the Deepwater Horizon for drilling operations in the Gulf of Mexico. On April 28, 2010, the U.S. Coast Guard designated Transocean Holdings as a “Responsible Party” under the Oil Pollution Act for the surface oil spill resulting from the blowout by the Deepwater Horizon. Transocean Holdings and its affiliates (collectively “Transocean”) were named as defendants in the operative B1 Master Complaint. (Rec. Doc. 1128.)

inspection and approval, was responsible for maintaining well control equipment, such as the blowout preventer and its control systems. Transocean also provided operational support for drilling-related activities on board the Deepwater Horizon, as well as onshore supervision and support for those drilling activities at all times relevant to the Oil Spill.

C. The Deepwater Horizon's Poor Safety and Maintenance Record

58. The Deepwater Horizon was a \$560,000,000 dynamically-positioned, semi-submersible deepwater drilling vessel built for Transocean and put into service in February 2001.

59. At all times relevant herein, the Deepwater Horizon was owned by Transocean and leased to BP for drilling exploratory wells at the Macondo prospect site, pursuant to the December 9, 1998, Drilling Contract between Vastar Resources, Inc. and R&B Falcon Drilling Co. for RBS-8D Deepwater Horizon ("Drilling Contract"), and later amendments to that agreement.⁹

60. Prior to the Oil Spill, Defendants had actual and/or constructive knowledge that their safety performance during offshore drilling operations was poor. Transocean CEO Steven L. Newman admitted prior to the Oil Spill that "we have to improve our safety performance." Just a month before the Oil Spill, in response to "a series of serious accidents and near-hits within the global organization," Transocean commissioned a broad review of the safety culture of its North American operations, including the Deepwater Horizon.

61. Also prior to the Oil Spill, Defendants had actual and/or constructive knowledge of significant problems related to the Deepwater Horizon's equipment and maintenance,

⁹ The parties to the 1998 Drilling Contract, Vastar Resources, Inc. and R&B Falcon Drilling Co., are now BP and Transocean entities, respectively. The Deepwater Horizon, formerly known as RBS-8D, was in the process of being built for R&B Falcon Corp. between 1998 and 2001, during which time Transocean purchased R&B Falcon Corp. Upon completion, the Deepwater Horizon was delivered to Transocean. BP America is a successor-in-interest to Vastar Resources, Inc. Amendments to the Drilling Contract were subsequently signed by representatives of Transocean and BP.

including problems with the vessel's BOP, electronic alarm systems, ballast systems used to stabilize the vessel in the water, and other significant deficiencies that could "lead to loss of life, serious injury or environmental damage as a result of inadequate use and/or failure of equipment." These equipment and maintenance problems are discussed more fully below.

62. Even if Defendants' equipment and operations inspection reports were ostensibly in compliance with MMS regulations, reports have surfaced that oil companies often authored their own inspection reports, submitting them for rubber-stamping by the MMS. Thus any seeming compliance with MMS inspection report regulations lacks credibility and does not protect Defendants' actions.

D. Macondo: a Troublesome Well

63. The Macondo prospect site is in the Northern Gulf of Mexico, an area notorious in the industry for high temperature, high pressure, highly gaseous hydrocarbon reservoirs trapped in weak, brittle rock formations. At the Macondo site, the Deepwater Horizon was conducting drilling operations in excess of 18,000 feet. Defendants knew or should have known that the threat of blowouts increases as drilling depths increase, especially in an area with such troublesome geology as the Northern Gulf of Mexico.

64. Defendants had been struggling with the Macondo well even before the catastrophic events of April 20, 2010. In emails weeks before the blowout, BP employees referred to it as a "crazy," "nightmare" well. At depths almost 3.5 miles below the sea floor, the pressures within and strengths of the various formation layers the Deepwater Horizon was drilling through varied widely and changed often, requiring constant adjustments to drilling fluid density and other factors. In some places the subsea rock formations were so brittle that they fractured, letting gallons of expensive drilling mud escape into the cracked and porous rock around the drill.

65. Deepwater Horizon workers reported that since drilling began on October 7, 2009, they had struggled to control the problematic well, as kicks of natural gas regularly burst into the well, halting the drilling progress. According to a NOAA Flow Rate Technical Group report, the hydrocarbon reservoirs the Macondo well drilled through have high ratios of gas to oil. The MMS had even warned BP that the gas buildup in this well was a concern and that BP should “exercise caution.”

66. On March 8, 2010, Defendants experienced particularly serious problems with the well, including a hydrocarbon influx into the well and loss of well control. During drilling, the brittle rock formation the Deepwater Horizon was drilling through fractured, swallowing up drilling tools and fluids, and allowing hydrocarbons into the well. Even worse, it took the Deepwater Horizon crew about 33 minutes to even notice that hydrocarbons were leaking into the well – by that time 40 barrels of hydrocarbons had already kicked into the well.

67. Because of the rig crew’s delayed response, the March 8, 2010, influx became a “near miss” of what could have been a lethal blowout. Afterwards, Transocean personnel admitted to BP that they had “screwed up by not catching” the kick sooner. A BP analysis of the March 8, 2010 near miss deemed the drilling vessel team’s 33-minute response time to the hydrocarbon influx was too slow, but did not investigate the reasons for the delay. A “lessons learned” document was distributed to BP employees, and both BP and Transocean leaders on the Deepwater Horizon were given verbal feedback about the handling of the event. Ten of the 11 individuals with well-control responsibilities who were on duty during the March 8, 2010, incident were also working on the Deepwater Horizon six weeks later at the time of the April 20, 2010, blowout.

68. The formation damage from the March 8, 2010, incident was so severe that a length of drilling pipe became stuck in the open hole of the well bore, and Defendants were forced to abandon the lower part of the well bore, plug it with cement, and begin drilling anew in a different direction, setting then back several days and \$25 million.

69. As the drilling schedule fell farther behind due to these and other problems, Defendants, and BP in particular, increased the pressure on the Deepwater Horizon's crew to "bump up" the speed of the drilling effort at Macondo.

E. Drilling with No Margin for Error

70. In keeping with Macondo's irascible nature, the last section of the well was difficult to drill, making it especially important for Defendants to accurately measure and manage the volatile, variable pressures they encountered as drilling progressed.

71. As a well is drilled, engineers will periodically measure the pore pressure¹⁰ and fracture gradient¹¹ of the well at different depths. Pressure in a well is managed by adjusting the "mud weight," which is the density of the drilling fluid (or "mud") circulated through the well during drilling. To maintain well control during drilling, the pressure in a well must be carefully balanced – too little pressure will allow hydrocarbons from the surrounding formation to leak into the well, but too much pressure will fracture the formation itself, threatening the integrity of the well. The range of appropriate mud weights between those two boundaries is known as the "drilling margin," and it must be continually recalculated and adjusted as drilling progresses through the varying layers of formation.

¹⁰ Pore pressure is the pressure exerted by fluids (often hydrocarbons) in the pore space of the formation that is being drilled through.

¹¹ The fracture gradient is the pressure that will cause the formation surrounding the well to fracture.

72. Federal regulations require operators to identify the safe drilling margin for a well in the Application for Permit to Drill (“APD”) submitted to the MMS, and require operators to submit revised APDs for approval whenever operators encounter unexpected pressures that differ from their original forecasts. *See* 30 C.F.R. § 250.427(b). Further, industry-accepted practice is to keep the mud weight between the “kick margin” (typically 0.5 ppg below the fracture gradient) and the “swab margin” (typically 0.2 ppg above the pore pressure).

73. On March 26, 2010, BP submitted to the MMS the estimated pressures for the last section of the Macondo well, as well as the mud weight it planned to use while drilling that section. The margin was narrow – the difference between the pore pressure and the fracture gradient in BP’s estimates was only about 2 ppg – but BP drilled ahead.

74. On April 2, 2010, BP conducted a formation integrity test to measure the fracture gradient of the formation being drilled through. The test gave a fracture gradient reading 1.0 ppg higher than the fracture gradient BP had estimated for this section – a significant difference given the already narrow margin. Despite the red flag of this unexpected result, BP did not retest the fracture gradient, recalculate the drilling margin or mud weight, or notify the MMS – BP just drilled ahead.

75. The drilling did not go smoothly, though. As they forged ahead, BP repeatedly experienced lost returns, as thousands of gallons of drilling mud disappeared into the formation. Eventually even BP was forced to acknowledge that it had run out of drilling margin at Macondo and had to stop. In an email to a colleague, BP engineer Robert Bodek explained that the Macondo team had decided to stop drilling because it “appeared as if we had minimal, if any, drilling margin,” which had become “a well integrity and safety issue.”

76. BP's drilling ahead without maintenance of a safe drilling margin violated federal regulations. If the safe drilling margin identified in the approved APD cannot be maintained, an operator "must suspend drilling operations and remedy the situation." 30 C.F.R. § 250.427(b). The March 26, 2010, APD was the last one that BP submitted to the MMS for Macondo – despite drilling difficulties and regressing pore pressure readings after that date, BP did not suspend operations or submit a revised APD to the MMS for approval, as the regulations required. On December 7, 2011, the federal Bureau of Safety and Environmental Enforcement ("BSEE") cited BP for four counts of violation of 30 C.F.R. § 250.427(b) for BP's failure to suspend drilling operations at Macondo when the safe drilling margin identified in the approved APD could no longer be maintained.

F. Reckless Decision-Making in the Rush to Complete the Well

77. By April 9, 2010, Defendants had been forced to stop drilling the last part of the well bore, and only casing and cementing the final open-hole section remained. In their rush to complete the well, Defendants made reckless decisions about well design, cementing, and well integrity testing that prioritized speed and cost-savings over safety and industry best practices.

78. Pursuant to their Drilling Contract, BP was paying Transocean approximately \$500,000 per day to lease the Deepwater Horizon, not including contractors' fees. BP had planned for the drilling work at Macondo to take 51 days, at a cost of approximately \$96,000,000.

79. At the time of the blowout, drilling at Macondo was already months behind schedule, costing BP over \$1 million per day in vessel lease and contractor fees and putting them increasingly over budget. This excess cost put the Macondo project in conflict with BP's recent mandate of a 7% reduction in costs for all of its drilling operations in the Gulf of Mexico. In spite of the difficult and dangerous nature of the Macondo well, Defendants made multiple

decisions about the drilling plan for economic reasons, even though those decisions increased the risk of the catastrophic failure of the “nightmare” well.

80. After investigating the disaster, Robert Bea, an oil industry expert leading the Deepwater Horizon Study Group, wrote: “Pressures to complete the well as soon as possible and minimize costs as much as possible are evident in the cascade of decisions and choices that led to the blowout.”

81. As explained in more detail below, Defendants repeatedly chose to violate industry guidelines and government regulations, and ignore warnings from their own employees and contractors on the Deepwater Horizon to reduce costs and save time on the behind-schedule and over-budget Macondo well. Testimony of employees on the drilling vessel highlights the time pressure BP and the other Defendants were putting on workers as they rushed them to double up on tasks and finish quickly so the well could be sealed and the Deepwater Horizon moved to another well prospect site to begin searching for even more oil.

82. This emphasis on speed and thrift over safety led to errors and omissions by Defendants that, in turn, caused and/or contributed to the blowout and the subsequent Oil Spill.

83. Since the Oil Spill, a series of governmental investigations and hearings has gradually produced evidence and testimony about the bad decisions, tradeoffs, actions, and inactions that led to this disaster, revealing a “ghastly” story of Defendants making “one bad call after another,” according to the chairmen of the presidential commission investigating the Oil Spill at a November 10, 2010 hearing.

84. In short, as Robert Bea put it, “critical things were compromised for the wrong reasons in the wrong ways at the wrong times.”

85. “Each company is responsible for one or more egregiously bad decisions” in “a suite of bad decisions,” many still inexplicable, involving tests that were poorly run, alarming results that were ignored, proper warning systems that were disabled and safety barriers that were removed prematurely at the high-pressure well, the presidential commission chairmen said. Taken together, these actions constituted “a cascade of deeply flawed failure and signal analysis, decision-making, communication, and organizational-managerial processes” that led to the blowout, in the words of the independent experts in the Deepwater Horizon Study Group.

86. Even BP has admitted that no one company’s single action or inaction caused this disaster, but rather “a complex and interlinked series of mechanical failures, human judgments, engineering design, operational implementation and team interfaces” by “multiple companies, work teams and circumstances” came together to cause the blowout and the Oil Spill. Deepwater Horizon Accident Investigation Report, BP (September 8, 2010).

1. Cutting Corners on Well Design

87. For the behind-schedule and over-budget Macondo well, Defendants chose a vulnerable well design with relatively few barriers against the ever-present risk of hydrocarbon blowouts because the safer option — which had been part of their original well design and was recommended by their contractors — would have taken longer to complete and would have cost up to an additional \$10 million.

88. In order to strengthen the well design and provide multiple barriers against blowouts, drilling companies often use a redundant casing design called a “liner/tieback,” which provides four barriers against blowouts, while the “long string” casing design chosen by BP only provided two: the cement sealing off the hydrocarbons in the reservoirs from entering the well and, more than 18,000 feet above that, the seal assembly at the top of the well.

89. Although the liner/tieback design is more expensive and takes more time to install, it provides four barriers against hydrocarbons leaking into the well and causing blowouts: (1) the cement at the bottom of the well; (2) the hanger that attaches the liner pipe to the existing casing in the well; (3) the cement that secures the tieback pipe on top of the liner; and (4) the seal assembly at the wellhead.

90. Defendants were aware that the long string design was the riskier option. An undated BP “Forward Review Plan” recommended against the long string option because of the risks: “Long string of casing *was* the primary option” but a “Liner[/Tieback] . . . is now the recommended option.”

91. The BP Forward Review Plan identified several arguments against using the long string casing design, including the high risk of a failed cement job, the inability to comply with MMS regulations, and the need to verify the cement job with a cement bond log test and most likely perform remedial cement job(s).

92. The BP Forward Review Plan also noted a number of advantages to using the liner/tieback design, including the liner hanger acting as an additional barrier against influxes, a higher chance for a successful cement job on the first try, and the flexibility to postpone a remedial cement job, if it was found that one was required.

93. The long string casing design was especially inappropriate for a difficult and kick-prone well like Macondo. Documents show that BP had originally planned to use the safer liner/tieback design, but rewrote the drilling plan just weeks before the disaster — against the advice of its contractors and its own employees — because the project was behind schedule and over budget. Internal BP emails from late March 2010 acknowledged the risks of the long string

design but chose it as the primary option because it “saves a lot of time...at least 3 days,” “saves a good deal of time/money,” and is the “[b]est economic case.”

94. Despite the known and documented operational risks and advantages to the respective well design options, one or more of the Defendants chose (or acquiesced to the choice) to install the long string casing instead of the safer liner/tieback design. There is no evidence that there was any motivation behind that decision other than the desire to save time and cut costs on the behind-schedule and over-budget well.

95. Defendants also made a risky choice for the casing pipe material itself, using metal well casings that raised concerns from their own engineers. Federal investigators cited internal documents showing that as early as 11 months prior to the blowout, BP engineers worried that the metal casings BP wanted to use might collapse under the high pressure at the bottom of the well. Senior drilling engineer Mark E. Hafle warned other BP employees that “I have seen it happen so know it can occur.” Using the metal casings also violated BP’s own safety policies and design standards. Nevertheless, the riskier metal casings were used after special permission was granted by BP supervisors. The internal reports do not explain why BP allowed for such a risky departure from its own safety standards, nor why the other Defendants allowed BP to use unsafe casings inappropriate for use in the highly pressurized environment in the Macondo well bore.

96. In addition to the casing-related problems, the float collar¹² installed on the final section of casing may have failed to seal properly, which could have allowed hydrocarbons to leak into the casing, contributing to the April 20, 2010, blowout.

¹² Weatherford U.S. L.P. designed and manufactured, marketed, sold, and/or distributed the casing components such as the float collar, shoe, and centralizers appurtenant to the vessel, and provided the personnel and equipment for running the casing and casing components into the

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97. A float collar is a component installed near the bottom of the casing string on which cement plugs land during the cementing job. A check-valve assembly fixed within the float collar works like a one-way valve, allowing drilling fluids or cement to be pumped in one direction through the valve, but preventing backflow of the fluids or cement when pumping is stopped, and preventing any influx of hydrocarbons below the float collar from rising farther up the casing. Failure of the Macondo well's float collar would have allowed hydrocarbons to flow up through the casing, towards the riser and the Deepwater Horizon at the surface, contributing to the blowout and the subsequent explosions, fire, sinking, and Oil Spill.

98. To properly prevent against backflow of fluids or hydrocarbons into the casing, a float collar must be "converted," or closed after installation. Prior to conversion, an "auto-fill tube" holds the float collar's one-way check valves open so that mud can flow through without having to be pumped through with high force that could damage the formation — especially important when working in brittle formations like those at the bottom of the Macondo well. A float collar is converted by partially blocking the bottom of the autofill tube, which essentially pops the autofill tube out of the check valves, allowing them to close.

99. Defendants installed the Macondo well's float collar after the final casing was installed in the well. When they attempted to convert the float collar, however, there seemed to be some blockage preventing the mud circulation that would have completed the conversion. The drilling vessel crew made nine attempts to re-establish circulation by increasing pressure in the casing, eventually succeeding with a pressure of 3142 psi — six times higher than the normal pressure needed to convert a float collar. In their report, BP's disaster investigation team

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wellbore. Weatherford was named as a defendant in the operative B1 Master Complaint. (Rec. Doc. 1128.) On June 20, 2011, BP and Weatherford reached a settlement in which BP agreed to indemnify Weatherford such that any fault found against Weatherford would be satisfied by BP.

questioned whether this burst of high pressure actually converted the float collar, or just cleared the blockage that had been preventing circulation in the first place.

100. Later, vessel workers had to use another burst of abnormally high pressure to rupture a “burst disk” in one of the well’s wiper plugs. The burst disk did not rupture until 2900 psi was applied — three times the amount of pressure usually required. The various post-Spill investigations have been unable to explain the need for such atypically high pressures to convert the float collar (if it even converted at all) and to rupture the burst disk. At the time they occurred, these anomalies should certainly have raised concern in the minds of Defendants’ personnel.

2. Using Too Few Centralizers

101. Defendants also cut corners — again despite multiple warnings from their employees and contractors — with the number of centralizers used on the last piece of casing pipe. Centralizers ensure that the casing pipe is centered in the well bore; if the pipe is not centered, the cement placed around it often fails to create a secure seal against the highly-pressurized hydrocarbons surrounding the well. The cement around the casing is intended to seal the space (the “annulus”) between the rock walls of the drilled out well bore hole and the casing that runs through the well bore. If the casing is not centered within the wellbore, the pipe can lay near or against the sides of the bore hole, creating too narrow of a space for the cement to set properly and leaving “channels” of empty space or weak areas in the cement. Those channels and imperfections can allow hydrocarbons to escape out of the formations and into the well, causing a kick or a blowout. An email from shore-based BP Operations Vice President Brett Coteles to rig-based BP drilling engineer Brian Morel acknowledged the importance of centralizers, noting that “[e]ven if the hole is perfectly straight, a straight piece of pipe even in tension will not seek the perfect center of the hole unless it has something to centralize it.”

102. The American Petroleum Institute (“API”) Recommended Practice 65 explains: “If casing is not centralized, it may lay [sic] near or against the borehole wall It is difficult if not impossible to displace mud effectively from the narrow side of the annulus if casing is poorly centralized. This results in bypassed mud channels and inability to achieve zonal isolation.”

103. On or about April 5, 2010, BP notified one or more of the other Defendants that it was planning to use only six centralizers on the final casing section at the Macondo well. Halliburton engineer Jesse Gagliano spent a day running models to determine if six centralizers would be enough to prevent channeling that gaseous hydrocarbons could seep through. Halliburton’s analysis concluded that 21 centralizers was the recommended number to ensure a secure cement job; using ten would result in a “moderate” gas flow problem and using only six would result in a “severe” gas flow problem. This information was provided to BP. Additional centralizers were available on the Deepwater Horizon, but BP well site leaders erroneously believed they were the wrong type, and did not want to wait for more. In the same email that had recognized the risks of proceeding with insufficient centralizers, BP official Brett Coteles shrugged off using only six, flippantly concluding, “who cares, it’s done, end of story, will probably be fine.”

104. Halliburton, hired for its cementing expertise, was fully aware that the number of centralizers BP chose to use was unsafe. Halliburton employee Marvin Volek had warned the BP well site team that BP’s cementing plan “was against our best practices.” Yet even after running the models that made it clear proceeding with only six centralizers would lead to “failure of the cement job,” Halliburton did not stop work or insist that BP use additional centralizers, instead recklessly proceeding with the cement job it knew was destined to fail.

3. Skipping Critical “Bottoms Up” Mud Circulation

105. Another questionable decision made by one or more of the Defendants was the failure to fully circulate the drilling mud through the entire length of the well before beginning the cementing job. This procedure, known as “bottoms up,” cleans the well bore and prepares the annular space for cementing by completely circulating the drilling fluids from the bottom of the well all the way to the surface. A bottoms up circulation also ensures the removal of well cuttings and other debris from the bottom of the well, preventing contamination of the cement, permits a controlled release of gas pockets that may have entered the mud during the drilling process, and allows workers on the drilling vessel to test the mud for influxes of gas. Given that gaseous hydrocarbons leaking into the well was what ultimately caused the blowout, a bottoms up circulation could have revealed the severity of the situation at Macondo before it was too late.

106. The API guidelines recommend a full bottoms up circulation between installing the casing and beginning a cementing job. The recommended practice states that “when the casing is on bottom and before cementing, circulating the drilling fluid will break its gel strength, decrease its viscosity and increase its mobility. The drilling fluid should be conditioned until equilibrium is achieved. At a minimum, the hole should be conditioned for cementing by circulating 1.5 annular volumes or one casing volume, whichever is greater.”

107. Halliburton technical advisor Jesse Gagliano told BP that Halliburton’s “recommendation and best practice was to at least circulate one bottoms up on the well before doing a cement job.” Yet again, Halliburton knew of the risk but did not insist that BP follow safe and recommended practices.

108. Even BP’s own April 15, 2010 operations plan for the Deepwater Horizon called for a full “bottoms up” procedure to “circulate at least one (1) casing and drill pipe capacity, if hole conditions allow.”

109. But a full bottoms up circulation would have taken up to 12 hours on the deep Macondo well, so against the recommendations of the API and Halliburton, and against industry standards and its own operations plan, BP chose to save time and money at the expense of safety by circulating only a small fraction of the drilling mud before beginning cementing. This too put the cement job further at risk.

110. Notwithstanding all of Defendants' risky choices and skipped safety precautions up to this point, and despite knowing the risks of using insufficient centralizers and skipping the bottoms up circulation, Halliburton began the cementing job on the Macondo well.

4. Cementing: the Incorrect Cement Mixture and a Failed Seal

111. Creating solid cement seals on a well is delicate, precise work, and among the most critical tasks to ensure the integrity and safety of the well. Nevertheless, after cutting corners on well design and the number of centralizers, and incomprehensibly skipping the bottoms up circulation, Defendants made even more cost-cutting, careless decisions about the crucial cementing work in the Macondo well.

112. Defendants knew or should have known that poor cementing increases the risk of a blowout. In a 2007 study, the MMS expressed concerns about drilling vessel blowouts caused by ineffective and/or improper cementing work. Although the study noted that the overall risk of blowouts has been declining, it suggested that blowouts related to cementing work continue with some regularity, and most frequently in the Gulf of Mexico. The study found that cementing problems were associated with 18 of 39 blowouts that occurred between 1992 and 2006, and in 18 of the 70 blowouts that occurred from 1971 to 1991. Nearly all of the blowouts examined occurred in the Gulf of Mexico.

113. Defendants also knew or should have known that careless, ineffective, negligent, or reckless cementing work by Halliburton caused an August 2009 blowout at the Montara well

in the Timor Sea off the coast of Australia. During that incident, a sequence of events almost identical to those at Macondo led to a similarly disastrous blowout, and a spill that gushed oil for ten weeks, causing environmental damage across a 200-mile radius.

114. Prior to beginning cementing operations on the last section of the Macondo well, Halliburton had to make decisions about the type, volume, placement, and pumping of the cement, while taking into account the narrow range of safe operating pressures at the bottom of the well, in addition to the gaseous nature of the hydrocarbon reservoirs surrounding the well.¹³ Halliburton also knew that BP had not properly prepared the annulus for the cement job by performing a bottoms up circulation, and that BP was not planning to use the recommended number of centralizers on the casing pipe.

115. This cementing job was intended to fill the annulus between the casing and the well bore and seal off the hydrocarbon-filled formations, as well as plug the bottom of the casing pipe to prevent an influx. The composition of the cement mixture (“slurry”) that Halliburton chose for the task would have to allow the cement to be effectively placed and fully set within the narrow range of safe operating pressures at the bottom of the well. During placement, the slurry would have to be light enough to avoid fracturing the brittle formations surrounding the well, but once set, the slurry would have to be strong enough to resist the intense, nearly 12,000 psi pressure of the hydrocarbon reservoirs within those formations, securely sealing the annular space between the casing and surrounding formations, isolating the hydrocarbon reservoirs from the well. Despite these challenges, Defendants and Halliburton improperly designed the cement

¹³ The ratio of gas to oil in the hydrocarbon reservoirs is significant because it increases the likelihood that gas will permeate the cement as it is setting, channeling and weakening the cement, and preventing it from forming a secure seal against hydrocarbon pressure.

slurry and failed to thoroughly conduct and/or review the results of laboratory testing of the cement slurry stability under conditions that would be found in the Macondo well.

116. Halliburton ultimately recommended a foamed cement mixture to seal the bottom of the Macondo well. Foam cement is cement that has been injected with nitrogen gas to lower its density. But high temperatures and pressures in wells like Macondo can have unpredictable effects on the nitrogen in the cement, leading to instability and weakness that prevents the cement from forming a secure seal in the well.

117. On October 28, 2010, Fred Bartlit, Jr., the lead investigator for the presidential commission investigating the Oil Spill, reported that tests conducted by Halliburton in February 2010 on a cement slurry similar to that used to secure the Macondo well showed instability under conditions like those found at the bottom of the Macondo well.

118. Halliburton and BP already knew the Macondo well was located in brittle, variable, challenging rock formations laced with volatile high temperature, high pressure, gaseous hydrocarbon reservoirs that had plagued drilling operations in the past. Using Halliburton's recommended cement mixture in Macondo's rock formations was "a recipe for disaster," Robert Bea told the *Washington Post*.

119. The presidential commission's investigators asked Halliburton to provide them with samples of materials like those used at the Macondo well; independent testing of those samples could not generate stable foam cement in the laboratory using the materials provided by Halliburton, which, according to Bartlit, strongly suggests that the foam cement used at Macondo was unstable during that cement job as well.

120. Independent tests conducted for BP's investigation of the disaster were also unable to generate a stable slurry using a mixture as similar as possible to Halliburton's slurry in conditions like Macondo's.

121. Prior to using its slurry mixture in the Macondo well, Halliburton conducted at least four foam stability tests on it, or on similar formulations, but the tests were incomplete and substandard, and mostly indicated the slurry would not be stable in the Macondo well.

122. In February 2010, Halliburton conducted the first two tests on a cement slurry that was slightly different than that ultimately used; both tests indicated that this foam slurry design was unstable if used in Macondo conditions. According to Bartlit's report, Halliburton provided the results of the February testing to BP by e-mail on March 8, 2010.

123. Halliburton conducted two other foam stability tests in April 2010, this time using the actual slurry mixture and design ultimately used in the Macondo well. On April 13, seven days before the blowout, testing indicated the foam slurry design was unstable. Bartlit reports that the results of this test were reported internally within Halliburton by at least April 17, 2010. In a second April test, Halliburton modified the testing procedure and the data indicated, for the first time, that the foam slurry mixture would be stable if used at Macondo. It is not clear if BP received the results of either of the April tests from Halliburton before it allowed Halliburton to begin cementing.

124. Oil industry expert Robert Bea told the Washington Post that drillers will often run one test on a proposed cement mixture, then a second test as a backup. Bea considered Halliburton's four tests "unusual . . . [T]hat's telling me they were having trouble getting to a stable design."

125. Despite the four tests Halliburton did run on the slurry mixture, the testing was not comprehensive, thorough, or consistent with industry standards. For example, as BP's investigation team noted, Halliburton did not provide results for such commonly tested cement slurry parameters as fluid loss, free water, foam/spacer/mud compatibility, static gel strength transition time, zero gel time, or settlement.

126. Bartlit reported to the presidential commission that, taken together, the Halliburton documents indicated that:

- (a) Only one of the four tests . . . that Halliburton ran on the various slurry designs for the final cement job at the Macondo well indicated that the slurry design would be stable;
- (b) Halliburton may not have had — and BP did not have — the results of that test [showing stable results] before the evening of April 20, meaning that the cement job may have been pumped without any lab results indicating that the foam cement slurry would be stable;
- (c) Halliburton and BP both had results in March showing that a very similar foam slurry design to the one actually pumped at the Macondo well would be unstable, but neither acted upon that data; and
- (d) Halliburton (and perhaps BP) should have considered redesigning the foam slurry before pumping it at the Macondo well.

127. In addition to having seen slurry test results showing the instability of Halliburton's proposed cement mixture, BP was also aware of the incomplete, substandard nature of Halliburton's tests, which failed to provide results for several commonly tested parameters. Nevertheless, BP did not insist that Halliburton reformulate its cement slurry or

perform the missing standard tests before proceeding with this tricky and important final cement job. Indeed, in its rush to complete the well, BP likely charged ahead having only ever seen Halliburton's first three slurry test reports — all of which indicated the cement would be unstable in the well.

128. Unstable foam cement slurry can result in nitrogen breakout, when bubbles of nitrogen create tiny holes in the cement as it is setting, leaving the cement porous and unable to form a seal against the hydrocarbon pressure. Nitrogen breakout not only jeopardizes the foam cement itself, but can also contaminate the other types of cement it is pumped with, interfering with their proper placement and/or degrading their ability to form a secure seal. Nitrogen breakout in the unstable foam slurry used at Macondo could have weakened the denser, non-foamed cement used to plug the very bottom of the last casing pipe, leaving it also unable to withstand the pressure of the hydrocarbons surrounding the well.

129. In addition to the formulation of the cement mixture, the volume of cement used is another factor in ensuring a successful cement job. Halliburton used a small volume of cement for this last section of the Macondo well. According to the interim report by the National Academy of Engineering (“NAE”) scientists investigating the Oil Spill, the concern with using a small volume of cement is “the potential for contamination of the entire slurry volume simply because less cement is present.” This was especially relevant at Macondo, where the high gas-to-oil ratio in the hydrocarbon reservoirs surrounding the well presented a risk of gas contaminating the cement during the setting process.

130. The NAE panel also expressed concern that the flow rate Halliburton chose to use when pumping the cement into the well was too low to achieve “turbulent flow,” a condition that helps push the mud out of the annulus during the cement placement.

131. Given the extremely narrow range of safe operating pressures Defendants were faced with in this last section of the well, it was all the more important to monitor well flow during the cementing process, to ensure there were no indications of fluid loss or fracturing of the formations around the bottom of the well. By monitoring the flow of drilling fluid out of the well as the cement is pumped in, it can be confirmed that every barrel of injected cement is associated with a barrel of drilling fluid flowing out of the well. These “full returns” indicate that the cement is displacing mud from the annulus as planned. If less mud flows out of a well than the amount of cement that is pumped in, fluid is being lost, most likely into fractures in the brittle formations.

132. Although BP claimed there were full returns during the last cementing job at Macondo, Halliburton cementer Nathaniel Chaisson testified that there was no monitoring system in place that could have confirmed full returns during cementing operations. Moreover, data presented to the congressional investigators by Halliburton cementer Vincent Tabler indicated that about 80 more barrels of cement were pumped into the well than barrels of mud that flowed out. This fluid loss would indicate that the brittle formations at the bottom of the well had fractured during the cementing process, allowing fluids and cement to escape into the fissures in the rock, and ruining the cement job. During its congressional testimony in September 2010, BP suggested that 50 barrels of the apparent fluid loss were due to compression of nitrogen in the cement. Nevertheless, BP should have had a flow monitoring system in place during the cementing process, and any losses due to nitrogen compression should have been anticipated and compensated for during the interpretation of the flow monitoring data.

5. Despite Red Flags, Defendants Skip Crucial “Bond Log” Test of Cement Integrity

133. After having made risky choices on well design, casing choice, the number of centralizers, skipping the bottoms up circulation, and using an unstable cement slurry, all of which sharply increased the risk that the cement job would fail, BP then made the unfathomable decision to cancel the “cement bond log” test, which would have checked the integrity of the completed cement job by using an imaging tool to gauge the thickness of the cement, and to determine if the cement was properly bonded to the casing and the rock formations surrounding the well.

134. This decision was again contrary to BP’s own original drilling plan, which included the cement bond log test. Skipping the cement bond log was also contrary to BP’s own internal standards, which do not consider full fluid returns a “proven cement evaluation technique,” and furthermore require a cement bond log test if a well’s cement design provides for less than 1000 feet of cement above the highest hydrocarbon layer — BP’s Macondo plan only provided for 500 feet.

135. But despite its own drilling plan, internal standards, and the simulations predicting cement failure, and despite warnings from its contractors and its employees regarding the risk of cement failure due to well design and insufficient centralizers, BP again rewrote its drilling plan on the fly, cancelling the cement bond log test and turning back the team from Schlumberger Ltd. that had arrived on the drilling vessel specifically and solely to perform the test.

136. BP’s only reasoning for skipping this absolutely critical and required test seems to have been a savings of approximately \$128,000 and less than 12 hours of work.

137. Gordon Aaker, Jr., an engineering consultant hired by the Congressional committee investigating the disaster, testified that it was “unheard of” and “horribly negligent” not to perform a cement bond log test on a well using a single casing design like the Macondo’s.

138. Moreover, skipping the test was a violation of MMS regulations, which require that a cement bond log test be conducted if there are indications of an inadequate cement job. 30 C.F.R. § 250.428.

139. Tommy Roth, a Halliburton Vice President of Cementing, also said BP should have conducted a cement bond log: “If the cement is to be relied upon as an effective barrier, the well owner must perform a cement evaluation as part of a comprehensive system integrity test.” Yet on board the Deepwater Horizon, neither Halliburton nor any of the other Defendants called to stop work or otherwise insisted that BP run the cement bond log test before proceeding.

140. Ultimately, later investigations confirmed what the cement bond log would likely have told BP – the cement job failed to seal the well. On October 12, 2011, the BSEE cited BP for violation of 30 C.F.R. §§ 250.420(a)(1) and (2) because “BP did not cement the well in a manner that would properly control formation pressures and fluids and prevent the direct or indirect release of fluids from any stratum through the wellbore into offshore waters.”

6. The Casing Hanger Lockdown Sleeve: Another Skipped Safety Precaution

141. As discussed above, the riskier long string well design Defendants chose for Macondo meant that there were only two barriers to a hydrocarbon blowout: Halliburton’s cement job isolating the hydrocarbon reservoirs from the well and the seal assembly at the wellhead on the sea floor. Given the insufficient number of centralizers, the failure to run a bottoms up mud circulation prior to cementing, and the results of Halliburton’s and BP’s own simulations, the risk of a failed cement job at Macondo was already high, making the strength

and integrity of the seal assembly at the wellhead — the second and final barrier against a blowout — paramount. Yet here again BP made a decision based on time and money rather than well, worker, and environmental safety: it did not deploy the casing hanger lockdown sleeve that would have prevented the wellhead seal from being broken by pressure from below, as it likely was on April 20, 2010.

142. A casing hanger lockdown sleeve ties down the seal assembly at the top of a well, providing an extra layer of protection against a blowout, much like the wire cage over the cork on a champagne bottle. During drilling, heavy mud counters the pressure from the hydrocarbons around the well, preventing their influx into the annulus and the casing. Once the well is properly sealed, with the cement isolating the pressurized hydrocarbons from the well, the heavy mud is pumped out and replaced by less dense seawater. Usually the casing hanger lockdown sleeve is deployed before the heavy drilling mud is pumped out of the well, so that it can offer an extra shield against any problems during and after the mud displacement process.

143. Contrary to industry standard, BP's plan was to deploy the casing hanger lockdown sleeve *after* the heavy mud had been displaced with seawater. A well design expert at another major oil company expressed surprise at BP's choice to displace the mud before deploying the casing hanger lockdown sleeve, saying it was "not the norm." BP had chosen to shake the champagne bottle with only a faulty cork — Halliburton's unsound cement job — standing in the way of disaster.

G. Premature and Nonstandard Mud Displacement Begins

144. BP and the other Defendants were so focused on speed that they could not even wait the 72 hours required for the cement job to fully set before pressing forward with the mud displacement. Without the heavy drilling mud to counter the reservoir pressure, any hydrocarbon influx into the well could turn dangerous very quickly, with only comparatively

light seawater blocking the path up through the well and the riser to the surface. Given the danger of hydrocarbons springing through a faulty, unset cement job, Halliburton should not have permitted BP to begin mud displacement unless it was absolutely certain that its cement job had successfully isolated the hydrocarbon reservoirs and sealed the well, yet there is no evidence that Halliburton ever protested BP's premature mud displacement.

145. Unlike Halliburton, Transocean officials did initially protest BP's displacement plan, getting into a "skirmish" with a BP official at a meeting about the drilling procedures. But even so, Transocean never exercised its right to stop work on the well in protest of BP's unsafe plan, and indeed soon acquiesced to BP's desire to rush the mud displacement at Macondo.

146. For the Macondo well, BP had contracted with M-I, LLC¹⁴ to provide mud products, including drilling fluids and spacers, engineering services, and mud supervisory personnel, such as mud engineers and drilling fluid specialists, to manage the properties of those fluids in the well. M-I employees planned and/or supervised key fluid-related activities at Macondo, such as mud displacement.

147. On the morning of April 20, 2010, the day of the blowout, BP informed M-I drilling fluid specialist Leo Lindner that the mud displacement would be more substantial than usual, displacing the top 8,367 feet of mud in the riser and drilling string, instead of the typical 300 feet. In his congressional testimony, Lindner did not mention why BP was displacing almost 28 times the usual amount of heavy mud.

148. Lindner calculated a mud displacement plan according to BP's specifications, including the suspension of the displacement procedure partway through to allow for pressure

¹⁴ M-I, LLC was a named defendant in the operative B1 Master Complaint. (Rec. Doc. 1128.) On February 17, 2011, BP and M-I, LLC reached a settlement in which BP agreed to indemnify M-I, LLC such that any fault found against M-I, LLC would be satisfied by BP.

testing of Halliburton's recently completed cement job. Lindner testified that he distributed copies of his mud displacement plan to BP and Transocean employees on the drilling vessel; thus some, if not all, of the Defendants were aware of and complicit in BP's plan to displace an unusually large amount of mud from the well, without the added safety of the casing hanger lockdown sleeve, and beginning before the cement had even fully set and been pressure tested.

H. The Well Fails Key Pressure Tests, Yet Defendants Press On

149. Two types of pressure tests are used to confirm the integrity of a well. The integrity of the casing pipes and assembly is assessed with a "positive pressure" test, which involves increasing pressure in the casing string and observing the pressure response. If the increase in pressure bleeds off, it indicates a problem with the pressure integrity of the casing: the pumped-in pressure is escaping through a leak somewhere along the line. However, if the increased pressure stays constant, it does not necessarily mean the casing assembly is secure — the external pressure from the hydrocarbons around the well can be sufficient to maintain the increased pressure reading in the casing string even if there is a breach. Thus, a negative result (where the pressure leaks off) is useful because it is diagnostic of a leaky casing string. A positive result (where the pressure remains constant), is not diagnostic of a secure casing string or a leaky casing string, and basically tells workers nothing about the integrity of a well's casing and pipe assembly.

150. On April 20, 2010, the Macondo well had a positive result to its positive pressure test, which neither confirmed nor denied the integrity of its casing string.

151. At around noon on April 20, 2010, after the completion of the positive pressure test, drilling vessel workers began the mud displacement process. According to the mud displacement plan, the displacement would proceed until the spacer fluid had been pumped down

to a level 12 feet above the BOP, after which the displacement would be suspended for the negative pressure test.

152. The BOP's annular preventer was closed to seal casing string for the negative test, but for some reason did not form a secure seal, which allowed about 50 barrels of spacer fluid to leak through the BOP and into the well. This meant that dense, viscous spacer fluid was across the inlets to several small-bore pipes that were to be used for the negative pressure test, rather than the plain seawater that should have been across the pipe inlets. Defendants were aware of this spacer fluid leakage and the potential for the viscous fluid to be blocking the small-bore pipes necessary for the negative pressure test, yet they took no steps to remedy the situation.

153. The negative pressure tests were intended to assess the security of Halliburton's cement job at the bottom of the Macondo well. With the casing string sealed, pressure was bled off from inside the well, "underbalancing" it by reducing the pressure in the casing until the external pressure from the hydrocarbon reservoirs surrounding the well was greater than the internal pressure within the casing itself. If Halliburton's cement job had securely sealed the hydrocarbon reservoirs off from the well, there would be little to no fluid flow out of the well and the pressure in the casing would remain at the reduced, underbalanced level. An increase in pressure or flow would indicate that the cement job was not secure, and was allowing hydrocarbons to flow into the well and repressurize the casing string.

154. Defendants' two negative pressure tests on the Macondo well both yielded abnormal results. In one instance, over four times the expected fluid returns spurted out of the well after the pressure was reduced to an underbalanced state. In the other test, the pressure in the well *increased* from 50 psi to 1,400 psi – a highly diagnostic "red flag" result indicating that Halliburton's cement job had failed to seal off the well from the surrounding hydrocarbon

reservoirs. The 1,400 psi pressure response and the excess fluid returns were indications that hydrocarbons were flowing into the well, re-pressurizing it after it had been underbalanced for the negative pressure test. The pressure tests themselves may have further damaged and weakened the cement in the well. Not only were the tests performed before the cement had a full 72 hours to set completely, but contrary to common practice, the drill string was 10,000 feet above the bottom of the well during the tests.

155. It is also possible that the pressure tests themselves further damaged and weakened the cement in the well. Not only were the tests performed before the cement had a full 72 hours to set completely, but contrary to common practice, the drill string was 10,000 feet above the bottom of the well during the tests.

156. Experts later testified that BP's interpretation of the pressure tests was not industry standard, while BP itself admitted to Congressional investigators that continuing work on the well after such alarming test results might have been a "fundamental mistake." In May 2010, BP admitted to congressional investigators that these pressure test results were clear warning signs of a "very large abnormality" in the well.

157. Later, in its September 8, 2010, disaster investigation report, BP concluded that the negative pressure test result of 1,400 psi was misinterpreted by Transocean and BP employees on the Deepwater Horizon, leading the vessel crew to the erroneous view that the test was a success and well integrity had been established. Moreover, BP's investigation found no evidence that the drilling vessel's workers consulted anyone outside their teams on the vessel or onshore about the abnormal pressure reading, as they should have, before coming to their incorrect conclusion that the well was secure. The well site leader should have called experts on

the drilling vessel or on the beach to discuss the results, BP Vice President Steve Robinson testified in congressional hearings in December 2010.

158. On December 7, 2011, the BSEE notified BP that its failure to conduct an accurate pressure integrity test violated 30 C.F.R. § 250.427.

159. In their November 16, 2010, interim report, the NAE panel wrote that “it is clear that pressure buildup or flow out of a well is an irrefutable sign that the cement did not establish a flow barrier” against the entry of hydrocarbons into the well. At Macondo, there was both pressure buildup to 1400 psi and unexpected flow out of the well during the negative pressure tests.

160. There was only one appropriate response to these abnormal negative pressure test results: remedial cement work to correct Halliburton’s obviously-flawed cement job and shore up the seal against the highly pressurized hydrocarbon reservoirs. Defendants, however, elected to ignore the “red flag” results of these, the only cement integrity tests they had even bothered to perform, and continue with their well completion plan as if Halliburton’s cement job had been a success.

I. Unorthodox Spacer Fluid Mixture and Volume Potentially Interfered with Pressure Tests and BOP Functionality

161. During the mud displacement process, BP used an unconventional fluid mixture – and an unusually large volume of it — as “spacer” fluid. This novel composition and amount of fluid may have interfered with the negative pressure test results and/or caused damage or clogging in the BOP.

162. In oil wells, a “spacer” is a fluid used to create a division between two other fluids, with the spacer fluid physically preventing the two other fluids from coming into contact

and mixing with or contaminating one another. In the mud displacement process at Macondo, the spacer was intended to separate the synthetic drilling mud from the seawater displacing it.

163. Spacer fluid is usually water-based mud, but according to testimony from drilling fluid specialist Leo Lindner, an uncommon mixture of fluids was used as a spacer during the Macondo well's mud displacement process. Instead of mixing a batch of the usual water-based mud spacer fluid, Lindner combined two "pills"¹⁵ of lost circulation material ("LCM") that had been previously prepared for use in the event of any fluid loss during the cementing job. Unlike the water-based mud typically used as spacer, LCM pills are highly viscous fluid that coagulates to create an extremely thick, stringy mass intended to fill the lost circulation zone, clogging fractures in the rock so that other drilling fluids can no longer escape into the formation. Lindner testified that it was "not common" to use LCM as a spacer, and that he had never done so before, but that BP and Transocean employees on the Deepwater Horizon were all aware of the unorthodox LCM-based spacer and either approved the use or allowed it to occur without comment.

164. In addition to the atypical composition of spacer Defendants used in the Macondo well, the volume of that fluid used was also nonstandard. Lindner testified that normally a spacer is around 200 barrels of fluid, but in the Macondo well, the two LCM pills that were used as spacer had a combined volume over twice as large: 450 barrels.

165. Upon information and belief, Defendants used this aberrant fluid composition and volume as spacer in the Macondo well solely to skirt environmental regulations that would have required more costly and time-consuming hazardous waster disposal procedures for the two unused LCM pills.

¹⁵ A "pill" is any small (<200 barrels) quantity of fluid particularly formulated for a specific task that regular drilling fluid cannot perform, such as prevention of circulation fluid loss.

166. As discussed above, the LCM used as a spacer leaked past the annular preventer through the BOP and into the well before the negative pressure test was run. Defendants' unusual use of LCM as spacer fluid could have confounded the negative pressure test results by blocking the small-bore pipes used for the tests, and could have negatively affected the functionality and effectiveness of the BOP itself.

J. Defendants Ignore and Overlook Warning Signs of the Imminent Blowout

167. Constantly monitoring a well for signs of hydrocarbon influx is so vital for well safety that it is common practice in the industry for employees of several companies on a drilling vessel — the mudlogging company, the drilling contractor, and the lease operator — to focus on it and be ready to take immediate remedial action, according to the NAE's interim report.

168. After the litany of flippant, short-cutting operational decisions Defendants made to save time and money completing the Macondo well, they should have been especially attuned to any signs of trouble from the historically intractable well. But instead of the requisite vigilance, Defendants had "turned to complacency in the haste to wrap up" operations at Macondo, according to the Deepwater Horizon Study Group, failing to properly monitor the well and ignoring and/or missing an increasingly ominous series of warnings and red flags exhibited by the well in the hours before the fatal blowout.

169. Pressure and flow data from well in the two hours before the blowout should have put Defendants on notice that there was a problem and that hydrocarbons were leaking into the well. Post-spill review of the real-time data that was available on the drilling vessel on April 20, 2010, showed that the first indications of hydrocarbons flowing into the well started at 8:52 p.m., and went unnoticed by Defendants. Post-spill modeling indicated that by 9:08 p.m., 39 barrels of hydrocarbons had leaked into the well, but Defendants still had not noticed the pressure and flow indications of the influx. It was not until 9:41 p.m., a scant four minutes before the blowout, that

Defendants finally noticed that the well was rapidly filling with hydrocarbons and that immediate well control action was needed.

170. At 8:52 p.m., the pumps displacing the heavy mud with seawater were slowed, but instead of flow out of the well decreasing accordingly, as it should have, flow increased — a clear “red flag” indicating that hydrocarbon pressure from the reservoir below was pushing the mud out of the well faster than the seawater that was supposed to be displacing the mud was being pumped in. Yet Defendants appear to have completely ignored this first red flag and simply carried on with the mud displacement process.

171. From 9:08 p.m. to 9:30 p.m. on the night of the blowout, when the mud displacement pump was either running at constant flow or was shut off, pressure in the well steadily increased. Modeling data from BP’s investigation of the disaster showed that at this point, hydrocarbons were flowing into the well at about nine barrels per minute. Again, this pressure data should have triggered Defendants to start well-kill operations to restore control over the pressure, but instead the increasing pressure was ignored or overlooked. In congressional testimony from December 2010, Halliburton mudlogger Joseph Keith admitted that he stepped away from his monitors for a coffee break on the night of the blowout; depending on when he took his break, Keith could have missed key data from the well.

172. Throughout the evening of April 20, 2010, the actions of the Deepwater Horizon workers were not consistent with a crew that was suspicious of any problems in the Macondo well. In fact, according to congressional testimony, when contacted by a superior at 9:21 p.m., the toolpusher reported that the negative pressure test result had been “good” and that the mud displacement process was “going fine,” neglecting to mention the increased flow out of the well or the increasing well pressure.

173. The mud displacement pumps were shut down completely at around 9:30 p.m., at which point hydrocarbons had been continuously flowing into the well for 38 minutes. Modeling data from BP's disaster investigation showed that about 300 barrels of hydrocarbons had flowed into the well by this time. A few minutes later, at 9:38 p.m., the steadily increasing level of hydrocarbons passed through the wide-open BOP into the riser.

174. Although there may have been some discussion of "differential pressure" in the well once the mud displacement pumps were turned off, there is no other evidence that Defendants noticed or properly interpreted the many warning signs of the imminent blowout until drilling mud began to spill out of the riser onto the vessel deck at 9:41 p.m., just four minutes before the blowout.

175. Inexperience may also have affected the choices and competency of the Deepwater Horizon workers during these critical hours. In BP's chain of command for Macondo operations, five employees had less than five months in their respective positions. BP's well site leader Robert Kaluza had mostly land-based drilling experience, and admitted he was working on the Deepwater Horizon "to learn about deepwater." BP also complained to Transocean that turnover on the drilling vessel had been high, including the replacement of experienced drillers with new hires. "Any further dilution of experienced personnel may be detrimental to the performance of the rig," BP told Transocean in an audit last year.

176. Investigators for the safety review commissioned by Transocean itself prior to the Oil Spill found that a lack of hands-on experience for Transocean workers and managers contributed to safety concerns, as many workers were too readily promoted without sufficient on-the-job experience to fully appreciate the risks. "[C]rews are potentially working with a mind-set that they believe they are fully aware of all the hazards when it is highly likely that they

are not,” the investigators wrote. Moreover, the Deepwater Horizon Study Group found no evidence that any of the drilling vessel workers or onshore employees directly involved with the Macondo well had formal training or qualifications in risk assessment and management of complex systems such as were found aboard the Deepwater Horizon.

177. In addition to carelessness, nonchalance, and/or inexperience causing them to ignore or overlook the harbingers of a blowout, it is also possible that drilling vessel workers, pushed by BP and the other Defendants to work faster and combine multiple tasks during these final completion operations, were too distracted to properly monitor the well and to notice the alarming signs of imbalance. A BP well site leader said after the disaster that workers may have taken unusual steps “to save time,” such as performing other tasks simultaneously during the mud displacement process.

178. One vessel worker testified that he was told to clean two tanks during his shift instead of the usual one: “To me it looked like they were trying to rush everything.” A mud logger later testified that he felt uncomfortable with the number of activities being done simultaneously on the day of the blowout.

179. As hydrocarbons were steadily filling the well and mounting towards the riser, vessel workers’ attention was split between mud displacement and other simultaneous tasks like a “sheen test” (which required a change in flow line configuration, depriving workers of data from one of the two flow meters that had been measuring flow from the well until that point), preparations for the upcoming cement plug insertion, the investigation of a problem that had arisen with one of the mud pumps, and the entertainment of BP and Transocean executives ironically onboard to celebrate the Deepwater Horizon’s supposedly spotless safety record.

180. Several of these simultaneously occurring activities impaired vessel workers' ability to monitor pit fluid levels, effectively eliminating that important source of well flow monitoring information.¹⁶ A few hours after the mud displacement process began at noon, Defendants began a four-hour offload of mud to the nearby supply vessel M/V Damon Bankston. In addition, some of the mud pits and the trip tanks were being cleaned and emptied during the course of the afternoon. These activities all affected the pit fluid levels, compromising their usefulness as indications of well flow. There is no evidence that Defendants had any reason to perform these activities during the mud displacement process other than time savings.

181. Even if there had been a compelling reason to perform the mud offload and pit cleaning activities simultaneously with the mud displacement process, Defendants could have preserved the useful monitoring function of pit fluid level information by isolating one or more of the pits for well flow monitoring. At the very least, Defendants could have begun monitoring pit fluid levels again at 5:17 p.m., once the mud offload task was complete, but there is no evidence that pit fluid levels were ever monitored again that afternoon or evening.

182. The multiple distractions and interference with well data caused by the drilling vessel crew's multitasking left them unable to "detect, analyze, and effectively react to the developing blowout," according to the Deepwater Horizon Study Group. The Group also noted that "perils of parallel processing" have underlain past oil and gas disasters such as the Piper Alpha blowout in the North Sea, and the Exxon Valdez crash. Just as sending text messages and driving a car are each individually safe tasks that can be deadly when combined, the tasks the

¹⁶ Pit fluid levels provide well flow information by indicating the volume of fluids at the surface. If the volume of fluid pumped into the well equals the volume of fluid returned from the well, pit levels will remain constant. If there is a hydrocarbon influx flowing into the well, the volume of fluid returned from the well will be larger than the amount pumped into the well.

Deepwater Horizon's crew were performing simultaneously fractured their attention at critical times, with catastrophic results.

K. Attempts at Well Control: Too Little, Too Late

183. While the Deepwater Horizon's crew was distractedly working miles above, highly-pressurized hydrocarbons leaked through Halliburton's faulty, channeled cement and into the casing string of the Macondo well. Several investigations have concluded that the hydrocarbons flowed into the well through the bottom of the last section of casing pipe, flowing up the casing string, and through the BOP and riser to the surface.

184. Because of their inattention to proper well monitoring during the mud displacement process, the first sign of this hydrocarbon influx Defendants seemed to notice was the mud that began spilling out of the riser onto the vessel deck at about 9:41 p.m., 49 minutes after the leak had started at the bottom of the well.

185. For emergencies like this one, Defendants' policies and instructions regarding well control procedures for their vessel workers were woefully inadequate. The procedures only contemplated relatively small influxes into the well, and did not provide guidance on what to do if the initial procedures fail to stop the influx, or whether and when to activate emergency BOP functions such as the emergency disconnect system.

186. In response to the mud spurting out of the riser at 9:41 p.m., the drilling vessel crew diverted flow from the well into the mud-gas separator, a device used to separate gas out of the drilling fluid and vent it safely into the air. This diversion would have been the correct protocol if this incident had been a mere kick. But for a blowout caused by hundreds of barrels of hydrocarbons blasting out of the well, the decision to divert well flow through the mud-gas separator only exacerbated the disaster.

187. Diversion to the mud-gas separator not only contributed to the explosions on the Deepwater Horizon, but it likely caused them to happen sooner than they might have if well flow had been directed overboard instead. The gas venting pipes on the Deepwater Horizon's mud-gas separator were goose-necked, which meant they directed the vented gas downwards towards the vessel. When huge volumes of gas began to hiss out of the Macondo well, these goosenecked vents effectively spread highly flammable gas all over the vessel's decks, increasing the likelihood that the gas would find an ignition source.¹⁷

188. The volume and pressure of the gas rushing out of the well eventually overwhelmed the mud-gas separator entirely, bursting its seals, and allowing the gas to spread directly under the vessel deck as well, effectively enveloping the Deepwater Horizon in a highly flammable cloud of gas.

189. The blowout worsened as the high pressure gas flow caused the failure of surface equipment on the drilling vessel, most of which was rated to withstand only 60 – 100 psi. As each of these seals and systems gave way under the immense pressure, additional flow paths were opened and the blowout gained strength.

190. The drilling vessel workers, following Transocean's insufficient well shut-in protocol, closed two of the BOP's non-shearing rams, which eventually sealed around the drill pipe at 9:47 p.m. At this point, all flow paths from the well to the drilling vessel were sealed off except for the drill pipe. Flow up the drill pipe was prevented by pressure in that pipe. With the BOP rams now blocking hydrocarbons from entering the riser along the sides of the drill pipe,

¹⁷ Hydrocarbons are in both gaseous and fluid forms in reservoirs, but since gas is less dense than oil, it blew out of the well ahead of the fluid oil. Thus gas spewed out of the well onto the Deepwater Horizon, and later oil (and gas-oil mix) gushed out of the well into the Gulf of Mexico.

the blowout could have been contained at this point, had the gas on the drilling vessel not exploded.

L. Faulty Vessel Safety Equipment Exacerbates the Blowout, Causing Vessel Explosions, Fire, and Sinking

191. Investigations and testimony suggest that the initial explosion on the Deepwater Horizon on the night of April 20, 2010, was caused by an engine on the vessel deck that sucked in the gas blasting down on the decks from the mud-gas separator vents.

192. Gas sensors, designed to shut down vessel engines when dangerous vapors are present, are critical to preventing explosions in such situations. Testifying before investigators in May 2010, the Transocean rig mechanic Douglas Brown said gas sensors — and the emergency engine shutdown systems connected to them — were not operational aboard the Deepwater Horizon on the night of the blowout. Moreover, the automated feature that should have closed the engine's air intake valves upon sensing gas entering the engine room also failed.

193. Brown further testified that the Deepwater Horizon's engine room was not equipped with a gas alarm system that could have shut off the power. The installation and maintenance of these sensors, alarms, and emergency shutdown systems on the Deepwater Horizon were the responsibility of Transocean, the vessel's owner.

194. At approximately 9:48 p.m., the gas sucked into one of the Deepwater Horizon's engines caused it to begin to overspeed. The vessel lost power less than a minute later, almost immediately followed by two explosions, which ignited the gas enveloping the vessel. The blaze intensified as damage from the explosions and fire opened new flow paths for the flammable gaseous hydrocarbons spewing out of the well. BP's investigators found potential flow paths through the mud pumps and through the top of the drill string, as well as the possibility that movement of the drill pipe broke the seal that the BOP rams had made around the drill pipe, re-

opening the direct flow path from the casing into the riser. Via all or some of these flow paths, gaseous hydrocarbons poured onto the vessel, feeding the inferno that engulfed the Deepwater Horizon and ultimately killed 11 crew members, injured 17 others, and destroyed the vessel.

2. The Failure of the BOP¹⁸

195. Immediately after the explosion, desperate vessel workers tried in vain to activate the emergency disconnect sequence on the Deepwater Horizon's BOP. As reports and testimony have shown, problems and failures with each of the BOP's emergency activation methods prevented the use of the Deepwater Horizon's BOP to seal the well, paralyzing its powerful shear rams that should have slammed shut, severing the drill pipe, and quelling the blowout.

196. The Macondo well's BOP had several emergency activation methods: the high-pressure closure of the blind shear ram, the emergency disconnect sequence¹⁹ ("EDS"), the automatic mode function²⁰ ("AMF"), and activation via remotely operated vehicles (ROVs) on the seafloor using the "hot stab"²¹ or autoshear²² functions. None of these were able to activate the BOP to seal the well.

¹⁸ The Deepwater Horizon's BOP was manufactured, designed, supplied, and/or installed by Cameron International Corporation f/k/a Cooper-Cameron Corporation ("Cameron"). Cameron was a named defendant in the operative B1 Master Complaint. (Rec. Doc. 1128.) On December 16, 2011, BP and Cameron reached a settlement in which BP agreed to indemnify Cameron such that any fault found against Cameron would be satisfied by BP.

¹⁹ The EDS disconnects the drilling vessel from the well by detaching the riser from the top of the BOP, allowing the vessel to move away from the well. The EDS also triggers the closure of the blind shear ram to seal off the well itself.

²⁰ The AMF is activated when electricity, hydraulics, and communications from the drilling vessel are all severed. Powered by hydraulic pressure from accumulators and batteries on the BOP itself, the AMF's functionality is independent from the vessel and is not affected by loss of power or hydraulics on the vessel itself.

²¹ An ROV can activate certain BOP functions, such as the blind shear ram, by performing a hot stab, injecting hydraulic fluid into dedicated ports on the BOP to close the rams.

²² An ROV can activate the autoshear function by snipping a rod on the BOP, triggering the closure of the blind shear ram.

197. The explosions and fire on the Deepwater Horizon disabled the only two emergency activation methods available to workers on the vessel: the high-pressure closure of the blind shear ram and the EDS. From the BOP control panels on the vessel, workers could push buttons for either of these functions, but both required communication with the BOP itself via multiplex cables running from the vessel to the BOP on the seafloor. On the vessel, these multiplex cables were not protected against explosions or fire; according to BP's disaster investigation, it is likely that they were damaged during or immediately after the first explosion, effectively disabling the vessel workers' ability to communicate with the BOP.

198. According to his own testimony, and that of several witnesses, Transocean subsea supervisor Christopher Pleasant pressed the EDS button after the explosions. "Everything in the [BOP control] panel did like was supposed to at the panel, but it never left the panel," Pleasant testified, which supports the likelihood that damage to the multiplex cables on the vessel severed communication between the vessel and the BOP after the explosions.

199. The AMF sequence initiates when electrical power, communications, and hydraulic pressure are lost to both control pods on the BOP, circumstances that were certainly satisfied once the multiplex cables and the also-unprotected hydraulic conduit hose on the Deepwater Horizon were damaged by the explosions and/or fire. But poor maintenance of the BOP itself prevented the completion of the AMF sequence to close the blind shear ram.

200. The Deepwater Horizon's BOP had two independent control pods, a redundancy intended to reduce the risk that control pod failure would jeopardize BOP functionality, but Transocean's shoddy BOP maintenance prevented either of the two pods from completing the AMF sequence on the night of the blowout. Examination and tests performed on the control pods after the disaster found a faulty solenoid valve and one battery with low charge in one pod,

and two dead batteries in the other pod. Investigators concluded that these problems existed prior to April 20, 2010, and were significant enough to prevent either control pod from completing the AMF sequence to close the BOP's blind shear ram.

201. BOP maintenance was Transocean's responsibility, but BP and the other Defendants were aware of Transocean's infrequent and inadequate maintenance of the device. The faulty solenoid valve on one of the control pods would have shown up on the BOP control diagnostic system on board the drilling vessel, which was accessible to all and should have alerted all of the Defendants to the problem.

202. Transocean's BOP maintenance records from 2001 to 2010, which were also available to Defendants at all times, indicate that the control pod batteries were changed far less frequently than the manufacturer's recommended annual replacement. Unlike the solenoid valve failure, the BOP's diagnostic function would not have shown a low battery charge, all the more reason for Transocean to proactively change the batteries frequently to avoid failure. But, as the other Defendants knew, Transocean had neglected the BOP batteries before — a November 2007 activity report recorded that when the BOP was brought to the surface, all of the batteries in one of the pods were dead.

203. Beyond these specific BOP maintenance issues, Defendants were also aware that during the entire duration of operations at Macondo, the Deepwater Horizon's BOP was out of certification and long overdue for extensive maintenance and repair. Although the BOP's manufacturer required manufacturer testing of the device every five years, the Deepwater Horizon's BOP had not been sent back to its manufacturer for inspection since 2000.

204. The BOP had not undergone a thorough series of maintenance checks since 2005, despite the significant problems uncovered within the device during that inspection. According

to Transocean maintenance documents from the 2005 inspection, the BOP's control panels gave unusual pressure readings and flashed inexplicable alarm signals, while a "hot line" connecting the vessel to the BOP was leaking fluid badly. An independent engineering company was hired to assess the BOP, but could not perform all of its examinations — including verification that the Deepwater Horizon's BOP could effectively shear drill pipe and seal off wells in high pressure, deepwater conditions — because the BOP was in use and inaccessible on the sea floor, and BP and Transocean would not stop work to bring it up.

205. A Transocean-commissioned independent audit of the vessel in April 2010, just before the blowout, again revealed a range of problems with the Deepwater Horizon's BOP, including a leaking door seal, pump parts needing replacement, error-response messages, and "extraordinary difficulties" surrounding the maintenance of the BOP's annular valves. BP well site leader Ronald Sepulvado testified in August 2010 that he too had raised concerns about Transocean's maintenance of the BOP, reporting that several pieces of equipment had been out of service for extended periods of time, but that Transocean "always told me that they didn't have the parts" to make the necessary repairs.

206. In keeping with its lax approach to BOP maintenance, Transocean had also failed to recertify the Deepwater Horizon's BOP, as required by federal regulations, because recertification would require a full disassembly of the device and more than 90 days of downtime. During his congressional testimony, one Transocean subsea supervisor brushed off the need for BOP recertification, testifying that Transocean considered it sufficient to simply monitor the device's condition while it was in use, rather than having to bring it to dry dock to get a full recertification.

207. In its disaster investigation, BP noted that Transocean did not record well control-related equipment maintenance, including that of the BOP, accurately or completely in the regular maintenance management system, sometimes even recording work performed on the BOP that could not possibly have taken place since the BOP was in use on the seafloor at the time of the supposed repair.

208. After the explosions, as the Deepwater Horizon was burning on the surface, emergency responders sent ROVs to the sea floor to attempt to close the blind shear ram using the “hot stab” or autoshear functions. Several hot stab attempts to close the blind shear ram failed due to insufficient hydraulic pressure. Over the course of these events, a number of leaks were discovered in the BOP’s hydraulic system, as well as incorrect hydraulic plumbing from the ROV intervention panel to the pipe rams, which was likely the result of aftermarket modifications to the BOP.

209. Hydraulic system integrity is critical to the proper functioning of a BOP. Hydraulic pressure supplies the force used to close the various rams in the device — if there is insufficient hydraulic pressure due to leaks, the system will not be powerful enough to close the rams with enough pressure to create a seal against highly pressurized hydrocarbons in the well.

210. Ultimately six leaks were discovered in the hydraulic system of the Macondo well’s BOP. From investigation and testimony, Defendants were aware of at least two, but likely almost all, of these leaks prior to April 20, 2010. One leak was discovered as early as February 2010, but was never repaired or otherwise addressed by Defendants. Vessel workers testified to awareness of other leaks during their congressional testimony. Not least, the weekly BOP function tests should have made Defendants aware of the other hydraulic system leaks identified during the ROV intervention.

211. Defendants' failure to properly maintain the Deepwater Horizon's BOP was also a violation of federal regulations. On October 12, 2011, BSEE found that BP, Transocean, and Halliburton had each violated 30 C.F.R. § 250.446(a) by failing "to maintain the Deepwater Horizon BOP system in accordance to API RP 53 section 18.10.3."

212. Defendants were also aware of the aftermarket modifications that hindered the emergency responders' ability to activate the BOP via hot stab procedures. In addition to incorrectly installed aftermarket hydraulic plumbing, Defendants had switched out one of the Deepwater Horizon's variable bore rams with a non-functional test ram. But after the blowout, emergency responders spent a day futilely trying to close that missing variable bore ram, not knowing it had been replaced with a useless test part, because Defendants hadn't updated the BOP's schematic diagram to reflect the aftermarket changes – a violation of 29 C.F.R. § 1910.119, which requires, *inter alia*, up-to-date process and safety system equipment drawings as a part of basic process safety management.

213. Defendant officials were aware of the faulty solenoid valve, poor battery maintenance, hydraulic fluid leaks, and aftermarket modifications on the Deepwater Horizon's BOP long before the April 20, 2010, but no action was ever taken to address the problems, perhaps because additional delays and costs would accrue as all well work stopped and the BOP was raised from the sea floor for repairs. In addition to posing a significant safety risk, Defendants' choice to continue drilling with a faulty hydraulic system violated federal regulations, which require companies to disclose problems to the MMS and to stop drilling if either of a BOP's two control systems is not working properly.

214. Despite vessel workers' efforts just after the blowout, and emergency engineers' efforts in the weeks after the blowout and sinking, the Deepwater Horizon's blind shear ram

never successfully sealed the well. Although tests determined that the ROVs had activated the high-pressure blind shear ram close function by cutting the autoshear rod, the well continued to spew oil into the Gulf of Mexico.

215. In March 2011, an independent expert analysis of the Deepwater Horizon's BOP indicated that the blind shear rams failed to seal the well because they simply were not designed with the strength needed for real-world blowout conditions. The report concluded that the force of the blowout had knocked the drill pipe into an off-center position in the wellbore, and the blind shear rams simply were not strong enough to shear the pipe and seal the well when the pipe was in an off-center position. See Det Norske Veritas, *Forensic Examination of Deepwater Horizon Blowout Preventer*, Vol. I Final Report (Mar. 20, 2011), available at <http://www.uscg.mil/hq/cg5/cg545/dw/exhib/DNV%20Report%20EP030842%20for%20BOEMRE%20Volume%20I.pdf> (amended and clarified by Det Norske Veritas, *Forensic Examination of Deepwater Horizon Blowout Preventer*, Addendum to Final Report (April 30, 2011), available at <http://www.boemre.gov/pdfs/maps/AddendumFinal.pdf>).

216. At the time of the disaster, Defendants were certainly aware that in addition to increasing the risk of blowouts, deep-sea drilling also increases the risk of BOP failure. Defendants were also aware that the industry and government had major concerns about the reliability of BOPs like the one installed on the Deepwater Horizon.²³ A 2004 study by Federal regulators showed that BOPs may not function in deep-water drilling environments because of the increased force needed to pinch and cut the stronger pipes used in deep-water drilling. Only

²³ See, e.g. Joint Industry Project (Phase I-Subsea), "Final Report, Blow-out Prevention Equipment Reliability," Report to MMS (May 2009); E. Shanks, "Deepwater BOP Control Systems – A Look at Reliability Issues," Proc. Offshore Technology Conference (2003); Tetrahedron, Inc., "Reliability of Blowout Preventers Tested Under Fourteen and Seven Days Time Interval," Report to MMS (Dec. 1996); Per Holland, "Reliability of Deepwater Subsea Blowout Preventers," Society of Petroleum Engineers (2000); Per Holland and P. Skalle, "Deepwater Kicks and BOP Performance," Report to MMS (July 2001).

three of 74 vessels studied in 2004 had BOPs strong enough to squeeze off and cut the pipe at the water pressures present at the equipment's maximum depth. "This grim snapshot illustrates the lack of preparedness in the industry to shear and seal a well with the last line of defense against a Blowout," the study said.

217. Despite being aware of the risk of the BOP failing at greater depths, Defendants did not install backup BOP activation systems, backup BOPs or other secondary redundant precautionary measures available to protect the vessel, its workers, Plaintiffs, and the environment from the catastrophic results of a well blowout.

218. The Deepwater Horizon's BOP was outfitted with only one blind shear ram. But blind shear rams are vulnerable to a "single-point failure" — if just one of the small shuttle valves that carry hydraulic fluid to the ram malfunctions, the BOP cannot seal the well. A 2000 report on the Deepwater Horizon's BOP concluded that the shuttle valve was the BOP's weak spot — consultants attributed 56 percent of the BOP's "failure likelihood" to this one small valve — and indeed, evidence suggests that when the Deepwater Horizon crew attempted to activate the BOP's blind shear ram, the ram's blades could not cut through the drill pipe because one or more of the shuttle valves leaked hydraulic fluid.

219. Vulnerabilities like the BOP blind shear ram's single-point failure risk were well understood by Defendants and the rest of the oil industry. In fact, offshore drillers now commonly add an extra layer of protection against this single-point failure risk by equipping their BOPs with two blind shear rams. In 2001, when the Deepwater Horizon went into service, Transocean was already equipping its newer drilling vessels with BOPs that could accommodate two blind shear rams, and today 11 of Transocean's 14 Gulf of Mexico vessels have two blind shear rams. (The three that do not were built before the Deepwater Horizon.) Nevertheless,

neither Transocean nor BP retrofitted the Deepwater Horizon's BOP with two blind shear rams. BP's explanation was that the drilling vessel needed to carry the BOP from well to well and there were space limitations, but oil industry experts have dismissed that explanation, saying an additional blind shear ram on the BOP would not necessarily have taken up any more space on the vessel.

220. Defendants were also well aware of the benefits of redundant blind shear rams. In May 2003 the Discoverer Enterprise — a Transocean vessel operated by BP, just like the Deepwater Horizon — was rocked when the riser pipe connecting the vessel to the wellhead cracked open in two places. The BOP was activated and the first blind shear ram closed. After robots checking the integrity of the BOP noticed damage, the second blind shear ram was also closed to provide an extra layer of protection against a blowout. Despite this firsthand experience of the necessity of redundant blind shear rams, BP and Transocean used one of the slots on the BOP for the non-functional test ram, which would save them money by reducing the time it took to conduct certain well tests, instead of installing a second blind shear ram there. In a joint letter, BP and Transocean acknowledged their awareness that installing the test ram instead of a functional ram would “reduce the built-in redundancy” and raise the “risk profile” of the Deepwater Horizon.

221. If the BOP on the Macondo wellhead had been functional and properly maintained by Transocean, it could have been manually or automatically activated right after the explosion, stopping the blowout at the wellhead, limiting the Oil Spill to a minute fraction of its ultimate severity, and thereby sparing Plaintiffs millions of dollars in losses and damage.

222. Defendants BP, Transocean, and one or more of the other Defendants, failed to ensure that the BOP present on the Deepwater Horizon possessed reasonably safe, adequate, functional technology to prevent blowouts.

223. Defendants BP and Transocean failed to ensure that the Deepwater Horizon's BOP had sufficient, functional, built-in redundancy to eliminate single-point failure modes.

224. Defendants BP and Transocean failed to ensure that all foreseeable repairs, if any, and foreseeable modifications, if any, to the Deepwater Horizon's BOP were performed, completed, and tested with the drilling vessel's operations shut down and the well secured.

225. Defendants BP and Transocean failed to ensure that the testing, if any, of the Deepwater Horizon's BOP was comprehensive, reviewed, and verified, and further failed to check and verify the BOP's entire operating and control system, including but not limited to, checking for leaks at ROV connection points, and verifying the functionality of the AMF and/or autoshear.

226. Defendants BP and Transocean could have ensured that a BOP and/or back-up BOP with sufficient strength and reliability for deepwater drilling was present and available on the Deepwater Horizon, but did not do so.

227. Defendants BP and Transocean could have installed a back-up acoustic trigger to activate the Deepwater Horizon's BOP in the event that the main trigger failed to activate. In fact, federal regulators at the MMS communicated to one or more of Defendants in 2000 that MMS considered a backup BOP activation system to be "an essential component of a deepwater drilling system."

228. Despite this notice, and although the back-up acoustic BOP trigger is a common drilling vessel requirement in other oil-producing nations, including other areas where

Defendants operate, the Deepwater Horizon was not equipped with this back-up acoustic BOP trigger.

3. Poor Vessel Maintenance and Reckless Bypass of Safety Systems

229. Unfortunately, the BOP was not the only part of the Deepwater Horizon that was poorly maintained and in disrepair at the time of the blowout. Transocean, the vessel's owner, had a history of postponing and ignoring needed maintenance on the Deepwater Horizon, despite concerns raised by its own employees and other vessel workers. In the weeks before the blowout, the Deepwater Horizon suffered power outages, computer glitches, and a balky propulsion system. In some cases, Transocean officials even purposely overrode or disabled vital safety mechanisms and alarms. When the Macondo well blew out, the Deepwater Horizon's shoddy maintenance facilitated a cascade of failures of multiple emergency systems, exacerbating the disaster.

230. According to testimony given before a federal panel by vessel engineers in August 2010, the Deepwater Horizon had a number of ongoing equipment problems at the time of the blowout, some of which contributed to the failure of backup generators that should have powered safety and shutdown devices immediately after the blowout. Vessel-wide electrical failures had occurred two or three times before April 20, 2010, and the driller's control chair had lost power just a few days prior to the blowout. The primary computer used to control all vessel drilling functions routinely crashed and had to be restarted, interfering with vessel workers' ability to monitor well data. One of the vessel's thrusters, an underwater propeller that helps the floating vessel move and stabilize itself in the water, had been "having problems" for eight months prior to the blowout.

231. Further, the computerized system used to monitor routine maintenance aboard the vessel was not working optimally because glitches from a recent computer system migration had

not yet been resolved. Sometimes the computer called for maintenance to be done on equipment that did not exist aboard the vessel, while some pieces of equipment that were aboard the vessel and in need of maintenance were not registered by the computer.

232. Even worse, some key safety systems and alarms on the Deepwater Horizon had been intentionally bypassed or disabled by Transocean. Mike Williams, a chief electronics technician working for Transocean aboard the Deepwater Horizon, testified that on the night of the blowout, a pressure regulator valve, which automatically cuts off gas flow at a certain pressure point and could have helped stop the blowout, was in “bypass” mode when the gaseous hydrocarbons blew out of the Macondo well. Williams had repeatedly expressed concern about bypassed safety systems to Transocean supervisors, only to be upbraided for his efforts. In one instance, Williams activated a gas safety valve that he thought was erroneously in “bypass” mode. Williams testified that Transocean subsea supervisor Mark Hay reprimanded him for it, saying: “‘The damn thing has been in bypass for five years. Why did you even mess with it?’ ... And [Hay] said, ‘As a matter of fact, the entire fleet [of Transocean drilling vessels] runs them in bypass.’”

233. Williams said a fire alarm system on the vessel was also partially disabled at the time of the blowout, and had been for at least a year since Williams first noticed it. The system was set to “inhibited” mode, meaning that the control panel would indicate a problem, but a general alarm would not sound throughout the vessel unless manually activated. Transocean supervisors told Williams “they did not want people to wake up at 3 a.m. due to false alarms.” Williams testified that he complained regularly about the practice of disabling and bypassing alarms and safety systems; his most recent complaint was just three days prior to the blowout.

234. Upon information and belief, had Transocean not disabled the alarm systems, the system would have sounded alarms just after the blowout, shut down all potential ignition sources, and activated the drilling vessel's EDS, which would have prevented the explosion and likely saved the lives of the 11 vessel workers who perished in the disaster.

235. When the Deepwater Horizon lost power during the blowout, none of the backup or emergency generators were working — equipment that was on board for the very purpose of providing power to alarm and safety systems in just such an emergency. Transocean employee and Deepwater Horizon chief engineer Stephen Bertone testified that there was no general alarm, no internal communications, and no power to the vessel's engines. "We were a dead ship." Without power, the crew was also unable to engage the EDS that would have stopped the flow of gas fuelling the fire on the vessel, and many other alarm and safety systems were rendered silent and useless.

236. An equipment assessment commissioned by Transocean in April 2010, just before the blowout, revealed many key components on the Deepwater had not been fully inspected since 2005, and at least 36 components and systems on the vessel were in "bad" or "poor" condition, which "may lead to loss of life, serious injury or environmental damage as a result of inadequate use and/or failure of equipment." The equipment assessment also found problems with the vessel's ballast system that they noted could directly affect the stability of the ship. The assessment found a malfunctioning pressure gauge and multiple leaking parts, and also faulted the decision to use a type of sealant "proven to be a major cause of pump bearing failure."

237. The findings of the Transocean-commissioned equipment assessment echoed the results of a similar BP-commissioned audit that had been conducted in September 2009, which

found that Transocean had “overdue planned maintenance considered excessive — 390 jobs amounting to 3,545 man hours [of needed maintenance work].”

238. In a confidential worker survey conducted on the Deepwater Horizon just weeks before the blowout, Transocean employees voiced concerns about poor equipment reliability. One worker noted that the drilling vessel had not once in its nine-year career been taken to dry dock for necessary repairs: “we can only work around so much.” Another worker described Transocean’s policy of running equipment to failure before making just the bare minimum repairs: “[r]un it, break it, fix it. . . . That’s how they work.”

239. The other Defendants were all aware of Transocean’s poor maintenance of the Deepwater Horizon and its practice of disabling or bypassing vital safety systems, and alarms, yet none of them called for work to stop until vessel safety was improved, and none of them reported Transocean’s actions and inactions to the MMS.

M. Defendants’ Culture of Complacency

240. All the evidence of Defendants’ misguided priorities and imprudent decisions regarding the Macondo well and the Deepwater Horizon described above is part of a pattern of cocksure behavior — “a culture of complacency,” as the chairmen of the presidential commission investigating the Oil Spill called it during a hearing on November 10, 2010. In essence, “[l]eaders did not take serious risks seriously enough and did not identify a risk that proved to be fatal,” the commission chairmen said.

241. This complacency was especially deplorable considering the fact that workers and leaders on the Deepwater Horizon had just survived a near miss — the March 8, 2010, influx that went unnoticed for 33 minutes, allowing 40 barrels of hydrocarbons to leak into the well before it was shut in. That brush with disaster should have been a lesson learned for Defendants, but to

the contrary, just six weeks later their haste and carelessness again led them to miss signs of an influx, this time for even longer — 49 minutes — not noticing the breach until it was too late.

242. An independent group of scientists singled out BP in particular for its “lack of discipline” in its operations at Macondo, in an interim report released November 17, 2010. “Numerous decisions to proceed toward abandonment [well completion] despite indications of hazard, such as the results of repeated negative-pressure tests, suggest an insufficient consideration of risk and a lack of operating discipline,” according to the 15-member panel of National Academy of Engineering scientists.

243. Moreover, the panel found that BP suffered from a lack of “management discipline” and problems with “delegation of decision making” on board the Deepwater Horizon. Workers aboard the drilling vessel were often unsure about who was actually in charge, and there was a “lack of on board expertise and of clearly defined responsibilities,” the NAE report said. Poor communication between employees of the various Defendants also contributed to the confusion on the vessel.

244. As the Deepwater Horizon Study Group put it: “It is the underlying ‘unconscious mind’ that governs the actions of an organization and its personnel.” In the case of the Deepwater Horizon, the cultural influences permeating the Macondo teams — both on the vessel and on the beach — reflected “gross imbalances between production and protection incentives” and manifested in “actions reflective of complacency, excessive risk-taking, and a loss of situational awareness.”

245. Defendants’ desultory approach to their respective responsibilities regarding the Deepwater Horizon Macondo well was in direct violation of federal regulations intended to maintain public safety. Pursuant to 33 C.F.R. 250.107, Defendants were required to protect

health, safety, property, and the environment by (1) performing all operations in a safe and workmanlike manner; and (2) maintaining all equipment and work areas in a safe condition. They were further required to immediately control, remove, or otherwise correct any hazardous oil and gas accumulation or other health, safety, or fire hazard and use the “best available and safest technology” whenever practical on all exploration, development, and production operations. Defendants’ violation of these regulatory mandates caused and/or contributed to the Macondo well blowout and the subsequent explosions, fire, sinking, and Oil Spill.

246. This culture of carelessness and impudence was not limited to Defendants’ actions and decisions on the Deepwater Horizon at the Macondo well. In fact, Defendants have a history of foolhardy, irresponsible behavior across their operations on land and at sea — a record littered with accidents, spills, regulatory violations, fines, and lawsuits.

247. Defendant BP has an especially sordid history of cutting corners on safety to reduce operating costs. In 2005, a blast at a Texas refinery killed 15 people and injured more than 170; Federal investigators found the explosions were in part due to cost-cutting and poor facility maintenance. Also in 2005, a large production platform in the Gulf of Mexico began listing severely and nearly sank due to a defective control system. And in 2006, four years after being warned to check its pipelines, BP had to shut down part of its Prudhoe Bay oilfield in Alaska after oil leaked from a corroded pipeline. As noted by the Deepwater Horizon Study Group in its second Progress Report, all the investigations of BP’s previous disasters “noted that cost cutting, lack of training, poor communication, poor supervision and fatigue were contributors” to the various calamitous incidents.

248. Despite this history of catastrophes and close calls, BP has been chronically unable or unwilling to learn from its many mistakes. The company’s dismal safety record and

disregard for prudent risk management are the results of a corporate safety culture that has been called into question repeatedly by government regulators and its own internal investigations. BP has consistently demonstrated that it will choose profit before safety at the expense of human lives and the environment. Moreover, the company's actions imply that it would rather pay fines than comply with U.S. law, as paying those fines — if and when its negligence is actually discovered — is ultimately a cheaper long-term strategy than regulatory compliance. This deficient corporate culture has been cited as a primary contributor to previous disasters at BP facilities, and is ultimately to blame for BP's grossly negligent decisions concerning the Macondo well, decisions made with willful, wanton, and reckless indifference to the foreseeably tragic results to the workers aboard the drilling vessel, the environment, and Plaintiffs.

249. Many of BP's workers at various facilities have voiced complaints about their employer's actions and policies, sometimes in the face of harsh retaliation from supervisors. Former employees, contractors, and oil field workers who worked for and with BP have reported that BP regularly cheated on pressure tests and failed to report leaks and spills to the proper authorities. For example, a BP subsidiary in Carson, California, submitted falsified inspection results to air quality regulators for eight years before it was revealed that the refinery was in a frightening state of disrepair. Instead of running at 99% compliance with regulations, as the falsified reports from BP had indicated, the refinery was actually operating with 80% *non*compliance. Workers at BP's Alaskan oilfield accused the company of allowing "pencil whipping," or falsifying inspection data, as well as pressuring workers to skip key diagnostics, including pressure testing, cleaning of pipelines, and corrosion checks, in order to cut costs. Workers on the Deepwater Horizon also described "a corporate culture of . . . ignoring warning signs ahead of the [April 20th] blast," saying that "BP routinely cut corners and pushed ahead

despite concerns about safety.” After all, as one Alaska worker was pointedly told when he raised a safety concern: “Safety doesn’t make money.”

250. Prior incidents, investigations, and testimony from Congressional hearings have shown that BP actively discourages workers from reporting safety and environmental problems. Reports from multiple investigations of the Texas City and Alaska disasters all indicate a pattern of intimidating — and sometimes firing — workers who raise safety or environmental concerns. In Alaska, pressure for increased production with fewer safety reports created “an environment where fear of retaliation [for reporting problems] and intimidation did occur.” Also in Alaska, a pipeline safety technician working for a BP contractor was scolded, harassed, and ultimately fired for reporting a crack in a pipe that was dangerously close to an ignition source, despite that other reports indicated he was one of the top-performing employees in his position. “They say it’s your duty to come forward,” he said of BP’s official corporate policies, “but then when you do come forward, they screw you.” In a more extreme example, in the 1990s a BP executive was involved in a scandalous scheme involving spies hired to track down a whistleblower who had leaked information about BP spills to the press.

251. When Tony Hayward took office as CEO of BP p.l.c. in 2007, he pledged to change BP’s culture with a renewed commitment to safety. Yet according to the Occupational Safety and Health Administration (“OSHA”), over the past three years — during which time BP was under Mr. Hayward’s leadership — BP has committed 872 safety violations — most categorized by OSHA as “egregious willful” — a number made even more shocking when compared to BP’s competitors, who average about five violations each. Two refineries owned by BP account for 97 percent of all “flagrant” violations found in the refining industry by government safety inspectors over the last three years. According to a former EPA lawyer

involved in the Oil Spill investigations, “none of the other supermajors have an environmental criminal record like they do.”

252. BP’s marginal ethics are well known to its competitors and others in the oil and gas industry, yet other companies, including Transocean and Halliburton, continue to work with BP closely and frequently.

253. Like BP, Transocean’s corporate culture is also skewed towards profits at the expense of safety, according to the results of the broad review of its North American operations made before the blowout. Workers complained of poor equipment reliability that they attributed to “drilling priorities taking precedence over planned maintenance.” “[Transocean] won’t send the rig to the shipyard for major refurb that is required in certain areas,” said one worker. Transocean’s system for tracking health and safety issues on the Deepwater Horizon was “counterproductive,” according to nearly all the workers surveyed. Fake data entered into the program in order to circumvent it distorted the perception it gave of safety on the vessel. Moreover, as Mike Williams testified, Transocean’s entire fleet of drilling vessels bypassed certain vital safety systems as a matter of practice.

254. Investigators also found that a stifling bureaucracy imposed by onshore management bred resentment among Transocean vessel workers. Workers complained that past problems were only investigated by the company in order to place blame, rather than to learn from the mistakes. Although workers “often saw unsafe behavior at the rig” many expressed fears of reprisals for reporting problems, especially to supervisors based in Houston. This tension between the vessel and the beach likely played a role in discouraging workers on Deepwater Horizon from reporting problems or anomalies like the abnormal negative pressure results to their supervisors onshore.

255. As Defendants internally prioritize profits over safety at every level of their companies, they continue to resist and evade regulation of the oil exploration and production industry. For example, despite the known vulnerabilities and shortcomings of BOPs in deepwater drilling, this year BP helped finance a study to support their argument that BOP pressure tests should be required with less frequency — every 35 days rather than the current frequency of every 14 days. This change would save the industry \$193 million per year in “lost productivity.” BP has also actively opposed MMS rules requiring drilling vessel lessees and operators to develop and audit their own Safety and Emergency Management Plans, insisting that voluntary compliance will suffice. The Deepwater Horizon disaster is a tragic example to the contrary.

256. Decisions, tradeoffs, actions, and inactions by Defendants, including the risky well design, inadequately tested cement, tests that were skipped or misinterpreted, and procedures that deviated from industry norms, all contributed to, and practically ensured the blowout of the Macondo well. At no time did any of Defendants report regulatory violations to the authorities, or call to stop work because of unsafe decisions, plans, actions, or conditions in the well or on the vessel. The carelessness, nonchalance, inexperience, and distraction of Defendants resulted in insufficient well monitoring and overlooking the signs of an influx for 49 minutes prior to the blowout. Once the well blew out, Defendants’ poor vessel maintenance and intentional bypass of alarms and emergency systems contributed to the failure of safety mechanisms, exacerbated the disaster, and likely caused the unnecessary deaths and injuries of vessel workers, and the destruction of the Deepwater Horizon. Underlying it all, Defendants’ corporate cultures of trading safety for speed, production, and profit, and encouraging their employees to do the same, sped the inevitable approach of catastrophe.

N. **Defendants Misrepresent the Severity of the Oil Spill and their Oil Spill Response Capabilities**

257. On the night of April 20, after the explosions ignited the vessel, the resulting gas-fueled fire on the Deepwater Horizon raged for two days, as the vessel listed progressively and finally sank on April 22, 2010. On the sea surface, the Deepwater Horizon had been connected to the wellhead at the seafloor by a 5,000-foot marine riser pipe, and as the vessel sank to the seafloor, it dragged the riser down with it, bending and breaking the pipe before finally tearing away from it completely. The riser, bent into a crooked shape underwater, now extended 1,500 feet up from the wellhead and buckled back down. Immediately oil and natural gas began to gush from the open end of the riser and from at least two places along its twisted length.

258. For 87 days, the surge of oil and gas from the gushing well continued unabated, and the Oil Spill's fast-growing oil slick made landfall on April 30, 2010, affecting increasingly larger areas of the Gulf coast as it was driven landward by currents and winds. Once the oil reached the coasts, it damaged the pristine beaches and delicate wetlands, marshes, and estuaries that line the coasts of the Gulf Coast Areas, destroying the habitats and spawning sites of marine life, as well as the tourism industry and property values in the those coastal areas.

259. From the outset, BP attempted to downplay and conceal the severity of the Oil Spill. BP's initial leak estimate of 1,000 barrels per day was found by government investigators to be a fraction of its actual measured leakage amount in excess of 50,000 barrels per day. On or about June 20, 2010, Congressman Edward Markey released an internal BP document showing that the company's own analysis had shown that the rate of oil spillage could reach as high as 100,000 barrels, or 4,200,000 gallons, per day. BP's may have understated the Oil Spill size because certain pollution-related fines against BP will ultimately be calculated based on the volume of oil and other pollutants spilled.

260. BP's obstructionist behavior regarding accurate data continued as the Oil Spill progressed; BP did not provide complete and timely announcements and warnings about the severity, forecast, and trajectory of the Oil Spill, and stymied scientists' efforts to gauge the scope of the disaster on land and at sea. *The New York Times* reported on May 16, 2010, that "BP has resisted entreaties from scientists that they be allowed to use sophisticated instruments at the ocean floor that would give a far more accurate picture of how much oil is really gushing from the well."

261. Just as BP was now understating the severity of the Oil Spill, it soon became clear that BP had previously overstated its ability to respond to a spill. In its Initial EP, submitted prior to beginning work at Macondo, BP had assured the MMS that it could effectively contain any spill of up to 250,000 barrels of oil per day, using "proven equipment and technology." In reality, BP was not at all prepared for an oil spill of any size. The spill-prevention plan BP had submitted to the MMS was an obvious cut-and-paste job that had not been updated to current conditions – not only did it reference Arctic wildlife not indigenous to the Gulf of Mexico, such as walrus, it also listed incorrect and out-of-date contact information for oil spill engineers and experts, including one wildlife expert who died in 2006.

262. BP Chief Operating Officer Doug Suttles admitted on May 10, 2010, that BP did not actually have a response plan with "proven equipment and technology" in place that could contain the Deepwater Horizon Oil Spill. Later, BP p.l.c. CEO Tony Hayward told the BBC that "BP's contingency plans were inadequate," and that the company had been "making it up day to day." In its official statement, BP made essentially the same admission: "All of the techniques being attempted or evaluated to contain the flow of oil on the seabed involve significant uncertainties because they have not been tested in these conditions before."

263. Despite the constant risk of a spill at any one of its many Gulf of Mexico wells, BP did not have a realistic response plan, a containment barge, skimming vessels, a response crew, or recovery material like containment boom ready and available to deploy immediately in an emergency. On the contrary, the Oil Spill response could not begin until the U.S. government, including the Coast Guard and the Navy, brought in skimmers, boom, and other materials, and volunteers were found to assist with the clean up.

264. On May 17, 2010, U.S. Senators Barbara Boxer, Ben Cardin, Frank Lautenberg, Kirsten Gillibrand, Bernie Sanders, Amy Klobuchar, Tom Carper, and Jeff Merkely contacted U.S. Attorney General Eric Holder to specifically request that the U.S. Department of Justice “open an inquiry into whether British Petroleum (BP) made false and misleading statements to the federal government regarding its ability to respond to oil spills in the Gulf of Mexico,” noting:

In the wake of the Deepwater Horizon oil spill, it does not in any way appear that there was “proven equipment and technology” to respond to the spill, which could have tragic consequences for local economies and the natural resources of the Gulf of Mexico. Much of the response and implementation of spill control technologies appears to be taking place on an ad hoc basis.

265. Upon information and belief, BP also hindered efforts to kill the Macondo well and stop the flow of oil and gas into the Gulf waters. Engineers knowledgeable about blowout responses told BP how to kill the well as early as June 2010, but BP chose to ignore the engineers’ well-kill procedure, because BP did not want to damage the well — or its chance to make a profit at Macondo. Because BP, along with its lease partners, hoped to retap the Macondo well and the large, valuable reservoirs beneath it, they ignored expert well-kill information that could have stopped the Oil Spill many weeks earlier.

O. Impact of the Deepwater Horizon Incident on Plaintiffs, the Environment, and the Gulf Coast Economy

266. For over twelve weeks, unprecedented amounts of raw crude oil, emulsified and weathered oil, natural gas, chemical dispersants, and other toxic pollutants spewed into the Gulf of Mexico — a total petroleum discharge of 6.9 million barrels, not including the 1.8 million gallons of chemical dispersants and any other toxic pollutants that were also released as a result of the Oil Spill.

267. The oil released in the course of the Oil Spill contains benzene, toluene, polyaromatic hydrocarbons, and other compounds (collectively referred to as Total Petroleum Hydrocarbons, or “TPH”), all of which are known carcinogens. Discharge of the toxic pollutants, as identified in 40 C.F.R. § 401.15, likely includes, but is not limited to, benzene, toluene, naphthalene, polynuclear aromatic hydrocarbons (including, but not limited to, phenanthrene, benzanthracenes, benzophyrenes, benzofloranthene, chrysenes, dibenzanthracenes, and idenopyrenes), fluoranthene, arsenic, cadmium, copper, mercury, and nickel, all of which are hazardous to the health of humans and marine life. Upon information and belief, BP has analyzed and knows the exact concentrations of each of the toxic pollutants present in the oil coming from its wells.

268. The chemical dispersants used by BP during the Oil Spill response may be harmful to the health of humans and marine life. Over two million gallons of chemical dispersants were released into Gulf waters to disperse the oil coming from the damaged well. According to environmental experts in the Deepwater Horizon Study Group, oil recovery (such as skimming) is preferable to chemical dispersion because recovery actually removes the oil from the environment, rather than simply spreading it through the water column and sinking it to the sea floor, where it can continue to cause environmental damage to the Gulf ecosystem while

no longer causing public relations damage to BP. The environmental effects of using chemical dispersants in such magnitude and at such depths have never been tested.

269. The Deepwater Horizon Incident has impacted and continues to impact Plaintiffs and the shorelines, beaches, shores, marshes, harbors, estuaries, bayous, bays, and waters of the Gulf of Mexico.

270. The Deepwater Horizon Incident and the resulting contamination of the Gulf of Mexico have caused and will continue to cause a loss of revenue for individuals and entities that rely on the use of the Gulf of Mexico and/or its marine life.

271. There are a wide variety of commercially valuable fish species in the Gulf of Mexico that have been and will continue to be harmed by the Deepwater Horizon Incident, including, but not limited to, shrimp, crabs, oysters, and pelagic fish.

272. The Deepwater Horizon Incident caused the National Oceanographic and Atmospheric Administration (“NOAA”) to restrict commercial and recreational fishing across large areas of the Gulf of Mexico — up to 88,552 square miles at the restriction’s greatest extent — causing damage to some Plaintiffs’ livelihoods. Fishing of certain species and in certain areas of the Gulf is currently still restricted until further notice from NOAA.

273. According to the National Marine Fisheries Service, commercial fishermen harvested 1.4 billion pounds of fish from the Gulf of Mexico in 2009, resulting in \$614.5 million in total landings revenue for the region.

274. Major shrimp species in the Gulf of Mexico, including, but not limited to, white, pink, Red Royal, and brown shrimp, are mainly located in coastal areas. During the Deepwater Horizon Incident, the Gulf’s various shrimp species were harmed due to mortality of adults, as well as that of post-larval shrimp, whose migrations out of the inlets, shallows, and estuaries

where they were born coincided precisely with the timing of the Deepwater Horizon Incident, devastating current as well as future shrimp catches.

275. In 2009, Gulf of Mexico shrimp landings were the nation's largest at 241 million pounds, which was 80 percent of the national total and worth \$313.8 million, according to NOAA sources. Louisiana led all Gulf states with nearly 109.8 million pounds, worth \$89.2 million; followed by Texas, almost 89.7 million pounds, worth \$72.9 million; Alabama, almost 21.7 million pounds, worth \$17.6 million; Mississippi, 10.1 million pounds, worth \$8.2 million; and Florida's Gulf Coast, 9.7 million pounds, worth \$7.8 million.

276. According to NOAA, the Gulf region also lead the nation in the production of oysters in 2009, harvesting 22.1 million pounds of meats, a catch worth almost \$85 million and making up over 62 percent of the nation's total.

277. Several valuable crab species live in the Gulf of Mexico, including, but not limited to, blue crab, Gulf stone crab, buster crab, and stone crab. As with shrimp, crab spawning and larval seasons coincided disastrously with the Deepwater Horizon Incident, putting future harvests at risk for years to come.

278. In 2009, the Gulf region harvested almost 40% of the nation's blue crab catch: 59.1 million pounds of hard blue crab landings worth \$57.3 million, according to the National Marine Fisheries Service. Louisiana alone landed approximately 33 percent of the total national blue crab catch: 50.78 million pounds, a catch worth \$49.17 million.

279. According to NOAA, surface-oriented marine life was most harmed by the early stages of the Deepwater Horizon Incident, especially near-shore species and/or species that were spawning when the oil reached the shore. But as the crude oil weathered, sank, or was dispersed throughout the water column, reef- and bottom-oriented fish (such as snappers and groupers)

were also threatened. In November and December 2010, scientists found evidence that thick swaths of sunken oil are covering large areas of the seafloor in the Gulf, killing deep-water coral reefs and sediment-dwelling organisms that play major roles at the base of the Gulf food chain. In a study published on March 26, 2012, scientists confirmed that chemical analysis of the oil coating the deep sea coral bears the unique hydrocarbon fingerprint of oil from the Macondo well.²⁴ Scientists who observed the suffocated coral described it as a bare skeleton, wreathed in loose tissue and covered in heavy brown mucous material, “like a graveyard of corals.”

280. Moreover, as sunken and dispersed oil resurfaces, additional harm to marine ecosystems will occur and continue. Since the Oil Spill, oil in various forms has continued to wash ashore along the Gulf coast, re-oiling beaches and wetlands and posing an ongoing threat to humans, wildlife, and marine life. For example, on March 22, 2012, National Geographic reported that a team of Auburn University scientists had recently collected thousands of tar balls from the beach in Orange Beach, Alabama. As noted by Dr. Lisa Kaplowitz of the U.S. Department of Health and Human services, in her June 15, 2010 testimony before Congress: “Oil can remain toxic in the environment for years.”

281. The Deepwater Horizon Incident has also harmed marine species at the top of the Gulf food chain, such as the Atlantic Bluefin tuna. The Gulf of Mexico is one of only two major spawning grounds for this endangered tuna species; each year from March to June the fish converge there between latitudes 25-28°N to breed. Not only did the Deepwater Horizon Incident’s timing coincide precisely with the peak of the Bluefin’s Gulf of Mexico spawning season, but NOAA maps show that the Deepwater Horizon Incident and its underwater plumes

²⁴ Helen K. White, et al., “Impact of the Deepwater Horizon oil spill on a deep-water coral community in the Gulf of Mexico,” PNAS 2012: 1118029109v1-201118029.

of oil and dispersants spread across latitudes 25-28°N, directly polluting the tuna's limited spawning area.

282. During the spawning season, Bluefin tuna release their eggs near the surface of the water, meaning oil and dispersants from the Deepwater Horizon Incident likely coated and destroyed millions of tuna eggs. Oil skimming activities could also have physically damaged the eggs, or broken surface water tension, allowing the eggs to sink too deep to properly develop.

283. The effects of the Deepwater Horizon Incident will continue to threaten the Bluefin species for years to come. Bluefin tuna are large, slow-growing fish that take ten years to reach sexual maturity. The destruction of, or severe damage to, an entire generation of fish in 2010 will therefore continue to affect the tuna population for at least a decade; if next year's spawning season is also affected by resurfacing oil or the remaining underwater plumes, the damage to the species will be catastrophic. Already severely overfished, the Atlantic Bluefin tuna may not survive this massive disruption to an entire spawning season, let alone the potentially long-term devastation of one of its annual spawning sites.

284. By wreaking havoc on the environment of the Gulf of Mexico, the Deepwater Horizon Incident has also severely impacted Plaintiffs that rely on subsistence use of the fish, plants, and animals of the Gulf ecosystem for their livelihoods, culture, and survival. The Subsistence Plaintiffs use these environmental resources for personal and family consumption as food, for making crafts, tools, clothing, and materials, and for customary barter and trade, much as generations of their ancestors did before them. Using traditional means, they catch fish and shellfish to feed themselves and their extended families, and to barter for other resources or services, such as fresh vegetables or medical services. Moreover, this age-old use of the fish, plants, and animals of the Gulf is deeply rooted and entwined in the Subsistence Plaintiffs'

culture, making it even more valuable and precious to them than simply the economic value of the harvest.

285. The Deepwater Horizon Incident has directly and severely impacted the Subsistence Plaintiffs by polluting their lands and fisheries and damaging the ecosystem vital to their culture and their survival. The Deepwater Horizon Incident caused fishing grounds to be closed for months, making it impossible for Subsistence Plaintiffs to obtain their traditional foods, and threatening their communities and culture. The after-effects of the Deepwater Horizon Incident continue to negatively affect the Gulf ecosystem, and therefore the Subsistence Plaintiffs that rely on it. Further, because the extent of the environmental impact of the Deepwater Horizon Incident is still unknown, the full extent of the Deepwater Horizon Incident's harm to the Subsistence Plaintiffs is also unknown.

286. The Deepwater Horizon Incident has also caused economic damages to Plaintiffs with VoO Charter Payment claims. As part of its offshore containment response program, BP directed the use of vessels to recover oil coming to the surface of the Gulf of Mexico, skim oil from the surface of the water, and conduct in situ burning of that reached the surface of the water. Many of the vessels BP used were part of its VoO program for oil spill response activities.

287. The VoO program is touted by BP as a key component to BP's response to the disaster. BP used at least 2,000 commercial and charter fishing vessels and other boats from communities along the shoreline to tow and deploy booms — floating barriers intended to contain, deflect, or hold back oil floating on the water's surface. Other VoO vessels worked with absorbent booms used to soak up some of the millions of gallons of oil coming to the surface of the Gulf. Still other VoO vessels supported in situ burning efforts. Some VoO vessels

conducted skimming operations to skim oil off the surface. Other VoO vessels recovered light oil and tar balls. Still others were tasked with the transportation of individuals to points out on the water.

288. Plaintiff vessel owners who participated in the VoO program entered into Master Vessel Charter Agreements (the “Charter Agreements”) under which Defendant BP chartered their vessels pursuant to the VoO program.

289. Pursuant to the Charter Agreements, BP and/or a subcontracting party agreed that the general maritime laws of the United States should govern “all matters of construction, validity and performance” of the Charter Agreements, and that only in the event that the general maritime laws of the United States do not apply, the laws of the State of Louisiana shall govern.

290. The Charter Agreements were subsequently amended by letter agreement, stipulation and/or court order, and the amendments apply retroactively to the date of the initial signing of the Charter Agreements.

291. In addition, Defendant BP made various statements and representations in the press, in court proceedings, on BP’s website, and/or otherwise, in which BP recognized and/or voluntarily assumed responsibility for the safety and protection of workers engaged in the VoO program.

292. Defendant BP is subject to a court order that prevents it from attempting to enforce against VoO Plaintiffs any releases contained in Charter Agreements and/or other documents engaging VoO Plaintiffs.

293. The Charter Agreements provided that the charter terms continued until the vessels were returned to moorings and decontaminated, and the boats received off-hire dispatch notifications, and that termination did not occur until all three of these events occurred. Many

vessels were laid off in August and September of 2010 and, although some were decontaminated, the owners were told that they were not released from the charters until they received off-hire dispatch notifications.

294. In most cases, off-hire dispatch notifications were not received until November 26, 2010. The owners of these vessels did not return to fishing because they understood that they were still under hire until they received the off-hire dispatch notification. Some VoO vessel owners did not receive off-hire dispatch notifications until December 2010 or January 2011, and on information and belief some still have not received off-hire dispatch notification.

295. Despite its detention of the VoO vessels through November 26, 2010 and beyond, BP has refused to pay these vessel owners for the full period between the commencement of the charter term and termination, the duration of which time the vessel owners were unable to return to their livelihoods.

296. The VoO vessels sustained substantial physical damage as the result of their participation in the program. The oil remediation efforts required of the vessels participating in the VoO program required the vessels to navigate through oil contaminated waters, staining propellers, rudders, and engines.

297. Initially, BP instructed the VoO vessel owners that their vessels would regularly undergo decontamination when they returned to shore on standby. However, although large commercial vessels regularly underwent decontamination, VoO vessels did not. As a result, large quantities of oil and other toxins accumulated on and in the VoO vessels.

298. When decontamination was finally performed on the VoO vessels, the procedure was often performed inadequately, without full environmental protection, causing damage to the VoO vessels, their hulls, decks, equipment and/or other appurtenances.

299. Because the vessels remained covered in oil and chemicals for weeks, months, or in some cases even more than a year, before decontamination, oil hardened like a varnish on hulls and decks of the vessels so that when decontamination was finally performed, the removal of the contaminants would cause paint to peel from the hulls, decks, equipment and appurtenances of the vessels. Further, the Coast Guard did not permit vessels to return to the water until the vessel received a letter confirming it had been decontaminated.

300. In addition, BP installed its oil containment equipment for oil remediation on the back of VoO vessels and, when that equipment was removed, the decks were often damaged with holes and dents. BP has failed to compensate the VoO vessel owners for this damage.

301. BP has failed to pay VoO vessel owners for the period during which their vessels were inoperable due to vessel damage from oil containment operations, inadequate decontamination, and/or damage due to removal of BP equipment.

302. The Deepwater Horizon Incident has not only had a severe impact on fisheries in the Gulf of Mexico, but it has also dealt a devastating blow to tourism in the Gulf Coast Areas and the individuals and entities that ordinarily rely on tourism for their livelihood. Prior to the Deepwater Horizon Incident, tourism accounted for about 46 percent of the Gulf Coast economy annually. The U.S. Travel Association predicted that the Deepwater Horizon Incident would result in at least \$7.6 billion in lost tourism revenue in 2010.

303. The Deepwater Horizon Incident has also caused damage to property owned and/or leased by Plaintiffs in the Gulf Coast Areas, resulting in physical damage and diminution of property values. Not only have oil and other contaminants polluted properties throughout the Gulf Coast Areas, but also pieces of the destroyed Deepwater Horizon vessel have come ashore in some places, damaging real and private property. The Deepwater Horizon Incident response

has also resulted in intrusion on and damage to property, including the annoyance, disruption and physical damage caused by vehicles, heavy machinery, boom, staging areas, and other materials and activities on or near Plaintiffs' properties.

304. The Deepwater Horizon Incident has also damaged submerged oyster beds that are the leased property of some Plaintiffs. The contamination of these submerged oyster beds has interfered with leaseholding Plaintiffs' ability to use their leased property as intended, damaging those Plaintiffs' livelihoods as well as the value of their leased oyster bed properties.

305. Because of the size and nature of the surface oil slick, the subsurface oil plumes, and weathered oil on shorelines, and the toxic effects of the oil and other substances released during the Deepwater Horizon Incident on humans, marine life, and the Gulf of Mexico environment, there have been and will continue to be further economic losses and diminution of property values to individuals and entities owning and/or leasing residential or investment properties in the Gulf Coast Areas.

CLASS ACTION ALLEGATIONS

A. Class Definitions and Exclusions

306. Class Definition. Plaintiffs seek certification of the following Economic & Property Damages Settlement Class ("the E&PD Class"):

1. CLASS DEFINITION.

Economic and Property Damages Settlement Class shall mean the **NATURAL PERSONS**²⁵ and **ENTITIES** defined in this Section 1, subject to the **EXCLUSIONS** in Section

²⁵ In the Class Definition and Exclusions sections of this Complaint, for consistency, terms that appear in bolded capital letters are defined terms and have the meanings set forth in, and Exhibit numbers are references to Exhibits to, the Deepwater Horizon Economic and Property Damages Settlement Agreement which is expected to be filed. Absent a judicially approved settlement of this action, the claims of the Class will continue to be prosecuted herein, and/or as pleaded in the operative B1 Bundle complaint, as appropriate.

2 below. If a person or entity is included within the geographical descriptions in Section 1.1 or Section 1.2, and their claims meet the descriptions of one or more of the Damage Categories described in Section 1.3, that person or entity is a member of the Economic and Property Damages Settlement Class, unless the person or entity is excluded under Section 2:

- 1.1. **Individuals.** Unless otherwise specified, all Natural Persons residing in the United States who, at any time between April 20, 2010 and April 16, 2012, lived in, worked in, were offered and accepted work in, owned or leased real or personal property located within, or owned or leased or worked on a vessel harbored or **HOME PORTED** in the States of Louisiana, Mississippi, or Alabama, the counties of Chambers, Galveston, Jefferson and Orange in the State of Texas, or the counties of Bay, Calhoun, Charlotte, Citrus, Collier, Dixie, Escambia, Franklin, Gadsden, Gulf, Hernando, Hillsborough, Holmes, Jackson, Jefferson, Lee, Leon, Levy, Liberty, Manatee, Monroe, Okaloosa, Pasco, Pinellas, Santa Rosa, Sarasota, Taylor, Wakulla, Walton and Washington in the State of Florida, including all adjacent Gulf waters, bays, estuaries, straits, and other tidal or brackish waters within the States of Louisiana, Mississippi, Alabama, or those described counties of Texas or Florida (the “**GULF COAST AREAS**”) (EXHIBIT A), or the U.S. waters of the Gulf of Mexico and all adjacent bays, estuaries, straits, and other tidal or brackish waters within the Gulf Coast Areas, as specifically shown and described in EXHIBIT B (“**SPECIFIED GULF WATERS**”), or worked on a vessel in Specified Gulf Waters after April 20, 2009.

With respect to Seafood Crew Claims, persons must have worked on a vessel that landed **SEAFOOD** in the Gulf Coast Areas after April 20, 2009.²⁶

and

1.2. **Entities.** All Entities doing business or operating in the Gulf Coast Areas or Specified Gulf Waters that:

- 1.2.1. owned, operated, or leased a physical facility in the Gulf Coast Areas or Specified Gulf Waters and (A) sold products in the Gulf Coast Areas or Specified Gulf Waters (1) directly to **CONSUMERS** or **END USERS** of those products or (2) to another Entity that sold those products directly to Consumers or End Users of those products, or (B) regularly purchased **SEAFOOD** harvested from Specified Gulf Waters in order to produce goods for resale at any time from April 20, 2010 to April 16, 2012;
- 1.2.2. are service businesses with one or more full-time employees (including owner-operators) who performed their full-time services while physically present in the Gulf Coast Areas or Specified Gulf Waters at any time from April 20, 2010 to April 16, 2012; or
- 1.2.3. owned, operated, or leased a vessel that (1) was Home Ported in the Gulf Coast Areas at any time from April 20, 2010 to April 16, 2012, or (2) landed Seafood in the Gulf Coast Areas at any time from April 20, 2009 to April 16, 2012; or
- 1.2.4. owned or leased **REAL PROPERTY** in the Gulf Coast Areas at any time from April 20, 2010 to April 16, 2012;

²⁶ Maps of the GULF COAST AREAS and SPECIFIED GULF WATERS are attached to this Complaint as Exhibits A and B, respectively.

1.3. Individuals and Entities who meet the geographical descriptions of Sections 1.1 or 1.2 above are included in the Economic Class only if their Claims meet the descriptions of one or more of the Damage Categories described below.

1.3.1. The following are summaries of the Damage Categories, which are fully described in the attached Exhibits 1A-14:

1.3.1.1. Seafood Compensation Program. Damages suffered by Commercial Fisherman and **SEAFOOD CREW** that owned, operated, leased or worked on a vessel that (1) was Home Ported in the Gulf Coast Areas from April 20, 2010 to April 16, 2012, or (2) Landed Seafood in the Gulf Coast Areas from April 20, 2009 to April 16, 2012; and damages suffered by, *inter alia*, Oyster Leaseholders and IFQ Owners. (Exhibit 10). Claims for Economic Damage arising from the fishing, processing, selling, catching, or harvesting of menhaden (or “pogy”) fish are excluded from the Seafood Compensation Program and other Economic Damage Claims under this Agreement.

1.3.1.2. Economic Damage Category. Loss of income, earnings or profits suffered by Natural Persons or Entities as a result of the **DEEPWATER HORIZON INCIDENT**, subject to certain Exclusions. (Exhibits 16-19)

1.3.1.3. Subsistence Damage Category. Damages suffered by Natural Persons who fish or hunt to harvest, catch, barter, consume or trade Gulf of Mexico natural resources, including Seafood and **GAME**, in a traditional or customary manner, to sustain their basic or family dietary, economic security, shelter, tool or clothing needs, and who relied upon subsistence

resources that were diminished or restricted in the geographic region used by the **CLAIMANT** due to or resulting from the **DEEPWATER HORIZON INCIDENT**. (Exhibit 9)

- 1.3.1.4. VoO Charter Payment Category. Damages suffered by Natural Persons or Entities who registered to participate in BP's Vessels of Opportunity ("VoO") program and executed a **VoO MASTER VESSEL CHARTER AGREEMENT** with BP, Lawson, USMS, USES, DRC, or any other BP subcontractor as **CHARTERER**, and completed the initial VoO training program.
- 1.3.1.5. Vessel Physical Damage Category. Physical damage that was sustained by an eligible Claimant's eligible vessel due to or resulting from the Deepwater Horizon Incident or the Deepwater Horizon Incident response cleanup operations, including the Vessels of Opportunity Program. (Exhibit 14)
- 1.3.1.6. Coastal Real Property Damage Category. Damages suffered by owners and lessees of **COASTAL REAL PROPERTY** and boat slips or damage to their Real Property located in specified geographical areas described in Exhibits 11A-11C who owned or leased that Real Property during the time period April 20, 2010 to December 31, 2010.
- 1.3.1.7. Wetlands Real Property Damage Category. Damages suffered by owners of wetlands Real Property or damage to their Real Property located in specified geographical areas described in Exhibits 12A-12C, who owned that Real Property during the time period April 20, 2010 to April 16, 2012.

- 1.3.1.8. Real Property Sales Damage Category. Damages suffered by sellers of residential property located in a specified geographic area described in Exhibits 13A-13B if the seller owned the property on April 20, 2010 and the sale of the property closed at any time from April 21, 2010 to December 31, 2010. The sales contract must have been (1) executed on or after April 21, 2010, or (2) executed prior to April 21, 2010 but subjected to a price reduction due to the Deepwater Horizon Incident.
- 1.3.1.9. Individuals/Employees in Otherwise Excluded Oil and Gas, Gaming, Banking, Insurance, Funds, Defense Contractors, Developers Industries, and any entity selling or marketing BP-branded fuel (including jobbers and branded dealers): As more fully described in Exhibit 16 and Section 5.10 below, individuals and employees of businesses and employers in these otherwise excluded industries described in Section 2 may submit Claims for Economic Damage outside of these excluded industries, and may pursue all other recovery permitted under other aspects of the Settlement.
- 1.3.1.10. Individuals/Employees in Support Services to Oil and Gas Industry: As more fully described in Exhibit 16 and Section 5.10 below, individuals and employees of businesses/employers in the **SUPPORT SERVICES TO OIL AND GAS INDUSTRY**, described in Exhibit 16 may submit Claims for Economic Damage incurred as a result of their employment in the Support Services to Oil and Gas Industry for (i) non-moratoria business interruption from Support Services to Oil and Gas Industry

activities and (ii) non oil and gas industry economic damages due to or resulting from the Deepwater Horizon Incident, except for moratoria claims. As is also more fully described in Exhibit 16, these individuals and employees may also pursue Claims for other Economic Damage outside the Support Service to Oil and Gas Industry, and may pursue all other recovery permitted under other aspects of the Settlement.

1.3.1.11. Businesses/Employers in Otherwise Excluded Gaming, Banking, Insurance, Funds, Defense Contractors and Developers Industries: As more fully described in Exhibit 16 and Section 5.10 below, businesses and employers in these otherwise excluded industries described in Section 2 may submit Claims only for Coastal Real Property Damage and Wetlands Real Property Damage, but are not entitled to recover under any other aspect of the Settlement.

1.3.1.12. Businesses/Employers in Support Services to Oil and Gas Industry: As more fully described in Exhibit 16 and Section 5.10 below, businesses and employers in the “Support Services to Oil and Gas Industry,” described in Exhibit 16, may submit Claims for (i) non-moratoria business interruption from Support Services to Oil and Gas Industry activities and (ii) non-oil and gas industry Economic Damages arising out of, due to, resulting from, or relating in any way to, directly or indirectly, the Deepwater Horizon Incident, except for moratoria claims, and may pursue all other recovery permitted under other aspects of the Settlement.

2. EXCLUSIONS FROM THE ECONOMIC AND PROPERTY DAMAGES SETTLEMENT CLASS DEFINITION.

2.1. Notwithstanding the above, the following individuals and Entities, including any and all of their past and present predecessors, successors, personal representatives, agents, trustees, insurers, reinsurers, indemnitors, subrogees, assigns, and any other Natural Person, legal or juridical person or Entity entitled to assert any claim on behalf of or in respect of any such individual or Entity in their respective capacities as such are excluded from the Economic Class.

2.2. Excluded Individuals or Entities:

2.2.1. Any Economic Class Member who or which timely elects to be excluded from the Economic Class under the deadlines and procedures to be set forth in the **ECONOMIC AND PROPERTY DAMAGES SETTLEMENT CLASS ACTION SETTLEMENT NOTICE**.

2.2.2. Defendants in **MDL 2179**, and individuals who are current employees, or who were employees during the **CLASS PERIOD**, of BP or other defendants in MDL 2179.

2.2.3. The Court, including any sitting judges on the United States District Court for the Eastern District of Louisiana, their law clerks serving during the pendency of the MDL, and members of any such judge's or current law clerk's immediate family.

2.2.4. The following exclusions are based on the substantive nature of the business, not the legal or juridical form of that business. Any of the following types of Entity, or any Natural Person to the extent he or she

alleges Economic Damage based on their employment by such an Entity, during the Class Period are excluded:

- 2.2.4.1. Financial Institutions as identified in the NAICS codes listed on Exhibit 18, which include, by way of example, commercial banks; savings institutions; credit card issuers; credit insurers; factors or other sales finance entities; financial or investment advisers or portfolio managers; fund managers; investment banking entities; lending institutions; real estate mortgage or lending entities; brokers or dealers of securities, commodities, commodity contracts or loans; securities or commodities exchanges; entities serving as custodians, fiduciaries or trustees of securities or other financial assets; or entities engaged in other financial transaction intermediation, processing, reserve or clearinghouse activities, *provided*, that the following shall not be excluded solely pursuant to this Section 2.2.5.1 unless they are subject to a different exclusion: stand-alone ATMs, credit unions, pawn shops, businesses engaged predominantly in making payday loans or paycheck advances and businesses that sell goods and services and offer financing on these purchases to their customers.
- 2.2.4.2. Funds, Financial Trusts, and Other Financial Vehicles, as identified in the NAICS codes listed on Exhibit 18, after giving effect to the bracketed exceptions contained in NAICS Codes 525920 and 523991, which include by way of example, public-open end investment funds; investment funds; real estate investment trusts; REMICS; mutual funds; money

market funds; derivatives; health and welfare funds; insurance funds; pension funds; financial trusts; and special purpose financial vehicles *provided*, that successions, estates, testamentary trusts, trusts of Natural Persons, bankruptcy estates, limited liability companies, corporations, Sub-Chapter “S” corporations, partnerships, limited partnerships, joint ventures, and any other businesses or juridical Entities, shall not be excluded pursuant to this Section 2.2.5.2 solely by reason of their form of legal or juridical structure or organization, except to the extent they are excluded pursuant to another exclusion in Section 2.2 of this Agreement.

2.2.4.3. Gaming, as identified in the NAICS codes listed on Exhibit 18, which includes, by way of example, casinos; casino hotels; off-track betting parlors; racetracks and other gambling establishments *provided*, that the following shall not be excluded solely pursuant to this Section 2.2.5.3 unless they are subject to a different exclusion: (a) bingo parlors, and (b) video gaming at bars, bingo parlors, hotels, off-track betting parlors, racetracks, restaurants and truck stops.

2.2.4.4. Insurance Entities, as identified in the NAICS codes listed on Exhibit 18, which include, by way of example, insurance carriers issuing disability, health, life, medical, property and casualty, title or other insurance; reinsurers; insurance agencies and brokerages; underwriting agencies or organizations; claims adjusters and processors; third-party insurance or fund administrators; or other insurance-related businesses.

2.2.4.5. Oil and Gas Industry, as identified in the NAICS codes listed on Exhibit

17, which includes by way of example, firms engaged in: extracting crude petroleum, natural gas or other hydrocarbons; drilling wells; preparing, maintaining or constructing petroleum or natural gas well-sites or other mineral extraction sites; mining; maintaining or constructing petroleum or natural gas pipeline or distribution facilities; pipeline distribution of crude petroleum, refined petroleum, oil or natural gas; petroleum or natural gas refining or other mineral refining and/or manufacturing; manufacturing petroleum lubricating oil and grease, petrochemical products, or other petroleum and coal products or chemical products derived from extracted minerals; merchant wholesaling of construction and mining (except oil well) machinery and equipment; wholesale distribution of oil well machinery, equipment and supplies; wholesale distribution of petroleum, petroleum products, other extracted minerals, chemical products produced from extracted or refined minerals, petroleum bulk stations and terminals, petroleum and petroleum products merchant wholesalers.

2.2.4.6. Defense Contractors/Subcontractors, including firms which derive in excess of at least 50% of their annual revenue from contracts with the United States Department of Defense and Individuals whose employer qualifies as a Defense Contractor.

2.2.4.7. Real Estate Developers, including any Natural Person or Entity that develops commercial, residential or industrial properties. This includes, but is not limited to, any Entity developing an entire subdivision (as defined by the law of the state in which the parcel is located) of real

property, including condominiums with multiple residential units and/or a residential subdivision with contiguous home sites and homes, *provided*, however, that Real Estate Developers shall be eligible to assert Coastal Real Property Claims under Section 5.7 and Real Property Sales Damage Claims under Section 5.9

- 2.2.4.8. Any Entity selling or marketing BP-branded fuel, including jobbers and branded dealers.
- 2.2.5. **GOVERNMENTAL ORGANIZATIONS**, as defined in this Agreement, provided that Native American tribal Entities may consent to participate in the Settlement as to otherwise eligible Claims.
- 2.2.6. Any Natural Person or Entity who or that made a claim to the **GCCF**, was paid and executed a **GCCF RELEASE AND COVENANT NOT TO SUE**, *provided*, however, that the execution of a GCCF Release and Covenant Not to Sue shall not prevent a Natural Person or Entity from making a VoO Charter Payment Claim or a Vessel Damage Claim, nor shall a release covering only bodily injury prevent a Natural Person from making claims under this Agreement.

307. This action is brought and may properly be maintained as a class action on behalf of the proposed Class defined above, pursuant to the applicable and appropriate provisions of Rule 23(a)(1)-(4) and (b)(3).

B. Numerosity of the Class/Impracticability of Joinder — F.R.C.P. 23(a)(1)

308. The Class consists of tens of thousands of individuals and businesses that have been economically damaged by the spill, making joinder impracticable. Class members can be informed of the pendency of this action by print, Internet, and broadcast notice.

C. Commonality — F.R.C.P. 23(a)(2).

309. Common questions of law and fact exist as to all members of the E&PD Class. Because Defendants' behavior here is governed by federal regulations, federal maritime law, and federal legislation like the Oil Pollution Act and the Clean Water Act, the E&PD Class members will be subject to common questions of law.

310. Furthermore, the factual bases of Defendants' conduct are common to all Class members and represent a common thread of reckless conduct and decisions, gross negligence and willful, wanton, and reckless indifference for the rights of others, resulting in injury to all members of the E&PD Class. Each Class member's claim arises from the same course of planning, decisions, and events, and each Class member will make similar legal and factual arguments to prove Defendants' outrageous, willful, reckless, wanton, and deplorable conduct and liability.

311. Defendants' conduct presents a series of significant factual questions with common answers, including:

- (a) Whether Defendants negligently, outrageously, willfully, wantonly, and/or recklessly caused and/or contributed to the Deepwater Horizon Incident;
- (b) Whether Defendants knew or should have known of the risk of a blowout and/or major failure of the vessel such as those which caused the Deepwater Horizon Incident;
- (c) Whether Defendants' conduct in failing to utilize all available deepwater drilling best practices and drilling vessel safety mechanisms to prevent the Deepwater Horizon Incident was outrageous, grossly negligent, willful, wanton, or reckless, or behavior even more deplorable;

- (d) Whether Defendants acted outrageously or with willful, wanton, and reckless indifference to the risk of a major failure of the drilling vessel, its pipes, valves, and other machinery and materials;
- (e) The degree of each Defendant's reprehensibility under the Supreme Court guidelines articulated in, for example, *BMW of North America, Inc. v. Gore*, 517 U.S. 559 (1996) and *State Farm Mut. Auto. Ins. Co. v. Campbell*, 538 U.S. 408 (2003).

312. Common questions of fact also exist with respect to the punitive damages liability of Defendants to the E&PD Class, including Defendants' outrageous, grossly negligent, willful, reckless, and wanton conduct; the calculation of the amount of punitive damages that may be imposed upon each of the Defendants consistent with due process; intra-class equity with respect to the allocation and utilization of punitive damages; and the most practicable and most equitable allocation, disbursement, and utilization of such damages for punishment of Defendants' wrongful conduct toward Plaintiffs, the E&PD Class, and society, and in fulfillment of the deterrent policy and purpose of punitive damages.

D. Typicality — F.R.C.P. 23(a)(3)

313. The claims in this Second Amended Master Class Action Complaint are typical of the claims of the E&PD Class in that they represent the various types of non-governmental economic losses and property damage caused by the Deepwater Horizon Incident. Each Class member's claim arises from the same course of planning, decisions, and events, and each Class member will make similar legal and factual arguments to prove Defendants' outrageous, grossly negligent, willful, reckless, and wanton conduct and liability.

E. Adequacy of Representation — F.R.C.P. 23(a)(4)

314. Plaintiffs will fairly and adequately represent and protect the interests of the E&PD Class. Plaintiffs have retained counsel with substantial experience in prosecuting environmental, mass tort, and complex class actions, including actions involving environmental contamination and, specifically, catastrophic oil spills. Among the undersigned counsel for Plaintiffs are counsel who represent claimants from each of the affected Gulf states and claimants with each type of claim (fishery-related, property-related, and business-related), and counsel with experience in complex class action litigation and trials, including the Exxon Valdez litigation, and counsel with particular expertise on punitive damages issues. Plaintiffs and their counsel are committed to prosecuting this action vigorously on behalf of the E&PD Class and have the financial resources to do so. Neither Plaintiffs nor their counsel have interests adverse to those of the E&PD Class.

F. Class Certification under F.R.C.P. 23(b)(3) — Predominance and Superiority

315. The common issues of fact and law presented in this action, including those specified above, predominate with respect to the claims of the E&PD Class over any questions affecting only individual Class members. Fundamentally, all Plaintiffs' claims arise out of a single course of conduct by Defendants that caused the Macondo well blowout, the Deepwater Horizon explosions, and the subsequent Deepwater Horizon Incident. Although this is a single-event, single-location mass disaster that has affected, and will continue to affect a large geographic area and many individuals and businesses, for a long time to come, its wide-ranging effects can be traced back to one single root: a chain of decisions and actions made jointly, severally, and solidarily by a small group of actors: Defendants, Transocean, and Halliburton. Plaintiffs will present common proof with respect to Defendants' failure to use deepwater drilling best practices or take adequate safety precautions in the operation and maintenance of the

Macondo well and the Deepwater Horizon — proof that is the same for each member of the E&PD Class. Plaintiffs’ proof of Defendants’ outrageous, grossly negligent, willful, reckless, and wanton conduct will involve the same cast of characters, events, discovery, documents, fact witnesses, and experts. Common questions of fact also predominate concerning the determination of the aggregate quantum of punitive damages, necessary to fulfill the punishment and deterrence goals of such damages.

316. Because Defendants’ behavior here is governed by federal regulations, federal maritime law, and federal legislation like the Oil Pollution Act and the Clean Water Act, the E&PD Class members will be subject to common questions of law.

317. A class action is superior to the only other method available for the adjudication of Defendants’ outrageous, grossly negligent, willful, reckless, and wanton conduct — individual litigation and multiple trials. The repetitive individual litigation of Defendants’ conduct by all members of the E&PD Class is inefficient, impracticable, economically infeasible, and potentially unfair, particularly in light of the unique context of Defendants’ course of conduct and its unprecedented impact upon the E&PD Class, the American environment, economy, and society.

318. It would be unduly burdensome on the courts to undergo the individual re-litigation of the same facts and legal issues in thousands of cases. The consideration of common questions of fact and law via this class action will conserve judicial resources and promote a fair and consistent resolution of these claims.

CLAIMS FOR RELIEF

A. Claims under General Maritime (Federal Common) Law

1. Negligence

319. Plaintiffs reallege each and every allegation set forth in all preceding paragraphs as if fully restated here, in the claim for negligence under federal common law.

320. At all times material hereto, Defendants were participating in drilling operations onboard the Deepwater Horizon in the Gulf of Mexico.

321. At all times material hereto, Defendants owed and breached duties of ordinary and reasonable care to Plaintiffs in connection with the drilling operations of the Deepwater Horizon and the maintenance of the vessel, its appurtenances and equipment, and additionally owed and breached duties to Plaintiffs to guard against and/or prevent the risk of an oil spill.

322. The existence and breach of these legal duties are established under the general maritime law and state law as deemed applicable herein.

323. Plaintiffs, as owners, lessors, lessees, and/or operators of real property at or near the coast of the Gulf of Mexico and/or businesses or employees of businesses that are dependent upon the Gulf of Mexico's marine and coastal environments for their livelihood and income, were within an appreciable zone of risk and, as such, were obligated to protect them.

324. The Deepwater Horizon Incident was caused by the joint and concurrent negligence of Defendants, Transocean, and Halliburton, which renders them jointly, severally, and solidarily liable to Plaintiffs.

325. Defendants knew of the dangers associated with deepwater drilling and failed to take appropriate measures to prevent damage to Plaintiffs and the Gulf of Mexico's marine and coastal environments and estuarine areas.

326. Defendants were under a duty to exercise reasonable care while participating in drilling operations on the Deepwater Horizon to ensure that a blowout and subsequent oil spill did not occur as a result of such operations.

327. Defendants were under a duty to exercise reasonable care to ensure that if crude oil discharged in the event of a blowout, that it would be contained and/or stopped within the immediate vicinity of the Deepwater Horizon in an expeditious manner.

328. Defendants knew or should have known that the acts and omissions described herein could result in damage to Plaintiffs.

329. Defendants, respectively and collectively, failed to exercise reasonable care while participating in drilling operations to ensure that a blowout and subsequent oil spill did not occur, and thereby breached duties owed to Plaintiffs.

330. Defendants, respectively and collectively, failed to exercise reasonable care to ensure that oil would expeditiously and adequately be contained within the immediate vicinity of the Deepwater Horizon in the event of a blowout, and thereby breached duties owed to Plaintiffs.

331. Defendants, respectively and collectively, failed to exercise reasonable care to ensure that adequate safeguards, protocols, procedures and resources would be readily available to prevent and/or mitigate the effects of an uncontrolled oil spill into the waters of the Gulf of Mexico, and thereby breached duties owed to Plaintiffs.

332. The conduct of the Defendants with regard to the manufacture, maintenance and/or operation of drilling operations and oil rigs such as the Deepwater Horizon and its appurtenances and equipment is governed by numerous state and federal laws and permits issued under the authority of these laws. These laws and permits create statutory standards that are intended to protect and benefit Plaintiffs, including, but not limited to, those set forth in the OPA,

and regulations that govern the National Oil and Hazardous Substances Contingency Plan²⁷ (*e.g.*, 40 C.F.R. § 300.150). One or more of the Defendants violated these statutory standards.

333. In addition to the allegations of statutory and regulatory violations made elsewhere in this Complaint, the BSEE found that Defendants, Transocean, and Halliburton violated the following federal regulations:

- (a) BP, Transocean, and Halliburton failed to protect health, safety, property, and the environment by failing to perform all operations in a safe and workmanlike manner, in violation of 30 C.F.R. § 250.107(a)(1);
- (b) BP, Transocean, and Halliburton did not take measures to prevent unauthorized discharge of pollutants into offshore waters, in violation of 30 C.F.R. § 250.300;
- (c) BP, Transocean, and Halliburton failed to take necessary precautions to keep the well under control at all times, in violation of 30 C.F.R. § 250.401(a);
- (d) BP did not cement the well in a manner that would properly control formation pressures and fluids and prevent the direct or indirect release of fluids from any stratum through the wellbore into offshore waters, in violation of 30 C.F.R. §§ 250.420(a)(1) and (2);
- (e) BP failed to conduct an accurate pressure integrity test, in violation of 30 C.F.R. § 250.427;

²⁷ Response actions under the National Oil and Hazardous Substances Contingency Plan must comply with provisions for response actions under 29 C.F.R. § 1910.120. These regulations impose upon Defendants a standard of care to which Defendants did not adhere.

- (f) BP and Transocean failed to maintain the Deepwater Horizon's BOP system in accordance with the American Petroleum Institute's Recommended Procedure 53 section 18.10.3, in violation of 30 C.F.R. § 250.446(a);
- (g) BP failed to obtain approval of the Temporary Abandonment procedures it actually used at the Macondo well, in violation of 30 C.F.R. § 250.1721(a);
- (h) BP failed to conduct an accurate pressure integrity test at the 13-5/8" liner shoe, in violation of 30 C.F.R. § 250.427; and
- (i) BP failed to suspend drilling operations at the Macondo well when the safe drilling margin identified in the approved application for permit to drill was not maintained, in four separate violations of 30 C.F.R. § 250.427(b).

334. The violations of these statutory standards constitute negligence per se under federal law, as well as Louisiana, Texas, Mississippi, Alabama, and Florida law.

335. Defendants also violated the International Safety and Management Code ("ISM"), as adopted by the International Convention for the Safety at Life at Sea ("SOLAS"), which provides rules and standards to ensure that ships are constructed, equipped, and manned to safeguard life at sea, by failing to properly maintain the vessel, train personnel, and perform appropriate risk assessment analyses. *See* 46 U.S.C. §§ 3201-3205; 33 C.F.R. § 96.230; 33 C.F.R. § 96.250.

336. At all times material hereto, the Deepwater Horizon was leased and operated pursuant to a contract between Transocean and BP. Together, Transocean and BP were responsible for design and well control.

337. BP owed duties to Plaintiffs to, *inter alia*, exercise reasonable care to design, create, manage and control the well and the flow of hydrocarbons therefrom in a safe and prudent manner and to conduct its drilling operations with reasonable and ordinary care.

338. BP breached its duties to Plaintiffs by, *inter alia*:

- (a) choosing and implementing a less expensive and less time-consuming long string well design, which had few barriers against a gas blowout, instead of a safer liner/tieback design which would have provided additional barriers to gas blowout, despite its knowledge that the liner/tieback design was a safer option;
- (b) using pipe material that it knew, and which it recognized before the blowout, might collapse under high pressure;
- (c) using too few centralizers to ensure that the casing was centered into the wellbore;
- (d) failing to implement a full “bottoms-up” circulation of mud between the running of the casing and the beginning of the cement job in violation of industry standards;
- (e) failing to require comprehensive lab testing to ensure the density of the cement, and failing to heed the ominous results of negative pressure testing which indicated that the cement job was defective;

- (f) cancelling the cement bond log test that would have determined the integrity of the cement job;
- (g) failing to deploy the casing hanger lockdown sleeve to prevent the wellhead seal from being blown out by pressure from below;
- (h) using an abnormally large quantity of mixed and untested spacer fluid;
- (i) failing to train drilling vessel workers and/or onshore employees, and to hire personnel qualified in risk assessment and management of complex systems like that found on the Deepwater Horizon;
- (j) requiring simultaneous operations in an effort to expedite the project, making it difficult for workers to track fluid volumes in the wellbore; and,
- (k) causing property damage to the vessels involved in the VoO program, and failing to properly administer and provide payment for work, time, and/or property damage to those entities and workers participating in the VoO program.

339. All of the foregoing acts and/or omissions by BP proximately caused and/or contributed to Plaintiffs' economic and property injuries and damages.

340. In addition to the negligent actions described herein, and in the alternative thereto, the injuries and damages suffered by Plaintiffs were caused by the acts and/or omissions of Defendants that are beyond proof by the Plaintiffs, but which were within the knowledge and control of the Defendants, there being no other possible conclusion than that the Deepwater Horizon Incident resulted from the negligence of Defendants. The Deepwater Horizon Incident would not have occurred had the Defendants satisfied the duty of care imposed on them and Plaintiffs, therefore, plead the doctrine of *res ipsa loquitur*.

341. In addition to the foregoing acts of negligence, Plaintiffs aver that the Deepwater Horizon Incident was caused by the joint, several, and solidary negligence and fault of Defendants in the following non-exclusive particulars:

- (a) Failing to properly operate the Deepwater Horizon;
- (b) Operating the Deepwater Horizon in such a manner that a fire and explosions occurred onboard, causing it to sink and resulting in the Oil Spill;
- (c) Failing to properly inspect the Deepwater Horizon to assure that its equipment and personnel were fit for their intended purpose;
- (d) Acting in a careless and negligent manner without due regard for the safety of others;
- (e) Failing to promulgate, implement and enforce rules and regulations pertaining to the safe operations of the Deepwater Horizon which, if they had been so promulgated, implemented and enforced, would have averted the blowout, explosions, fire, sinking, and Oil Spill;
- (f) Operating the Deepwater Horizon with untrained and unlicensed personnel;
- (g) Negligently hiring, retaining and/or training personnel;
- (h) Failing to take appropriate action to avoid or mitigate the accident;
- (i) Negligently implementing or failing to implement policies and procedures to safely conduct offshore operations in the Gulf of Mexico;
- (j) Failing to ascertain that the Deepwater Horizon and its equipment were free from defects and/or in proper working order;

- (k) Failing to warn in a timely manner;
- (l) Failing to timely bring the oil release under control;
- (m) Failing to provide appropriate accident prevention equipment;
- (n) Failing to observe and read gauges that would have indicated excessive pressures in the well;
- (o) Failing to react to danger signs; and
- (p) Such other acts of negligence and omissions as will be shown at the trial of this matter; all of which acts are in violation of the general maritime law.

342. Plaintiffs are entitled to a judgment finding Defendants liable, jointly, severally, and solidarily, to Plaintiffs for economic and property damages suffered as a result of Defendants' negligence and awarding Plaintiffs adequate compensation therefor in amounts determined by the trier of fact.

343. The injuries to Plaintiffs were also caused by and/or aggravated by the fact that Defendants failed to take necessary actions to mitigate the danger associated with their operations.

344. As a direct and proximate result of Defendants' negligence, Plaintiffs with Economic Damage claims have suffered a loss of income, loss of the use of the Gulf of Mexico and its coastline for commercial and tourism purposes, and damages associated and inconvenience sustained by the closure of the Gulf water areas, harbors, marinas, boat launches and waterways, including loss of their livelihood which directly depends upon the environmental health of the Gulf of Mexico.

345. As a direct and proximate result of the Defendants' negligence, Plaintiffs with Subsistence Damage claims suffered economic and cultural damages due to the inability to use the natural resources of the Gulf of Mexico for their income and personal and family subsistence.

346. As a direct and proximate result of Defendants' negligence, Plaintiffs with VoO Program Damage claims sustained economic damage due to underpayment for their participation in the VoO program, as well as property damage as a result of the contamination of their vessels by oil, dispersant chemicals, and the decontamination process.

347. As a direct and proximate result of the Defendants' negligence, Plaintiffs with Coastal Real Property Damage claims have suffered the loss of use and enjoyment of their coastal properties, as well as property damage due to oil, tar balls, and clean-up and dispersant chemicals contaminating their property, and heavy foot and equipment traffic from disaster response teams, which sometimes used these Plaintiffs' property as a staging area for the clean-up effort, usually without Plaintiffs' permission.

348. As a direct and proximate result of the Defendants' negligence, Plaintiffs with Real Property Sales Damage claims have suffered economic damage because they were forced to sell their properties at prices significantly lower than the pre-Spill property values, due to the Deepwater Horizon Incident.

349. As a direct and proximate result of the Defendants' negligence, Plaintiffs with Wetlands Real Property Damage claims have suffered property damage due to oil, tar balls, and clean-up and dispersant chemicals contaminating their property, and heavy foot and equipment traffic from disaster response teams, which sometimes used these Claimants' property as a staging area for the clean-up effort, usually without Claimants' permission.

2. Gross Negligence and Willful Misconduct

350. Plaintiffs reallege each and every allegation set forth in all preceding paragraphs as if fully restated here, in this claim for relief for gross negligence and willful misconduct under federal common law.

351. Defendants owed and breached duties of ordinary and reasonable care to Plaintiffs in connection with the maintenance of, and drilling operation on, the Deepwater Horizon, and additionally owed and breached duties to Plaintiffs to guard against and/or prevent the risk of the Oil Spill. The existence and breach of these legal duties are established under the general maritime law and state law as deemed applicable herein.

352. Defendants breached their legal duty to Plaintiffs and failed to exercise reasonable care and acted with reckless, willful, and wanton disregard in the negligent manufacture, maintenance, and/or operation of the Deepwater Horizon.

353. Defendants knew or should have known that their wanton, willful, and reckless misconduct would result in a disastrous blowout and oil spill, causing damage to those affected by the Deepwater Horizon Incident.

354. Defendants acted with gross negligence, willful misconduct, and reckless disregard for human life and the safety and health of the environment and Plaintiffs by, *inter alia*, failing to use a sufficient number of “centralizers” to prevent channeling during the cement process; failing to run a bottoms up circulation of the drilling mud prior to beginning the cement job; disregarding proper drilling, casing, mudding, and cementing procedures; failing to ensure that that adequate safeguards, protocols, procedures and resources would be readily available to prevent and/or mitigate the effects an uncontrolled oil spill into the waters of the Gulf of Mexico.

355. Defendants acted with gross negligence, willful misconduct, and reckless disregard for human life and the safety and health of the environment and Plaintiffs by, *inter*

alia, using an inappropriate cement mixture for the well; failing to appropriately test that cement mixture prior to using it in the well; failing to run a cement bond log to evaluate the integrity of the cement job; and failing to deploy the casing hanger lockdown sleeve prior to commencing the mud displacement process in the well.

356. Defendants acted with gross negligence, willful misconduct, and reckless disregard for human life and the safety and health of the environment and Plaintiffs by, *inter alia*, using an untested, abnormally large volume of mixed spacer solutions to avoid having to properly dispose of the two separate spacer substances as hazardous wastes.

357. Defendants acted with gross negligence, willful misconduct, and reckless disregard for human life and the safety and health of the environment and Plaintiffs by, *inter alia*, recklessly maintaining and altering, and/or wantonly operating and/or using the BOP appurtenant to the Deepwater Horizon.

3. Breach of Contract

358. Plaintiffs reallege each and every allegation set forth in all preceding paragraphs as if fully restated here, in this claim for breach of contract under federal common law.

359. VoO Plaintiffs who are vessel owners and who participated in the VoO program entered into a Charter Agreement that BP drafted and required to be used to participate in the VoO Program, whether the VoO Plaintiff contracted directly with BP or a contractor of BP, under which BP chartered or caused to be chartered their vessels pursuant to the VoO program.

360. Pursuant to the Charter Agreement, BP agreed that the general maritime laws of the United States should govern “all matters of construction, validity and performance” of the Charter Agreement, and that only in the event that the general maritime laws of the United States do not apply, the laws of the State of Louisiana shall govern.

361. The Charter Agreement was subsequently amended by letter agreement, stipulation and/or court order, said amendments applying retroactively to the date of the initial signing of the Charter Agreement.

362. Under the Charter Agreement, BP agreed to pay VoO Plaintiffs from the time they were activated on hire until the time they were taken off hire. A vessel was not off hire until it received off-hire dispatch notification, was properly decontaminated, and was returned to moorings.

363. BP placed, or caused to be placed, VoO Plaintiffs on hire and received the benefit of VoO Plaintiffs' services. BP did not properly off-hire VoO Plaintiffs; some did not receive sufficient decontamination, while many did not receive timely off-hire dispatch notification.

364. BP refused and continues to refuse payment for time owed under the Charter Agreements.

365. The refusal of BP to pay amounts owed to the VoO Plaintiffs under Charter Agreements either directly with BP or with a BP contractor is a breach of contract for which BP is liable.

B. The Oil Pollution Act

366. Plaintiffs reallege each and every allegation set forth in all preceding paragraphs as if fully restated here.

367. The Oil Pollution Act, 33 U.S.C. § 2701, *et seq.* (the "OPA"), imposes liability upon a "responsible party for a . . . vessel or a facility from which oil is discharged . . . into or upon navigable waters or adjoining shorelines" for the damages that result from such incident as well as removal costs. 33 U.S.C. § 2702.

368. The Coast Guard has named BP as the responsible party for the downhole release of oil; thus, BP is strictly liable pursuant to Section 2702 of the OPA for all the damages resulting from the Deepwater Horizon Incident.

369. Defendants are not entitled to limit their liability under Section 2704(a) of the OPA because the Deepwater Horizon Incident was proximately caused by their gross negligence, willful misconduct, or violation of applicable safety, construction or operating regulations. 33 U.S.C. § 2704(c).

370. Moreover, in its “Statement of BP Exploration & Production Inc. Re Applicability of Limitation of Liability Under Oil Pollution Act of 1990,” filed on October 19, 2010, BP waived the statutory limitation on liability under the OPA.

371. As a result of the Deepwater Horizon Incident, Plaintiffs have not been able to use natural resources (air and water, and potentially wetlands and other areas and spaces that have and/or may become contaminated by the spilled oil), and they are entitled to recover from Defendants for such damages in amounts to be determined by the trier of fact, in addition to the damages as set forth below.

372. As a result of the Deepwater Horizon Incident, Plaintiffs are entitled to damages pursuant to Section 2702(b)(2)(B), which provides for recovery of damages to real or personal property, including “[D]amages for injury to, or economic losses resulting from destruction of, real or personal property, which shall be recoverable by a claimant who owns or leases that property, including the diminution in the value of their property.”

373. As a result of the Deepwater Horizon Incident, Plaintiffs are entitled to damages pursuant to Section 2702(b)(2)(C), which provides for recovery for “[D]amages for loss of subsistence use of natural resources, which shall be recoverable by any claimant who so uses

natural resources which have been injured, destroyed, or lost, without regard to the ownership or management of the resources.”

374. As a result of the Deepwater Horizon Incident, Plaintiffs are entitled to damages pursuant to Section 2702(b)(2)(E), which provides for “[D]amages equal to the loss of profits or impairment of earning capacity due to the injury, destruction, or loss of real property, personal property, or natural resources, which shall be recoverable by any claimant.”

375. To the extent required by law, and/or by consent or stipulation by BP, Plaintiffs have satisfied, or will have satisfied, all of the administrative requirements of 33 U.S.C. §§ 2713(a) and (b), as to each and all defendants, by the submission of their claims to the Gulf Coast Claims Facility (the “GCCF”) and/or BP and/or its agents or designees.

376. In its “Statement Of BP Exploration & Production Inc. Re Applicability Of Limitation Of Liability Under Oil Pollution Act of 1990” filed on October 19, 2010, BP waived the statutory limitation on liability under the OPA.

C. Other Claims for Relief²⁸

1. Nuisance

377. Plaintiffs reallege each and every allegation set forth in all preceding paragraphs as if fully restated here.

378. At all times material hereto, Plaintiffs with claims for Coastal Real Property Damage, Real Property Sales Damage, and Wetlands Real Property Damage were owners, lessors, or lessees of residential, commercial, and/or investment properties on or near the Gulf of Mexico.

²⁸ Although this Court has dismissed similar state law claims for nuisance and trespass asserted by Plaintiffs in the operative B1 Master Complaint. (Rec. Doc. 1128), Plaintiffs reallege them here under federal law (general maritime law) and out of an abundance of caution to preserve them for potential reconsideration, appeal, or other resolution.

379. Defendants' negligence caused and/or contributed to the blowout and subsequent Deepwater Horizon Incident and resulted in an economic and ecological disaster that has directly and proximately caused an invasion that has interfered with Plaintiffs' interests as owners, lessors, and/or lessees of properties to use and enjoy their properties.

380. Defendants were under a duty to take positive action to prevent or abate the interference, but failed to do so.

381. The harm suffered by Plaintiffs was significant and of a kind that would be suffered by a normal person in the community or by property in normal condition and used for normal purpose.

382. Plaintiffs have also suffered the migration of contaminants and noxious odors as a result of the Deepwater Horizon Incident.

383. Defendants acted in an unreasonable manner in creating the nuisance described herein.

384. The Deepwater Horizon Incident that Defendants caused and/or contributed to has polluted Plaintiffs' property, constituting a nuisance that has caused and will continue to cause injury to Plaintiffs, including, but not limited to, damages to and diminution in the value of their properties and the surrounding marine and coastal environments caused by the Deepwater Horizon Incident.

385. Defendants are liable to Plaintiffs for actual and compensatory damages sustained as the direct and proximate result of the nuisance alleged herein.

2. Trespass

386. Plaintiffs reallege each and every allegation set forth in all preceding paragraphs as if fully restated here.

387. Defendants knew of the risks of a blowout on the Deepwater Horizon and that a blowout would result in an oil spill, and that the oil from such a spill would wash ashore and cause devastating damage to real property along the shores of Alabama, Florida, Mississippi, Texas, and Louisiana.

388. Defendants discharged a polluting substance beyond the boundary of Plaintiffs' property in such a manner that it was reasonably foreseeable that the pollutant would, in due course, invade Plaintiffs' property and cause harm.

389. By discharging pollutants, Defendants entered, invaded, and intruded on Plaintiffs' properties.

390. Defendants had a duty to use reasonable care not to enter, intrude on, or invade Plaintiffs' properties. Defendants also owed a duty to Plaintiffs to exercise reasonable care in the design, execution, and operation of the Macondo well and the manufacture, maintenance, and operation of the Deepwater Horizon and its appurtenances and equipment.

391. Defendants breached the duties they owed to Plaintiffs when they outrageously and maliciously, owing to gross negligence, willful, wanton and reckless indifference for the rights of others, or behavior even more deplorable, failed to exercise reasonable care in the design, execution, and operation of the Macondo well and the manufacture, maintenance, and operation of the Deepwater Horizon and its appurtenances and equipment, which conduct resulted in the entry, intrusion, or invasion on Plaintiffs' properties.

392. BP also breached the duty it owed to Plaintiffs when it outrageously and maliciously, owing to gross negligence, willful, wanton and reckless indifference for the rights of others, or behavior even more deplorable, failed to request permission to enter and use Plaintiffs' property as a disaster relief staging area, or exercise reasonable care when using Plaintiffs'

property for those activities, which conduct resulted in the rude, aggravated, and oppressive entry, intrusion, or invasion on Plaintiffs' properties.

393. Defendants' outrageous, malicious, rude, oppressive, grossly negligent, willful, reckless, and wanton conduct, as described herein, entitles Plaintiffs to compensatory and punitive damages.

394. Plaintiffs have also suffered the migration of contaminants and noxious odors onto their properties as a result of the Deepwater Horizon Incident.

395. These acts on the part of Defendants have caused oil from the Deepwater Horizon Incident to come ashore in Louisiana, Mississippi, Alabama, Florida, and Texas. This deliberate invasion and contamination of the property owned by Plaintiffs constitutes a trespass in violation of applicable law.

396. In addition, as a cost-cutting clean-up measure, Defendants left oil in place for dilution and decomposition, and thereby reduced, damaged, and impaired the use and value of the land owned or leased by certain Plaintiffs without permission, contract, or compensation.

397. As a direct and proximate result of their unauthorized invasion, entry and contamination, Defendants have caused and continue to cause Plaintiffs real and personal property damage, economic and business loss, loss of income, loss of value of their property, inconvenience and out-of-pocket expenses, and the creation of conditions that are harmful to human health and the environment, for which Defendants are liable in damages.

3. Fraudulent Concealment

398. Plaintiffs reallege each and every allegation set forth in all preceding paragraphs as if fully restated here.

399. To the extent available under state law, Plaintiffs are entitled to recovery against Defendants for their fraudulent concealment of material facts concerning the Deepwater Horizon Incident.

400. After the explosions, Defendant BP attempted to downplay and conceal the severity of the Oil Spill. BP's initial leak estimate of 1,000 barrels per day was found by government investigators to be a fraction of the actual leakage amount of over 50,000 barrels of oil per day.

401. Moreover, in the aftermath of the explosions, BP did not provide complete and timely announcements and warnings about the severity, forecast and trajectory of the Oil Spill.

402. In addition, BP misrepresented its capabilities to respond to the Oil Spill. BP overstated its ability to handle a blowout in its Exploration Plan, wherein it claimed that in the event of a blowout resulting in an oil spill, it was "unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses."

403. In fact, BP did not have proven equipment and technology to respond to the Oil Spill; instead, according to the letter to Attorney General Eric Holder by Members of Congress on May 17, 2010, it did not "in any way appear that there was 'proven equipment and technology' to respond to the spill, which could have tragic consequences for local economies and the natural resources of the Gulf of Mexico." As noted further in that letter, "much of the response and implementation of spill control technologies appear[ed] to be taking place on an ad hoc basis."

404. BP admitted on May 10, 2010 that "[a]ll of the techniques being attempted or evaluated to contain the flow of oil on the seabed involve significant uncertainties because they have not been tested in these conditions before."

405. Despite its inability to respond and control the Oil Spill, BP resisted requests from scientists to use sophisticated instruments at the ocean floor that would have provided a more accurate picture of the amount of oil that was gushing from the well.

406. BP did not in the aftermath of the blowout or since that time provide complete or timely announcements and warnings about the severity, forecast and trajectory of the Oil Spill.

407. The severity, forecast and trajectory of the Oil Spill, and BP's ability to respond to the Oil Spill, were material facts that BP had a duty to disclose.

408. Moreover, BP was aware, before the Oil Spill, that Halliburton's testing had revealed that the concrete foam was unstable, yet it concealed this material fact.

409. Defendants failed to disclose or concealed the foregoing material facts, and their failure to do so induced Plaintiffs to act or to refrain from acting to protect their property, businesses, livelihoods and income.

410. As a direct and proximate result of the fraudulent concealment of the foregoing material facts by Defendants, Plaintiffs suffered damage to their businesses, livelihood, income and damage to and diminution in value of their property, for which they are entitled to compensation.

411. Moreover, Defendants' acts of misrepresentation and concealment of the foregoing material facts were willful, wanton, and/or in callous disregard for the safety of others and, accordingly, Plaintiffs are entitled to an award of punitive damages.

D. Punitive Damages under All Claims

412. Plaintiffs reallege each and every allegation set forth in all preceding paragraphs as if fully restated here, and assert, in additional support of their claim for punitive damages under federal, statutory, maritime, and federal common law:

413. Defendants engaged in conduct so reckless, willful, wanton and in such utter and flagrant disregard for the safety and health of the public and the environment in their activities leading up to and/or during the Deepwater Horizon Incident, as alleged herein, that an award of punitive damages against them at the highest possible level is warranted and necessary to impose effective and optimal punishment and deterrence. Plaintiffs, society and the environment cannot afford and should never be exposed to the risks of another disaster of the magnitude caused by Defendants' misconduct herein.

414. Defendants focused primarily on profit while disregarding public and environmental health and safety while undertaking their ultra-hazardous activities on the Deepwater Horizon by performing a critical well pressure test with untrained and unqualified personnel and by callously ignoring and/or misinterpreting abnormal "red flag" pressure test results.

415. Defendants' corporate culture caused and allowed them to disregard the lessons they should have learned and applied from previous incidents at their facilities that resulted in extensive damage and loss of life; instead, Defendants continued to place others at risk in the interests of cost-cutting and financial gain.

416. Defendants focused primarily on profit while disregarding public and environmental health and safety while undertaking their ultra-hazardous activities on the Deepwater Horizon by using a well design with too few barriers to gas flow.

417. Defendants focused primarily on profit while disregarding public and environmental health and safety while undertaking their ultra-hazardous activities on the Deepwater Horizon by failing to use a sufficient number of "centralizers" to prevent channeling during the cement process.

418. Defendants focused primarily on profit while disregarding public and environmental health and safety while undertaking their ultra-hazardous activities on the Deepwater Horizon by failing to run a bottoms up circulation of the drilling mud prior to beginning the cement job.

419. Defendants focused primarily on profit while disregarding public and environmental health and safety while undertaking their highly dangerous activities on the Deepwater Horizon by using an inappropriate cement mixture for the type of rock formation surrounding the well, and by failing to appropriately test that cement mixture prior to using it in the well.

420. Defendants focused primarily on profit while disregarding public and environmental health and safety while undertaking their highly dangerous activities on the Deepwater Horizon by failing to run a cement bond log to evaluate the integrity of the cement job.

421. Defendants focused primarily on profit while disregarding public and environmental health and safety while undertaking their highly dangerous activities on the Deepwater Horizon by failing to deploy the casing hanger lockdown sleeve prior to commencing the mud displacement process in the well.

422. Defendants focused primarily on profit while disregarding public and environmental health and safety while undertaking their highly dangerous activities on the Deepwater Horizon by using an untested, abnormally large volume of mixed spacer solutions to avoid having to properly dispose of the two separate spacer substances as hazardous wastes.

423. Defendants focused primarily on profit while disregarding public and environmental health and safety while undertaking their highly dangerous activities on the Deepwater Horizon by ignoring and/or misinterpreting abnormal, “red flag” pressure test results.

424. Defendants recklessly, willfully and/or wantonly caused or contributed to the catastrophic Deepwater Horizon Incident by their grossly inadequate maintenance, and reckless and improper operation and use of the BOPs appurtenant to the Deepwater Horizon.

425. Defendants recklessly, willfully and/or wantonly failed to ensure that oil would expeditiously and adequately be contained within the immediate vicinity of the Deepwater Horizon in the event of a blowout.

426. Defendants recklessly, willfully and/or wantonly caused or contributed to the catastrophic Deepwater Horizon Incident through their collective and respective disregard for proper drilling, casing, mudding, and cementing procedures.

427. Defendants willfully and/or wantonly failed to ensure that that adequate safeguards, protocols, procedures and resources would be readily available to prevent and/or mitigate the effects an uncontrolled oil spill into the waters of the Gulf of Mexico.

428. Defendants recklessly, willfully and/or wantonly failed to utilize reasonably safe dispersant chemicals in their haphazard attempts to respond to the Oil Spill, and thereby exacerbated and worsened the pollution of the Gulf of Mexico.

429. In addition, after the blowout and before the well was finally sealed, BP was aware of procedures that would immediately block the flow of oil into the Gulf, yet it delayed the implementation of any such procedures, and limited its efforts to plug the well to options that would salvage the well for future use, instead of selecting procedures that would stop the flow of oil as soon as possible regardless of the well’s continued functionality. As such, BP increased

the magnitude of, and damage caused by, the Deepwater Horizon Incident by willfully and/or wantonly and recklessly choosing its profits over the lives of the workers on the vessel, the safety of the environment, and the health, welfare, and value of the people, businesses, and property of the Gulf states.

430. Defendants' conduct was oppressive, wanton, malicious, reckless, or grossly negligent each time they:

- (a) failed to properly maintain and/or operate the Deepwater Horizon;
- (b) operated the Deepwater Horizon in such a manner the safety and integrity of the vessel and the well were disregarded to save time and money;
- (c) ignored warnings that the integrity of the well, the cementing job, and the vessel were in jeopardy;
- (d) failed to promulgate, implement, and enforce proper rules and regulations to ensure the safe operations of the Deepwater Horizon;
- (e) violated MMS regulations for the safe design and operation of oil wells and drilling rigs in the Gulf of Mexico;
- (f) failed to take appropriate action to avoid or mitigate the accident;
- (g) failed to implement policies and procedures to safely conduct offshore operations in the Gulf of Mexico;
- (h) failed to ensure that the Deepwater Horizon and its equipment were free from defects, properly maintained and/or in proper working order;
- (i) failed to provide appropriate disaster prevention equipment;
- (j) failed to have an appropriate emergency spill response plan or readily available spill response equipment.

431. Defendants' conduct, as described more fully hereinabove, is at the highest level of reprehensibility, warranting and necessitating the imposition of punitive damages at the highest level, because Defendants' conduct was motivated by financial gain; because it injured and endangered human and environmental health and safety; because it caused devastating damage and loss to the livelihoods, businesses, and properties of Plaintiffs; because it was not isolated or accidental, but part of a culture and ongoing pattern of conduct that consistently and repeatedly ignored risks to others in favor of financial advantage to Defendants; and because it has accordingly caused societal harm, moral outrage and condemnation, and the need to punish Defendants and deter further repetition by Defendants or others.

432. Accordingly, Plaintiffs are entitled to an award of punitive damages in an amount to be determined at trial.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs, on behalf of themselves and the E&PD Class Members, demand judgment against Defendants, jointly, severally, and solidarily, as follows:

- (a) Certification of the E&PD Class as defined herein under F.R.C.P. 23(a)(1)-(4); 23(b)(3) and appointment of Plaintiffs as E&PD Class Representatives and undersigned counsel as E&PD Class Counsel;
- (b) economic and compensatory damages in amounts to be determined at trial;
- (c) punitive damages;
- (d) pre-judgment and post-judgment interest at the maximum rate allowable by law;
- (e) attorneys' fees and costs of litigation;²⁹

²⁹ Although this Court has dismissed similar claims for attorneys' fees asserted by Plaintiffs
Footnote continued on next page

- (f) declaratory and injunctive relief;
- (g) such other and further relief available under all applicable state and federal laws and any relief the Court deems just and appropriate.

Dated: May 2, 2012

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Footnote continued from previous page
under general maritime law in the operative B1 Master Complaint. (Rec. Doc. 1128), Plaintiffs reallege them here out of an abundance of caution to preserve them for potential reconsideration, appeal, or other resolution.

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CERTIFICATE OF SERVICE

WE HEREBY CERTIFY that the above and foregoing has been served on All Counsel by electronically uploading the same to Lexis Nexis File & Serve in accordance with Pretrial Order No. 12, and that the foregoing was electronically filed with the Clerk of Court of the United States District Court for the Eastern District of Louisiana by using the CM/ECF System, which will send a notice of electronic filing in accordance with the procedures established in MDL 2179, on May 2, 2012.

/s/ Stephen J. Herman and James Parkerson Roy