

# **The BP Spill – Geologic Backdrop And Litigation Roundup**

By Eric Andreas

## **Introduction**

It was not a pretty site. On April 20, 2010, the Deepwater Horizon oil rig – owned by Transocean and leased by BP – burst into flames and sunk in 5,000 feet of water in the Gulf of Mexico killing eleven. What happened next was frightening. The blowout preventer failed and a mixture of oil and gas began to spew at an alarming rate from a broken riser pipe. Unabated, despite several efforts, it took nearly three months to stop the leak. In the meantime, the government estimates that approximately 4.9 million barrels (205.8 million gallons) of oil was released from the well.<sup>1</sup> At its greatest extent, the spill's collective footprint covered about 68,000 square miles of ocean surface. Despite herculean effort, pools and tendrils of floating oil reached beaches and delicate wildlife habitat, coated birds, sea turtles, and other marine life. It also shut down the fishing grounds, brought the tourism industry to its knees and affected businesses – not only along the Gulf – but as far away as Maine. Just weeks after the well was capped, there were no longer signs of visible oil on the surface of the water. And by late summer, underwater plumes of oil that had been detected earlier miraculously disappeared. It seems newly discovered microbes had specially evolved to feast on common and naturally occurring oil and gas seeps in the Gulf of Mexico and performed their job on admirably. There may be no visible oil left in the water now, but the long term effects of the spill and use of dispersants remain unknown.

My interest in the BP spill (or the Deepwater Horizon spill as it is also called) stems from both a former career as a marine geologist and my current profession as an environmental lawyer. This article takes a brief diversion into the geology of the Gulf of Mexico to provide a backdrop for why so much offshore drilling occurs there and the dangers associated with it, and then provides a roundup of the litigation that has so far ensued as a result of the spill.

## **The Gulf of Mexico Is a Hydrocarbon Machine**

There is a reason why hundreds of drilling rigs and platforms dot the off-shore waters from Mississippi to Alabama – the Gulf of Mexico has one of the most hydrocarbon rich seabeds anywhere in the world. Geologically speaking, the Gulf is perfectly constructed to produce massive oil and gas deposits. Over millions of years, the Mississippi River and its predecessors have drained detritus and organic matter from an eroding North America into the Gulf basin. Periodically, the sea also rose and fell. As the sea evaporated, thick layers of salt were deposited. When sea levels rose again, the salt was covered with layers of sediment rich in organic matter. Where did the organic matter come from? It is a result of the mass-loading of nutrients from the early Mississippi

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<sup>1</sup> For an official explanation of how much oil was released and where it went, see Federal Science Report Details Fate of Oil From BP Spill (available at [http://www.noaa.gov/stories2010/20100804\\_oil.html](http://www.noaa.gov/stories2010/20100804_oil.html)).

River. Those nutrients fed an explosion of microorganisms – plankton and zooplankton. Normally that organic matter and the web of life that feeds on it is eventually oxidized away by feasting microbes. But the Gulf is like a bathtub. It has a circular in shape with Cuba blocking a good part of the opening between the Yucatan Peninsula and Florida. Consequently, now and in the past, there has been limited circulation in the Gulf. That relative quiescence resulted in extended periods of a lack of oxygen (known as hypoxia) in deeper waters. The result was that as microorganisms and other life sank into the depths after their demise, they were not entirely consumed by hungry microbes – and the carbon in their microscopic carcasses was preserved. Continue this process for millions of years, add heat and pressure from the growing pile of sediment and organic matter, and you are almost done.

Cooked organic matter that has transformed into hydrocarbons is economically worthless in a flat environment. You need relief to force them to migrate and pool into reservoirs. Fortunately for oil companies, and the rest of us who depend on hydrocarbons, while the seafloor of the Gulf looks relatively flat, beneath the surface it can look like a rollercoaster. Salt is one of the major players in causing this unevenness. Because it is less dense than the sediments deposited on top, it pushes through forming mushroom shaped structures call diapirs. The process is very similar to watching a blob rise from the bottom of a lava lamp. As the salt pushes through the overlying rock, it bends or fractures the surrounding rock layers and tilts them upward. Oil and gas migrate up permeable layers and are trapped by the impermeable salt. Folding and faulting is also caused by the lateral movement of crustal plates in the Gulf and by vertical pressures due to overburden stress. The end result is that abundant traps are set in a basin rich in wandering hydrocarbons. This is both a blessing and a curse. Because oil and gas can accumulate in great quantities in the Gulf, it can also be under great pressure. In thousands of feet of water under thousands of feet of rock, oil and gas are greatly compressed. To make matters worse, the gas sits on top of the oil because it is less dense. Therefore, it is usually encountered first. Once a reservoir is punctured, unless great precaution is taken, it can be like opening a champagne bottle. As the gas rises, the pressure on it lessens; it expands rapidly as a result, which in turn greatly increases the velocity. The result, like we found out this Spring, can be a catastrophic, uncontrollable blowout.<sup>2</sup>

Oil and gas are not the only source of hydrocarbons in the Gulf of Mexico. There are also abundant gas hydrates. Essentially, a gas hydrate is an ice-like crystalline solid comprised of a cage of water molecules surrounding a gas molecule, usually methane. They form under high pressure and low temperature in water depths usually greater than 300 meters (984 feet). The thickness of hydrates is limited by the increase in temperature that occurs with increasing depth (referred to as the thermal gradient). Once gas migrates into the gas-hydrate-stability zone, it freezes and can create a seal trapping free gas beneath. They are also abundant in the Gulf of Mexico at water depths in which the

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<sup>2</sup> For a general discussion of the geology of the Gulf of Mexico visit <http://www.gulfbase.org/facts.php>; <http://oceanexplorer.noaa.gov/explorations/02mexico/background/geology/geology.html>; [http://www.aapg.org/explorer/2002/12dec/gom\\_impact.pdf](http://www.aapg.org/explorer/2002/12dec/gom_impact.pdf).

Deepwater Horizon rig was drilling and can cause serious risks.<sup>3</sup> Halliburton – the contractor that performed the cement jobs for the well – was keenly aware of the risks of drilling in areas where gas hydrates form. At a conference on deep sea drilling, it warned in a presentation that “gas flow may occur after a cement job in deepwater environments that contain major hydrate zones.” And that “under water blow out has occurred” and “destabilization of hydrates during cementing and production in deepwater environments is a challenge to safety and economies.”<sup>4</sup> Whether gas hydrates played any role in the blowout remains a mystery. But, as was widely reported in the news, they certainly did cause problems with BP’s initial efforts to stanch the flow of oil.

Hopefully, this brief geologic summary provides a richer context for the following review of the litigation that has been filed as a result of the spill.

### **Litigation Roundup**

Most of the federal cases that have been filed against BP, Transocean and Halliburton to date have been consolidated as part of a multidistrict litigation in the Eastern District of Louisiana for purposes of pretrial discovery. *In Re: Oil Spill by the Oil Rig Deepwater Horizon in the Gulf of Mexico, on April 20, 2010*, No. 10-2179 (E.D. La., consolidation ordered 8/24/10) (“MDL-2179”). There are now about 180 separate listed member cases that are part of MDL-2179, with perhaps as many as 150 yet to be transferred. Generally, the oil-spill-related cases fall into three categories: wrongful death or personal injury, economic injury, and environmental.

In the wrongful death actions, typically a family member or members are claiming damages under maritime law alleging negligence and seeking for damages suffered as a result of their lost relation. *See, e.g., Roshto v. Transocean*, No. 10-1156 (E.D. La., filed 4/21/10). In addition to seeking lost wages and other pecuniary damages, these suits are also requesting non-monetary damages, for pain and suffering and loss of consortium. This presents a real problem for plaintiffs in these actions because the Jones Act and the Death on the High Seas Act currently prohibit the imposition of non-monetary damages in maritime incidents. A further complicating factor is that the Limitation of Liability Act of 1851 limits a vessel (in this case rig) owner’s liability to the value of the lost vessel and cargo. Transocean has already filed an action to limit its liability under this law, which is now part of the MDL. *See In Re the Complaint and Petition of Triton Asset Leasing GmbH, Transocean Holdings LLC*, No. 10-2771 (E.D. La., filed 5/13/10). But there may be hope for plaintiffs. On July 1, 2010, the House of Representatives passed H.R. 5503, which seeks to revise maritime law to allow family members of those killed in maritime accidents to be compensated for non-pecuniary damages, like pain and

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<sup>3</sup> For a discussion on the formation of gas hydrates and the risks they pose see *Gas Hydrate in the Northern Gulf of Mexico Has Puzzling Characteristics and Could Pose a Hazard to Deep Drilling*, USGS Soundwaves (2003) (available at <http://soundwaves.usgs.gov/2003/07/fieldwork.html>); Gas Hydrate Studies, USGS (available at <http://woodshole.er.usgs.gov/project-pages/hydrates/index.html>).

<sup>4</sup> A copy of the Halliburton presentation is available at [http://risk.berkeley.edu/deepwaterhorizonstudygroup/dhsg\\_articles.shtml](http://risk.berkeley.edu/deepwaterhorizonstudygroup/dhsg_articles.shtml).

suffering. The bill was specifically written to apply retroactively to the explosion of the Deepwater Horizon rig. The Senate, however, has not taken any action on the bill.

The vast majority of the cases against BP are for economic losses due to the spill. These cases have been filed both individually and as class actions. Plaintiffs in these actions include fishermen, shrimpers, fishing charters, restaurants, seafood companies, rental property owners, hotels, tourist guides, and real estate brokers and agents. Under current law, BP and Transocean's liability as responsible parties for all claims – including costs relating to cleanup and natural resource damages – is capped at \$75 million under the Oil Pollution Control Act, unless it can be proven that there was gross negligence involved. *See* 33 U.S.C. § 2702. After that, the Oil Spill Liability Trust Fund – which is funded by a five-cents per barrel fee on imported and domestic oil – can provide up to one billion dollars per spill incident. *See* 26 U.S.C. § 9509(c)(2)(A)(i). The \$75 million cap may not be an issue, however, because BP has pledged to pay up to \$20 billion to compensate those injured as a result of the spill. These claims must be filed with the Gulf Coast Claims Facility, which is managed by a neutral fund administrator – Kenneth Feinberg – who is responsible for all decisions.<sup>5</sup> So far, over 58,000 claims have been filed and the fund has paid out over \$175 million. It also remains to be seen how many of the economic injury claims will survive. BP, Transocean, Halliburton and the other defendants have argued to the court that under OPA, these plaintiffs were required to first present their claims to Mr. Feinberg and then wait until denial of the claim or 90 if no settlement could be reached within that time. 33 U.S.C. §§ 2713(a), (c). The argument is that not having done so, the court lacks jurisdiction to hear their claims and they must be dismissed. *See, e.g., United States v. Murphy Exploration and Prod. Co.*, 939 F. Supp. 489, 492 (E.D. La. 1996).

In addition to the maritime and economic injury cases that have been filed, there are also a handful of environmental cases that are pending. While these cases are fewer in number, they cover much more legal ground and are not only against BP and Transocean, but the government as well. One MDL case in particular has gotten a lot of attention because of its potential price tag – over \$20 billion. *In Re Deepwater Horizon*, No. 10-2454 (E.D. La., filed 8/4/10); *see also Center for Biological Diversity v. BP America, Inc.*, No. 10-1768 (E.D. La., filed 6/18/10). In this citizen suit, the Center for Biological Diversity (“CBD”) is suing BP and Transocean alleging a litany of violations under the Clean Water Act (“CWA”), Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), and the Emergency Planning and Community Right-To-Know Act (“EPCRA”). The main counts alleged by CBD allege an illegal discharge of oil and toxic and hazardous substances under the CWA without a permit. *See* 33 U.S.C. §§ 1311, 1316, 1317, 1321. The stinger here is that CBD is alleging that the accident was the result of gross negligence or willful misconduct, which, if true, would mean that BP and Transocean would be liable for penalties of \$4,300 per barrel of oil (or reportable quantity of hazardous substance) discharged into the Gulf. *See* 33 U.S.C. 1321(b)(7)(D); *see also* Fed. Reg. 75340 (Dec. 11, 2008) (civil monetary penalty inflation adjustment rule). The CBD complaint also alleges reporting violations under CERCLA and EPCRA

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<sup>5</sup> For more information on the GCCF visit <http://www.gulfcoastclaimsfacility.com>.

for failure to report the release of toxic and hazardous substances to the proper authorities. *See* 42 U.S.C. §§ 9603, 11004. The toxic and hazardous substances, CBD claims, are in the oil and gas itself that was released from the floor of the Gulf and from the burning rig. The federal government has not intervened in this suit, but has informed the judge in charge of MDL-2179 that it is currently investigating potential civil and criminal penalties against BP and Transocean and is requesting a separate track from the MDL.

CBD has filed another case outside Louisiana in the federal district court for the District of Columbia – not against BP, but against the Secretary of the Interior and the defunct Minerals Management Service, now the Bureau of Ocean Energy, Management, Regulation and Enforcement. *Center for Biological Diversity v. Salazar*, No. 10-816 (D.D.C., filed 7/26/10). In this suit, which has not been transferred to MDL-2179, CBD alleges violations under the National Environmental Policy Act (“NEPA”) and the Endangered Species Act (“ESA”). CBD alleges that the Department of Interior violated NEPA by exempting drilling plans in the Gulf from review under NEPA on the basis – now obviously suspect as a result of the spill – that there was no possibility of significant environmental impacts. CBD is asking that this policy be set aside to prohibit Interior from relying on it now or in the future. This same complaint also alleges ESA violations against the government. The crux of these allegations is that Interior’s prior reliance on conclusions by the Fish and Wildlife Service and the National Marine Fisheries Service following consultation that drilling in the Gulf under the Outer Continental Gas Oil and Gas Leasing Program was not likely to jeopardize threatened and endangered species or damage their habitat was proven wrong as a result of the spill. As a result, CBD is asking that the court order the reinitiation of consultation with the Services in light of the recent disaster and require that all pending approvals under the current leasing program be rescinded until a new ESA consultation is completed, which, given the backload at the Services, could take a year or more to complete. In what may have been a coordinated effort, the Defenders of Wildlife filed a nearly identical suit in the Southern District of Alabama alleging the same NEPA and ESA violations against Interior. *Defenders of Wildlife v. Salazar*, No. 10-254 (S.D. Ala., filed 8/10/10). Evidently, the government is willing to listen, as this case is presently stayed pending settlement negotiations.

Two cases that are part of MDL-2179 were brought by the Gulf Restoration Network and the Sierra Club. These, are also directed at the Secretary of Interior and are aimed at changing the Interior’s policies and practices for oil and gas leasing in the Gulf. The first of these seeks to eliminate use of a “Notice to Lessees” that waived the normal requirement to first conduct a blow-out and worst-case oil spill analysis. *Gulf Restoration Network v. Salazar*, No. 10-1497 (E.D. La., filed 5/18/10). The second demands that Interior set aside its approval of BP’s 2009 Oil Spill Response Plan, which was submitted to support its permit for drilling operations in the Gulf. *Gulf Restoration Network v. Salazar*, No. 10-1630 (E.D. La., filed 6/3/10). The goal being to prevent any operations in the Gulf that rely on the current plan and forcing the submission of a new one that takes into account recent events.

States also have actions pending in federal court. Louisiana has filed a natural resource damage claims against BP under state law for injury caused by the spill to the State's wildlife. *State of Louisiana v. BP Exploration*, Nos. 10-1757, 1758, 1760 (E.D. La., filed 6/17/10). These cases were originally filed in state court, but were removed to federal court and are now part of MDL-2179. Transocean is also in Louisiana's sights. The company is claiming that it is only liable for fuel discharges from the Deepwater Horizon rig, and not for any discharges from the well below. As a result, the state has filed a declaratory judgment action against Transocean seeking to designate it as a responsible party under OPA and the state's oil spill law for damages resulting from the entire spill. *State of Louisiana v. Triton Asset Leasing, GmbH*, No. 10-3059 (E.D. La., filed 9/14/10) (consolidated as part of MDL-2179). The Alabama State Attorney General has also filed separate cases against BP and Transocean – actions which are not supported by the governor of that state. The cases are for both economic damages, including lost tax revenue, and natural resource damages. *State of Alabama v. BP, Plc.*, No. 10-690 (M.D. Ala., filed 8/12/10); *State of Alabama v. Transocean, Ltd.*, No. 10-691 (M.D. Ala., filed 8/12/10). These cases have not yet been consolidated with MDL-2179. Alabama's governor has separately presented BP with a claim for \$148 million in lost tax revenue. BP has stated publicly that the federal suit is causing delay in resolving the governor's claim.<sup>6</sup>

The Interior Department is also defending two suits seeking to overturn its blanket moratorium on offshore drilling in the Gulf. These are not part of MDL-2179, but are still in the Eastern District of Louisiana on a separate track. Brought by drilling companies, the second of these not only seeks to lift the moratorium, but also to prevent the implementation of safety measures that allegedly should have been enacted through notice and comment rulemaking and not through a policy statement. *EnSCO Offshore Co. v. Salazar*, No. 10-1941 (E.D. La., filed 7/9/10); see also *Hornbeck Offshore Services v. Salazar*, No. 10-1663 (E.D. La., filed 6/7/10). Although the district court initially struck down Interior's first moratorium – which was upheld by the 5th Circuit – Interior immediately instituted a second moratorium based on different grounds, but having the same effect. The cases challenging both moratoriums are on going. However, with the ban set to expire on November 30, 2010, it appears that – except for the policy challenge – they will soon be rendered moot.

A final case worth mentioning is a Freedom of Information Act (“FOIA”) suit against the United States Geological Survey (“U.S.G.S.”) for wrongfully failing to disclose documents relating to the spill. *Public Employees for Environmental Responsibility v. U.S. Dept. Interior*, No. 10-1559 (D.D.C., filed 9/16/10). Specifically, plaintiffs are alleging that the U.S.G.S. is purposefully withholding information it requested under FOIA that relates to the actual leak rate from the blowout. The leak rate has been a hotly contested issue because it is directly tied to the size of the civil penalties under the CWA. The larger the leak, the bigger the fine. At an official count of nearly 5 million barrels discharged, potential penalties are already estimated to be in the billions.

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<sup>6</sup> See Alabama AG, governor at odds again over oil spill, AP (9/3/10) (available at <http://www.miamiherald.com/2010/09/03/1807455/alabama-ag-governor-at-odds-again.html>).

## **More to Come**

This is not the end of the story. The litigation discussed above, while fairly comprehensive, is just the first chapter. It is almost certain that future litigation will arise as a result of the government's civil and criminal investigations and its assessment of natural resource damages. There is also likely to be considerable appellate litigation resulting from the cases discussed above. Less than half a year into this, it is safe to say that things are just getting started.