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## Prologue: The Deep-water Horror Zone

April 20, 2010, had been a pretty good day for the friends on the 26-foot craft, *Endorfin*. Fishing for blackfin tuna, they had caught their limit, and as night fell, they headed toward the *Deepwater Horizon*—a gigantic drilling rig that had been enjoying a pretty good day as well.

Just seven months earlier, the big rig had set an all-time record for deepwater drilling, completing a well nearly six miles deep. The day before, one of the platform's key contractors—Halliburton—had finished cementing the current well's final casing, a key step in the process of getting the platform ready to move to a new location. Topping things off, April 20 was the day when important corporate bigwigs had come on board, celebrating the fact that the *Deepwater Horizon* had just completed seven full years without a single lost-time accident—the first such rig ever to do so.<sup>1</sup>

As would befit its record-setting status, the *Deepwater Horizon* was a marvel of technology. In many ways, it was more of a ship than a drilling platform—two submarine-like hulls, floating below the surface, where waves had little effect, plus a deck up above the waves that provided living and working space for the crew. In other ways, though, it was more of a city than a ship—a complex of steel and machinery, served around the

clock by a crew of 130, and with a deck as big as two football fields, floating side by side. Also like a city, the *Deepwater Horizon* was intended to stay in one spot, at least once it reached a drilling location, using global positioning technology so precise that the its drills could hit a specific spot on the ocean floor, just inches in diameter, but located nearly a mile below.

The earliest exploratory offshore drilling rigs had a much easier task of lining things up; they sat in one spot or stood on tall steel “legs” firmly attached to the bottom of the sea. As the drilling moved to ever-deeper locations, though, it became impossibly expensive to build rigs that could support themselves from the sea bottoms, thousands of feet below. Instead, oil companies shifted to new technologies—“semisubmersible” rigs or drill ships, floating on the surface rather than standing on the bottom. Early semisubmersibles were tethered in one spot by using a set of cables and anchors. Those cables continued to work well, even as water got deep enough to crush a Navy submarine, but in the spot where the *Deepwater Horizon* was drilling—an area known as Mississippi Canyon block 252—the water was almost a mile deep. A tethered drilling rig in that location would have required an almost prohibitively heavy, expensive, and complicated set of anchors, connected with cables that would have needed to be miles long. Instead, the drilling rig used a set of eight massive thrusters—each one capable of producing over 7,000 horsepower—in a complex choreography that kept the rig precisely aligned.

On the *Endorfin* on April 20 were Albert Andry III, a student in Marine Biology, and three of his high-school friends. Fishing and oil drilling had a long history of coexistence in the Gulf, and the friends intended to idle through the night at the massive drilling operation. When they first got to the rig, things looked particularly serene—the sea was as calm as the surface of a mirror—and they started catching bait for the next day’s

fishing. Just after 9:30 that night, though, things suddenly got anything but peaceful. Water came gushing down so fast that Andry thought the *Deepwater Horizon* crew was dumping its bilge water to keep from capsizing, and the friends' eyes started to burn. One of them who had experience working on rigs, Wes Bourg, knew that they needed to move fast, shouting to his friend to "Go, go, go, go, GOOOOO!" Andry gunned the throttle and headed for open water as fast as his boat could go. The *Endorfin* was about 100 yards away when the platform exploded into flames.<sup>2</sup>

By the narrowest of margins, the friends on board the *Endorfin* all survived. Above them, though, the crew members of the *Deepwater Horizon* were not so fortunate—and neither were the wildlife or the other human inhabitants of the Gulf region. Seventeen of the crew members suffered serious injuries, and eleven more were killed in the explosion. In just the first few weeks after the spill, several hundred sea turtles, all of them officially threatened or endangered, washed up dead. They were joined by hundreds of porpoises and other sea mammals, thousands of seabirds, and an unknowable number of fish, which would die from the spilled oil, from the dispersants that were used in an effort to break up that oil, or both. On shore, meanwhile, the millions of human inhabitants of the Gulf coast states, slowly starting to recover from the devastation of Hurricanes Katrina, Rita, and Ike, were about to be confronted by a new disaster.<sup>3</sup>

For some of the workers who managed to survive the initial explosion, the force was enough to knock them off their feet or to bury them under debris. Struggling through smoke, heat and darkness, most managed to reach the lifeboats that were being lowered to the surface of the Gulf, some 80 feet below, but some had to jump, hitting the surface of the water with a force of 20 Gs.

The Coast Guard was contacted almost immediately; the service ship *Joe Griffin*, equipped with water cannons that could pump out 10,000 gallons of water a minute, managed to fire up its engines and get underway in a quarter of the time usually required. Unfortunately, although the *Joe Griffin* was heading out toward the burning rig at full speed, that meant was the trip out to the rig would take more than nine and a half hours. The glow of the flames were visible from 35 miles away.

The effort to put out the flames was heroic, but futile. Thirty-six hours later, during the late morning hours of April 22, in a strange but spectacular commemoration, the charred remains of the *Deepwater Horizon* collapsed and sank to the bottom of the sea.<sup>4</sup>

It was the fortieth anniversary of Earth Day.

The initial assessments of the spill ranged from the argument by BP's CEO, Tony Hayward—namely that “The overall environmental impact of this will be very, very modest”—to the declaration by President Obama, and many others, that the spill will ultimately be seen as “the worst environmental disaster America has ever faced.” At the moment, the long-term outcomes of that debate are no more clear than are the waters of the Gulf. Instead, based on our experience in dealing with other disasters, we can already offer the confident prediction that variations on these same arguments will continue to be made for decades to come, providing a steady income to lawyers yet unborn.

Even at this early stage, however, it is possible to start bringing much greater clarity to our thinking. The key to doing so is by focusing on some of the larger lessons that are available to be learned from this and other disasters. That is particularly true with the lesson that will be the major focus of this book, which applies not just to BP, but also more broadly: Both

literally and figuratively, and both in the Gulf of Mexico and elsewhere, we have been getting into increasingly dangerous waters, doing so without being sufficiently vigilant about the implications of our actions. Perhaps the logical place to start, then, is by asking why the crew of the *Deepwater Horizon* would have been working in such a dangerous spot in the first place.