STANLEY REED
ALISON FITZGERALD
Bloomberg News

# IN TOO DEEP

## BP AND THE DRILLING RACE THAT TOOK IT DOWN

# Contents

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STANLEY REED
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*For Katherine, Katy, and Matt.*

*—SR*

*For Drew, with tons of love, and Nikita, Elijah, and Forrest,*
*the greatest kids on earth.*

*—AF*

For the thing which I greatly feared is come upon me, and that which I was afraid of is come unto me.

I was not in safety, neither had I rest, neither was I quiet; yet trouble came.

*Job 3:25–26*

# *Cast of Characters*

## BP Executives

| | |
|---|---|
| John Browne | CEO, 1995–2007 |
| Tony Hayward | CEO, 2007–2010 |
| Robert Dudley | CEO, October 1, 2010–present |
| Andy Inglis | Head of BP Exploration and Production, 2007–2010 |
| David I. Rainey | Vice President, Gulf of Mexico Exploration |
| Cindy A. Yeilding | Exploration Manager, Gulf of Mexico Exploration |

## Deepwater Horizon Workers

| | |
|---|---|
| Michael Williams | Chief Electronics Technician for Transocean Ltd. |
| Stephen Bertone | Chief Engineer for Transocean Ltd. |
| Doug Brown | Chief Mechanic for Transocean Ltd. |
| Jimmy Harrell | Offshore Installation Manager, Transocean Ltd. |
| Donald Vidrine | Well Site Leader, BP PLC |
| Robert Kaluza | Well Site Leader, BP PLC |

## Washington, D.C.

| | |
|---|---|
| Barack Obama | President of the United States |
| Congressman Bart Stupak | Chairman of the Subcommittee on Oversight and Investigations, House Energy and Commerce Committee |
| Congressman Henry Waxman | Chairman of the House Energy and Commerce Committee |

## Others

| | |
|---|---|
| Mikhail M. Fridman | One of Russia's richest men, chairman of Alfa Group and TNK-BP |
| Brent Coon | Plaintiff's lawyer in Beaumont, Texas, who led the lawsuits against BP after the company's Texas City refinery exploded |
| Dave Senko | Construction Manager, J.E. Merit Constructors, a subsidiary of Jacobs Engineering Group Inc. |

# *Authors' Note*

Both of us will likely remember 2010 as our BP and Gulf of Mexico year. We spent months reporting on and writing about the aftermath of the April 20 explosion and subsequent oil spill. Alison Fitzgerald tracked down survivors and relatives of the victims and attended many of the hearings trying to understand what caused the fatal accident. She dug through documents, read transcripts, and spent time with lawyers and investigators who were already familiar with BP. Bloomberg dispatched Stanley Reed from London to rural Louisiana to try to make contact with BP's senior executives. He wound up having dinner with CEO Tony Hayward in a restaurant in Houma, where BP was coordinating its cleanup effort.

The two of us came to the story from very different perspectives. Reed, a Middle East and oil specialist, had been covering BP and other oil companies for more than a decade, mostly as the London bureau chief of *BusinessWeek* magazine. Over the years he had spent hours with BP's influential CEO, John Browne, traveling with him to Russia and dining at his home. He also knew Browne's successor, Tony Hayward, well and had even spent time with the man who was to be Hayward's heir, Robert Dudley. He had been out to BP's pride and joy in the Gulf, the Thunder Horse platform, less than a year before. He had spent a day in Houston with BP's Gulf explorers, hearing them explain how they found oil in what they said was the trickiest patch of geology in the world. Fitzgerald, a Washington-based investigative reporter, hadn't had as much contact with the oil industry. She was assigned to the story so that she could bring to bear her sleuthing skills, vast range of Washington contacts, and knowledge of the regulatory and political spheres.

We were drawn to the story by shock and sorrow over the violent deaths of the Deepwater Horizon rig workers, as well as dismay over the extraordinary tide of pollution that spewed from the stricken well. We wanted to know why this tragic incident had occurred under the watch of BP and not another company such as ExxonMobil.

We found that there was in fact a reason.

The story behind the Macondo blowout is more than a story about technical failures or human error. The root cause, we found, may lie in BP's particular corporate culture, which depends on and even celebrates calculated risk taking. The company's corporate DNA is different from its competitors, where engineering principles dominate. BP is more of a financial culture. BP is very creative at finding oil and persuading governments to open their doors. But it is sometimes less good at everyday operations.

The Deepwater Horizon disaster was not the company's first large-scale industrial accident. Five years before, 15 workers had died in a massive explosion at a BP refinery called Texas City just outside of Houston. There were other close calls as well.

Today's BP was created by the combination of several major oil companies that were packaged together in a merger spree by Lord Browne. Browne pushed the stodgy BP to be a growth company and became one of the most admired CEOs of his time. He saw that there was big money to be made by putting companies together, wringing out costs, and investing in their best prospects. He took advantage of a rare moment in history when nations long off-limits to western companies suddenly opened their doors. The question is whether he went too fast and failed to pay close enough attention to integrating the merged companies and ensuring that their operations—pipelines, refineries, and production platforms—were up to standards.

Hayward himself said near the end of Browne's tenure that BP needed to slow down.

Browne also may not have foreseen all the consequences of his drive to improve financial performance. When put under pressure, people sometimes make poor choices that compromise safety. From the information that has emerged so far, that is what happened in the blowout. People in a hurry made bad decisions. They convinced themselves that a dangerously defective well was safe.

The oil industry is inherently dangerous because it works with volatile substances under pressure. Companies need to be constantly vigilant to prevent accidents. Slipups kill people, sometimes many people. Tragically, that is what happened both at Texas City and on the Deepwater Horizon.

In closing, we would like to remember those who died:

**Deepwater Horizon, April 20, 2010**

Jason Anderson
Aaron Dale Burkeen
Donald Clark
Stephen Curtis
Gordon Jones
Roy Wyatt Kemp
Karl Kleppinger
Blair Manuel
Dewey Revette
Shane Roshto
Adam Weise

**Texas City Refinery, March 23, 2005**

Glenn Bolton
Lorena Cruz-Alexander
Rafael "Ralph" Herrera Jr.
Daniel J. Hogan III
Jimmy Ray Hunnings
Morris "Monk" King

Larry Wayne Linsenbardt
Arthur Galvan Ramos
Ryan Rodriguez
James Warren Rowe
Linda Marie Hammer Rowe
Kimberly Smith
Susan Duhan Taylor
Larry Sheldon Thomas
Eugene White

# *Prologue*

July 27, 2010, was a fine day for a corporate execution in London. Television vans filled the parking bays across from a quiet, fenced park with high trees, located outside the British Petroleum Public Liability Company's (BP PLC) tan, brick headquarters. The cameras were there to see the giant oil company's CEO, Tony Hayward, take the fall for the Gulf of Mexico disaster that had killed 11 men, spilled an estimated 4.9 million barrels of oil, and made the company a pariah in the United States—its most important market. Indeed, what had occurred under Hayward had jeopardized the future of the entire oil industry in the Gulf and brought BP itself close to the abyss.

A handful of reporters, many of whom had covered BP for years, were invited inside. Soon, three men joined them in a meeting room sparsely furnished with wooden chairs and a handsome wooden table created by the Queen's grandson, Viscount Linley, whose expensive, handmade furniture was admired by Hayward's predecessor, John Browne. Hayward made the rounds, shaking hands. Then he and his newly appointed successor, Robert Dudley, flanked the company's tall, elegantly-dressed Swedish Chairman, Carl-Henric Svanberg, who announced that, by mutual agreement with the board, "Tony is stepping down and Bob is taking over." Svanberg said he was sad.

Hayward's swaggering, gaffe-plagued effort to lead BP's response to the spill had made him a figure of scorn and ridicule in the United States. The *New Yorker* magazine even satirized him as "Chef Tony," author of a cookbook with oily dishes such as "blackened prawns" and "thick-as-tar chocolate pudding." Just months before, he was in command of one of the world's largest and most profitable companies. BP was the Goldman Sachs of the oil industry, as one veteran executive said: cutting edge and always on top. In what had been a slow-to-change industry, it was a company that was innovative and on-the-move, playing on the political and technological frontiers.

As CEO, Hayward had been like a chief of state, roving the world on a corporate jet, feted everywhere BP had operations, from the royal palaces of the Gulf sheikdoms to the Kremlin. Now, just three years into his job, he was being made to walk the plank, thanks to some disastrous misjudgments by people drilling what should have been a relatively simple oil well. Up until early July, Hayward had some hope of surviving in his job, but activist board members thought his staying on would be toxic to BP’s future. Many people inside BP thought the company and Hayward were victims of bad luck because the accident could have happened to anyone. But in an industry that claims all accidents are preventable, this one hadn’t been prevented. In fact, many industry insiders say it happened to BP for a reason, and that it was years in the making. After a string of industrial accidents and close calls, BP executives, including Hayward, hadn’t learned the lessons that presented themselves from repeated investigations. The board, one BP official said, was determined that there would be no reward for failure.

This book presents the story of BP’s meteoric rise and then Hayward’s and the company’s sudden fall. The tumble was especially shocking because Hayward had tried to banish the mishaps that wrecked the last years of his predecessor, John Browne. Lord Browne was the CEO whose mega-deals and outspokenness on climate change had raised BP’s public profile. But like Browne, whose tenure ended badly in 2007, Hayward wound up being fodder for the television cameras and photographers waiting to record his downfall. Being CEO of what many consider Britain’s most important company has its drawbacks as well as benefits.

Asked if he thought he had been unfairly judged—after all, he had been tossed out even before BP published its own investigation of the incident—Hayward sounded almost Shakespearean. He said, “I think, frankly, what is fair or unfair is not the point. The fact is that I did lead the response and, as a consequence, I became the public face of BP; and as a consequence of that I was demonized and vilified. And the fact is that BP cannot move on as a company in the United States with me as its leader. It is not possible, and that is the reality.”

Dudley, Hayward’s successor, who grew up in Mississippi and has a more natural affinity for the Gulf, faces a future full of unknowns, especially in the United States, the company’s most important center of operations. “It is not our intention to exit the U.S.,” he said, “Nor do we believe we will not be able to operate there.” But what proposition BP now has to offer governments that control access to resources, investors, and, indeed, its own employees is in question. As Amy Myers Jaffe of the James A. Baker III Institute for Public Policy at Rice University put it: “If you were a politician, would you want to be responsible for giving BP a lease?”

# Chapter 1

# Night of Horror, Day of Triumph

Mike Williams just finished a day of routine maintenance on the offshore drilling rig Deepwater Horizon. Short on sleep, because today was the day he was rotating from the night to day shifts, Williams was testing and repairing electrical equipment, then filled in some overdue paperwork. By 9:30 that night, he was in his electronics shop, talking to his wife on the phone. Williams was the chief electronics engineer on the rig, which was in the middle of the Gulf of Mexico drilling a well for the oil giant BP PLC. He'd been away for about 10 days and had another 10 to go before he'd be heading home.

Through the phone Williams' wife heard someone over a loudspeaker announce that gas levels on the Horizon were high. "Do you need to go take care of that?" she asked her husband. He downplayed the importance of the warning. "We'd gotten them so frequently that I'd become immune to them," Mike Williams said afterward. "I didn't even hear them anymore, especially with this well. With this well, we were getting gas back all the time."

Just a few months before the Horizon had triumphantly completed the deepest well in history, in a BP discovery called the Tiber field. The Horizon then moved to this spot, about 42 miles off the coast of Louisiana, to drill in a part of the Gulf called Mississippi Canyon. The well was called Macondo, after the fictional "city of mirrors" in Colombian author Gabriel Garcia Marquez' masterpiece *One Hundred Years of Solitude*. The city, in the end, is destroyed by a hurricane. The Transocean Inc. rig and crew, hired by BP, had hit oil at Macondo weeks before and had spent April 20th preparing to plug the well with cement in order to move on to the next hole. BP would come back later to tie Macondo up to an oil production platform that would harvest the crude. BP press officers were preparing a press release announcing the find.

Williams soon heard a loud hissing noise and became concerned. He told his wife it was time to hang up and find out what was going on. He assumed the hiss was some sort of hydraulic leak, nothing particularly dangerous.

Doug Brown, the chief mechanic working in the engine control room next door, heard it too. Over in the living quarters, Stephen Bertone had just finished a shower, and was lying on his bed, about to begin reading a book, when the hissing began. It grew louder and louder until it sounded like a freight train storming through his room. The hiss was soon followed by a cacophony of alarms. Then a voice over the P.A. system warned a nearby service ship to back away from the Horizon because the rig was in a “well control situation,” a mundane-sounding term that really means disaster could be moments away.

As Williams pushed back from his desk to find out what was wrong, the entire rig began to shake. His computer monitor exploded, and all the lights in his room popped, leaving him—and everyone else on the rig—in the dark. He headed for the door as the hiss got louder and louder; he now realized the sound came from the ship’s engines which were feeding on the natural gas that filled the air. “It was higher than I could possibly describe. It was spinning so fast,” Williams said. Suddenly the spinning engines stopped and a huge explosion rocked the Deepwater Horizon, blowing the fire-safe door to Williams’ shop off its hinges and directly into the electronics technician, knocking him back several feet against the back wall and to the floor.

The blast threw Brown against his control panels, and then down through a hole that opened on the floor. “I was wondering what was happening. I was confused. I was hurting. I was dazed, and I proceeded to try to get up and the second explosion happened.” That blast threw him into the hole a second time, and the ceiling caved in upon him.

After the first explosion, Bertone put on his boots, life vest and hard hat and headed for the door; he could smell and taste fuel in the air. He knew it was an emergency and that he had a muster station to get to, and possibly a fire to battle. Then there was the second boom. The hallway was strewn with debris. He headed for the bridge.

Williams was crawling through the darkness toward the door of the electronics shop, gasping for breath as the $CO_2$ systems, designed to starve any fire of oxygen, also starved his own lungs. He held a penlight between his teeth, but it failed to cut through the smoke-filled darkness. He made it through his exploded doorframe, and headed to the next fire door. As he reached for that handle, the second blast blew the second door off its hinges, sending another wall of steel hurtling into his body. “The doors were beating me to death,” Williams, a burly, goateed man with ruddy skin, said. “Two doors in a row hit me right in the forehead. My arm wouldn’t work and my left leg wouldn’t work, I couldn’t breathe and I couldn’t see.”

Williams crawled, blind, across the bare grid where floor panels had once been. He crawled over the bodies of two men he couldn’t identify, nor help. Brown, who had pulled himself out of the hole in the floor, was crawling beside Williams, both searching for a way out and air. They found the exit, found air to breathe, and turned to head upwind of the fire and smoke. Williams paused to wipe blood from his eyes, and found the walkway before him, the railing, and entire wall had been blown away in the explosion. The voice of Andrea Fleytas, the rig's dynamic positioning officer, was blaring over the PA system, calling "Mayday, Mayday."

Brown helped Williams along. "He was dazed, confused. He was screaming he had to get out of here, and he had a wound on his forehead and he was bleeding profusely," said Brown. The hissing had turned into a roar, and Williams could see that the doghouse, a storage and break room on the rig floor, and half the derrick, which rises 242 feet into the sky, were aflame. "At that moment, I realized there was a blowout," Williams said. He eyed an empty lifeboat in the distance and, in his terror, flirted with the notion of jumping in and launching it to save himself. Instead, he and Brown headed for the bridge, the emergency station they had rehearsed going to in so many drills. "I had responsibilities," Williams said.

Brown and Williams reached the bridge, which was in complete chaos. "They were trying to get systems going. They were trying to get control back," Brown said. There were no engines, no thrusters, no telephones—no power at all. When Bertone arrived on the bridge he heard someone yelling, "The engine room, ECR, and pump room are gone. They're all gone." The man was covered in blood and Bertone didn't recognize him.

"What do you mean, gone?" Bertone demanded.

"They've blown up. They're all gone. They've blown up."

It was then that Bertone recognized the voice of Michael Williams, who was also screaming at the captain, "We need to abandon ship now!" Bertone tried to staunch the bleeding from Williams' forehead with toilet paper. Captain Carl Kuchta told them to remain calm as he tried to figure out what to do about the lost power. The only way to save the rig would be to get the engines going again so they could fight the fire.

Bertone volunteered to head back toward the fire and try to start the backup generator, the only hope of saving the

Horizon. Williams told him he could not go alone. He grabbed Bertone's shirt, and they headed through the door toward the blaze. The emergency generator was across the deck. The men tried repeatedly to start it up. They failed. When they returned to the bridge, Captain Kuchta determined the fire was out of control and ordered the remaining crewmembers to abandon ship.

Williams, Bertone, and Fleytas left the bridge only to find that both lifeboats at their end of the rig had already been launched. The fire blazed between them and the remaining two. The air was popping and sizzling, pieces of hot metal rained down on them, and the flames were starting to wrap around the rig in search of oxygen.

With no lifeboats, the crewmembers found the inflatable emergency rafts, and put an injured mate on a stretcher aboard the first. Bertone and several others climbed in with him and they were lowered into the water. The fire was so hot now that Williams decided there wasn't time to launch another raft. Fleytas, still on deck, was yelling, "We're going to die!"

"I honestly didn't believe that we would survive trying to deploy a life raft. I decided we can stay here and die or we can jump," Williams recalled.

He turned to Fleytas and told her it was time to run and jump. She said she couldn't possibly jump the 10 stories from the blazing rig to the dark waters below. "I said, 'Watch me then.' I took off running, and I jumped," Williams said. Fleytas followed.

By the following day, 11 crewmembers were dead and dozens more, including Williams, were injured. The Deepwater Horizon was ablaze in the middle of the Gulf, and would soon tip over and sink into the depths, leaving an open wellhead with oil gushing into the tropical waters.

• • •

The BP and Transocean drillers on the Deepwater Horizon were all working for one of the most powerful men in BP. Andy Inglis had been the right-hand man of CEO Tony Hayward since 2004. When Hayward got the top job, following the ouster of the legendary John Browne in 2007, Inglis took over the exploration and production (E&P) unit, an elite group at BP that accounted for most of the company’s profits and that was used to getting its own way.

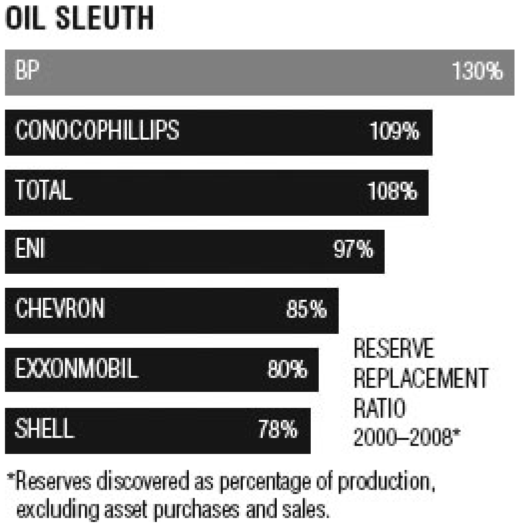
During the reign of Inglis, E&P’s stature grew even more, and so did the importance of the Gulf of Mexico. He moved his unit’s headquarters to Houston, away from the meddling bureaucrats in London. Even though it was located across the ocean, it was clear that E&P was the heart and soul of BP. The company’s most recent annual report was emblazoned with the title: “Operating at the Energy Frontiers.”

In the three years since Hayward took the top job at BP, Inglis had been used to reporting a string of successes to his boss. Now, early in the morning of April 21, he had a very different job. He rang Hayward, who was in the habit of staying at the Haymarket Hotel, a cozy London establishment near BP’s offices, on weekdays. Hayward was eating breakfast when Inglis told him there was a blowout in the Gulf and people were missing. Hayward says his first reaction was “unprintable.” What he thought he had worked hard to prevent had happened—and his best business unit was responsible.

Only nine months earlier Inglis was at the top of his game. On a steamy July day in 2009, he held court in the cabin of a wood-paneled corporate jet as it took off into the early morning skies from Sugarland Regional Airport, in the Houston suburbs. Inglis was accustomed to having private jets at his disposal. He spent much of his work life visiting BP’s far flung empire, and oil chiefs rarely fly commercial. Today, he was taking a guest to BP’s showcase development in the Gulf of Mexico, a massive oil production platform called Thunder Horse.

On the short hop to Houma, Louisiana, BP's base for ferrying people and supplies to its growing number of installations in the Gulf of Mexico, Inglis—pronounced "Ingalls"—unfolded a table, flipped through a bound set of charts and graphics, and gave a simple presentation, a kind of BP 101. The one thing that is crucial for a company like BP is finding new oil and gas to replace what you remove. If you fail in that task, you are eventually out of business—you are dead. Many companies struggle to replace their output; BP does not, Inglis said. It has been consistently adding more oil to its reserves than it produces, he said. In 2009, the company said it had found more oil than it pumped from the ground for 17 straight years. Inglis gave much of the credit for this performance to a strategy first laid out by former CEO John Browne in the early 1990s. As Inglis explained, BP doesn't waste its energy on small-potatoes projects. Instead, it focuses on finding and being the first to exploit giant fields of a billion barrels or more because these bring the scale and follow-on opportunities that can keep a company in business for a long time and earn it big money.

BP's oil explorers have better success than their competitors in finding new oil to replace the oil that the company produces from its existing wells. This ensures BP has plenty of oil to produce and sell in the future.



*Source:* Stanley Reed, “BP Rolls the Dice,” *BusinessWeek*, September 14, 2009, p. 48. Data: Exane BNP Paribas.

The strategy means working on the frontier, a word that in the oil business has more than one meaning. Sometimes the frontier is an edgy political regime such as in Russia or Iraq, where BP has taken risks to gain a step on its peers. Sometimes it’s the boundaries of technology, such as drilling and producing oil in water a mile deep or more. BP has taken the lead in deepwater zones, including the Gulf of Mexico and off Angola. The national oil companies that control much of the world’s remaining oil reserves need multinational behemoths such as BP to develop such challenging resources. They don’t need them to develop or maintain plain vanilla oil fields, and in those situations they are tempted to squeeze their foreign partners or throw them out entirely. That’s why BP, Inglis said, was not interested in low margin, low risk work. “We don’t do simple things,” Inglis said. “We are prepared to work on the frontier and to manage the risks.”

Inglis, a chunky teddy bear of a man with a full head of wavy hair and bright eyes is, by all accounts, reticent, especially with strangers. But when he warms to a subject, he looks you straight in the eye and talks with great enthusiasm in his north of England accent. That was how he was behaving on this day, and why not? Since Hayward