



# Beyond BP: The Gulf of Mexico Deepwater Horizon Disaster 2010

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## Introduction

On April 20th 2010, an explosion occurred on the Deepwater Horizon – an oil rig operated on behalf of BP, in the Gulf of Mexico, 40 miles from the coastline of the American state of Louisiana. The explosion killed 11 workers and oil started pouring from the Macondo well-head, 5000 ft beneath the surface of the sea. It was to become the worst oil spill the USA had experienced with the escape of oil being the equivalent of an Exxon Valdez incident every 4 days. By June, President Obama was describing it as “the worst environmental disaster in US history.” The BP CEO Tony Hayward who had taken personal charge of BP’s efforts to contain the disaster was vilified in Congress and the media as “the most hated man in America” and was later to resign over the incident. At one stage, BP’s share price was halved from its peak immediately before the explosion, and there was serious business media speculation about whether the company could survive without being taken over. The situation was complicated because although BP owned a majority stake in the well, and was the “responsible operator” for the US authorities, another company: Transocean, operated the drilling rig; a third: Halliburton, cemented around the well pipe; and a fourth: Cameron, made the blow-out preventer on the rig, which was meant to shut off the well in an emergency, but failed to do so. President Obama was later to say: “There’s enough responsibility to go around, and all parties should be willing to accept it. That includes, by the way, the federal government.”

For BP, it was the latest in a series of significant incidents in BP’s North American operations such as the fatal accident at BP’s Texas City Refinery in 2005<sup>1</sup> and a

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<sup>1</sup>For a detailed analysis of Texas City and subsequent crises leading up to Deepwater Horizon, see PBS FRONTLINE documentary, “The Spill,” produced in collaboration with ProPublica: [www.pbs.org/wgbh/pages/frontline/the-spill](http://www.pbs.org/wgbh/pages/frontline/the-spill)

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major leak in Prudhoe Bay Alaska (see extracts of a speech by the then CEO of BP Tony Hayward at Stanford Business School in July 2009 – [Appendix 1](#)). The Gulf of Mexico incident was quickly dubbed BP’s Brent Spar moment or a second Exxon Valdez. Some commentators called it Obama’s Katrina (after Hurricane Katrina, the mishandling of which caused massive damage to the standing of the previous, Bush administration).

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## Context

The Deepwater Horizon drilling platform was one of more than 3500 in the Gulf of Mexico alone – but as of 2008, only 36 were for deep-drilling below the sea-bed. There were only three in 1992 and drilling in deepwater (depths greater than 1000 ft) and ultra-deepwater (depths of 5000 ft or more) had only started becoming economically profitable and technically feasible on a large scale in the previous decade, in part due to significantly higher oil prices and a US push for “energy independence.”<sup>2</sup> BP has been the leader in deep-water drilling in the Gulf of Mexico and, therefore, had the largest exposure. BP had grown into one of the world’s largest oil companies through a series of audacious corporate take-overs under John Browne (Lord Browne of Maddingley who was CEO 1995–2007).

Browne transformed BP from a dying corporation in the early 1990s into the world’s second largest oil behemoth. He refocused BP on ‘elephants’ – the big oil reservoirs – and ruthlessly cut costs. He used BP’s rising share price to stage audacious takeovers of failing oil companies, especially in America. His success earned worldwide plaudits.... Cutting costs became BP’s obsession. The philosophy was ‘More for less’ – 100 per cent of a task would be completed at a cost of only 90 per cent of the previous resources. ... Browne’s casualties included BP’s engineers. Hundreds were fired and replaced by subcontractors. Just as ExxonMobil was hiring engineers because ‘drilling is the core of our business’, Browne was ditching BP’s in house expertise, which could second-guess every technical operation on land and under the sea...<sup>3</sup>

The Macondo situation was complicated, however, because although BP owned a majority stake in the well (65%), and was the “responsible operator” for the US authorities, the remaining ownership was divided between Anadarko (25%) and Mitsui (10%). Another company: Transocean, the world’s largest oil drilling contractor, owned and operated the rig; a third: Halliburton, cemented around the well equipment; and a fourth: Cameron, made the blow-out preventer on the rig, which was meant to be the fail-safe device to shut off the well in an emergency, if all else failed – but which did not do so. In all, 12 different companies had employees on the rig immediately prior to the explosion. Only a few of the 126 crew members on the Deepwater Horizon worked directly for BP.

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<sup>2</sup>(Council on Foreign Relations Background: U.S. Deepwater Drilling’s Future – Toni Johnson, 25th May 2010). Indeed, only 3 weeks before the explosion, President Obama had significantly relaxed regulations relating to offshore drilling, highlighting the need for greater US energy security.

<sup>3</sup>Tom Bower, *The Spectator*, 26th June 2010.

## Initial Reaction

In the immediate aftermath of the explosion, Tony Hayward initially sought to divert responsibility, observing: “This was not our accident ... This was not our drilling rig ... This was Transocean’s rig. Their systems. Their people. Their equipment”<sup>4</sup> before modifying his position to say: “A number of companies are involved, including BP, and it is simply too early – and not up to us – to say who is at fault.”<sup>5</sup> In September 2010, BP released its own report into what had happened, conducted by a team led by the BP head of operations and safety Mark Bly (see [Appendix 2](#)). While BP’s investigation attempted to allocate accountability among the involved companies, Transocean and Halliburton dismissed the Bly report as incorrect, incomplete, and an attempt to divert attention away from BP’s alleged flawed well design. President Obama was later to say: “There’s enough responsibility to go around, and all parties should be willing to accept it. That includes, by the way, the federal government.”<sup>6</sup> The Minerals Management Service (MMS), the federal agency that regulated offshore drilling, had claimed that the chances of a blowout were less than 1%, and that even if one did happen, it wouldn’t release much oil. In 2009 the MMS had been excoriated by the U.S. General Accounting Office for its lax oversight of offshore leases.<sup>7</sup> A Presidential Commission appointed by President Obama to investigate the disaster which reported in Jan 2011, produced an account of events that led up to the blast which was similar to BP’s. This is unsurprising since computer logs and survivor testimonies meant most of what happened was undisputed. But the Presidential Commission’s assessment of who was to blame was strikingly different to BP’s: of nine material decisions, the Commission said BP was to blame for seven or even eight; and all nine were about saving time and therefore saving BP money. As the co-chair of the Presidential Commission William Reilly noted: “most of the bad decisions were made by BP or with BP’s approval and acceptance.” (See [Appendix 3](#)).

Days after the rig sank, Tony Hayward, flew to the US to take personal charge of the incident, declaring that he would not leave until the problem was contained. However, BP initially appeared slow to release information, was at first sparing with media appearances; and some thought was projecting an arrogance for which many had long condemned the oil industry. BP appeared slow to appreciate mounting media and therefore, political interest and concern – perhaps because spillages from off-shore oil platforms around the world are not uncommon. BP was not alone in

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<sup>4</sup>BP vows to clean up Gulf of Mexico oil slick, BBC May 3rd 2010 news.bbc.co.uk/1/hi/world/americas/8658081.stm.

<sup>5</sup><http://www.nytimes.com/2010/05/26/us/26rig.html?src=me&ref=us>

<sup>6</sup>Obama Criticizes ‘Spectacle’ of Blame at Oil Spill Hearings – May 15 2010 – Businessweek <http://www.businessweek.com/news/2010-05-15/obama-criticizes-spectacle-of-blame-at-oil-spill-hearings.html>

<sup>7</sup>Is Another Deepwater Disaster Inevitable? Joel K. Bourne, Jr. National Geographic / ngm.nationalgeographic.com/2010/10/gulf-oil-spill/bourne-text/2 In the wake of the accident, MMS was reorganized and renamed the Bureau of Ocean Energy Management, Regulation, and Enforcement.

initially failing to appreciate the significance of the accident. The US authorities similarly played down the incident and did not appreciate the scale of the leak.

A near contemporaneous spill off Australia, for example, had generated little coverage. At this stage in the crisis, was it better to say little and let actions speak for themselves (BP's previous default communications strategy when under attack) or try to satisfy the insatiable appetite for 24-h news media attention? Hayward himself and his principal PR and media advisers had little direct experience of the US media and few contacts in Washington. It was reported that former aides to John Browne were amazed that 3 years after becoming CEO, Hayward had still not met the US president. BP's media advisers were more used to dealing with financial media – not the relentless pressure of 24/7 TV news and tabloid media.<sup>8</sup>

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### **“The Well from Hell”**

It was later to emerge that the Macondo well was known amongst insiders as “the well from hell!” In April, the operation was \$58million over budget, 43 days behind schedule and costing BP \$500,000 each day.

By May 20th 2010 – 1 month after the accident – the oil spillage was still continuing. Attempts to cap the well-head had failed. US lawmakers and scientists were accusing BP of trying to conceal what many already believed was the worst US oil spill, eclipsing the 1989 Exxon Valdez accident in Alaska, and representing a potential environmental and economic catastrophe for the US Gulf coast.<sup>9</sup> BP was forced by the US Congress to make available a live film-feed showing the oil spewing from the wellhead. Congress immediately put this live film-feed on the Internet and TV stations such as CNN started showing this feed every time they referred to the disaster. Within hours of the live film-feed being put on the internet, independent experts viewing the film, calculated the daily spillage to be far higher, than BP and the US authorities had been suggesting – with some, uncorroborated estimates suggesting figures 5 or 10 times higher than BP's figure – with some saying it could be of the order of 70,000 barrels per day rather than the circa 5000 barrels suggested by BP. The larger estimate gained more credence when a BP spokesman announced that measures they had successfully taken to siphon some of the leaking oil was containing up to 5000 barrels per day – but despite this partial success, the volume of the oil continuing to spew into the Gulf of Mexico seemed hardly to have been reduced.<sup>10</sup> CNN and other media by this time were excoriating BP *and* the Obama Administration for the continuing pollution which was threatening the livelihoods of Louisiana fishermen and tourism-dependent businesses around the Gulf of Mexico; as well as major biodiversity loss. A subsequent study of media coverage of the oil spill disaster by the Pew Research Center's Project for Excellence in

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<sup>8</sup> Spills and Spin, Tom Bergin, Random House 2011.

<sup>9</sup> By June, President Obama was describing it as “the worst environmental disaster in US history.”

<sup>10</sup> By June 14, official figures had been revised upwards to 60,000 figures daily – the equivalent of an Exxon Valdez spill every four days.

Journalism found that in the mainstream news media in the 100-day period after the explosion, the spill accounted for 22% of the US newshole – almost double the next biggest story.<sup>11</sup> This was particularly remarkable given competing stories such as the US mid-term elections, Obama-care, the global financial crisis, Afghanistan “surge” and immigration.

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## BP’S “Near-Death” Experience

By May 28th, the incident was being described as the largest oil spill in US history, dwarfing the Exxon Valdez disaster. Attempts to cap the wellhead continued to be thwarted as BP attempted solutions never tried before, a mile under water. Tony Hayward admitted that BP lacked the tools to stop the leak from the well in the aftermath of the explosion and that the company would have to look for new ways to manage “low-probability, high impact” risks such as the Deepwater Horizon accident.<sup>12</sup> This was the first failure of a BOP in 50,000 wells drilled in the oceans around the US coast.<sup>13</sup> The clean-up effort was comprehensive and technically extraordinary.<sup>14</sup> Several commentators drew analogies with the ill-fated Apollo 13 moon exploration which had to be dramatically rescued. Certainly, BP and the industry innovated and developed new technologies in a fraction of the time that these might have taken absent the crisis.

Tony Hayward told the BBC: “It is clear that this will be a transforming event in the history of deep-water oil exploration.” The clean-up had already then cost BP \$1billion plus a commitment to a \$500 m environmental fund to investigate future solutions. Estimates of BP’s ultimate liabilities were then variously quoted to be \$8billion or even \$12billion.

Less than 3 weeks later, some US legislators were calling for BP’s North American operations to be put into receivership. President Obama, repeatedly referring to the company by its old name “British Petroleum,” pledged to make BP pay for the clean-up. The BP chairman and CEO were summonsed to the White House where on June 16th, they announced a new fund with an *initial* commitment of \$20 billion to compensate businesses and residents affected by the spill, for loss of livelihoods. It was also announced that BP would not pay any further dividends for the rest of 2010. By this stage, the market capitalisation of BP had been almost halved: see share price chart – [Appendix 4](#). One trillion BP shares were traded in a single week (w/c June 7); and the ratings agencies had downgraded BP. In the words of industry insiders, the company suffered a ‘near death experience’ as its credit default swap (CDS), the cost a BP creditor would have to pay for insuring that credit, became prohibitive, effectively assessing the likelihood of BP going bankrupt as 50%. As the BBC’s then

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<sup>11</sup> [www.journalism.org/2010/08/25/100-days-gushing-oil/](http://www.journalism.org/2010/08/25/100-days-gushing-oil/)

<sup>12</sup> Financial Times 3rd June 2010.

<sup>13</sup> BP: Beyond the Horizon, BBC Radio 4, 25th July 2010.

<sup>14</sup> see The Economist magazine –22nd May 2010 page 91–92: “The Gulf Oil Spill – what lies beneath.”

Economics Editor Robert Peston wrote in his blog: “sometimes these CDS prices are utterly misleading, because the market in them is thin. But there is a substantial market in BP credit default swaps. And the reason I’m boring on about all this is that a number of senior BP people – including members of the board – have volunteered to me that what worried them most was what was happening to the CDS price...the Gulf of Mexico debacle has increased the cost of insuring BP’s shorter-term debt by a factor of 50.<sup>15</sup> Speaking 5 months after these events, Bob Dudley, who by then had succeeded Tony Hayward as CEO, was to recall:

We couldn’t believe what was happening. We came very close to going on to the rocks. The credit markets were indicating the company was potentially going into bankruptcy. Some banks stopped trading crude oil with us. Some suppliers wanted to be paid in cash.<sup>16</sup>

It was noticeable how little industry support appeared forthcoming in the media and that industry associations appeared (at least publicly) inactive. Exxon Mobil and other companies had made technical experts available (by mid June 150 employees from other oil majors were seconded to the BP Houston emergency command centre) and joined a consortium of oil companies participating in the clean up, but this had not received substantial publicity in contrast to Exxon Mobil’s warnings of the threat to offshore exploration that the crisis was creating. Indeed, at televised hearings on Capitol Hill on June 14th, representatives of Exxon Mobil, Shell and Chevron criticised BP’s drilling of the well and claimed that BP had not followed industry norms on the Deepwater Horizon rig/Macondo well. There were suggestions that the CEOs’ criticisms were based partly on what their employees seconded to the BP disaster command had been reporting back about the well design.

Macondo’s meltdown may well have been exacerbated by equipment failure in the case of the BOP, or by human error on the part of the individuals who misread the negative pressure test, but as far as the Big Oil bosses were concerned, BP’s drilling practices were primarily to blame for the explosion.<sup>17</sup>

Hayward’s own performance before the Congressional committee, 2 days later, was variously described as “stumbling” and “probably over-influenced by legal advice to say little or nothing of substance.”

The media and social media were rife with criticisms of BP. Clips of Tony Hayward’s gaffes were regularly posted to Facebook, You Tube etc.<sup>18</sup> Slogans and adverts parodying BP’s high visibility commitment to “Beyond Petroleum” first launched in 2001 were widely circulated on the internet. (Appendix 5) Many sustainability campaigners were particularly critical of BP, perhaps disillusioned by what they perceived as the failure to follow through on the *Beyond Petroleum* commit-

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<sup>15</sup> Robert Peston’s Blog 17 June 2010.

<sup>16</sup> Sunday Times 7th Nov 2010: “Dudley: my plan to salvage BP.”

<sup>17</sup> Pages 243–4, Spills and Spin, Tom Bergin, Random House 2011.

<sup>18</sup> For a summary of gaffes by Hayward and BP’s chairman Carl-Henric Svanberg see: [www.theguardian.com/business/2010/jul/27/deepwater-horizon-oil-spill-bp-gaffes](http://www.theguardian.com/business/2010/jul/27/deepwater-horizon-oil-spill-bp-gaffes)

ment. Company leaders were subsequently to describe being taken completely by surprise, by the extent of social media coverage of the Deepwater Horizon disaster. The company had to build a social media team, presence and awareness pretty much from scratch to respond to the saturation coverage on twitter, Facebook etc.<sup>19</sup> BP's own website was getting 17,500 unique visitors per week immediately before the Deepwater Horizon explosion. During the crisis, it was getting 4.5 million visitors.

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## Capping the Well and the Immediate Crisis

In July, after frenetic media speculation that the BP chairman and/or the CEO would be forced out, Tony Hayward announced his resignation; and the American Robert (Bob) Dudley was appointed as his successor. The wellhead was finally capped on July 15th – 87 days after the explosion. A number of corporate and public investigations were under way to identify just what had happened. BP's own report into the immediate causes of the accident was published on 8 September 2010. The company also announced the sale of a number of assets around the world to help pay for the disaster. Media interest declined and the share price started to recover.

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## The Aftermath

However, in Sept 2014, a US federal judge Carl J. Barbier ruled that BP was grossly negligent in the disaster, and not merely negligent, thus opening “the possibility of \$18 billion in new civil penalties for BP, nearly quadruple the maximum Clean Water Act penalty for simple negligence and far more than the \$3.5 billion the company has set aside.”<sup>20</sup> While Judge Barbier did find Transocean and Halliburton had acted with negligence, he concluded that only BP, which leased the well and was in charge of the operation, was grossly negligent. He apportioned 67% of the blame for the spill to BP, 30% to Transocean and 3% to Halliburton. The New York Times reported: “The ruling stands as a milestone in environmental law given that this was the biggest offshore oil spill in American history, legal experts said, and serves as a warning for the oil companies that continue to drill in the deep waters of the Gulf of Mexico, where high pressures and temperatures in the wells test the most modern drilling technologies.”<sup>21</sup>

Ten months later, in July 2015, it was announced that BP had agreed to pay up to \$18.7 billion in penalties to the U.S. government and five states to resolve nearly all claims. Under the agreement with the U.S. Department of Justice and the states, BP will pay at least \$12.8 billion for Clean Water Act fines and natural resource

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<sup>19</sup>BP speaker at Ethical Corporation Responsible Business Summit May 3rd 2011, author's notes.

<sup>20</sup>BP May Be Fined Up to \$18 Billion for Spill in Gulf, CAMPBELL ROBERTSON and CLIFFORD KRAUSS. New York Times Sept 4, 2014 [www.nytimes.com/2014/09/05/business/bp-negligent-in-2010-oil-spill-us-judge-rules.html?\\_r=0](http://www.nytimes.com/2014/09/05/business/bp-negligent-in-2010-oil-spill-us-judge-rules.html?_r=0)

<sup>21</sup> *ibid.*

damages, plus \$4.9 billion to states. The payouts will be staggered over as many as 18 years. The settlement avoided a substantial amount of further litigation. It was the largest corporate settlement in U.S. history.

The agreement added to the \$43.8 billion that BP had previously set aside for criminal and civil penalties and cleanup costs. Reuters reported BP as saying, “its total pre-tax charge for the spill now stands at \$53.8 billion.” ([link.reuters.com/duz94w](http://link.reuters.com/duz94w)). In October 2015, the figure was reassessed upwards from \$18.7 billion to \$20.8 billion.<sup>22</sup>

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## Conclusion

Ultimately, Deepwater Horizon has been a disaster, not just for BP, but for many other businesses; for the 11 men who lost their lives in the explosion and their families and friends; but also *inter alia* for US tax-payers, British pensioners, many of the residents of the five US states most affected, and marine life. Like other corporate *cause celebres* like Bhopal, the legacy of April 20th 2010 may rumble on for years to come. The company itself has distilled its learning in five key areas including spill-control and crisis-management; and is sharing this learning with governments, regulators and the industry around the world. Reviewing BP asset sales since Deepwater Horizon, The Economist described BP as a “shrunkn giant” and concluded: “Repairing the balance-sheet and books is one thing. Repairing BP’s reputation for management excellence will take longer. The poor safety record of past years reflected over-zealous cost-cutting. The more recent legal woes in America, and previous troubles in Russia, suggested that BP has been ill-run.”<sup>23</sup>

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## Appendices

### Appendix 1: Tony Hayward Speaking at Stanford Graduate School of Management May 12th 2009

Speaking to an audience of graduate students, Hayward began by describing the huge change that BP went through from 1999 onwards. ‘Until the later 1990s BP was a relatively small oil and gas company. In an extraordinary period between 1999 and 2003, under the leadership of John Browne, we put together a whole series of mergers and acquisitions – such that by 2003 we had created one of the largest integrated oil and gas, energy companies in the world – equal second with Shell – with operations everywhere.

Then catastrophe struck. In the space of several years we had a whole series of real disasters actually.

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<sup>22</sup>The Economist Oct 10th 2015 <http://www.economist.com/news/world-week/21672374-business-week>

<sup>23</sup>BP: A shrunkn giant” The British oil company is safer, smaller, sadder and wiser since its disaster in the Gulf of Mexico: Feb 8th 2014 | From the print edition, The economist.

- We blew up a refinery in Texas City and killed 15 people.
- Our flagship project, called Thunderhorse, almost ended upon the sea bed in 6000 ft of water in the Gulf of Mexico
- We had a major, major oil spill in Alaska
- We were found guilty by the Department of Justice for a trading manipulation in the natural gas market of the US
- And our financial performance in that period was appalling. We under-performed our major competitors by 30–50%

And so it was with that that I was given the job of being the CEO of BP.

The only thing you can do is to confront it head on – we assembled a new team, mainly internal but with some external people. We went through a critical self-assessment with the following diagnosis:

1. BP was a company which was top down, too directive and not good at listening – good stories travelled fast, bad ones travelled nowhere.
2. We had failed to recognise that we were an operating company – too many generalists, not enough skilled specialists.
3. We had created an extraordinary amount of complexity when we put all those companies together – consultants mapped 10,000 organisational interfaces- for a company of 100,000 employees that's impressive! – too much analysis and not enough decision-making.
4. Then we sat down as a team to decide what to do about it.

Firstly, we created something called 'The Way Forward'

- Safer, reliable operations
- Having the right people in the right place
- Performance: restoring revenues and reducing complexity

Secondly, we reinstated competitor benchmarking – looking at the performance of our principal competitor, Shell – an \$8billion gap in Q2 2007.

Thirdly, we addressed issues of leadership and culture change.

At that time it turned out we had 36 live and operating leadership models at various parts of BP – not surprising; we had assembled all these companies from all over the place and they all had their different bits of heritage.

So my team spent 3 or 4 months, without consultants, without any external help, talking about the company that we wanted, the culture that we wanted and the leadership framework which would begin to enable that sort of culture.

The new leadership framework would need to:

1. Recognise skills and professional capability and competence
2. Recognise how important it is to energise and motivate people
3. Focus on decision-making – there had been too much introspection and not enough taking of decisions and getting on with it

4. Deliver results.
5. The culture of an organisation is shaped by what the leaders do....

We are early in that journey. It's probably a 3–5 year journey for those who work in the offices and probably a 5 plus year journey for the people who work out in the facilities.....

Is it working (2 years into the process)? Well, I would say we are making progress, we are not there yet. We've closed the performance gap, so \$8billion in Q2 2007 has become no gap at all in Q2 2009. We beat the market in three out of the last four quarters, and there is a lot of momentum in the company in terms of rising revenues and falling costs. So, there's a lot of momentum but it's clear that to create the sort of company that we want to create, which will be sustainable, we have more work still to do.

## **Appendix 2: Bly Report Summary**

On 8th September 2008, BP released its internal Accident Investigation Report on Deepwater Horizon, compiled by Mark Bly, BP's Head of Operations and Safety. The report concluded that 'the team did not identify any single action or inaction that caused this accident. Rather, a complex and interlinked series of mechanical failures, human judgments, engineering design, operational implementation and team interfaces came together to allow the initiation and escalation of the accident. Multiple companies, work teams and circumstances were involved over time.' The main failures were a combination of engineering design and human judgment.

The main engineering design failure identified in the Bly Report concerns cement for which Halliburton is accountable. Two quotes from the report highlight this:

'The investigation team concluded that there were weaknesses in cement design and testing, quality assurance and risk assessment.' 'The investigation team has identified potential failure modes that could explain how the shoe track cement and the float collar allowed hydrocarbon ingress into the production casing.'

The cause of the critical failure of the blowout preventer (BOP), which should have provided a last resort failsafe, is still being investigated.

A series of human judgment failures take most of the blame, for which the Bly Report suggests that BP and Transocean are accountable, see quotes below:

The Transocean rig crew and BP well site leaders reached the incorrect view that the test was successful and that well integrity had been established.

The rig crew did not recognize the influx and did not act to control the well until hydrocarbons had passed through the BOP and into the riser.

Through a review of rig audit findings and maintenance records, the investigation team found indications of potential weaknesses in the testing regime and maintenance management system for the BOP (blowout prevention).

It has been suggested that at each point where a test result or reading showed there might be a problem, the decision to ignore it was made because of reliance on assumed built-in compensating fail-safe processes elsewhere, including the BOP.

The main recommendations of the report, which highlight the main failings found by the inquiry are:

1. Improved technical practices, requirements and operational guidance regarding cementing, pressure testing and subsea blowout prevention (including strengthening BP's minimum requirements for drilling contractor's BOP maintenance management systems).
2. Increased capability and competency at all levels, including advanced training, competency assessment, embedding lessons learnt and shared learning throughout oil industry.
3. Strengthen BP's rig audit process to improve the closure and verification of audit findings and actions across BP-owned and BP-contracted drilling rigs.
4. Require drilling contractors to implement an auditable integrity monitoring system to continually assess and improve the integrity performance of well control equipment against a set of established leading and lagging indicators.

### Appendix 3: New York Times

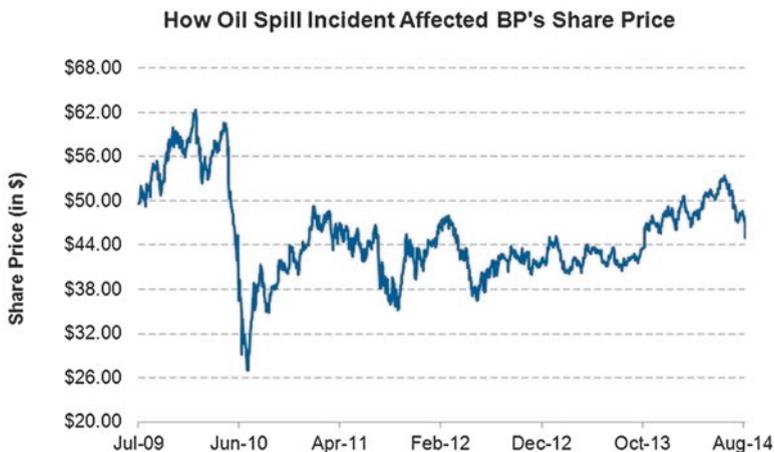
January 5, 2011

#### **Blunders Abounded Before Gulf Spill, Panel Says**

*A version of this article appeared in print on January 6, 2011, on page A14 of the New York edition.*

[http://www.nytimes.com/2011/01/06/science/earth/06spill.html?\\_r=0](http://www.nytimes.com/2011/01/06/science/earth/06spill.html?_r=0)

### Appendix 4: BP Share Price Movement



### Appendix 5



BP Spills Coffee: a PARODY by UCB Comedy  
[www.youtube.com/watch?v=2AAa0gd7CIM](http://www.youtube.com/watch?v=2AAa0gd7CIM)

For Additional Background Information on the Case

Timeline of disaster from April 20th to July 30th prepared by Thompson Reuters:  
[www.cnbc.com/id/37448876/Timeline\\_of\\_the\\_Gulf\\_of\\_Mexico\\_Oil\\_Spill](http://www.cnbc.com/id/37448876/Timeline_of_the_Gulf_of_Mexico_Oil_Spill)

The Financial Times, BBC, and CNN websites all contain detailed analysis and contemporaneous reports:

[www.ft.com](http://www.ft.com)

[http://www.bbc.co.uk/search/bp\\_oil\\_spill](http://www.bbc.co.uk/search/bp_oil_spill)

[http://news.bbc.co.uk/1/hi/world/us\\_and\\_canada/](http://news.bbc.co.uk/1/hi/world/us_and_canada/)

<http://edition.cnn.com/2010/US/04/29/interactive.spill.tracker/index.html?hpt=T1> – for an animation day by day of the surface area of the spill

For visuals and graphics:

<http://google-latlong.blogspot.co.uk/2010/05/keeping-up-to-date-on-gulf-of-mexico.html>

For documentaries:

The Great Invisible (2014) directed by Margaret Brown

[www.youtube.com/watch?v=LDwIbudbZpQ](http://www.youtube.com/watch?v=LDwIbudbZpQ)

One particularly valuable resource is a US PBS-Frontline ProPublica documentary. [www.pbs.org/wgbh/pages/frontline/the-spill/](http://www.pbs.org/wgbh/pages/frontline/the-spill/). This was a meticulously researched programme, also made available in “chapters” – segments covering the evolution of BP through a series of mergers and acquisitions in the 1990s, previous safety lapses, the accident and aftermath. PBS backed this up with substantial, additional supporting evidence and materials posted on-line.

*This case was initially developed as a “live-case” taught as the crisis continued from May to July 2010, written by David Grayson from contributions from members of the Global Network for Corporate Citizenship: Michael Buersch, Derick de Jongh, Bradley Googins, Susanne Lang, Phil Mirvis, Mario Molteni, Christopher Pinney, Bill Valentino.*

*A subsequent version of the case was developed with fellow Cranfield School of Management faculty: Dr Steve Carver, Prof David Denyer and Chris Marsden OBE for the Pears Business School Partnership.*

*The author wishes to thank these contributors and the industry and sustainability specialists who commented on earlier texts.*

*The case relies on published sources.*