Offshore Drilling in the Outer Continental Shelf: International Best Practices and Safety Standards in the Wake of the *Deepwater Horizon* Explosion and Oil Spill

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I Introduction

The *Deepwater Horizon* explosion of April 2010 ("Deepwater Horizon spill") resulted in more than 200 million gallons of oil spilling into the Gulf of Mexico. The consequences of the wellhead blowout, platform explosion and resulting oil spill have been far-reaching, and include significant impacts to industry, the environment, and the economy. In the wake of tragedies such as the *Deepwater Horizon* spill, countries tend to reexamine their regulatory regimes governing offshore drilling. This is a necessary step, as is promoting smarter regulations that take risk into account, and, in general, reforming systems based on overly prescriptive rules. Ultimately, international standards should be developed considering the risks involved in offshore drilling operations. These standards should set forth the level of risk deemed acceptable in the interests of efficiency, profitability, and human and environmental safety.

This paper discusses the role of risk assessment in promoting safer regulatory regimes, examines best practices in Norway, the United Kingdom and Brazil, analyzes the regulatory regime in the United States both before and after the *Deepwater Horizon* spill, and, finally, discusses potential solutions and steps forward to promote safe and efficient drilling operations in the Continental Shelf.

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II Challenges and Goals of Regulation Generally

There are numerous, often complex goals involved in regulation of the oil and gas industry. These goals are often viewed as adverse to one another or are dismissed as the priorities of diverse interest groups. In making policy choices, regulators must balance the needs of environmental protection and human health and safety with the need to provide fair incentives, profits, and benefits to businesses. Efficient regulation will balance these goals, promoting the safe extraction of oil and gas in what is termed in US regulations as the Outer Continental Shelf (OCS) region while providing fair opportunities for industry to profit. With various interest groups pressuring lawmakers to support their own policy goals, this can become a difficult balance to strike.

Deepwater drilling in the OCS can pose extreme challenges, and as oil reserves that are more easily reached begin to run out, attempts at extraction of reserves that are under even deeper amounts of water is becoming more cost-effective, and therefore more common. Technical challenges inhibiting deepwater drilling include extreme depths, high shut in pressures in wells and bottom hole temperatures, and problematic salt and tar zone formations.¹

There are also substantial challenges presented by offshore production in cold climates. For example, while submersible drilling rigs can be used in the Arctic, they can only be moved in open water and work best at shallow depths of less than 30 meters, making development difficult in that area.² The implications of an oil spill in the Arctic could be huge, due to what the World Wildlife Fund described as “enormous environmental challenges, a lack of capacity, and the severe limitations of current response methods in ice-covered waters.”³ Its report on Arctic drilling additionally notes the large response gap that exists in the Arctic due to its remoteness and extreme weather.⁴ It is critical that any regulatory system be able to address the particular risks presented by unique and challenging conditions involved in offshore drilling.

⁴ Id. at 16.