

BP Macondo – Deepwater Horizon
Report for the United States of America

A handwritten signature in blue ink, reading "R Heenan", is positioned above a solid horizontal line.

Richard Heenan, P.Eng.

Heenan Energy Services

2011/08/26

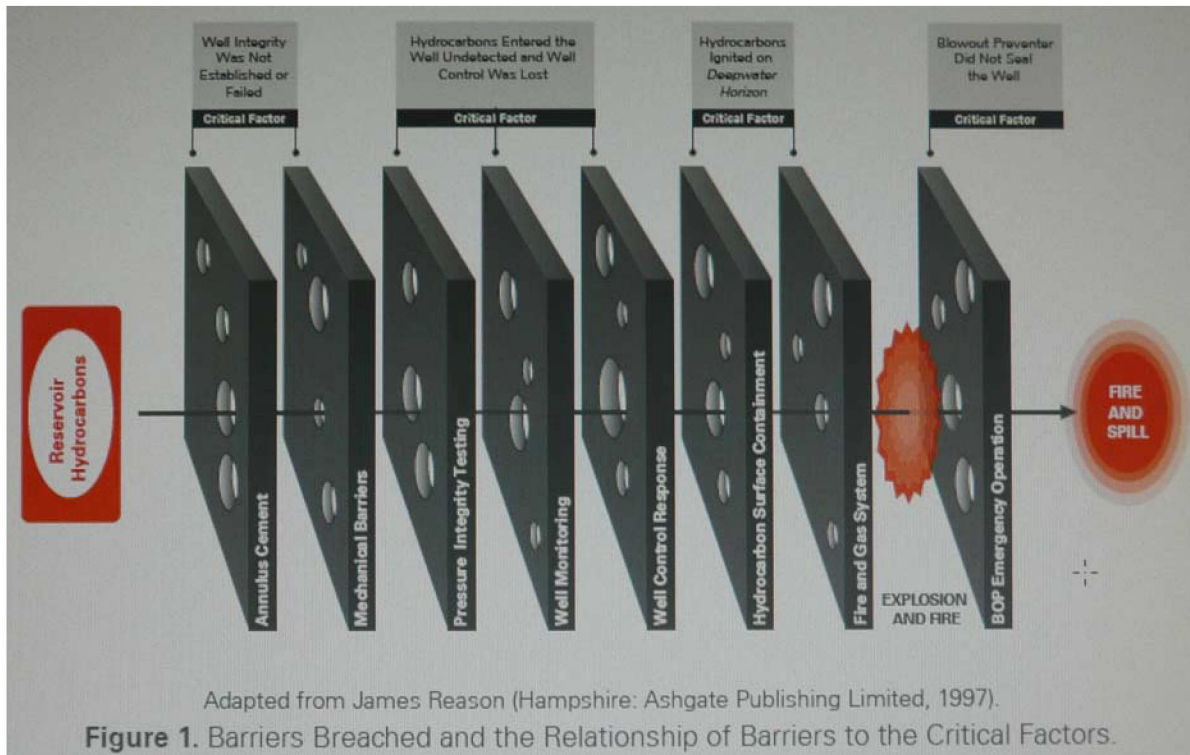
THE REPORT’S AUTHOR

I am a mechanical engineer with thirty three years of experience in the petroleum industry. Eight years of those are as a drilling and completion consultant specializing in remote operations. Previous experience includes fourteen years of petroleum engineering, predominantly in drilling and completions, in both a technical and a field supervisory role for an offshore drilling contractor, a major oil company and an international service company. My experience includes work both on and offshore in the Western Canadian Sedimentary basin, the Canadian Arctic, and overseas. This report is based upon my formal education and industry experience.

SCOPE OF REPORT

A series of events and decisions resulted in the Macondo blowout. The elimination of any one of these would have eliminated, or at least reduced, the magnitude of the event, presumably with a corresponding reduction in loss of life, injury, and environmental impact. BP’s Internal Investigation, the “Bly Report”, identifies eight rig-based causation elements that BP asserts caused or contributed to the Deepwater Horizon blowout and its aftermath. These are graphically illustrated in Figure 1, pages 32 and 181 of the report, and reproduced below. I have been asked to provide an opinion as to whether the actions of BP and/or Transocean met the professional standard of care of the drilling industry regarding three of the elements:¹

- Pressure Testing (particularly the negative pressure test) of the Macondo well on April 20, 2010
- Well Monitoring on April 20, 2010
- Well Control Response on April 20, 2010



¹ I have not been asked to render an opinion on potential failures relating to casing and cement issues (i.e. casing design, cement design and placement, float collar conversion), on the Deepwater Horizon’s BOP system (design, maintenance, or functioning), nor on the rig’s fire and gas and related systems. In addition, I have not been asked to provide an opinion as to whether the eight causation elements listed in BP’s report are the sole factors that caused the Deepwater Horizon blowout. This report therefore does not discuss or make conclusions regarding other potential issues, including process safety issues that may have caused or contributed to the blowout on April 20, 2010.