

Changing Perceptions of Drilling Process Safety Risk

Drilling Process Safety will advance as soon as, and not until, the FOCUS is directed on the risk of its neglect and then MONEY is assigned to it. At that point there will be a dedicated duty to keep track of the quality of the barrier to flow. The only way to focus on this is to correctly assert this as a commercial interest in corporations. This is simply a formula. The reason we have missed this in the past is that the experts' intuitive judgments have been wrong and the formula we have used has been wrong and the predictions of the cost of consequences of a blowout in deepwater have been wrong. There have been warnings that were not heeded like the 1997 paper by then Boots and Coots Vice President Larry Flak in Offshore Magazine warning that because of the back pressure of deep water on a blowout this event, if it ever happened, would be a blowout like never seen since it would not "bridge over".

Ok. So now fast forward. Experts today will still claim the risk of a blowout is very small. In a meeting this year there were 1, 2, 3, 4, 5, 6, 7 deepwater drilling engineers and the engineering manager and the question was posed as "none of you think the risk of a "Macondo" happening again in the next 10 years right? They all answered "no" and the consensus was it was a once in 20 year event; max. Perception? So first off at the time of Macondo there were not more than 700 deepwater wells drilled in the GOM. Okay, so that probability is 1/700 and so that is a probability of .14% chance of a blowout. Well folks plenty of engineers and engineering managers are (have been) assigning the risk of a blowout as .14%. That isn't the RISK! That is the PROBABILITY! We also know now that Macondo's cost of consequence is at least \$40,000,000,000. So anyone that knows risk knows that $RISK = PROBABILITY \times CONSEQUENCE$. So the risk is at least \$57,000,000 risk PER WELL! If you say the probability is not 1/700 and yet half that or even 1/10 of that probability this risk has not been and seems to still not be properly represented in discussions of commercial risk at the very top of the organizations engaged in deepwater drilling. If it truly was there would be a relatively affordable drilling process safety engineer whose sole focus is on the quality of the barrier to flow on a well and there would be more money spent on developing quality assessments of risk, and yet the focus itself would develop drilling process safety quickly and diligently.

The first step is to convey the true risk to the very top of the organizations involved. Step two is the focus and the MONEY is put on the quality of barrier to flow. Step three will be the development drilling process safety as an industry. The details, the systems, the formalities, the safety, will all follow the FOCUS and the focus will follow the true risk message being properly assembled and this message being transmitted through the proper channels to the proper people. We mitigate the drilling process safety risk by conveying a message that the RISK is HIGH and not .14% low; \$57,000,000 risk per well. Three - 24/7 Drilling Process Safety (DPS) engineers working 8 hour shifts would cost < \$500,000 per well. <1% of \$57,000,000 risk. The DPS engineers then dynamic assess risk of losing quality in the barrier and create constant, dynamic "situational awareness" (now missing) throughout the project thus adding quality to the most important barrier, "The Human Barrier" to flow.

The one and only way to mitigate the drilling process safety risks/hazards is to "internalize" the cost to the commercial concern that will FOCUS and allocate MONEY to the change needed.

Do you perceive this risk correctly now?