was that any effort to stop or contain the flow from the original Well should not make the situation worse.

Of course, any attempt to stop or contain the flow had potential downsides, such as potentially increasing the flow from the Well, or preventing other source control options from being effective. One of the many ways in which the downsides of different source control options were evaluated during the *Deepwater Horizon* response was through hydraulic modeling.

In that respect, Dr. Wilson is correct in quoting my colleague, Mr. Simon Bishop, as saying that modeling was used "to assess the robustness of a number of operations associated with source control."[14] However, Dr. Wilson's report presents an incomplete picture of how the hydraulic modeling work during the response proceeded.

First, Dr. Wilson's report asserts that "BP engineers and their contractors doing the modeling appear to have had access to almost unlimited resources, except for the urgency of time."[15] In fact, very few engineers at BP or in the industry had the ability to work with the more complex hydraulic models that were used during the *Deepwater Horizon* response.[16] Those who could do the work frequently lacked the time to fully document their assumptions and the purposes of the modeling they performed.

Second, Dr. Wilson's report suggests an imbalance in access to data useful in hydraulic modeling. Dr. Wilson's report states that "BP engineers and their contactors had access to proprietary data regarding the reservoir and the engineered infrastructure of [the Well]," and that "BP engineers knew or had high-quality estimates of the reservoir, fluid properties and the engineered

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[14] Bishop Tr. at 95:7-9 (quoted in Wilson Report, p. 5, note 7). In general, the models to which Dr. Wilson's report refers (Wilson Report, p. 6-8) can be grouped into four categories: (1) steady-state multi-phase hydraulic simulators (such as PipeSim and PROSPER), (2) transient multi-phase hydraulic simulators (such as OLGA, OLGA-ABC, OLGA Well Kill, and WELLCAT), (3) general hydraulic simulators called computational fluid dynamic (or "CFD") models, and (4) the material balance reservoir simulator called MBAL.

[15] Wilson Report, p. 6.

[16] Tooms Tr. at 244:5-246:15.