Key Messages

Expected Case:
In the current state of a wellhead pressure decrease from 3600 psi to 2270 psi (pressure at wellhead) results in a flow rate increase ranging from 15% to 30%.

Alternate Case:
If fluid flow is only through the drill pipe – and then the drill pipe is unintentionally removed and flows into the sea (2270 psi):
- For flow up the annulus the rate doubles
- For flow inside production casing the rate triples

Note:
If BOP and wellhead are removed and if we have incorrectly modeled the restrictions – the rate could be as high as ~ 100,000 barrels per day up the casing or 55,000 barrels per day up the annulus (low probability worst cases)

Flow increases by 13-31% when wellhead pressure drops from 3600 psi to 2270 psi.