

BLOWOUT CONTINGENCY PLANNING

The decline of easily accessible hydrocarbon reserves has introduced challenges for the petroleum industry's exploration and production of oil and gas. Complex well designs and extreme conditions are only some of the aspects that call for an increased focus on HSE considerations and the preparation of high quality blowout contingency plans (BCP). The combination of cutting-edge software and broad experience gives add energy a unique position when it comes to BCP delivery.

Drilling and well operations nowadays often require new and complex well solutions due to factors like deep waters, HPHT conditions, shallow reservoirs and multilateral, complex well designs. In addition, forthcoming operations in arctic environments are adding new kinds of challenges including remoteness, ice, extremely low temperatures and long periods of darkness. It has therefore become crucial to prepare contingency plans in order to increase the likelihood of safe and successful operations. add energy has delivered more than 1200 BCPs to the world's oil and gas industry since 1991, ensuring optimal risk management for a wide range of operators.

A typical BCP consists of blowout and kill simulations in addition to a detailed relief well plan. This includes blowout scenario determination with calculation of potential blowout rates, as well as specification of the best suited kill method and kill resources. Relief well rig availability and equipment requirements will also be investigated. A carefully worked out BCP will shorten the response time during a blowout or well control incident, saving cost as well as reducing the environmental impact.

add energy uses Olga-Well-Kill, a dynamic multiphase flow software tailor-made for well control simulations. Olga-Well-Kill is based on the industry standard OLGA, and has been applied by add energy on 70 live blowout and well control incidents. The unique experience gained from these incidents is continuously being implemented in the development of BCPs, ensuring add energy's position as a market leading supplier of well control engineering.

Profiled Olga-Well-Kill Operations:

- Elgin gas blowout, North Sea (2012)
- Macondo blowout, Gulf of Mexico (2010)
- Montara gas blowout, offshore Australia (2009)

BCP Features Offered By Add Energy:

- Blowout scenario determination
- Dynamic kill requirements
- Relief well plan
- Relief well rig availability and equipment requirements
- Casing magnetization proposition
- Simulation while drilling proposition