

## ExxonMobil 2022 Exploration Drilling Program

### Well Control Planning

ExxonMobil Canada Ltd. (EMCL) has contracted the Stena Forth drillship to drill an exploratory well on license EL 1165A (Hampden) in the Flemish Pass basin. The well is located 245 NM and 225 NM ESE from St. John's and will be drilled in water depth of 1180m to evaluate the potential of oil bearing rock formations. The anticipated duration of the well is 40 – 60 days depending on evaluation of formations. Drilling is expected to commence in early to mid-July 2022.

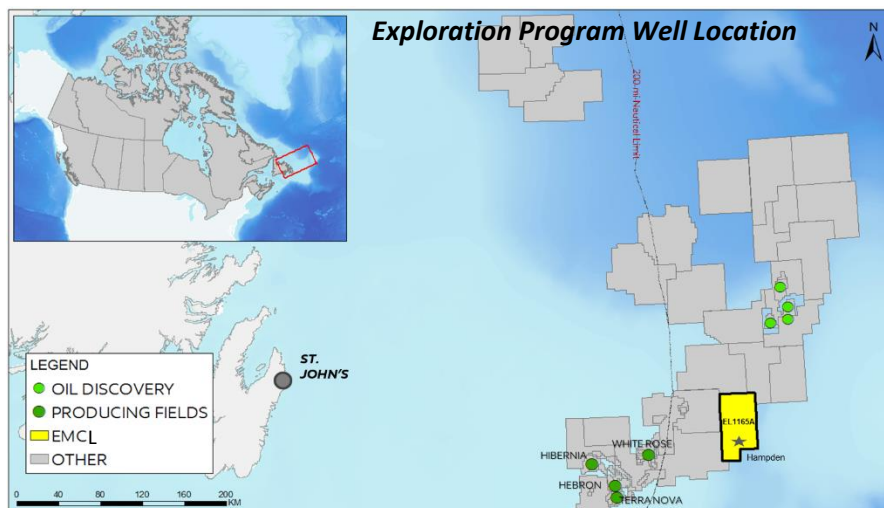


**Stena Forth Drillship**

#### Well Control Philosophy

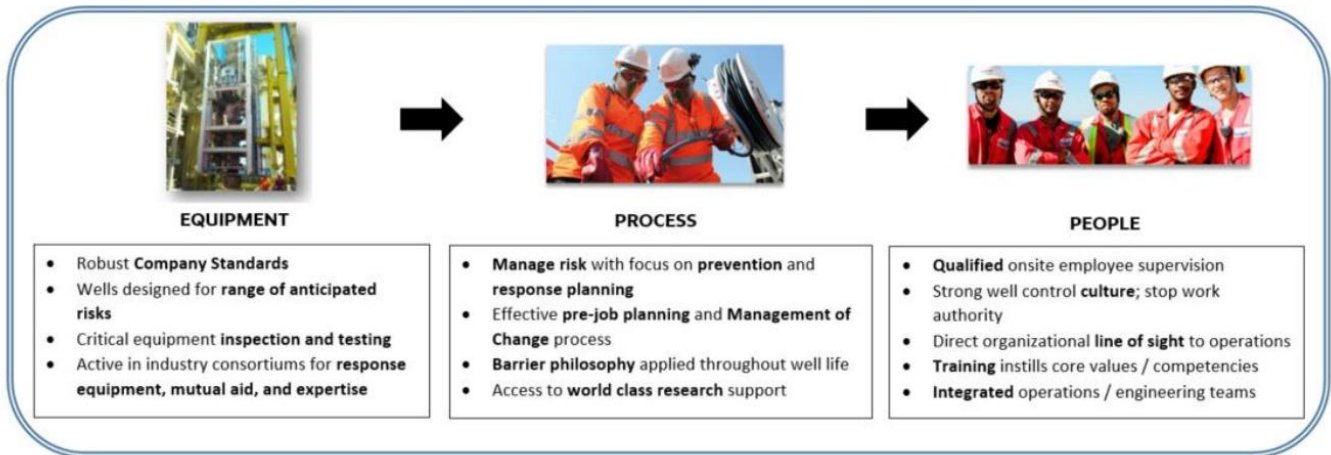
Well control is fundamental discipline that EMCL employs to prevent wellbore influxes, contain and bring encountered wellbore influxes to surface under control, and ultimately ensure personnel safety and environmental protection during well operations. The intent throughout this exploration program is to maintain well control at all times, by employing the strategies described in Stena' *Well Control Manual* and *ExxonMobil Well Control Theory and Procedures Manual*, with the two documents bridged by the *Exploration MODU Well Control Bridging Document* and in compliance with Canada-Newfoundland Offshore Petroleum Board (CNLOPB) Regulations.

These documents provide information which empowers the crew to focus on maintaining primary well control throughout all planned operations, and to safely manage any wellbore influxes that may occur in an exploration operation. Early detection and controlling a wellbore influx is a team effort by all members of the rig crew. Each member shall be trained and familiar with their duties so that any well control operation can proceed smoothly and efficiently. Stena and EMCL also ensure that all personnel are trained to standards in accordance with Company and Regulatory guidelines. Drills are carried out in the most realistic manner possible and where practical, there shall be no difference between drills and actual operations that would be taken in the case of an event. Well control drills will be conducted as per Operational Integrity Management System (OIMS) and ExxonMobil Standards and in accordance with Canadian Association of Petroleum Producers (CAPP) Standard Practice for Training and Qualification Personnel (TQSP).



## Well Barriers

Well Barriers are envelopes of one or several well barrier elements designed to prevent, control and manage unplanned wellbore influxes of either fluids or gases from flowing unintentionally from the formation. The primary well control barrier for all planned operations is a stable column of fluid with sufficient density to overbalance the pressure in the exposed formations; frequent mud property checks ensure the planned weight and density is maintained. The secondary barrier is the envelope formed by the casing, cement, wellhead, and blow-out preventer (BOP). Each barrier element (e.g., cement, plugs, packers, valves, BOPs, etc.) is pressure tested to confirm that the required integrity of the barrier envelope is in place for the operation being performed.



## Well Control Strategies

In the event of a loss of primary well control, the wellbore influx is managed through a series of mitigation processes, which involves securing the well and circulating out the influx while maintaining containment and control of wellbore pressure and fluids. The primary means to shut-in the well will be using existing well control equipment (BOPs). The remotely operated vehicle (ROV) can also be deployed to supply additional closing power to the BOPs. The ultimate key to the success of these measures is early detection, which is achieved through active monitoring by the rig crews and knowing what the well is doing at all times. All personnel involved with well monitoring are provided training and competency programs which also include lost circulation detection and response. To prepare for the unlikely event of loss of well control, the Source Control Branch is responsible for stewarding equipment and procedures for intervention through: site survey, debris clearance, existing BOP intervention, subsea dispersant application, capping stack installation, and well shut-in procedures. If in the event it's necessary, the capping strategy involves attaching a capping stack onto the BOP or wellhead to control and stop the discharge of hydrocarbons from the well if the BOP is not functional. Following the capping operation, the drilling of a relief well may be necessary to intercept the existing wellbore and permanently seal the well.



**Capping Stack**