



# Equinor Canada Ltd. 2024 Exploration Drilling Program

## Well Control Strategy

equinor

Equinor Canada Ltd. has contracted the Hercules semi-submersible drilling installation to carryout a drilling program in 2024. The 2024 drilling program consists of one firm exploration well and an optional second well. The Hercules drilling installation is managed by Odfjell Drilling.

- Drilling and abandonment of an exploration well Sitka C-02 on EL1156
- Second well within a 5-7 km distance from the Sitka C-02 well

Drilling will occur in the Flemish Pass, approximately 450 km from St. John's, in water depths ranging from 850m to 900 m. The 2024 drilling program will commence in in early July 2024 and is expected to be completed within six months, contingent on well results.

Exploration drilling activities completed during this program will be performed in accordance with Canada - Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) regulations. The C-NLOPB will issue an Operations Authorization (OA) and Approval to Drill a Well (ADW) prior to drilling. This program will also be conducted in accordance with Equinor Canada Ltd. governing principles.

### Well Control Philosophy

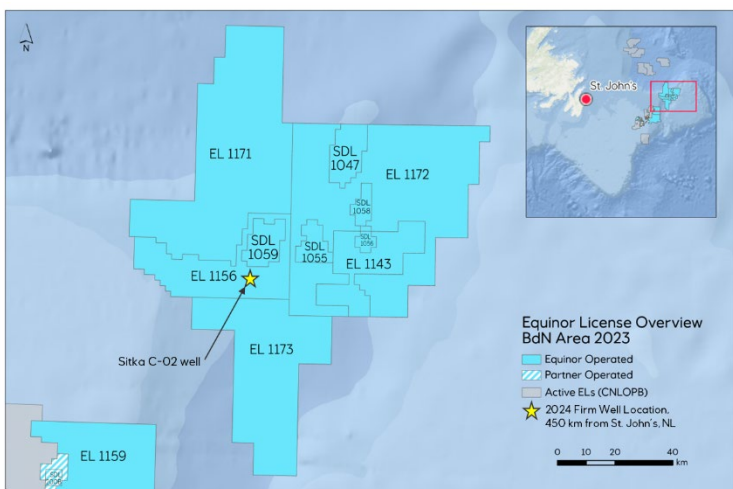
Equinor's goal is zero (0) well control or well integrity incidents.

Establishing strong well control barriers in planning and execution is the basis of Equinor's "Always Safe" strategy to deliver wells with no harm to personnel or the environment.



Hercules Drilling Unit

Primary well control is maintained by drilling fluids ('mud') with sufficient density ('weight') to prevent the influx of formation fluid into the wellbore. Throughout the drilling industry, the loss of primary well control most frequently results from errors in fluid volume monitoring, swabbing, insufficient fluid density, or lost circulation. The objective for the 2024 drilling program is to maintain primary well control at all times by applying preventative well control measures as per Odfjell's Well Control Manual, Equinor's Well Integrity Manual, and the Canada 2024 Equinor-Odfjell Well Control Bridging Document agreed between the Companies. Preventative well control measures include, but are not limited to the following:



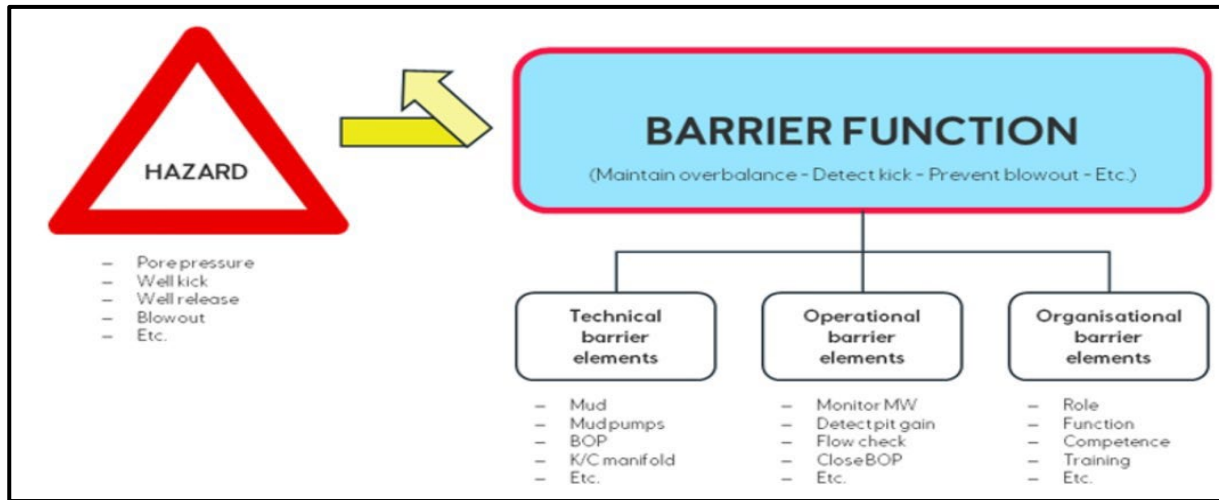
- Mud weight with overbalance safety margin against the prognosed pore pressure during drilling.
- Mud weight with trip safety margin during tripping to prevent influx due to swabbing.
- Continuous monitoring of fluid level in well including flowback monitoring/fingerprinting on connections.
- Hands-on verification by rig leadership of mud properties, swab simulations, and trip sheet accuracy.
- Awareness of barrier status at all times, including barrier plan for riser disconnect.
- Well control drills and tabletops, including understanding of indicators that overbalance is decreasing.
- Clear roles and responsibilities for monitoring and communicating well control.
- Verification and regular testing of well barriers including casing, cement, and the Blowout Preventor (BOP).

Information from the Canada 2024 Well Control Bridging Document is communicated to the drilling crews through Equinor offshore well control forums, risk assessments and pre-job meetings before each hole section, and are imbedded in the detailed operational procedures for the well. Well control drills are conducted per the 2024 Well Control Bridging Document in the most realistic manner possible, with assessments to identify areas where crew competency or the drills themselves can be improved.

Operations within the reservoir section of the Sitka C-02 well will also follow the Canada 2024 Enhanced Well Control Manual. This manual provides more in-depth checklists, fingerprinting, and drilling procedures to ensure well control and equipment rating safety margins are not exceeded while operating in the elevated temperature and pressure conditions deep in the well.

## Well Barriers

If a loss of primary well control occurs, a secondary well control barrier envelope including the BOP is capable of shutting in the well. The effectiveness of the secondary barriers is a function of the technical, operational, and organizational elements in place. Each of the barrier functions for the 2024 drilling program have been addressed to ensure reliable well control preparedness and to avoid the escalation of a well control event.



### Barrier Elements

#### Technical Barrier Elements

Technical barrier elements are engineered equipment, such as a BOP. Technical barriers must meet the performance standards for the operation (i.e., temperature / pressure ratings, shear capacity, etc.). Each technical barrier is designed, pressure and/or function tested to confirm required integrity for the 2024 drilling program.

#### Operational Barrier Elements

Operational barrier elements are safety-critical tasks performed by the offshore team, such as the shut-in procedure for the BOP and the kill procedure to re-establish primary well control (fluid overbalance). Equipment and procedures required for operational barrier elements are established during the rig intake phase by leading Equinor-Odfjell well control expertise.

#### Organizational Barrier Elements

Organizational barrier elements are defined roles, competence, and training to achieve the desired well control response in a timely manner. Organizational barriers are maintained through well control drills including onshore organization response and well control certifications (IWCF/IADC) as per Canadian Association of Petroleum Producers (CAPP) standards for Training and Qualifications of Personnel (TQSP).

## Source Control

If the primary BOP closure is unsuccessful, there are several back-up BOP functions including ROV closure, acoustic signal, as well as emergency "autoshear" systems (i.e. automatic close if communication with BOP is lost) which may shut-in and seal the well. To prepare for the unlikely event of loss of well control, Equinor's Source Control Branch (SCB) and Incident Management Team (IMT) have plans and resources in place to mobilize vessels and equipment for site survey, subsea debris clearance, BOP intervention, dispersant application, and capping stack installation. The capping stack can be connected on top of the BOP (at BOP/LMRP interface) or on top of the wellhead. Following the capping operation, a relief well may be required to intercept the existing wellbore and permanently seal the well. Relief drilling rigs and relief well equipment have also been identified for this purpose.

The primary capping stack for the 2024 drilling program is the Wild Well Control system located in Montrose, Scotland. Equinor and Wild Well Control have established logistics plans to minimize response time in the event the capping stack is required, with capping stack mobilization by vessel the recommended method.



**Capping stack**