****

**NOTIFICATION TO COMPLETE**

|  |  |
| --- | --- |
| Operator: |  |
| Operations Authorization Number[[1]](#footnote-1): |  |
| Well Name[[2]](#footnote-2): |  |
| Intended Service[[3]](#footnote-3): |  |
| Completion Date[[4]](#footnote-4): |  |

*Information submitted in this document is privileged under subsection 119 (2) of the Canada-Newfoundland Atlantic Accord Implementation Act (Canada) and sub-section 115 (2) of the Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland and Labrador Act, and shall not be released or made public except as provided for in that Act.*

|  |
| --- |
| **Instructions**:   1. To avoid delays in receiving concurrence or follow-up with respect to this notification, operators should provide this notification along with relevant logs, for review as soon as possible but no later than five working days prior to running the completion string. If logs are still being obtained or processed at the time of submission, they should be submitted as soon as they are available. Acknowledgement of the notification submission can only be provided after all log data has been received and reviewed. 2. This notification should be submitted via e-mail to the C-NLOPB Information Resources Center ([information@cnlopb.ca](mailto:information@cnlopb.ca)) in both MS Word and pdf format. The Well Operations Engineer should be copied on the correspondence. 3. A Well Termination Record recording the details of the well completion should be provided to the Board within 30 days of completing operations. |

## OBJECTIVE:

Provide a brief description of the objective of the operation in terms of the well service, the zones/horizons to be completed, the equipment to be used, whether any flow testing/injectivity testing is to be conducted and the production logging plans following completion. An estimated start date and duration (days) required to conduct the operation should also be provided. For flow-back and/or injectivity operations of development wells drilled and completed from MODUs, the operator is required to comment on how they intend to address subsection 34(2) of the *Newfoundland Offshore Petroleum Drilling and Production Regulations[[5]](#footnote-5)* and associated guidance.

|  |
| --- |
| *[Please type here]* |

## WELL AND RESERVOIR DESCRIPTION:

Briefly describe the type of completion (e.g. monobore completion), the reservoir zones/horizons penetrated by the well and the region of the field (e.g. fault block) where the well is located. This should include the depths in meters Measured Depth Rotary Table mRT (MD) and meters True Vertical Depth Subsea mSS (TVD) of fluid contacts observed from logs or inferred from pressure data.

|  |
| --- |
| *[Please type here]* |

## RESERVOIR PRESSURE:

Provide the average reservoir pressure (in xx.x MPa @ x,xxx.xx m TVDss) for each zone to be completed and the basis for the pressure data (e.g. LWD or WL pressure data). The Excel data file must also be included as an attachment.

|  |
| --- |
| *[Please type here]* |

## INTERVALS:

For all the tables provided below, please indicate the open or cased hole log used for correlation purposes. The log must be reference to mRT (MD).

**Note 1**: If logging isn’t complete at the time of preliminary submission of the notification, these tables may be completed and submitted when the logs are available.

**Note 2:** Reference to geologic tops and/or targeted formations within this notification must agree, where applicable, with pool and/or zone names as designated by the C-NLOPB’s Chief Conservation Officer. **Failure to comply will result in the return of the notification and a re-start of the 5 day review period upon receipt of the revised notification.**

Complete Table 4a in support of perforation intervals proposed over a cemented liner or casing section.

*Table 4a*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| New or Existing | **Zone** | **Top**  **mRT (MD)** | **Bottom**  **mRT (MD)** | **Top**  **mSS (TVD)** | **Bottom**  **mSS (TVD)** |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Correlation Log:  (Indicate the reference log) | | | | | |

Complete Tables 4b, 4c, 4d, 4e, 4f and 4g in support of any open hole completion where zonal isolation is provided by open hole packers. Where flow control devices or gravel packs are employed for reservoir management purposes, relevant details should be provided as an attachment in accordance with any directions provided to the Operator by the C-NLOPB at the ADW stage.

*Table 4b*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Barefoot Sections** | | | | |
| **Zone** | **Top**  **mRT (MD)** | **Bottom**  **mRT (MD)** | **Top**  **mSS (TVD)** | **Bottom**  **mSS (TVD)** |
|  |  |  |  |  |
|  |  |  |  |  |
| Correlation Log:  (Indicate the reference log) | | | | |

*Table 4c*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Isolated / Blanked Off Sections** | | | | |
| **Zone** | **Top**  **mRT (MD)** | **Bottom**  **mRT (MD)** | **Top**  **mSS (TVD)** | **Bottom**  **mSS (TVD)** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Correlation Log:  (Indicate the reference log) | | | | |

*Table 4d*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Inflow Control Devices (ICD)** | | | | | |
| **Top**  **mRT (MD)** | **Bottom**  **mRT (MD)** | **Top**  **mSS (TVD)** | **Bottom**  **mSS (TVD)** | **Nozzle size**  **(mm)** | **Screen size**  **(µm)** |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Correlation Log:  (Indicate the reference log) | | | | | |

*Table 4e*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Gravel Pack / Stand Alone Screens** | | | | | |
| **Top**  **mRT (MD)** | **Bottom**  **mRT (MD)** | **Top**  **mSS (TVD)** | **Bottom**  **mSS (TVD)** | **Gravel Size**  **(mm)** | **Screen size**  **(µm)** |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Correlation Log:  (Indicate the reference log) | | | | | |

*Table 4f*

|  |  |  |
| --- | --- | --- |
| **Isolation Packers (i.e. Swell Packers)** | | |
| **Depth, COE\***  **mRT (MD)** | **Depth**  **mSS (TVD)** | **Packer Length**  **(m)** |
|  |  |  |
|  |  |  |
|  |  |  |
| Correlation Log:  (Indicate the reference log) | | |

*\*COE = Center of Element*

*Table 4g*

|  |  |  |
| --- | --- | --- |
| **Tracers** | | |
| **Depth**  **mRT (MD)** | **Depth**  **mSS (TVD)** | **Tracer Type**  **(Oil/Water)** |
|  |  |  |
|  |  |  |
|  |  |  |
| Correlation Log:  (Indicate the reference log) | | |

GEOLOGIC TOPS

|  |  |  |
| --- | --- | --- |
| **Formation Top or Zone** | **Depth**  **mRT (MD)** | **Depth**  **mSS (TVD)** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
| Correlation Log:  (Indicate the reference log) | | |

## GEOLOGIC WELL SECTION

Provide a geological cross-section for vertical or deviated wells with relevant offset wells. In the case of a horizontal well, a well section is not required. The cross-section should be inserted into this document as a “high” resolution image file (e.g. pdf) such that depths, tops, log traces and section labeling can be easily read on image expansion. The subject well should have the same geological tops and include the reference log listed in section 4.0. The cross-section should be referenced to m TVDss depths, but must also have an associated measured depth track, i.e. m MDRT. For development wells where pooling/zone tops are used, the tops for offset wells should be concurrent with the most recent submissions to the C‑NLOPB.

## CASED HOLE LOGS ACQUIRED/PLANNED:

Provide details of any cased hole logging program to be conducted during or after the completion operation, so long as the planned logging program impacts the well completion or completion interval.

|  |
| --- |
| *[Please type here}* |

## PLANNED OPERATIONAL SEQUENCE:

Provide a high level operational sequence for the completion operation describing the equipment to be used and the pressure tests to be performed on the equipment.

|  |
| --- |
| *Please type here]* |

## WELLBORE SCHEMATIC:

Attach a proposed schematic of the well detailing all completion equipment and perforation intervals.

## COMPLETION STRING DESIGN

Complete the table. In the comments section, include a summary of the design load cases that were evaluated, together with a description of the worst-case design load and the depth at which the lowest safety factor occurs.

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
| **Burst** | **Design Summary** | | **Comments1** |
| Highest Load (kPa) |  |  |
| Safety Factor |  |
|  | | | |
| **Collapse** | **Design Summary** | | **Comments1** |
| Highest Load (kPa) |  |  |
| Safety Factor |  |
|  | | | |
| **Tensile** | **Design Summary** | | **Comments1** |
| Highest Load (daN) |  |  |
| Safety Factor |  |

## Include in this table a summary of the design load cases that were evaluated, together with a description of the worst-case design load and the depth at which the lowest safety factor occurs. Please provide any additional comments as necessary in the space provided below.

## Comments:

|  |
| --- |
| *Please type here]* |

## PRESSURE TESTING SUMMARY

Complete Table 10a and 10b to describe all the pressure tests and inflow tests to be conducted, including the relevant test details (pressure, duration, testing fluid).

*Table 10a: Pressure Tests*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Surface Pressure (kPa)** | | **High Test Duration**  **(mins)** | **Fluid/Density for Pressure Test**  **(kg/m3)** | **Identify the well barrier elements being pressure tested.** |
| **Low** | **High** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

*Table 10b: Inflow Testing Details*

|  |  |  |  |
| --- | --- | --- | --- |
| **Differential Pressure (kPa)** | | **High Test Duration**  **(mins)** | **Identify the well barrier elements being pressure tested.** |
| **Low** | **High** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Clearly identify any well barrier elements that are proposed to **NOT** be tested in the direction of flow, after installation of the completion string, to confirm its integrity for the maximum anticipated operating pressure. Provide rationale.

|  |
| --- |
| *Please type here]* |

## WELL BARRIER DIAGRAMS

Attach the individual well barrier diagrams for the various stages of the completion operation. There should be a separate diagram included for any stage at which the well barriers envelopes would be re-defined. These diagrams should include all well control equipment installed on the well, define the primary and secondary well barrier envelopes, list each element within the barrier envelope, and note the criteria used to validate it.  (Reference the NORSOK Standard D-010 for further guidance.)

1. Provide the Operation Authorization number under which the operation will be conducted. [↑](#footnote-ref-1)
2. The name of the well should be the full legal name as assigned by the Board when the Application for Approval to Drill a Well (ADW) was issued. [↑](#footnote-ref-2)
3. Indicate intended well service i.e. oil producer, gas injector, etc. [↑](#footnote-ref-3)
4. Format as Month, Day, Year (i.e. March 31, 2016). [↑](#footnote-ref-4)
5. There are federal and provincial versions of these regulations – the federal version is referenced here. [↑](#footnote-ref-5)