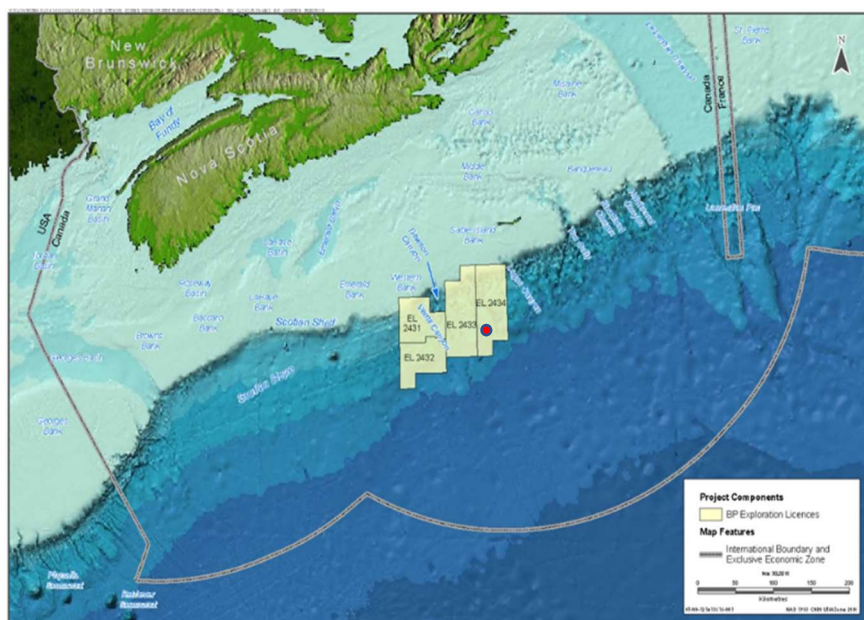




Scotian Basin Exploration Program

WELL ABANDONMENT STRATEGY

BP's Scotian Basin Exploration Program involves drilling an initial well on Exploration Licence (EL) 2434 in 2777 metres water depth, approximately 330 kilometres southeast of Halifax, Nova Scotia. BP has contracted the *West Aquarius* rig, operated by Seadrill, to drill the well. Drilling is planned to commence in April 2018 and it is estimated that it will take approximately 120 days to drill the well. The supply base is located in Halifax Harbour (approximately 20 hours sailing time to the drill rig) and the helicopter fleet base is located at Halifax Stanfield International Airport (approximately 1 hour, 20 minutes helicopter flight time to the drill rig).



Scotian Basin Exploration Program Location

West Aquarius Semi-Submersible Drill Rig

BP's proposed exploration program has been subject to a rigorous environmental assessment process under the *Canadian Environmental Assessment Act, 2012*. A decision from the Minister of Environment and Climate Change Canada is anticipated in early 2018. Should the project be approved to proceed, BP must also obtain an Operations Authorization and an Approval to Drill a Well (ADW) from the Canada-Nova Scotia Offshore Petroleum Board (CNSOPB) prior to drilling. These authorizations are part of a robust regulatory regime administered by the CNSOPB to manage offshore exploration drilling.

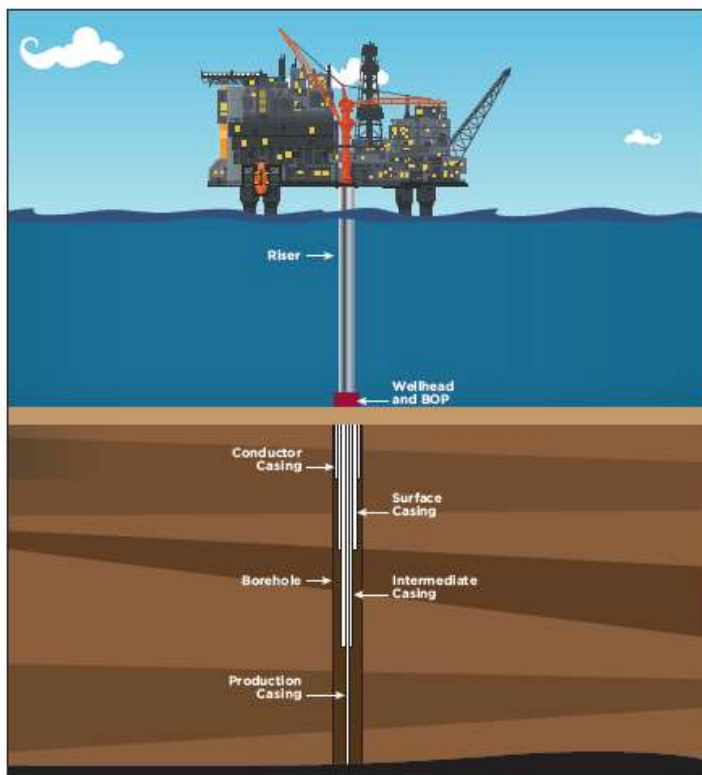
Once drilling has been completed and the well is sealed, the wellhead is either removed from the seafloor or kept in place. The decision whether to remove or abandon in place is based primarily on the potential for the abandoned wellhead to interfere with other commercial uses of the sea (e.g., fishing). As part of the application for the ADW, BP has indicated it will seek regulatory approval to leave the wellhead in place on the seafloor after well termination for its initial well (2777 m water depth).

More information on how wells are drilled and abandoned in place and BP's Well Abandonment Strategy is provided below.

Well Drilling and Abandonment

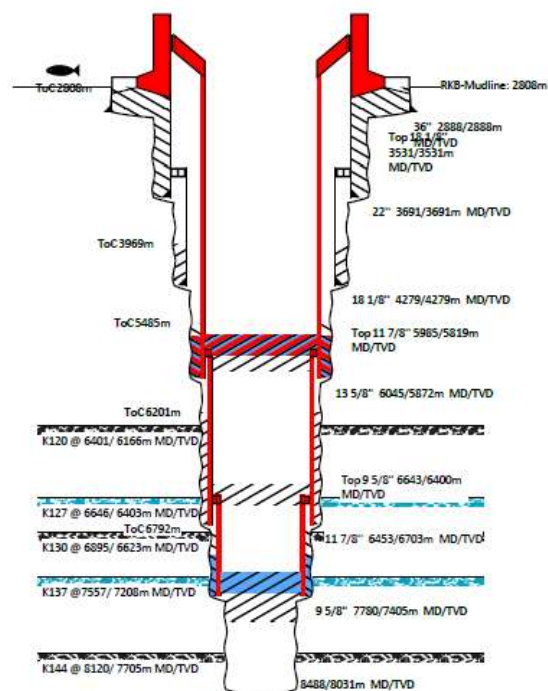
A well is drilled in a number of sections of progressively smaller-diameter intervals. The top interval is drilled starting at the sea floor and has the largest diameter hole (approximately 36 inches or 91 cm in diameter). A typical well consists of five or six sections, each with progressively smaller-diameter intervals. The final deepest section is usually less than 10 inches (25 cm) in diameter.

Once the well has been drilled to total depth and well evaluation programs have been completed (if applicable), the well will be plugged and abandoned (P&A) in line with applicable CNSOPB requirements, BP practices, and industry standards. P&A operations involve setting a series of cement and/or mechanical plugs within the wellbore, including plugs above and across any hydrocarbon-bearing intervals, at appropriate barrier depths in the well. These procedures are designed to isolate the well and prevent the release of wellbore fluids to the marine environment. Since 1967, more than 180 wells have been plugged and abandoned in the Nova Scotia offshore.



Schematic of a Completed Offshore Well

Source: CAPP 2017. Exploration Drilling in Atlantic Canada Factsheet



BP's P&A Plan for Aspy D-11

Note cement plugs and casing cement in different well sections

BP's Well Abandonment Strategy

When the wellhead is not expected to interfere with other commercial uses of the sea, application may be sought and approval may be granted to keep the wellhead in place. In this scenario, after the well has been sealed, the wellhead is not recovered from the seafloor but remains at the wellsite.

Subject to approval, the only infrastructure that would be left on the seafloor is a wellhead which would be approximately 1.5 m to 3.7 m in height and take up a permanent footprint of less than 1 m², at a depth of 2777 m below the water surface. The largest outside dimension on the wellhead is the extension joint which is 36" (91 cm) in diameter. All other subsea infrastructure, including the blowout preventer (BOP) will be removed. The BOP will only be removed once the cement plugs are put in place and verified. A remotely operated vehicle (ROV) is used to survey the seafloor to confirm the location of the wellhead on the seafloor and confirm there is no other infrastructure or debris on the seafloor.

Leaving the wellhead does not alter the number, type or method of placement and verification of the permanent barriers in the well.

A Well Termination Record, which includes a schematic of the well and details the configuration of the well at the time it was terminated, is submitted to the CNSOPB. The location of the wellhead is published on nautical charts.

Given the water depths of the well location (2777 m), and lack of bottom contact fishing activity at this water depth, there are no predicted interactions with fishing activities. The exposed wellhead will provide hard substrate for recolonization by benthic communities.



Underwater photo taken by ROV showing an abandoned wellhead on the seafloor