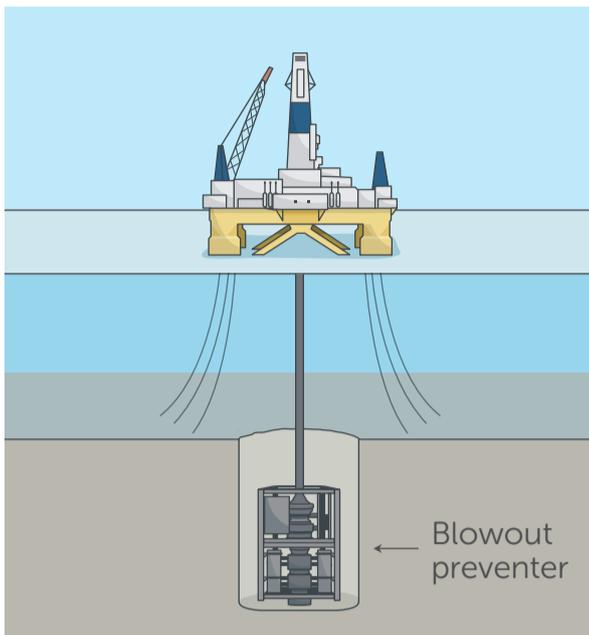


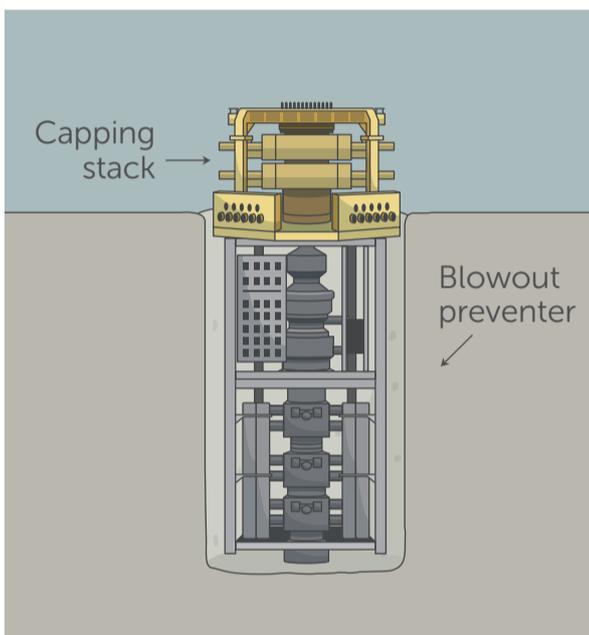
New Federal Rules Will Help Prevent and Contain Oil Spills in the U.S. Arctic Ocean

The U.S. Department of the Interior has finalized regulations to address some of the most pressing challenges of offshore oil and gas exploration in Alaska's Beaufort and Chukchi seas. These regulations apply to floating drill rigs, known as mobile offshore drilling units, in the U.S. Arctic Ocean and require operators to have equipment nearby to stop an out-of-control oil spill.



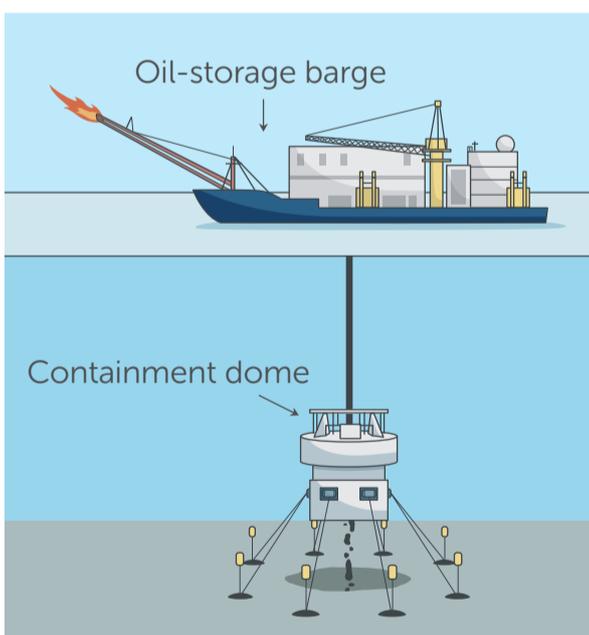
Improved blowout preventers

Blowouts can occur during drilling if the pressure in a hydrocarbon reservoir is not properly controlled, which can lead to spills. Blowout preventers, which are standard equipment for offshore drilling, include a series of valves that can help to restore safe pressure or seal the well, if needed. New federal well-control regulations, which supplement the Interior Department's recent Arctic rules, will help improve the effectiveness of some blowout preventers, including those on the seafloor or in the subsea, by requiring a more robust design with redundant parts installed.



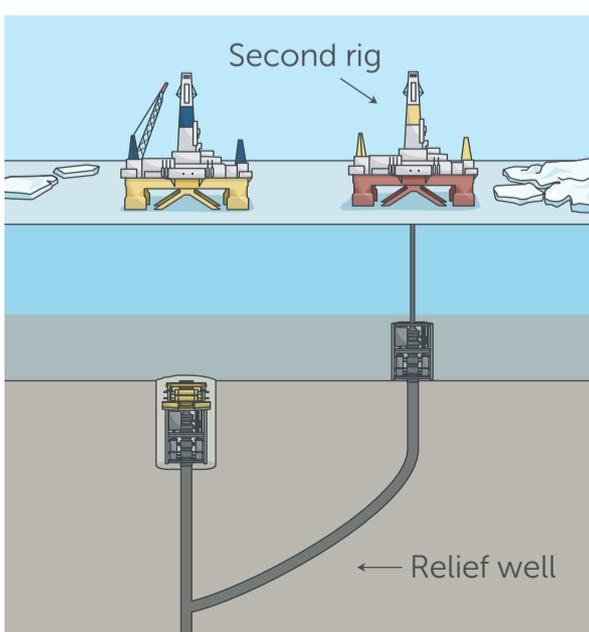
Capping stacks

If a blowout preventer fails, as happened in the 2010 Deepwater Horizon incident in the Gulf of Mexico, a capping stack is the next option to control the well. A capping stack is essentially a second blowout preventer that is used to seal the well or route the hydrocarbons to a floating vessel. The new regulations require that a capping stack be located within 24 hours' travel time of drill sites.



Containment systems

If the blowout preventer and capping stack fail, a containment system can be used to keep oil and gas from getting into the water while other well-control methods are undertaken. Containment systems include oil-storage barges equipped with domes that are lowered into the water over the source of the leak and route oil to the vessel for storage and gas to be flared safely. The new regulations require that these systems be located near drill sites for rapid deployment.



Same-season relief wells and second rigs

Relief wells—second wells drilled at a safe distance from a blowout and used to intercept and plug a leak—are the blowout solution when all other methods have failed. In most cases, a blowout will make it unsafe, or impossible, to use the primary rig. The new Arctic regulations require that a second drilling rig be available nearby so a relief well can be completed and a spill stopped in the same season in which drilling began and before sea ice moves in.