

Australian Timor Sea Well Blowout Myth Buster

Shell is following the event closely and will take any appropriate learnings into our planned operation (local regulators are currently investigating, so we are unsure of the exact cause)

The Operator involved is PTTEP - a leading Asian exploration and production company. A top-ten publicly-listed company on the Thailand Stock Exchange, with headquarters in Bangkok, PTTEP operates more than 40 projects around the world and has a workforce of over 2,000. **PTTEPA**- is the Australian subsidiary

Myth – The same thing will happen in the US Arctic if Shell is allowed to explore.

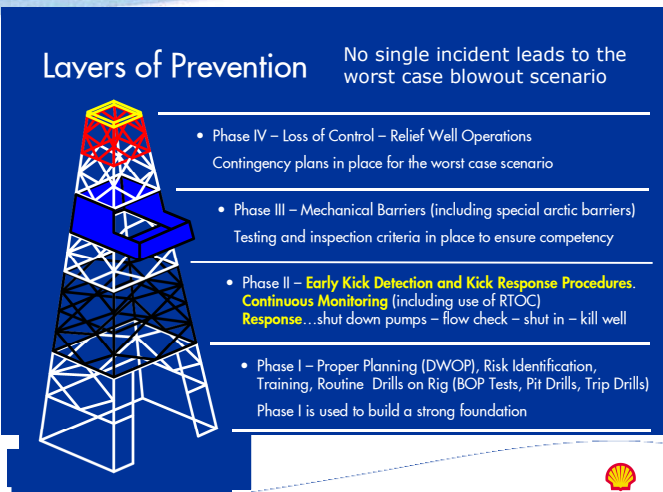
Reality

- The well in Australian waters was a development well, not a subsea exploration well, which is what we are proposing for 2010.
- The well that blew out was not the well that the rig was drilling. Because it was a production well and cased (steel pipe within the hole) it could not collapse on itself and naturally stop the flow, as would be the case in an exploration well.
- In the US Offshore Continental Shelf, industry is required by the MMS to comply with a two-barrier program. Which ensures redundancy.
- The MMS requires pressure testing of most components to ensure they are working as designed prior to being placed in service, again reducing the chance of a “leak”.

Shell’s prevention measures ensure that no single incident leads to the worst case blowout scenario

- Shell’s operating practices are to place a valve on the top of the well, which allows for early detection prior to escalation
- Shell employs internal and industry best practices when pumping cement that reduces the chances of having “leak” path
- Our barriers to maintain well control include **fluid barriers** with drilling mud and brine and **mechanical barriers**, including; blowout preventers, casing, cemented casing, cement plugs, mechanical isolation plugs and storm/ice isolation packers:
- The process for suspending a well, is different in the US and includes:
 - Pumping and filling the wellbore with heavy mud
 - Pumping and setting cement plugs in the wellbore
 - Setting mechanical plugs in the casing
 - Closing the Blow Out Preventor (BOP) rams and locking them, then leaving the bottom section of BOP over the well
- Shell has a rigorous quality control program that reduces the chance of a leak.
- Shell’s approach to reducing the risk of a well control incident includes the implementation of numerous safeguards in preparation, execution, training, risk identification, contingency planning and well control equipment maintenance, inspection and testing procedures





- Use of Shell’s Real Time Operations Center (RTOC) to assist in monitoring operations, analyzing penetrated formations, and analyzing pressure trends from Houston or New Orleans as we drill is another key prevention barrier we utilize

Myth – It will take too long to drill a relief well in the US Arctic, therefore leading to a larger spill.

Reality

- The Australia rig operating over the blowout was a jack-up rig, which cannot be moved quickly.
- The Timor Sea incident necessitated bringing a rig in from a remote location to carry out the relief well operations, this has caused a delay in killing the well
- Shell will be using a drillship in the Arctic for a number of reasons, including the ability to move offsite and reestablish in a new location quickly.
- Relief well drilling plan is prepared and approved by the MMS before commencing an exploration well and the MMS is satisfied with our procedures and they do not require a second rig to provide this capability during the 2010 season.
- In the unlikely event we need to drill a relief well, we can begin the drilling process within days of a hydrocarbon release.
- We will store aboard the drillship enough casing and extra wellhead housings to start the relief well immediately after mooring.
- We have a robust contingency plan in place, approved by MMS, in case the drillship is disabled and cannot drill the relief well.

Myth – Shell will not be able to respond quick enough to control a spill.

Reality

- Shell has the capability of deploying our equipment and beginning recovery within an hour of any incident large or small. No other company has ever deployed the immediate response resources here that Shell has.
- We have incorporated traditional knowledge of Arctic conditions into our program through the employment of local Alaska Natives.
- Shell has created unprecedented oil spill response capability to support its drilling plans in the Beaufort and Chukchi Seas. Shell has a dedicated fleet of vessels, boats, barges, tow vessels and specialized ice containment equipment, which will be on-site 24/7 and staged to react immediately in the extremely unlikely event of a spill or other problem.



Myth – The chance of a spill is great and inevitable.

Reality

- The fact is that a large oil spill (>1,000 barrels) is an extremely unlikely event – virtually nil, when considering exploratory drilling.
- The main source of oil in the ocean is naturally occurring seeps. Most spills are caused by run-off, ocean going ships and pipeline ruptures.
- Technology and processes employed today makes it very unlikely that a spill could occur, and that if a spill did occur, it would likely have minimal impact on the surrounding environment.
- Oil spills of any kind are exceedingly rare in drilling and production activities, however, Shell is prepared for that highly unlikely event, and has tested its plans against multiple conditions. No other company has ever deployed the immediate response resources here that Shell has.
- Only 1 percent of oil discharges in North American waters are related to oil production, and only a fraction of those few incidents involve drilling.

