

# Ongoing effort to contain Gulf oil leak

BP aims to boost the amount of oil being captured to as much as 28,000 barrels a day by re-employing equipment used in its previous, failed "top kill" attempt. The company is also working on a long-term plan that will temporarily halt containment efforts if a hurricane approaches

**1 RELIEF WELLS**  
BP drilling two relief wells designed to intercept leaking well beneath sea bed. Once first new well intersects existing well, heavy drilling mud, followed by cement, will be pumped in to stop oil from leaking. Wells expected to be finished in August

**Relief well 1:**  
Drilling started May 2

**2 CONTAINMENT CAP**  
Cap placed over failed blow-out preventer capturing and funnelling oil up to *Discoverer Enterprise* drillship, which can collect around 15,000 barrels of oil a day

Existing *Deepwater Horizon* well

Planned intersection depth: 5.5km

Oil reservoir

Relief well 2:  
Started May 16

*Discoverer Enterprise* will be replaced by shuttle tanker *Loch Rannoch* and production ship *Toisa Pisces* when long-term containment plan gets underway in late June

*Loch Rannoch*

*Toisa Pisces*

Oil funnelled to ship

Oil and gas still gushing out from under cap while BP pumps in nitrogen and methanol to prevent formation of methane hydrate "ice crystals" that could block main flow of oil

Q4000 "Top kill" rig

**3 LONG-TERM CONTAINMENT PLAN:**  
BP aims to replace current containment cap on blow-out preventer with heavier, better-sealing cap which will feed oil from well to floating pipe suspended 90 metres below surface

Pipe will be attached to ship via flexible hose that can be disconnected to allow ship to move out of path of storm and resume operation when weather is calmer

BP still working out how to cap or corral leak while hose is disconnected

**3**

Hose

Floating pipe

SEA BED

Failed blow-out preventer

New manifold

**2**

Cap

"Choke and kill" hoses

"Top kill" manifold

**4**

**4 ENHANCEMENT TO CONTAINMENT CAP**  
BP will reverse "top kill" operation using equipment installed for earlier, failed effort. Instead of pumping in heavy drilling fluid to smother leak, new operation will suck oil and gas from blow-out preventer through hoses and manifold to Q4000 rig, where it will be burned off. New system expected to collect up to 10,000 barrels a day

Drill pipe to Q4000

Flexible hose

BP estimates cost of spill response as of June 10 at \$1.43bn – including containment, relief well drilling, grants to U.S. states on Gulf coast, claims paid, and federal costs. Company says it is too early to quantify other potential costs and associated liabilities