

# CONOCOPHILLIPS CHINA COMMITTED TO BOHAI BAY SAFETY, ENVIRONMENT AND CLEAN UP

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ConocoPhillips China Committed to Bohai Bay Safety Environment and Clean Up

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## Key Messages

- ConocoPhillips expresses regret for incidents
- All 115 cubic meters (700 barrels) of oil released has been recovered or evaporated
- Mineral oil-based mud release from well stopped; recovery of 400 cubic meters (2,500 barrels) from the seabed underway; to be complete by the end of August
- No meaningful impact from this release on shore
- Long-term solutions to prevent potential recurrence underway

BEIJING - ConocoPhillips China had two separate incidents in June in Bohai Bay, China, where approximately 115 cubic meters (700 barrels) of oil were released into the sea and 400 cubic meters (2,500 barrels) of mineral oil based drilling mud (MOBM) were released onto the seabed. ConocoPhillips sincerely regrets the incidents in Bohai Bay, and accepts its responsibilities.

The intermittent oil seep sourced from a natural fault in the seabed near Platform B in the ConocoPhillips China-operated Peng Lai field is contained. The company is implementing plans, under the direction of China's State Oceanic Administration (SOA), to seal the fault.

The June 17 release of oil and MOBM from the Platform C-20 well was completely stopped within 48 hours and the well was permanently plugged. The company is now working diligently to clean up the remaining MOBM from the seabed by the end of August. Droplets of oil have recently been observed seeping intermittently from a small area on the seabed near Platform C. These are being recovered as they occur and the cause is under investigation.

"Any release of oil, no matter how small, is too great, and we will take all appropriate steps to contain and clean up these releases and prevent them from recurring," said Georg Storaker, president, ConocoPhillips China. "No oil from these events remains on the surface of the water of Bohai Bay – all the oil has either been recovered, evaporated or degraded to background levels from naturally occurring action of biodegradation, wave, wind and currents."

ConocoPhillips is committed to ensuring the safety of personnel and the protection of the environment associated with the company's operations. ConocoPhillips China is working closely with the SOA and co-venturer, CNOOC, to address the environmental and operational issues associated with the two Peng Lai incidents. The following paragraphs provide an overview of environmental protection actions, incident descriptions, current status and path forward.

## Environmental Protection

Although we have no evidence that any of the oil sheen itself made it to shore or soiled beaches, ConocoPhillips China crews continue to actively monitor the shoreline daily, collecting potential oil particles for testing to see if any of them match the chemical makeup of the oil released from the Peng Lai B and C platforms. Typically, the particles are coin sized, or two to five centimeters (one to two inches) in diameter.

Over the duration of the incidents, 56 samples have been collected along several thousand kilometers of surveyed shoreline. All of the samples were tested by an independent laboratory and only two samples can be directly linked to the seep on the seabed. Those samples came from an oil containment boom that broke away from the B Platform area and washed ashore. Three additional oil particles have a strong correlation to oil from the C Platform event. The vast majority of the 56 samples collected appear to be similar to fuel oil.

“ConocoPhillips China has worked diligently to patrol the beaches and waterways of Bohai Bay to contain these releases and to confirm their extent,” Storaker said. “The test results to date suggest that there has been a very minimal amount that has reached the shoreline.”

ConocoPhillips China has not seen any demonstrated cases of harm to marine life but the company continues to work with the government and international experts to confirm whether there has been any impact to marine life or fisheries.

## Platform B Incident

On June 4, approximately 18 cubic meters (100 barrels) of oil escaped from a previously inactive, fault – a seep – in the reservoir structure of Bohai Bay near Platform B in the Peng Lai 19-3 field. ConocoPhillips China immediately deployed skimmers, absorbent booms, and other cleanup equipment and worked to reduce reservoir pressure to help stop the seep. Hundreds of personnel have worked around the clock to address the incident. All work was done under the supervision of the SOA.

Upon discovering the seep, which is sourced from a naturally occurring fault and which the company believes may have been activated by reservoir pressure, the company promptly alerted SOA and ConocoPhillips China’s co-venturer, CNOOC, of the incident.

Since this incident, the released oil has either been collected, evaporated, or broken down to background levels by virtue of waves and currents. A seep containment pump system called a steel tent was constructed and placed over the seep area in the 27-meter (90-foot) deep water on July 2.

The main seepage stopped following adjustment of production activities, including actions that reduced reservoir pressure. Smaller, intermittent seeps have occurred since then, and are believed to be residual seeps associated with the initial event. Any gas and oil from these seeps is being captured in the tent containment device on the seabed. This seep event is unusual and is the first such seafloor seepage incident known to have happened in this field.

In late July it was determined that the intermittent seep had shifted approximately eight meters from the original seep location. The company was in the process of repositioning the tent on August 6 when offshore activities were temporarily suspended due to the approach of Typhoon Muifa. Personnel and

equipment have since been remobilized and the containment device has been repositioned over the current seep location.

The estimated volume of hydrocarbons released at the current seep location is less than one liter per day, all of which is immediately captured. We continue to see no evidence of any seepage from the original location.

“While the repositioned containment device is capturing the hydrocarbons coming from the seep, as a precaution, we are building a second, larger containment device that will cover both the current and the original seep locations.” Storaker said.

ConocoPhillips China, with SOA approval, is flowing some of the wells on the wellhead platform B that were originally shut in July 13 at SOA’s direction. The flowing wells are reducing the pressure in the subsurface formation to minimize the risk of additional seepage.

ConocoPhillips China believes that the fault leading to the seep has since naturally sealed. Additionally, the company is implementing plans to ensure the fault is sealed off by pumping cement into various spots along the fault. There may be small intermittent releases of hydrocarbons trapped in the fault itself, which are captured by the containment device, and no more reservoir fluids should be seeping to the surface. ConocoPhillips China believes that the best long term solution to prevent future seepage is to address the issue at the reservoir itself, specifically by sealing the fault and reducing the reservoir pressure.

## Platform C Incident

On June 17, a separate, unrelated incident near Platform C caused the release of approximately 97 cubic meters (600 barrels) of oil and about 400 cubic meters (2,500 barrels) of MOB on the seabed. The source of the leak was due to well C-20 encountering an unexpected high pressure zone within the reservoir. The company immediately alerted SOA and CNOOC of the incident and within 48 hours, a cementing procedure stopped the release and the well was permanently plugged.

Initially, ConocoPhillips China identified only about 180 cubic meters (1,100 barrels) of MOB on the seafloor.

“This quantity was recovered by August 3, well before the August 7 deadline set by SOA,” Storaker said. “However, as divers were conducting additional surveys, an additional 220 cubic meters (1,400 barrels) of MOB were discovered and clean up began immediately.”

ConocoPhillips China has since conducted additional surveys of the area with no additional volumes discovered. Surveys will continue with third-party verification upon completion of the clean up.

“Because MOB is much heavier than water, it has all settled on the seafloor,” Storaker said. “The remaining MOB is not a threat to migrate either to the surface or to the shoreline. It is also important to bear in mind that the cleanup work and the surveys to locate the mud on the seabed are conducted by divers working in very challenging conditions.” The visibility underwater around the Peng Lai field is only about one meter.

There has been no release of material from the C-20 well since June 19 when the well was permanently plugged. However, droplets of oil occasionally rise to the surface as the result of the MOB being disturbed on the seabed during the clean up operations, and the company continues to investigate a

small area on the seabed north of the C Platform where, upon removing MOBMs, small droplets of oil are seen intermittently seeping. Any oil found at the surface is immediately cleaned up.

Since June 19, the volume of material that has been released from the seep at B Platform plus the droplets that rise up at C platform totals only 0.15 cubic meters, or approximately one to two liters per day.

“ConocoPhillips China has dedicated substantial resources to the clean up including more than 900 personnel and more than 30 vessels involved in the response efforts,” Storaker said. “As of August 19, more than 85 percent of the MOBMs on the seabed has already been cleaned up and we expect to have all of the MOBMs cleaned up by the end of the August.”

## Path Forward

Although natural seeps of hydrocarbons are found around the world, they rarely occur due to oil field operations and were previously unknown in the Peng Lai field. Therefore, the seep near B platform was unexpected. Once the seep was identified, the company shut in all injection activities in the area that could have been involved and shortly thereafter, all water injection on B and E platforms was stopped as a precaution and to test the reservoir pressure. As a further precaution the company will test all the injectors in the entire field and only wells proved to be safe will be returned to injection.

ConocoPhillips China is preparing to deliver to the SOA a report reviewing the steps taken to address these incidents and to review forward plans. It will also keep the public apprised of its progress.

“ConocoPhillips China is working with Chinese and international independent experts to review the reservoir fault analysis, validate the permanent seal of well C-20, confirm the MOBMs clean-up and conduct an environmental survey of the areas around the Peng-Lai field,” Storaker said. “Our company takes these events very seriously. We support the goal of the SOA, CNOOC and the people of China for a prompt and thorough clean up, and to taking steps to ensure such incidents do not happen again. We are nearly complete in reaching these targets and will provide further updates in the future.”

For daily updates, please visit our dedicated web site: [ConocoPhillips' China Clean-Up Operations](#)

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CONTACT COPC Media Hotline: (86)10 84538666 ext. 6565