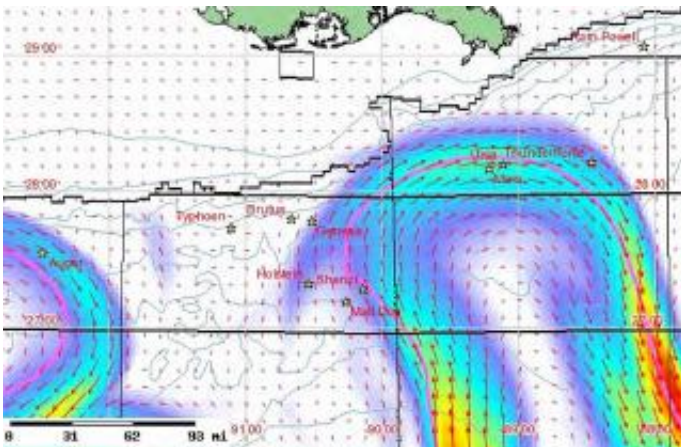


# Satellite data used to warn oil industry of potentially dangerous eddy

March 1 2006



The forecast shows current speeds in the Loop progressively weakening, and the gap between the Loop and Eddy Walker increasing. Credits: Ocean Numerics 2006

Ocean FOCUS began issuing forecasts on 16 February 2006 – just in time to warn oil production operators of a new warm eddy that has formed in the oil and gas-producing region of the Gulf of Mexico.

These eddies, similar to underwater hurricanes, spin off the Loop Current – an intrusion of warm surface water that flows northward from the Caribbean Sea through the Yucatan Strait – from the Gulf Stream and can cause extensive and costly damage to underwater equipment due to the extensive deep water oil production activities in the region.

The Ocean FOCUS service is a unique service that provides ocean current forecasts to the offshore oil production industry to give prior warning of the arrival of eddies. The service is based on a combination of state-of-the-art ocean models and satellite measurements.

Oil companies require early warning of these eddies in order to minimise loss of production, optimise deep water drilling activities and prevent damage to critical equipment.

The Loop Current and eddies shedding from it pose two types of problems for underwater production systems: direct force and induced vibrations, which create more stress than direct force and results in higher levels of fatigue and structural failure.

The impact of these eddies can be very costly in terms of downtime in production and exploration and damage to sub sea components. Information provided by Ocean FOCUS gives industrial operators an accurate and up-to-date analysis of the present situation to support production management decisions.

In addition, Ocean FOCUS forecasts will be used by oil and gas companies planning major operations such as installing new equipment – which are very sensitive to local conditions and may require prolonged 'windows' of low current speed to achieve successful completion.

The Loop Current is presently to the north of its average position, sparking concerns that more eddies could be generated over the next few weeks. The current eddy, dubbed 'Walker', was detected breaking away from the Loop Current in mid February.

Source: European Space Agency

Citation: Satellite data used to warn oil industry of potentially dangerous eddy (2006, March 1)  
retrieved 20 April 2024 from

<https://phys.org/news/2006-03-satellite-oil-industry-potentially-dangerous.html>

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