

# DEEPWATER

## CP SYSTEM TO PROTECT PERMANENT GUIDE BASES: MISSISSIPPI CANYON, GULF OF MEXICO

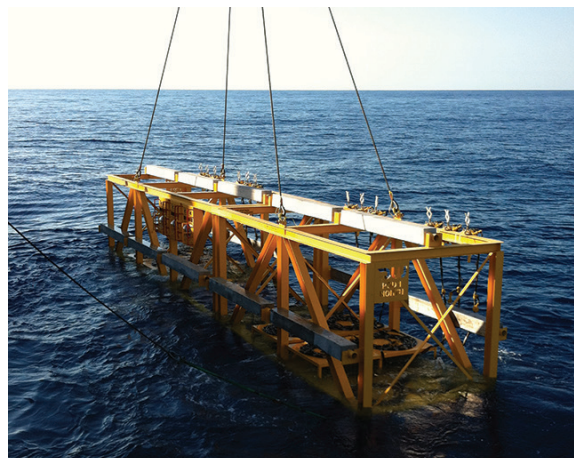
### Deepwater supplied anodes and monitoring to protect 24 subsea PGBs for 45 years

Deepwater Corrosion Services, Inc. provided a cathodic protection (CP) system for the Olympus TLP's wellheads and permanent guide bases (PGBs) installed in the Mississippi Canyon in the Gulf of Mexico (24 total PGBs). The RetroPod™ XL is an anode sled that was deployed from Oceaneering's ROV support vessel, the Ocean Alliance, and installed on the seabed in approximately 3,000 feet of water. This cathodic protection system, in conjunction with the existing PGB anodes, is designed to provide protection for 45 years. Installation time was 30 hours.

Four large anode sleds (RetroPod™ XL) were deployed around the perimeter of the well bay. To reduce the number of subsea lifts, each unit was designed to protect six subsea wells. RetroClamps™ were used to connect each sled to six PGBs on the wells. Each anode sled carries 12,000 lbs. of aluminum anodes arrayed to provide 32 Amperes of CP current during the 45-year service life.

Each RetroPod™ XL has a monitoring station to allow confirmation of CP readings during installation and future integrity surveys. For each asset protected, one SunStation™ readout displays readings from reference electrodes connected to each RetroClamp™. These solar-powered readouts allow the ROV to take CP readings for multiple assets from the perimeter of the field, away from tightly-clustered subsea equipment that can be a hazard for ROV pilots. Also, SunStations™ eliminate the need for a CP probe.

More info at [www.stoprust.com](http://www.stoprust.com)



#### HEAVY LIFT

Each RetroPod™XL is large enough to protect six wells for 45 years.



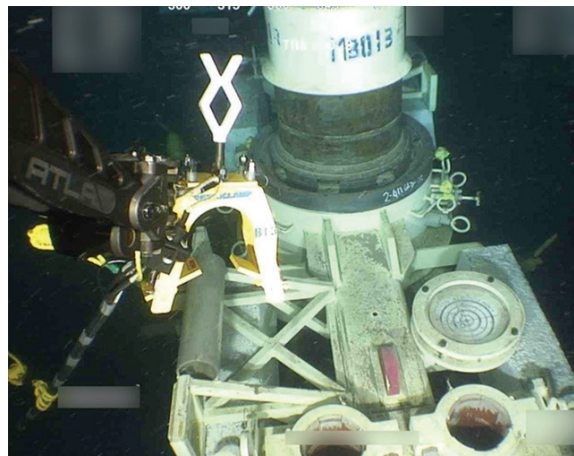
#### SUNSTATION™ MONITORING

Each asset is monitored with a readout that's actuated by an ROV's lights.



#### A BOATLOAD OF CATHODIC PROTECTION

Four RetroPod™XL anode sleds will protect 24 PGBs in the Olympus Field.



#### RETROCLAMP™ IS KEY

The CP and monitoring relies on electrical connectivity via RetroClamps™.