



# U.S. Offshore Energy Model

Confidently manage oil and gas infrastructure risk in the Gulf of Mexico

Oil and gas infrastructure in the Gulf of Mexico is extremely vulnerable to the effects of high waves and severe winds that almost always accompany hurricanes. Tropical cyclones Ivan, Rita, Katrina and Ike destroyed scores of offshore assets, with combined material damage and lost production of approximately \$2 billion, \$7 billion, \$6 billion and \$6 billion respectively<sup>1</sup>. The Gulf of Mexico represents a large concentration of risk in the energy industry, providing seventeen percent of the oil and approximately five percent of the natural gas produced in the United States. The Gulf Coast region accounts for over forty-five percent of total U.S. refining capacity<sup>2</sup>, and with this many are looking for a granular model to assess both on-shore and off-shore facilities in the same policy contracts. In the Gulf of Mexico, quantifying the hurricane risk of property and business interruption damage to oil and gas production facilities requires a specific model that addresses the unique vulnerability exposure of these assets, in addition to the design and pipeline routing infrastructure. The Offshore Energy Model from CoreLogic® offers exactly this—the ability to fully assess prospective risk for hurricanes in the Gulf of Mexico region, highlighting a unique financial model that accounts for the specific terms and conditions of the offshore energy market.

## A Single View of Risk

Hurricanes in the Gulf of Mexico can cause significant insured oil and gas industry losses both on-shore and off-shore, resulting in the need for the P&C insurance industry to be able to best manage the combined aggregate loss potential. The CoreLogic U.S. Offshore Energy Model and the North Atlantic Hurricane Model share the same historical and stochastic event set. The North Atlantic Hurricane Model has approximately 110,000 hurricane events, and of these, approximately 20,000 events span the oil and gas-producing areas of the Gulf of Mexico. These events provide the granular analysis necessary to capture the complex correlation between the on- and off-shore regions.

The Offshore Energy Hurricane Model from CoreLogic provides the P&C insurance industry with comprehensive hurricane risk management that includes:

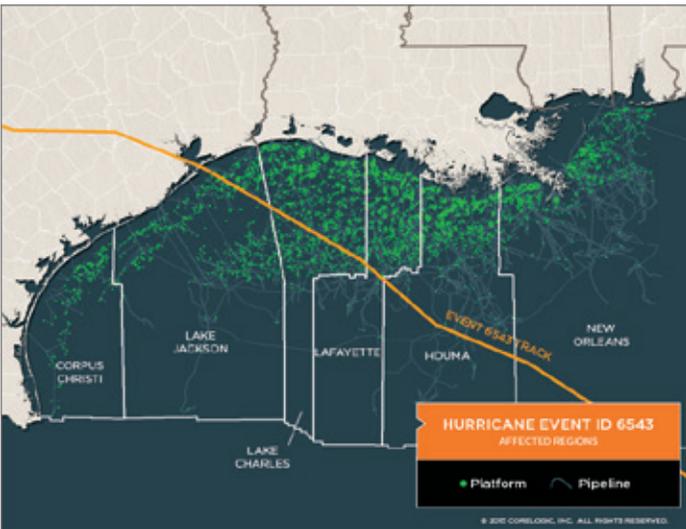
- ▶ High definition model results to help with better risk differentiation
- ▶ Industry-specific financial modeling accounting for the specific terms and conditions in the offshore energy market
- ▶ The ability to model on-shore and off-shore facilities in the same policy contract
- ▶ The ability to aggregate off-shore and on-shore portfolio exposures for a single view of risk
- ▶ A Year-Loss-Table (YLT) that delivers stable marginal and aggregate loss metrics
- ▶ Models validated against recent historical events

CATASTROPHE  
RISK  
MANAGEMENT

The Gulf Coast region accounts for over 45 percent of total U.S. refining capacity<sup>2</sup>.

## Global Catastrophe Modeling Platform

Available through a suite of catastrophic risk management products from CoreLogic, the Offshore Energy Model can be licensed through our global multi-peril catastrophe modeling platform, RQE® (Risk Quantification & Engineering). RQE is a statistically robust simulation platform delivering high confidence outputs. As one of the most comprehensive full simulation Catastrophe Modeling solutions in the market, RQE offers a wide range of analytic outputs allowing for the assessment of catastrophe exposure—both gross and net of reinsurance contracts—that can be used to inform underwriting decisions, pricing, diversification, portfolio accumulations and capital requirements.



When assessing hurricane risk in the Gulf of Mexico, CoreLogic are committed to maintaining basin-wide correlation

## Why Consider CoreLogic?

Increasing exposure to catastrophic events is challenging the P&C insurance industry to revisit existing catastrophic risk management and loss adjustment strategies. With a staff of Ph.D.-level scientists and engineers, we have taken natural hazard risk assessment a step further by developing a proprietary methodology that enables a more granular level of risk management control and reporting. Catastrophe Risk Management from CoreLogic offers a comprehensive look at risk by evaluating probable events, and verifying current and post event impacts.

## About CoreLogic Insurance Solutions

CoreLogic delivers unique and comprehensive data, analytics and services to property & casualty insurance companies—powerful information found at the core of smart decisions. We offer catastrophe risk models worldwide with easy access to extensive data visualization and reports.

<sup>1</sup> Willis Energy Market Report, March 2009

<sup>2</sup> US Energy Information Administration, [http://www.eia.gov/special/gulf\\_of\\_mexico/](http://www.eia.gov/special/gulf_of_mexico/)

FOR MORE INFORMATION, PLEASE CALL 866-774-3282  
OR EMAIL US AT [hazardrisk@corelogic.com](mailto:hazardrisk@corelogic.com)