

Chevron's successful deployment of a capping stack in the Gulf of Mexico

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Chevron, in collaboration with the Marine Well Containment Company (MWCC), successfully conducted a capping stack deployment exercise under the oversight of the Bureau of Safety and Environmental Enforcement (BSEE). The exercise, initiated on May 19, 2023, and concluding on May 23, 2023, was designed to test industry readiness for addressing subsea well blowouts in the Gulf of Mexico. This unannounced drill demonstrated Chevron's ability to mobilize, deploy, and install a capping stack at a simulated wellhead located over 6,200 feet below the ocean surface and more than 500 miles from MWCC's shore base.

The exercise adhered to the stringent requirements of BSEE's Blowout Preventer System and Well Control Rule, finalized in 2019. Chevron utilized MWCC's advanced source control and containment capabilities, including access to well containment equipment, a skilled technical team, and response protocols. MWCC's comprehensive infrastructure includes four capping stacks and two shore bases along the Gulf Coast, enabling rapid mobilization and deployment. For this exercise, MWCC's 400°F-rated capping stack underwent final testing and preparation at its Ingleside, Texas, shore base, with oversight from Chevron and BSEE, before being installed offshore.

A key planning effort included use of Chevron's "Strike Plan," a detailed checklist that outlined roles, responsibilities, and procedural reviews. The plan emphasized team alignment through RASCI charts and robust Management of Change (MOC) processes. Critical steps during the planning phase included hazard analyses across four operational nodes—suction pile installation, mobilization and demobilization, open water operations, and capping stack operations. Additionally, Chevron coordinated with partners such as TechnipFMC, Kiewit, and Delmar Systems to prepare the equipment and procedures for the drill.

The exercise commenced with the mobilization of the Harvey Blue Sea, a multi-service vessel equipped with a heave-compensated crane capable of handling the capping stack, which weighed approximately 180,000 pounds. The stack was transported to the offshore site, where it was installed on a simulated wellhead. Remote Operated Vehicles (ROVs) operated from the vessel ensured precise closure of the capping stack's valves, simulating the process of "shutting in" a well. The system was pressure tested to 13,000 psi, successfully demonstrating its operational integrity.

Chevron, MWCC, and BSEE maintained alignment through live video feeds, collaborative decision-making, and real-time problem-solving. The exercise highlighted the importance of preplanned deployment procedures, adaptable equipment configurations, and clear communication channels. Innovations such as SpaceX's Starlink system enhanced offshore communication, while MWCC's rigorous training and maintenance programs ensured operational readiness.

This exercise underscores Chevron and MWCC's commitment to environmental safety and preparedness in the Gulf of Mexico. By leveraging advanced technology, robust planning, and industry collaboration, the exercise demonstrated the oil and gas sector's ability to respond effectively to subsea well control incidents.