Abstract

The marine salvage and commercial diving industries have increasingly been sought out to prevent oil spills from submerged shipwrecks and to proactively detect and recover spilled oil below the surface once a subsea spill occurs. In recent years, underwater oil recovery techniques have advanced from predominantly surface-supplied diver installed vacuum or pumping systems in relatively shallow waters to the use of saturation diving systems and remotely operated vehicles at greater depths. Underwater oil detection technologies have advanced significantly, permitting the accurate detection of spilled oil in the water column, on the bottom and in the subsurface. Additionally, neutron backscatter technology has been successfully used to detect trapped oil within sunken shipwrecks. This presentation will provide the basics of underwater oil spill response operations and an analysis of recent technological advances available to detect and recover oil at depth. Multi-beam sonar, real-time mass spectrometry, saturation diving systems, diver-operated recovery systems, and remotely operated vehicle systems will be discussed. Recent case studies, including lessons learned during the Deepwater Horizon oil spill response operation, will frame this presentation of advances in subsea oil detection and recovery equipment.

Biography

Jim Elliott serves as Vice President of Salvage Operations for T&T Marine Salvage, Inc. in Galveston, Texas. He is responsible for managing worldwide marine salvage, heavy lift, commercial diving and emergency response operations. A former Coast Guard Federal On-Scene Coordinator, Certified Type-1 Incident Commander and Master Diver with over 25 years of experience in maritime response operations, Mr. Elliott holds a Bachelor of Science in Environmental Management, a Masters of Environmental Policy and a Master of Arts in National Security and Strategic Studies. A Certified Environmental Professional, he is a recipient of the Texas Association of Environmental Professionals Regulator of the Year Award and over 70 U.S. Coast Guard awards.