At Woods Hole Group, we place our emphasis on quality, safety, and customer service. We have decades of experience supporting offshore oil and gas requirements for exploration and production operations. We also support pipeline and transportation design through measurement and analysis projects extending from ports and harbors to deep water. Our Oceanography & Measurement Systems team includes a diverse staff of design engineers, field engineers and technicians with international experience, as well as world-class oceanographers and ocean engineers with both research-institution and practical industrial experience. Our client base is worldwide and includes major and independent oil and gas companies, engineering companies, drilling companies, port and harbor authorities, and government agencies. Woods Hole Group also provides Coastal Engineering and Applied Ecological services.

Clients rely on our team to provide turn-key services from design, integration and deployment of measurement systems, to data telemetry and quality control, scientific analysis, and engineering/operational guidance. The team adheres to schedules and budgets, operates according to approved HSE protocols and quality standards, and is responsive to customer needs.

Woods Hole Group has completed nearly 2,000 projects to the satisfaction of our customers in more than 25 years of doing business.

Learn More About the WatchDog-1000

For more information about WatchDog-1000, please visit www.WoodsHoleGroup.com/WatchDog-1000. View our video and see how it works. Or, call us to discuss your custom application requirements.
Captures the most accurate data critical to safe operations and sound engineering design of oil and gas platforms.

WatchDog-1000 monitoring system is a rugged, moored metocean monitoring system independent of oil platforms that is open-ocean survivable and reconfigurable to provide ocean current data from the near-surface to deep-water.

WatchDog-1000 is completely customizable to offer a wide variety of data acquisition solutions including wind, wave, and current profiles in real-time (for example, every twenty minutes 24/7/365) in a variety of environments. The system’s surface buoy, integrated with sub-surface and mooring components, requires no physical connection to the oil platform, provides unobstructed instrumentation for high quality data, and enables easy servicing. The surface buoy is completely self-powered by solar. One system strategically placed may serve the Bureau of Ocean Energy Management’s Notice to Lessee (NTL) real-time data requirements for multiple platforms.

WatchDog-1000 is designed, manufactured, tested, deployed, and maintained by Woods Hole Group around the world in waters that is open-ocean survivable and reconfigurable to provide ocean current data from the near-surface to deep-water.

REAL-TIME SYSTEMS FOR OFFSHORE OIL & GAS OPERATIONS
State-of-the-art real-time monitoring systems provide the means to measure ocean current profiles in ultra-deep water, surface currents, waves and winds. Real-time data are updated at frequent programmed intervals and displayed on the host facility or transmitted to multiple locations as needed on shore. The reasons for collecting current profiles are wide ranging - from satisfying regulations (MMS NTL No. 2009-G02 in the Gulf of Mexico) to assisting operations by monitoring sometimes rapid changes in the strength of currents associated with mesoscale features such as eddies – to collecting data to improve regional databases used in design.

Along with deepwater applications for the offshore oil and gas industry, WatchDog systems are configurable for:

- Port & Harbor Monitoring
- Global & Integrated Ocean Observing Systems (GOOS/IOOS)
- Marine Renewable Energy Project Planning & Design
- Defense & Maritime Security
- Ocean Research

The surface buoy instrumentation suite may consist, for example, of a 300 kHz Acoustic Doppler Current Profiler (ADCP) looking downward to a depth of 100 meters, a directional wave sensor, meteorological sensor package, a data acquisition and logging system, and dual redundant telemetry systems.

The subsurface float may contain dual 75kHz ADCPs looking up and down in the water column, a data acquisition system, and acoustic telemetry equipment to communicate with the surface buoy. This combination of ADCPs and telemetry provides high-quality ocean current profile data from near-surface to 1000m depths, in real time (20 minute averages). Additional subsurface current meters can be placed on the mooring line and connected by inductive telemetry to the subsurface float. Sufficient battery power is provided for the subsurface instruments to enable operation for more than 1 year without need for recovery of the mooring.

When the telemetered data have been received on shore, they are processed, archived and displayed on a customer-specific real-time website with protected access. The data can be transmitted automatically to the National Data Buoy Center as required by the NTL, and are also available to the customer in digital form.

Real-Time System Specifications

SENSORS AND MOORING DESIGN
A typical configuration of the WatchDog-1000 monitoring system consists of a 3-meter diameter foam-hull surface buoy and an instrumented subsurface float at 450 meters, in a compound mooring configuration.

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