

The Offshore Oceanography Center

Oceanography and Offshore Oil and Gas

Deep water presents new challenges to offshore operators. Understanding the deep ocean is a prerequisite to good design, construction, operations and maintenance solutions. It is also a key to the management of risk and the ability to adequately steward the physical and biological environment.

Successful investments in deep water can only be delivered by world class operators. They need access to world class research and advanced capabilities in oceanography and ocean engineering for:

- Informed decision-making
- Strategic planning
- Risk mitigation
- Baseline and environmental monitoring
- Technology assessment
- Emergency response
- Assessment and mitigation of accidents
- Conservation and restoration

A deep understanding of the ocean is both the technical underpinning and a management obligation of successful offshore activities. It is good business.

The Vision

We envision an education and research partnership with a permanent in-country presence that brings together the world leading Woods Hole Oceanographic Institution and the best local academic and industrial expertise in oceanography and ocean engineering to serve the Brazilian offshore industry. This collaboration will provide immediate and credible capability for today's offshore activities, identify technology needs, facilitate innovative technology development and help create the next generation of Brazilian ocean scientists and engineers.

The Offshore Oceanography Center

The OOC is a center of excellence to be established in Brazil by the Woods Hole Oceanographic Institution (WHOI) with local university and research partners to fulfill the need for oceanographic expertise in support of deepwater offshore activities. The center will be a local resource for oceanographic science, advanced technology and environmental sustainability, with two main thrusts:

Training

Enhance oceanographic understanding across the operator's organization

- **Executive Education** – designed to give decision makers and thought leaders needed understanding of the offshore environment, basic oceanography, deepwater technologies and risk.
- **In-depth Seminars** – geared towards timely and relevant topics across the oceanographic spectrum, taught by subject matter experts

- **Exchanges** – Host scientists and engineers at home laboratories or embed ocean scientists and engineers within the oil and gas operator as a means of information sharing and education.
- **Access to Ongoing Research** – Obtain regular updates on the results of research projects from participating institutions

Research, Development and Engineering

Perform research targeted to specific problems, questions and needs

- Ocean observing networks
- Next generation undersea vehicles
- Deepwater systems for mapping, sampling, leak detection and communications
- Spill response
- Laboratory analyses
- Data management
- Environmental remediation

Getting Started

A series of seminars and reciprocal visits will be held to open the dialogue, create a mechanism for information sharing, establish areas of mutual interest and identify priorities. These exchanges will facilitate the founding sponsorships and partnerships for the OOC.

About Woods Hole Oceanographic Institution

The Woods Hole Oceanographic Institution (WHOI) is a private, non-profit institution dedicated to research and education in the ocean sciences and engineering. Founded in 1930, WHOI today has a staff of 1,000 and an operating budget of \$200+ million. Its operations are funded by the U.S. Government, foundations, industry and private donations.

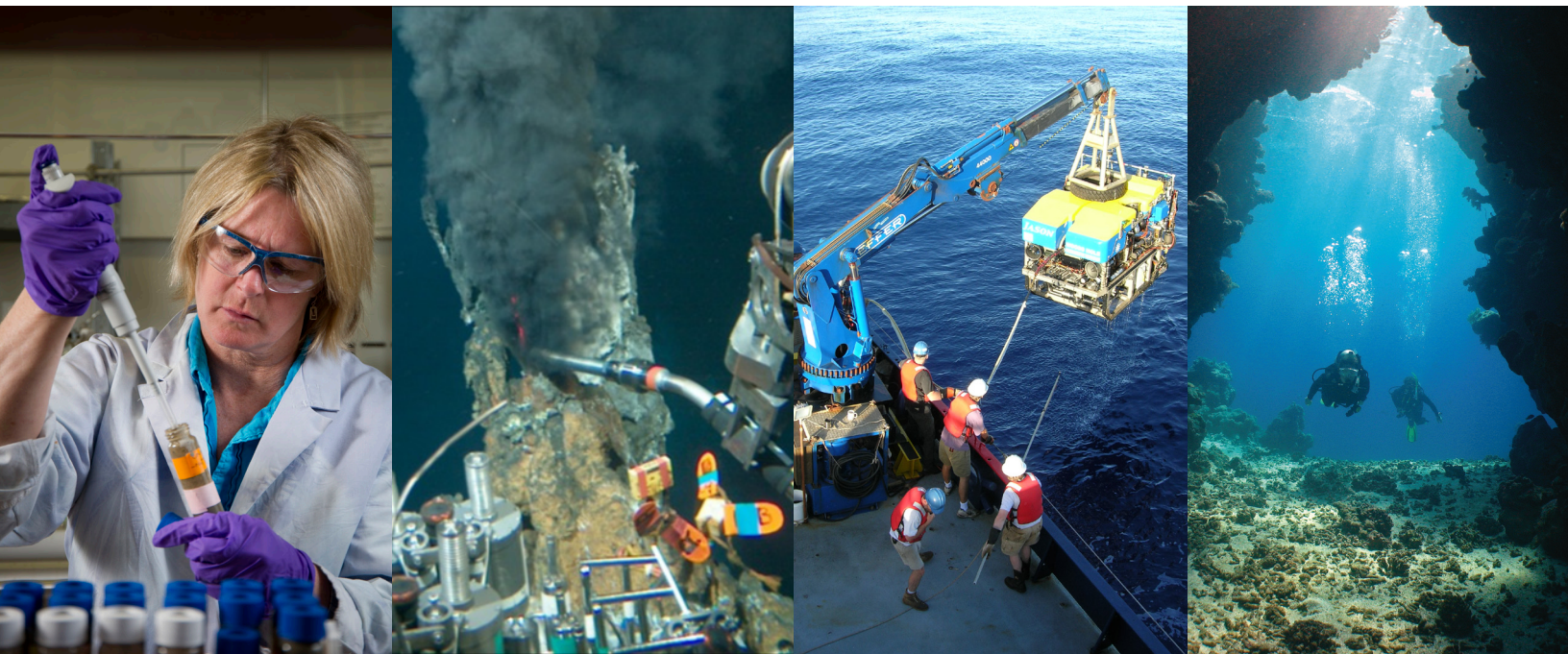
WHOI is distinguished by its singular focus on ocean science and by the independence with which its scientists and engineers pursue their research. This creates an extraordinary depth and breadth

of knowledge and capability in oceanographic research and education along with a reputation for objective, unbiased scientific research. The Institution combines scientists studying complex questions about how ocean systems work and relate to human society, engineers who invent and deploy new tools and technology, and research vessels and undersea vehicles that provide unparalleled access to the sea.

WHOI's engineering and seagoing capabilities have historically presented innovative tools and methods for ocean science research.

The Institution operates two ocean-going research vessels, the R/V *Atlantis* and *Knorr*, and the coastal research vessel R/V *Tioga*. WHOI also operates deep-sea exploration vehicles for the U.S. oceanographic community, including the Deep Submergence Vehicle *Alvin*, the remotely operated vehicle *Jason*, and the autonomous vehicle *Sentry*.

WHOI conducts a joint PhD degree program with the Massachusetts Institute of Technology. Alumni of the MIT-WHOI Joint Program have gone on to become international leaders in oceanography.



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