

# SEISMIC SURVEY VESSEL

## Porpoise

### Description

The primary objective of the *Porpoise* is to investigate the formation of rocks, oceanographic trenches, and other subsea geology that could affect the lives of humans and the marine environment through seismic survey.

### Seismic Survey

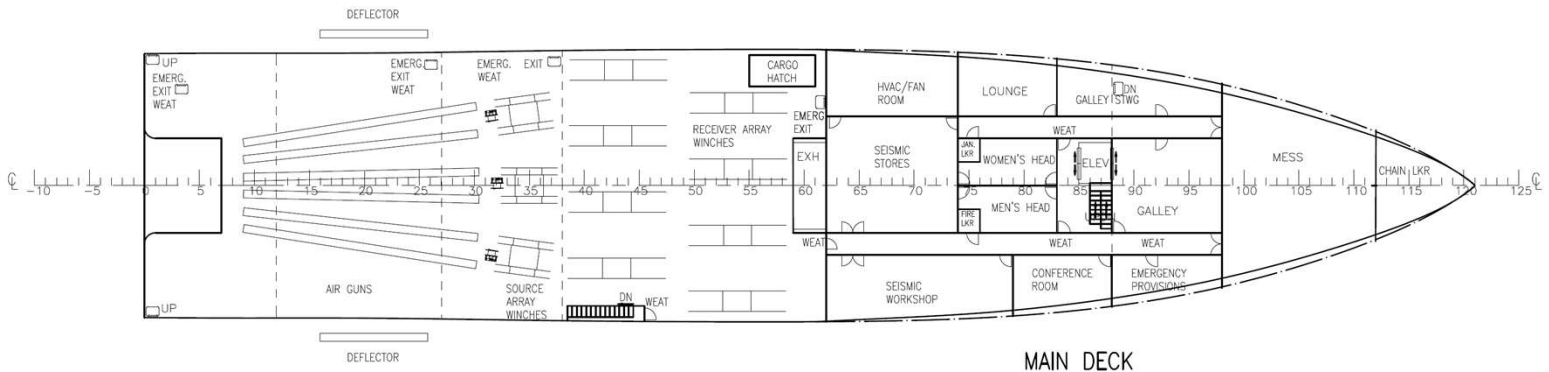
Seismic images will be acquired by generating a signal using a compressed air energy source and detected/recorded with a series of hydrophones streamed by the vessel.

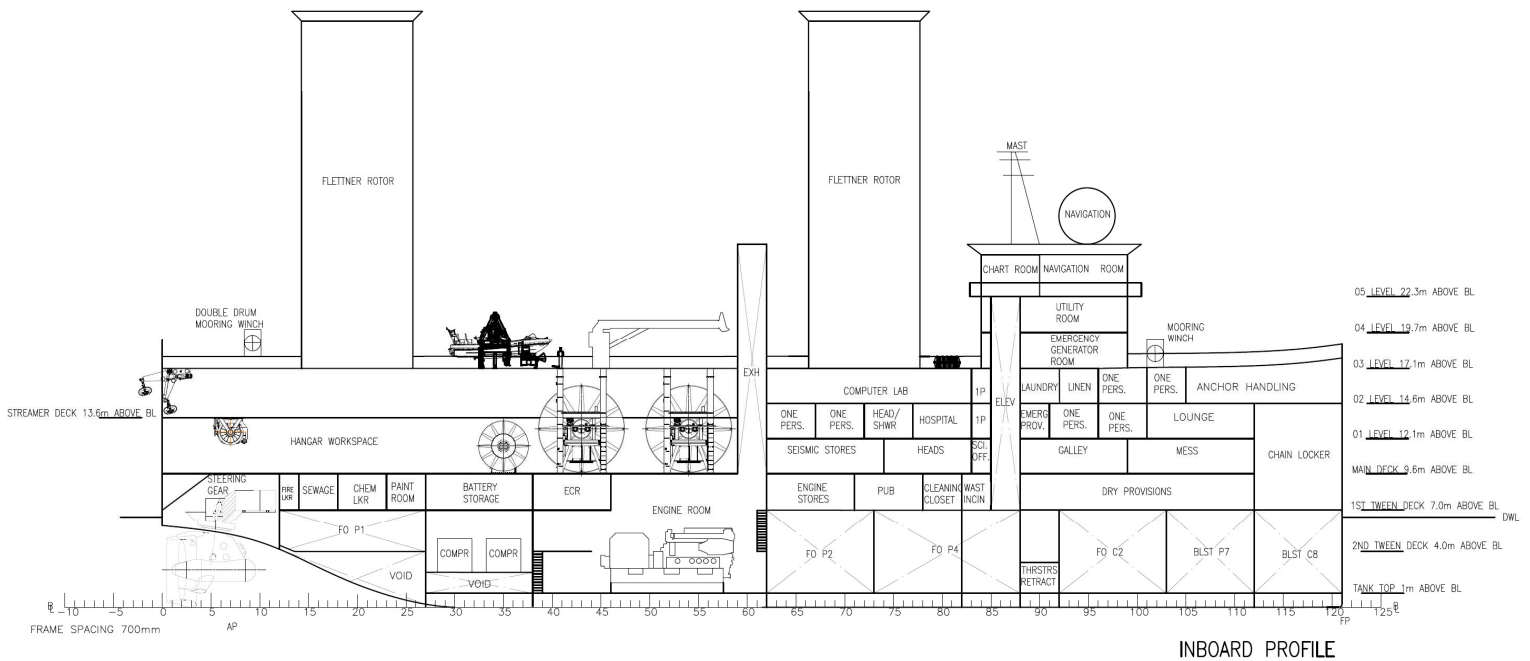
### Regulatory Requirements

Det Norske Veritas, Rules for Classification:  
Ships (DNV-RU-SHIP)  
IMO's Intact Stability (IS) Code  
SOLAS 1974

### Technical Specifications

LOA: 84.7m  
LWL: 80.7m  
Beam: 18m  
Design Draft: 6.5m  
Depth: 18.3m  
Design Speed: 12kts  
Survey Speed: 4.5kts  
Capacity: 40 people  
Endurance: 60 days, 8,000 nm  
Service life: 30 years  
80MT Bollard Pull





## Hull Form

An axe bow was chosen to reduce resistance and water spray on deck and maximize deck space.

## Powering/ Propulsion

- 3x Wartsila 16V26 5220kW Diesel Electric Generators
- 2x ABB 5500kW DZ1400P Azipods
- 2x Wartsila 1000kW LMT CS175MNR Azimuthing Bow Thrusters
- 2x Flettner Rotors for emissions reduction

## Research Facilities

The seismic hangar spans three decks on the aft end of the vessel and houses all the winches and streamers. A computer lab and seismic storage room is included nearby.

## Electrical Plant

- 15660kW of total power
- 16 2MW Cell Corvus Orca Energy Battery Bank
- AC 480V

## Accommodations

- 40 single berths
- Gymnasium
- Pub
- Lounge

## Seismic Machinery

- 8x hydrophone streamers
- 6x air guns
- Single-beam side scan sonar
- Multi-beam side scan sonar
- Water sampler
- Magnetometer

## Deck Machinery

- 1x Deck Crane
- 2x Fast Rescue Boats
- 2x Life Rafts



# OUR TEAM



**Jack Kirk**

**Hometown:** Millbury, MA

**Internship Experience:**

New England Boatworks  
Donald L. Blount and Associates  
Shipwright LLC

**At Webb:**

Sailing Teams  
Honor Council Junior  
Pub Chair

**Career Plans:** Naval Architecture



**Kira Shaw**

**Hometown:** Pennington, NJ

**Internship Experience:**

Metal Shark Franklin Shipyard  
Shipwright LLC  
ReconCraft  
General Dynamics NASSCO

**At Webb:**

Junior Class President  
Women of Webb Chair  
Dinghy Sailing Team  
Art Club Chair

**Career Plans:** Offshore Energy



**Cole Matthes**

**Hometown:** Central Valley, NY

**Internship Experience:**

Detyens Shipyard  
Quantum Marine Stabilizers  
USCGC Lilac  
Shipwright LLC

**Career Plans:** Ship Design and  
Construction



**Deck Uttmark**

**Hometown:** Brooklyn, NY

**Internship Experience:**

New England Boatworks  
Persak & Wurmfeld  
General Dynamics NASSCO

**Career Plans:** Something in  
Shipping/Finance

