



# WELL TESTING SERVICES

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# SEA MANATEE

The Sea Manatee is IAL's dedicated mobile offshore well testing platform, purpose-built to deliver safe, efficient, and compliant operations in offshore environments. Designed to handle a wide range of well testing requirements, this barge integrates advanced process equipment, robust safety systems, and modern data acquisition technology.

## Key Features:

- Dimensions: 150 ft x 35 ft x 8 ft
- Mooring: Four-point anchoring for stability during operations
- Storage Capacity: 1,000 BBL
- Processing Capability: Up to 3,000 BBL/day and 3 MMSCFD gas
- Separator: Two-phase unit rated at 720 psi for accurate oil/gas separation
- Crude Handling: Suitable for heavy crude (> API 10) with heating capability
- Safety Systems: Firewater pump, foam system, wheeled extinguishers, ESD integration
- Metering: Coriolis and turbine meters for precise flow measurement
- Utilities: Dual 75 kVA generators, air compressors, and auxiliary systems



# MOBILE WELL TESTING SERVICES

AT IAL we deliver comprehensive offshore well testing solutions designed for efficiency, safety, and compliance. Our Mobile Test Barge enables rapid deployment to offshore assets, minimizing downtime and optimizing production evaluation.

## Core Capabilities Include:

### Production Handling:

Inlet manifolds and segregated oil & gas outlets feed a two-phase separator rated for 720 psi, handling up to 3,000 BBL/day and 3 MMSCFD.

### Metering Accuracy:

Equipped with Coriolis liquid meters, turbine and vortex gas meters, and advanced BS&W ultrasonic technology for precise measurement of oil, gas, and water cut (0-100%).

### Safety Systems:

Integrated Emergency Shutdown (ESD) with level and pressure sensors, firewater pumps, foam units, flame arrestors, and gas/heat detection ensure operational integrity.

### Utility Support:

Onboard generators, air compressors, and heaters for heavy crude (<12 API) maintain process reliability.

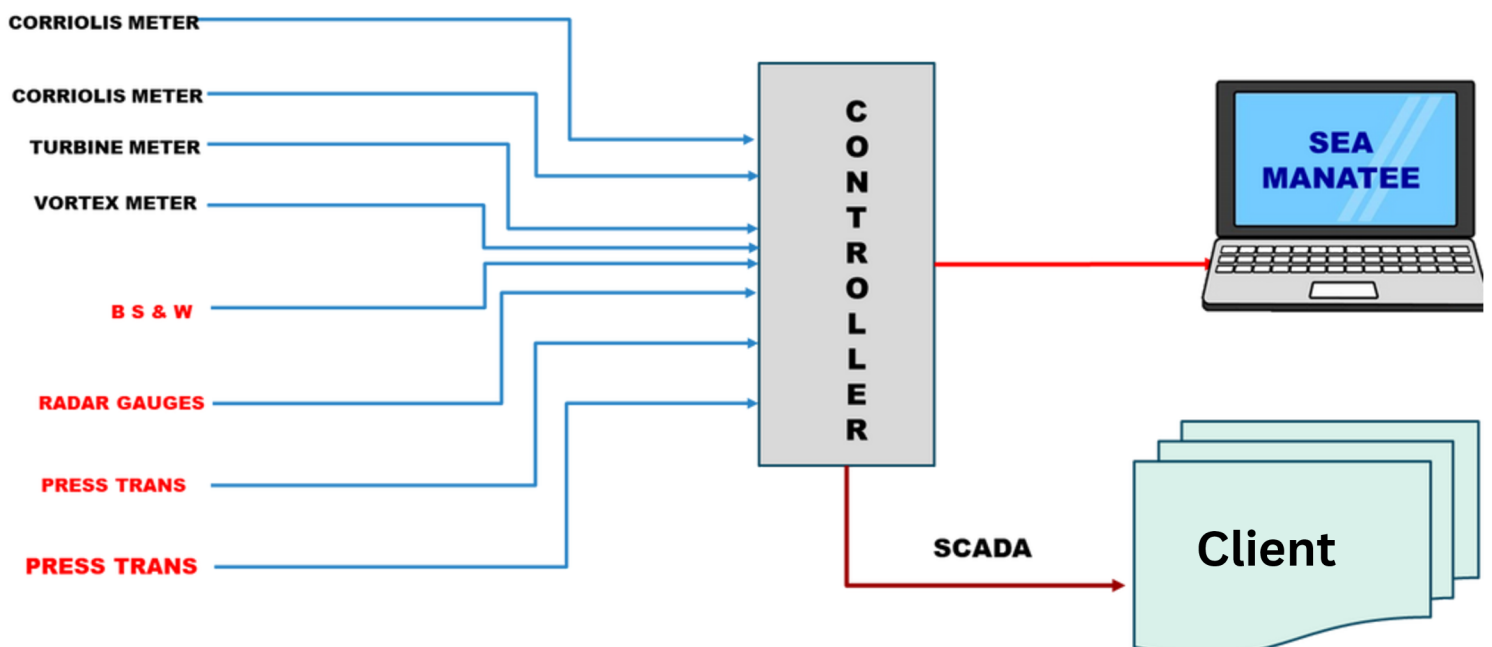


# INSTRUMENTATION & DATA

Our Mobile Offshore Well Testing Services are supported by a robust instrumentation and control architecture designed for accuracy, safety, and real-time visibility. The diagram below illustrates how critical measurement devices interface with our centralized controller.

## System Overview

- Measurement Inputs:
- Coriolis Meter – Mass flow and density for liquid hydrocarbons
- Ultrasonic Meter – Non-intrusive flow measurement for multiphase streams
- Turbine & Vortex Meters – High-accuracy gas flow monitoring
- BS&W Analyzer – Water cut and sediment analysis for crude oil
- Radar Gauges – Precise tank level measurement
- Pressure Transmitters – Real-time pressure monitoring at key process points



# SAFETY & COMPLIANCE

Safety is the foundation of every offshore well testing operation. Our systems are designed to meet API RP 14C and international standards, ensuring maximum protection for personnel, equipment, and the environment.

## **Emergency Shutdown (ESD):**

Automated system with level and pressure sensors (LC, LSH, PSHH/PSHL) that triggers alarms and full shutdown when limits are exceeded.

## **Pressure Protection:**

Relief valves on major equipment and rupture discs as secondary safety measures.

## **Fire Safety:**

Firewater pump and monitors, foam system, wheeled extinguishers, flame arrestors, and pressure vacuum valves for vent protection.

## **Detection Systems:**

Continuous monitoring for hazardous gases ( $H_2S$ ,  $CO$ ,  $CO_2$ ) and heat/smoke detection throughout operating areas.



# SUPPORT VESSELS

## **Sea Porpoise:**

Anchor handling vessel with heavy-duty crane and winch.



## **Sea Lion:**

Support tug and egress vessel for towing and emergency response.



## **Sea Ray:**

Dive and survey vessel for subsea inspection and maintenance.



# LET'S DISCUSS SOLUTIONS

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## INTEGRATED SOLUTIONS

- ✓ Valve Technology
- ✓ Wellhead Solutions
- ✓ Tubular Services
- ✓ Equipment Services
- ✓ Corrosion Solutions
- ✓ Fabric Maintenance
- ✓ **Marine Services**

