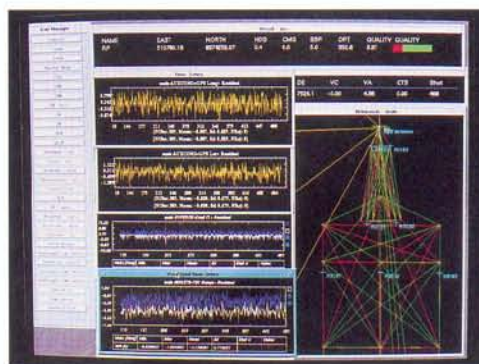


M.V. SIMON LABRADOR

This vessel is equipped to gather multi-source, triple or quadruple streamer 3D seismic data using fully proven recording technology. The Labrador incorporates 1000 channel recording, a full multi-system positioning net for deployed equipment, and is optionally equipped for full navigation and 3D/2D seismic processing.



RECORDING SYSTEM

- Syntron MLTP digital recording system, 1000 channel capability and 3480 cartridge recording
- Teledyne designed low-noise streamer incorporating 12.5m/25.0m group lengths
- Enhanced seismic QC system developed jointly by Horizon and Syntron
- QC displays via high resolution monitors and 24" Oyo plotter
- Up to 200m spread between streamers
- Horizon's 'CAPTURE' high volume real-time seismic data port

ENERGY SOURCE

- Multi float deployment system
- High output clustered sleeve airgun arrays
- Horizon ISC source controller for synchronisation and monitoring
- Four Hamworthy and two LMF air compressors

NAVIGATION SYSTEMS

- Fully integrated 'SPECTRA' marine navigation system P2/91 and real-time P1/90 files
- All available positioning information (DGPS, radio-navigation, acoustics, compasses and Lasertrak) used for real-time steering and coverage displays
- All raw navigation recording (available for subsequent analysis)
- Extensive real-time and end of line QC analysis available via 'SPECTRA'

VESSEL DETAILS

GRT:	2809
Length:	80.2m
Beam:	16.8m
Cruising Speed:	14.0 knots
Certified Helideck	
Accommodation:	45 maximum

The Labrador has a large fully equipped afterdeck for safe rapid deployment of overside equipment. Various clustered sleeve airgun array options are available, configured either as compact dual sources for 3D surveys or various spatial options for 2D. Streamers are deployed from high efficiency low drag diverters. Seismic recording, source control and seismic navigation facilities are integrated within a single control room.

A fully integrated network solution (P1/90) is derived from all positioning sensors (DGPS, RGPS, radio-navigation, Lasertrak, compasses, acoustics, etc.) utilising Concept Systems' SPECTRA. This is used by the real-time binning system (Concept Systems' REFLEX) for coverage estimation.

Seismic source control, synchronisation and monitoring are performed by the Horizon ISC (integrated source controller) and SHM (source hydrophone monitor). The former configures arrays and controls individual gun timing using the latest SV-3 solenoids and sensors. Near-field signatures for each cluster are monitored by the SHM.

The SYNTRAK digital modules and associated recording system are reliable and flexible in use, usually configured for 12.5m group lengths but with comprehensive array forming options onboard. Extensive first line QC facilities are available within each of the areas of navigation, source performance and recording system. These include real-time on screen displays, graphical plots, histograms and post-line analyses. The UNIX network provide interconnection and external access to these systems.

Horizon's CAPTURE interface provides a tape 'imaging' capability between SYNTRAK and the recording medium, for access by seismic processing systems to the SEG D format records.

INMARSAT communications have been enhanced by a 'hi speed' 64 Kb capability for offloading data samples.

Optional onboard navigation processing is available using Concept Systems' SPRINT offering valuable benefits in overall turnaround time and through feedback to binning and seismic processing systems.

Onboard seismic processing is available with various configurations capable of:

- QC of acquisition either in 2D or 3D senses
- Production of a low fold 3D migrated cube
- Full onboard processing of 2D or 3D data

The capabilities and benefits of onboard processing are described on a separate sheet.