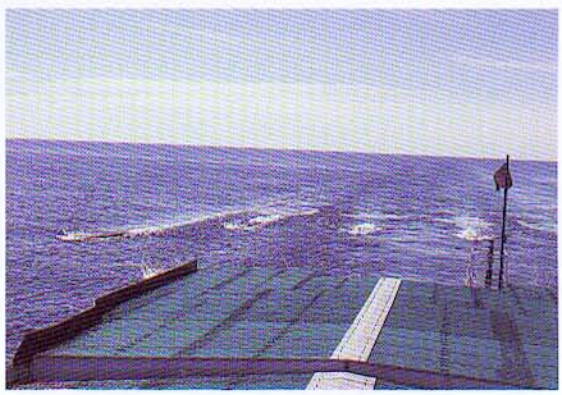
M.V. PACIFIC HORIZON

This vessel is equipped to gather dual source, dual streamer 3D seismic data using fully proven recording technology. Pacific Horizon 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.



HORIZON
EXPLORATION LTD

RECORDING SYSTEM

- Input/Output Inc 1024 channel 24 bit recording system in SEG D format on 3480 cartridges
- Input/Output Inc reduced diameter digital telemetry streamer with 12.5m spacing
- QC displays via high resolution monitors and 24" Oyo plotter
- Up to 100m spread between streamers
- Horizon's 'CAPTURE' high volume real-time seismic data port offers extensive QC facilities

ENERGY SOURCE

- Multi float deployment system
- High output clustered sleeve airgun arrays
- Horizon ISC source controller for synchronisation and monitoring
- Three Joy 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 recorded (available for subsequent analysis)
- Extensive real-time and end of line QC analysis available via 'SPECTRA'

VESSEL DETAILS

GRT:	1473
Length:	76.5m
Beam:	12.6m
Cruising Speed:	12.0 knots
Accommodation:	37 maximum

The Pacific Horizon 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 Input/Output Inc MSX 24 system combines 24 bit low power consumption electronics modules with high reliability dual fibre optic transmission paths. Read after write monitoring of seismic data is standard.

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 MSX 24 and the recording medium, for access by seismic processing systems to the SEG D format records.

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

Navigation processing via high speed link 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.

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