

TRANSITION ZONE CAPABILITY

Horizon Exploration Ltd can now complement deep and shallow water marine acquisition with a highly cost effective transition zone capability. The use of digital telemetry bay cable technology avoids the limitations inherent in conventional hard wired or radio telemetry based systems.

A fully waterproof plug-in system enables a variety of sensors to be deployed, including gimballed geophones for dual sensor OBC operations. Source options include the use of the Caribbean Horizon as source vessel, in combination with a separate airgun pontoon and explosive charges emplaced using flushing or drilling techniques.



RECORDING SYSTEM

- SYNTRAK 480 digital recording system, 480 channel capability and 3480 cartridge recording
- Telemetry modules suitable for bay cable use in environments from dry land to water depths in excess of 50m
- System diagnostic module for rapid fault finding

BAY CABLE / OBC

- Robust, lightweight telemetry cable
- Station spacings up to 40m
- High integrity underwater connectors
- Flexible configurations, long line or swathe coverage

RECEIVER OPTIONS (TYPICAL UNITS)

- Mark Products P-44 Hydrophone operational to 75m water depth
- Mark Products L-10 Geophones mounted in MC-10 amphibian cases
- Mark Products G-2 Gimbal mounted geophone

ENERGY SOURCE OPTIONS

- Clustered sleeve guns deployed from M.V. Caribbean Horizon
- Sleeve guns deployed from pontoon
- Shothole charges - flushed or drilled

ON SITE SEISMIC PROCESSING (OPTIONAL)

- ProMAX software running on IBM RISC 6000 hardware for QC and evaluation purposes

Transition zone operations are, by their very nature, the most complex types of seismic survey, calling for a variety of techniques depending on environmental conditions. Horizon Exploration can match technique to conditions to provide cost effective coverage.

Use of digital bay cable telemetry overcomes the signal loss and reliability problems of analogue systems without the channel limitations and licensing difficulties of radio telemetry. Alternate sensors can be deployed at the station positions using a high integrity plug system waterproof to more than 50m. Dual sensors to handle water column effects can also be accommodated.

Source type can be tailored to the environment with use of a specialist vessel like the Caribbean Horizon to deploy a powerful clustered sleeve airgun source, or explosive charges if these are more suitable.

Specialist installations have been put together for special projects including a self propelled, towed streamer, sleeve airgun equipped barge on a freshwater lake 400 kilometres from the sea.

The use of different source and receiver types within a single TZ survey makes the deployment of a field processing unit critical. During the initial testing phase, and then for QC purposes throughout the acquisition stage, an Horizon seismic processing system can prove its worth many times over.