



video transcript

# ocean bottom nodes in action

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human energy®

## Voiceover

What if we could shoot seismic images more safely and get sharper, more complete data? Ocean bottom nodes technology does just that. It places hundreds of nodes the size of a suitcase in neat rows atop discoveries and developed fields. Positioned by remotely operated vehicles, the nodes nestle harmlessly beside platforms, sea-floor wells and pipelines.

Laying out hundreds of nodes – each with battery, clock, geophones and other components – can take weeks. After the nodes are deployed, a source boat tows a seismic source array that sends a burst of energy into the subsurface, which bounces off different layers of rock and is recorded as seismic reflections in the nodes.

In areas where complex geology like salt or volcanic layers hide oil and gas deposits, the source boat sweeps outside field boundaries to collect wide and full azimuth seismic data. OBN technology allows us to safely pass closer to facilities than could a conventional streamer vessel with its wide swath of receivers in tow.

These stable nodes catch reflected waves in an orderly grid, enabling us to gather clean, high-fidelity data without gaps in coverage. They also improve repeatability in 4-D seismic, which compares surveys years apart to see how reservoir fluids move during development. This information help us see where to add wells, how to optimize facilities and we can use them to record data from exactly the same spots, unlike conventional streamers.

Bottomline? OBN data gives Chevron a clearer structural image without the noise of conventional data – helping us see past barriers of complex geology to better estimate a reservoir’s potential. Chevron has completed node surveys in the North Sea, U.S. Gulf of Mexico, West Africa, Brazil and Northwest Australia.