REGIA
Marine Seismic Survey

# What is a seismic survey?

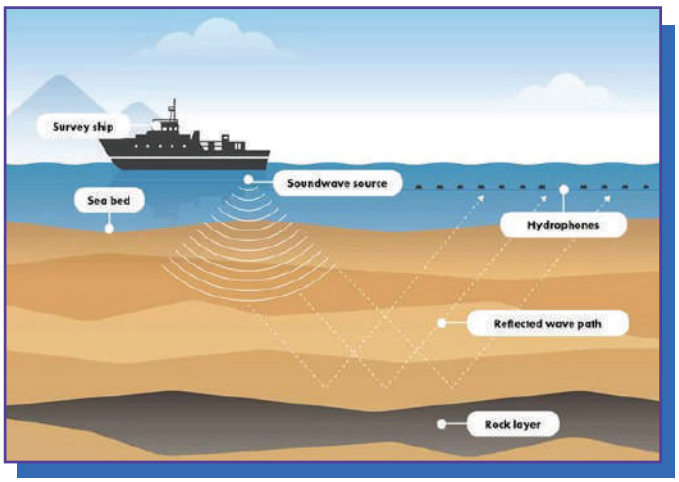
A marine seismic survey is a technique used to explore and map the subsurface of the ocean floor. The primary goal of a seismic survey is to create a detailed image of the subsurface geology, including the location and characteristics of rock formations that may contain oil, gas, or other valuable resources.

The survey begins with the deployment of a ship equipped with specialized equipment, including equipment that creates underwater sound, and a network of hydrophones. Soundwaves travel through the water and into the subsurface. As the sound waves encounter different layers of rock and other subsurface materials, they are reflected back to the surface and recorded by the hydrophones.

The data collected by the hydrophones is then used to create a map of the subsurface geology. This map can be used to identify areas that are likely to contain valuable resources, such as oil and gas deposits. Additionally, marine seismic surveys can also be used for carbon capture purposes, to study the geology of the ocean floor, identify potential hazards, and monitor changes in the subsurface over time.

Marine seismic surveys are generally conducted in deep waters, beyond the reach of divers and other traditional exploration techniques. They are commonly used in the oil and gas industry, but they are also used in other industries and for scientific research purposes.

The survey process can be quite complex and time-consuming, and it requires specialized equipment and trained personnel to operate. The data obtained from the survey is analysed by geophysicists who use sophisticated software to create detailed images of the subsurface.




Source: Energy Information Australia

Marine seismic surveying may cause harm to marine life, for this reason, the method is heavily regulated. In 2019, an Australian Senate Inquiry was conducted into the impact of seismic testing on fisheries and the marine environment. The process, submissions, and concluding report can be found here.

More information about seismic surveys and their environmental impacts can be found at the following links:

IOGP Sound & Marine - Home (soundandmarinelife.org)

Energy Information Australia

Marine seismic surveys | NOPSEMA

Impact of seismic testing on fisheries and the marine environment – Parliament of Australia (aph.gov.au)



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