



# Deep-crustal seismic survey 2023–24

## South West, Great Southern and Mid West

The Geological Survey of Western Australia will be conducting a program of up to 1200 km of deep crustal reflection seismic surveys in the south and mid-west of the State to image the crustal structure and geological domains as deep as 60 km.

### What is a reflection seismic survey?

It's a geophysical technique where 'Vibroseis' trucks generate sound wave vibrations into the ground. The vibrations are reflected by deep rocks and structures and return to the surface where they are recorded by geophones (small sensors similar to microphones). These recordings are processed to make images of the rocks below Earth's surface.

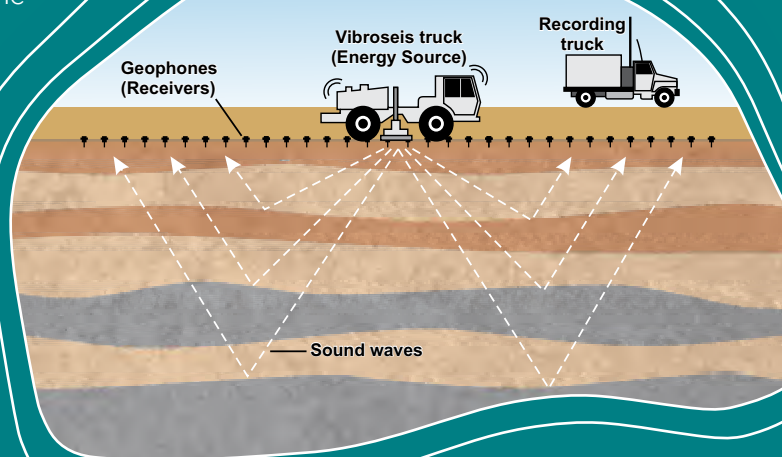
### How does it work?

The Department of Mines, Industry Regulation and Safety (DMIRS) has contracted the specialist seismic company HiSeis Pty Ltd to conduct the surveys. HiSeis is an experienced seismic contractor and follows strict operational guidelines.

A field crew of up to 30 people lay out geophones on the surface along the road verge 10m apart. Three Vibroseis trucks drive along the line stopping every 40m to vibrate the ground through a steel plate for about 30 seconds. Geophones record the reflected vibrations for another 20 seconds before the trucks move to the next vibration point. The entire process is controlled from a recording truck where the data from the geophones are recorded for analysis and processing. The survey progresses at about 20 km per day.

### How does it affect the community?

The surveys will not affect the environment, any physical infrastructure, or heritage sites. The survey lines will be sited on roads and established tracks, so no line clearing will be necessary. Signage and traffic management will be in place as needed to ensure the safety of the survey crew and other road users. As the timing for each line is established, a representative from DMIRS or HiSeis will be in contact with stakeholders to provide further details.



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Contact us directly for further information:



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Deep crustal seismic reflection surveys



Shapefile of line paths

