

AIRBORNE SEISMIC SURVEY IN NORTHERN NEW GUINEA

The Bureau of Mineral Resources is conducting an experimental airborne seismic survey in the Sepik-Ramu area of northern New Guinea between October and December this year.

The purpose of the experimental survey is to establish a practical method for reconnaissance or detailed seismic exploration of swamp, jungle and other areas which are inaccessible for conventional seismic operations, but otherwise of interest in the search for petroleum. This survey will provide information on the thickness of sediments and structures within the Northern New Guinea Basin, in a number of locations where there is a lack of geological information. It will also assist in resolving problems which have arisen out of the interpretation of aeromagnetic and gravity reconnaissance survey data previously obtained in the area.

A helicopter will be used to place explosives, shooting equipment and geophones connected to Sonobuoy radio transmitters into position on the swamp or ground surface. Seismic information transmitted by the Sonobuoys, will be recorded on conventional seismic recording equipment mounted in an aircraft which will fly over the survey area at the time of each shot. The proposed method of recording is based on the method already used in the Bureau's marine geophysical surveys to record seismic refraction information.

In New Guinea, the need for man-handling equipment, laborious line-cutting and the limitation of connecting geophones by cable to the recording equipment on the ground will be obviated by the airborne seismic method.

The results of the Bureau's work will be made available to industry within a few months and may prove to be of assistance in the petroleum exploration of inaccessible areas throughout the world.

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