quite dense (interval velocities of 12,850 ft./sec. at 3600 ft.) and also fracture-prone. Where fracture systems are developed, this rock type has the potential for being, initially, a highly productive reservoir rock.

Seismic Expression of Carbonate Build-ups, Northwest Java Basin

J.E. Burbury
Atlantic Richfield Indonesia, Jakarta

Four distinct episodes of carbonate deposition can be recognised in the Tertiary of the Northwest Java Basin. The two most widespread of these occurred during the interval from Oligocene to Lower Miocene and during Late Middle Miocene time. Two minor episodes resulting in more localized deposition, occurred in Lower to Middle Miocene time.

Carbonate build-ups were developed during each of these periods. These build-ups can be recognized and mapped in detail from the excellent seismic data obtained from the area.

The size, shape and disposition of all build-ups, except those developed during the late Middle Miocene, are shown to be related to the tectonic framework, depositional history and local structural features of the basin. The late Middle Miocene build-ups appear to be unrelated to paleo — structural features, indicating deposition on a base-levelled surface at a time of structural maturity and quiescence.

The available seismic data can be used to detect variation in porosity and to provide direct and indirect indications of hydrocarbons within the build-ups.

It is demonstrated how the presence of a large volume of gas within a late Middle Miocene carbonate build-up can be interpreted directly from the seismic data.

Early Miocene Carbonate Depositional Environments, East Java Sea[*]

C.S. Kenyon
Cities Service East Asia, Singapore

In Lower Miocene time, a prolonged period of gentle epeirogenic subsidence and transgression resulted in the deposition of a widespread, thick, limestone and shale unit (the 'Kujung Unit I') in the region of the present day Eastern Java

[*] The complete text of this paper occurs in the Proceedings of the Sixth Annual Convention, 1977, Indonesian Petroleum Association.