

5.0 INTERPRETATION

5.1 Regional Stratigraphy

The deepest recognizable event on the seismic data in T13P is interpreted to be basement. This is strongly faulted, and is possibly similar to outcropping quartzite and schists on the Furneaux Islands.

Basement is overlain by the Strzelecki Formation in the north Gippsland Basin and comprises greywackes and shales of Lower Cretaceous age. The Strzelecki Group may exist in T13P, but in the absence of satisfactory well data or seismic marker characteristics it cannot be confidently mapped.

The Strzelecki Formation is a possible hydrocarbon source, even though in the central Gippsland Basin it is considered economic basement. In the central basin its depth of burial is substantial (>5000m) in a high temperature gradient. However, if present in T13P it is much shallower and thus likely to be a valid source.

The orange-marked "Basement" horizon may be seismic basement, or possibly top of Strzelecki Formation. Plate 5 illustrates seismic horizon depths and identification.

The Latrobe Group (or Coal Measures) has been postulated as the source for the Gippsland oil-gas accumulation and also contains the main reservoirs. In the central basin, this group is a complex of fluvial and deltaic clastic sediments. It contains sands, coals and some shales. The group is terminated in the Eocene by the Gurnard Formation, a shale formed during a marine transgression.

The Gurnard Formation is important in some of the Bass Strait Fields and acts as a seal.

The Latrobe undergoes a facies-change into a shallow marine environment in the south-east of the basin. The absence of well control prevents any conclusions as to the presence of this marine sequence in T13P. The marine facies is expected to be a good potential hydrocarbon source.