The other mapped seismic events showed good correlatability at most levels over the area of the main Yolla structure, grading to very poor in some of the more heavily disrupted zones beneath the volcanics. The Early Eocene, Middle M.diversus and possibly the Near Top 2718 sand and Early Palaeocene seismic markers represent unconformity surfaces. Between the latter two events there is a considerable amount of thinning indicated towards the structural crest, with possible truncation of events. However, as discussed in previous sections, the tuning thickness of approximately 40 metres, and the presence of short period inter-bed multiples will distort the continuity of seismic character and definition.

The deep seismic onlap event corresponds to a high amplitude event that lies within previously undrilled section and that appears to onlap the basalt surface. As illustrated in Figure 16 the basalt surface is difficult to identify, but there do appear to be linear features steeper than the sedimentary dip, and coincident with subtle changes in character, dip, polarity or continuity, that may represent a conical shape, similar to the Miocene extrusive piles. This shape has been picked as the basalt surface.

4.3 Description of Maps

The Yolla field is a simple fault bounded structure lying over a prominent Early Cretaceous ridge on the flanks of the Cormorant Trough. Drape and compaction over this ridge, with active fault growth provides the dominant structural control. The top EVCM structure is primarily four-way-dip with the intensity and frequency of faults increasing with depth. The field is compartmentalised by the faults at deeper levels into four main areas, the Yolla 1 fault block, Yolla North fault block, Yolla Northwest and Yolla Northeast blocks (Figure 17).

The Yolla South closure as identified on the previous 2D seismic data, appears now to be part of the main Yolla 1 closure. Regional 2D mapping supports the time structure contours wrapping into the main fault to the south and outside of the detailed 3D survey area. The 2D data is located at 2-3 kilometre intervals but does show that a larger upside to the Yolla 1 block closure is possible (Figure 17).

The Yolla 1, Yolla North and Yolla Northwest fault compartments lie together on the upthrown side of the main controlling fault, but are separated by lesser faults. The main fault obviously is providing a seal to gas/condensate migration, but the sealing capacity of the minor faults is unknown. As fault throws are interpreted to be relatively small, down to in the order of 10-20 metres, the three areas may be linked in one continuous system.

However, if the faults are providing adequate reservoir seals, then there exists a much greater potential for hydrocarbon entrapment, particularly in the Yolla Northwest compartment which has closure extending well below that of the Yolla 1 compartment.

4.4 Amplitude Mapping

4.4.1 Top EVCM Gas/Oil Reservoirs

The top EVCM seismic reflector was picked on a negative trough. This event is defined as the actual top EVCM marker, but has no anomalous amplitude response, as shown by Drawing Number 13835 of Appendix 1. The following peak however, which corresponds approximately to the gas-oil interface at 1831.6 metres KB does