

a correlatable horizon in Pelican 1, 2 and 4 which may be a local unconformity surface. The main E & F pay sands also occur in this zone.

The relationships between overpressuring and Pelican Field hydrocarbon accumulation is not understood, but the overpressure maintenance indicates that faults are sealing. The existence of overpressuring also implies that a valid seal exists for sediments beneath it.

The following points taken from Fertl (1976) require consideration in any future play concepts involving potential overpressure zones:

- * Lower temperature gradients exist within an overpressure zone due to the insulating effect associated with increased shale porosity.
- * Overpressure may retard oil destruction (Fertl, 1976 p. 305).
- * When an index ($R_{Sh} \text{ (normal)} / R_{Sh} \text{ (observed)}$) calculated from the short normal electrical log (Fertl, 1976, p. 178) exceeds 3.5, it has been established from the US Gulf Coast and elsewhere, that no matter what other indications there are, including log results and mud logging, the zone will be non-commercial. This is normally associated with where the formation pressure exceeds overburden pressure ie. superpressure zones.
- * In some cases overpressure zones can be determined prior to drilling from seismic data. There are numerous methods