

8.8 Traps on the Downthrown Side of Listric Faults

Accumulations of oil on the downthrown side of extensional faults are less common. Traps may exist within the areas where reverse drag formed as the downside block rotated along a normal listric fault.

Reverse drag is mapped along the bounding fault to the Boobyalla Sub-Basin.

8.9 Trapdoor Structures

Extensional block trapdoors are mapped along the structural margins of the sub-basins. The basin margins have a continuous history of uplift, and so, of extension. The structures are unlikely to be productive.

9.0 CONCLUSIONS

- (1) Post-depositional rollover structures are the most common trap mapped within T/15P. There is the possibility of mapping more rollover structures on the downside of listric faults that define the structural margins in other parts of the Boobyalla Sub-Basin.

Erosion of the Durroon Megasequence in the direction of the Bassian Rise suggests that rollover structures within which an attenuated isopach will be met, may be stripped of significant reservoirs. A drilling location should test both the validity of the trap and as much of the depositional megasequence as possible.

Rollover structures on the Bassian Rise side of the Boobyalla Sub-Basin may be more attractive prospects than those against the southwest bounding faults. Here, fluvial and deltaic facies may develop along the depositional hinge lines and dipping flanks of the half-graben during nonmarine periods of deposition. Conglomerates, coarse sandstones, and lacustrine facies may predominate adjacent to the southwest bounding faults of the Boobyalla half-graben.

The rollover structures that overlie mature source are preferred to those that are at a distance from these rocks.

- (2) The Bridgewater Nose is the largest structure within the Boobyalla Sub-Basin. The structure plunges basinwards, though the exact relationship between the structural drape at its western end and the rest of the structure has to be resolved. The problem arises from the difficulty of correlating the "Event With Durroon Megasequence" from one fault compartment to the next. Correlations along the strike of the structure are in doubt, and there is a possibility that the plunge of the structure may reverse at its western extremity.

Structural-stratigraphic traps in nonmarine beds offer the best opportunity for hydrocarbon accumulations.

- (3) The bulk of petroleum in extensional basins has been found on the upthrown side of tilted blocks. Durroon-1 was supposed to test the potential of the cover of sediments on top of the tilted Otway Megasequence within the Anderson Sub-Basin. The well was drilled out of closure.