The structural style allows for the presence of giant risked yet to find potential of at least 10 billion barrels of oil equivalent. Source rock modelling, prospect evaluation, and analogue basin review show:

- **Tertiary shelf and basinal plays**
- **Lower Cretaceous syn-rift shelf and basinal plays**

The Atlantic Basins of Ireland are an under-explored frontier petroleum province sponsored by the Petroleum Affairs Division, includes a major revision of the Atlantic Ireland basins with the Orphan Basin of Eastern Canada. This reconstruction has shed light on the depositional environments and sediment transport directions. These new models show the likelihood of regional world class Upper and Lower Jurassic source rocks. Reservoir distribution at four stratigraphic levels controls the following play systems:

- **Permian-Triassic play (proven by the Corrib and Platten discoveries)**
- **Middle-Lower Jurassic deltaic and shelf plays**
- **Lower Cretaceous syn-rift shelf and basin plays**
- **Tertiary shelf and basin plays**

Source rock modelling, prospect evaluation, and analogue basin review show a risked yet to find potential of at least 10 billion barrels of oil equivalent. The structural style allows for the presence of giant un-drilled structures.

### Tectonic Evolution
The tectonic evolution of the area is complex, showing four rifting events. These superimposed events control source and reservoir deposition resulting in the potential for stacked play systems.

- A simplified stratigraphic column is shown.

### Atlantic Reconstruction
Gravity and magnetic data illustrate the position of the Atlantic Ireland basins against the Orphan and Labrador basins of Eastern Canada (not palinspastically restored).

The reconstructed basin and structural (lineaments) model is also shown. This illustrates the basin configuration immediately prior to the onset of Atlantic rifting in the Mi Cretaceous (after Silvasavaris, 1996).

### Source Rock Modelling
Well data combined with gross depositional environment models indicate Upper and Lower Jurassic regional world class source rocks. Volumetric assessment and expulsion modelling from the Lower Jurassic alone, as illustrated, shows generated volumes of over 130 trillion barrels of oil and around 500Tcf of gas.

### Structural Style
Rifting followed by basin margin inversion has resulted in a structural style characterised by simple tilted fault blocks as illustrated. These structures along with large inversion features shown on seismic data invite the possibility of giant un-drilled prospects.

### Depositional Environments
On the basis of the reconstructions, the depositional environments at closure in the Early Jurassic (left) and initial Atlantic separation in the Early Cretaceous (right) can be postulated.

Source rocks are generating today.