Plays and Prospectivity Offshore Lebanon, Syria and Cyprus: New Insights from Depth-Imaged Seismic Data

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This paper illustrates the nature of the Levantine Basin and adjacent areas based on an analysis of modern seismic data. It shows that the Basin is comprised of a substantial thickness (> 10,000 metres) of Mesozoic to Cenozoic sediments above a rifted terrain of probably Triassic- Lower Jurassic age.

Depth imaged sections are used to show the nature of the Basin including its relationship to the Eratosthenes Seamount and the Larnaca Thrust Zone.

Depth imaged sections (with Time Migration comparisons) are also used to illustrate some of the numerous plays seen in the area. These consist of:

> Jurassic and older: faulted structures, rollovers and basin margin plays.
> Upper Jurassic to Middle Cretaceous: mounds, reefs, progrades, drape structures, structural/stratigraphic plays and unconformity plays.
> Middle Cretaceous to Paleogene: anticlines, fault blocks, rollovers, mounds, drapes, structural/stratigraphic plays and basin margin pinch-outs.
> Sub-Salt (with salt as the seal) and Intra-Salt (Messinian): pinchouts, bright spots, channels and mounds.
> Post Salt (Pliocene to Recent): channels and mounds.

Depth imaging of the seismic data is shown to aid the evaluation of many of these plays and to highlight the prospectivity of offshore Lebanon, Syria and Cyprus.

Reference will also be made to both the ongoing and future bid rounds; and to some of the issues involved in producing velocity models for Pre Stack Depth Migration including the subsequent time conversion of depth migrated data.