

## **Petroleum Systems of Turkish Basins**

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Turkey is structurally in such a complex area where two major oceans were closed and some of structural deformation is superimposed. Part of it is situated geologically on the northernmost edge of the Arabian Plate as passive margin (Southeast Anatolia) on one side, and on the southern part of the Eurasian Plate as passive margin (part of Black Sea Region) on the other during the Palaeozoic and the Mesozoic time. These two major plates collided during late Cretaceous to Eocene time and Anatolian plateau is sandwiched between these continents. The collision has created two important suture zones and different basins were formed in front of and in between suture zones. Stratigraphy of these areas markedly differ from each other. In Southeastern Turkey where most of the petroleum production are made, both Palaeozoic and Mesozoic petroleum systems are present. Palaeozoic especially Silurian contains organic rich source rock and some of the oil is linked genetically to these source rock. Early Cretaceous source rocks are probably responsible for feeding the most of the reservoir in the region. Mostly structural elements are drilled and stratigraphic traps are not fully evaluated. Mostly Cretaceous reservoirs are producers and Palaeozoic reservoirs do exist. Petroleum systems in the interior basins are not fully resolved yet, due to insufficient and incomplete studies. Locally Cretaceous and Eocene organic rich source rocks are present. Younger (Oligocene and Neogene bituminous shales) source rocks are present and generated oil. Northern areas (Black Sea) contains both Palaeozoic and Mesozoic organic rich source rocks. Live oil shows are present and known historically in different part of the region. Some gas production is present from offshore field. Trace basin where oil and gas have been produced for a long time has oligocene petroleum system. Eocene reservoirs are mostly productive.