

The central Black Sea Basin of Turkey has a complex history; first the basin was a rift basin then transitioned into an arc basin and eventually formed into a retroarc foreland basin.

- There are many large structures that are associated with extensional and compressional tectonics. Researchers believe that there might be a good source for hydrocarbon accumulation.
- A period of drilling (1960s-1990s) onshore exploration wells showed no economical oil or gas accumulation.
- The purpose of this article is to show why well exploration has been unsuccessful and to provide new future exploration opportunities.
 - Describe the sedimentary and structural settings of the basin based on 4 years of field work and tons of seismic data.
 - Data from the 15 exploration wells are reinterpreted.
 - The petroleum geology of the basin is summarized based on basin modeling, oil to source analysis, reservoirs. Rock-Eval-Total carbon (TOC) analysis and organic petrographically data.

The Fold traps near the eastern area where there are possible reservoirs, but no exploration wells have been drilled.

- This is because the Formations of Kusuri, Atbasi, Akveren, and Gursoku are thick formations where wells would need to drill down to great depths to reach hydrocarbon accumulations.

Future exploration wells in the eastern area:

- Reservoirs of the Cagkayan and Inalta Formations and the seal rocks of formations Kapanbogazi and Yemislicay.

Main traps in the basin were formed in the middle Eocene Southern and Northern fold-thrust zones and the Cangaldag anticlinorium Formations.

- In the late Eocene is when source rocks began to start to generate oil and gas, but this was before the formation of the structural trap.

Drilling results suggests that.

- Wells were not drilled deep enough to reach the upper Jurassic-Lower Cretaceous reservoirs
- Only 3 wells reached potential reservoir intervals in the locations where major seal rocks were eroded and traps were disrupted by thrusts.
 - Future exploration targets: The eroded fold traps of Formations Caglayan and Inalta