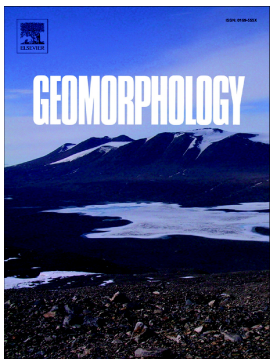

Morphologic and seismic evidence of rapid submergence offshore Cide-Sinop in the southern Black Sea shelf

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ABSTRACT

Multi-beam bathymetric and multi-channel seismic reflection data obtained offshore Cide-Sinop have revealed important records on the latest transgression of the Black Sea for the first time. A relatively large shelf plain within the narrow southern continental shelf characterized by a flat seafloor morphology at -100 water depth followed by a steep continental slope leading to -500 m depth. This area is widely covered by submerged morphological features such as dunes, lagoons, possible eolianites, an eroded anticline and small channels that developed by aeolian and fluvial processes. These morphological features sit upon an erosional surface that truncates the top of all seismic units and constitutes the seafloor over the whole shelf. The recent prograded delta deposits around the shelf break are also truncated by the similar erosional surface. These results indicate that offshore Cide-Sinop was once a terrestrial landscape that was then submerged. The interpreted paleoshoreline varies from -100 to -120 m. This variation can be explained by not only sea level changes but also the