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## Technical Note

### Earthquake dates and water level changes in wells in the Eskisehir region, Turkey

G. Yuce and D. Ugurluoglu

Department of Geological Engineering, Osmangazi University, 26480, Meselik, Eskisehir, Turkey

E-mail for corresponding author: gyuce@ogu.edu.tr

**Abstract.** Although satisfactory results have yet to be obtained in earthquake prediction, one of the most common indicators of an anomalous precursor is a change in groundwater level in existing wells. Further wells should thus be drilled in unconfined aquifers since these are more susceptible to seismic waves. The Eskisehir region lies in the transition zone between the Aegean extensional domain and the compressible northern Anatolian block. Limnigraphs, installed in 19 exploration wells in the Eskisehir region, recorded pre-seismic, co-seismic and post-seismic level changes during the earthquakes of 17 August Izmit ( $M_w = 7.4$ ) and 12 November Duzce ( $M_w = 7.2$ ) 1999 that occurred along the North Anatolian Fault Zone. The Izmit and Duzce earthquakes affected groundwater levels, especially in confined aquifers. The aquifer characteristics before and after the earthquakes were unchanged so the aquifer is elastic in its behaviour. Further detailed geo-mechanical investigation of the confined aquifer in the Eskisehir region may improve understanding of earthquake prediction.

**Keywords:** earthquake prediction, Eskisehir, hydrological warning, monitoring groundwater levels

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