

Radon based investigation of active geological faults in eastern part of Tehsil Banda Daud Shah, Southern Kohat Plateau, Khyber Pakhtunkhwa

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Abstract

Radon survey in soil air can provide important information for the study of the tectonic activity along geological faults. Active faults constitutes permeable channel ways for radon gas to leak out, therefore, causing huge radon emission on or in the vicinity of fracture zones and active geological faults. This study was planned to proclaim suitability of this technique in the study of an active fault in Tehsil Banda Daaud Shah. Concentrations of radon gas were measured across Banda Daud Shah and along four newly discovered faults, during this study. RAD7 radon detector of Durrige Company was used for the measurement of radon level in traverses made across the faults. It was noticed that highest values of radon occurs above the fault zones i.e. nearly at 0 m distance from the fault trace. Level of radon gas decreases on both sides across the faults.

The research indicates that measuring radon concentration in traverses across the fault can be of great assistant in pin pointing and distinguishing active geological faults, on the earth surface or buried under the soil.