

A seismic study of the McGregor geothermal system, southern New Mexico

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Seismic data were collected across the heat flow high (Figure) to determine bedrock geometry associated with this anomaly and to image any faults that might be serving as conduits for rising hot water. Approximately 14.8 km of data were collected during the seismic survey along three profiles. One of the profiles, line 2, was occupied a second time to obtain longer offset data. The reflection data were collected in a 48-channel split-spread geometry with source and group intervals of 33.3 m. At each source location, four 0.149-kg boosters were fired independently in a four-hole pattern. Data were recorded for 2 s at a 1-ms sample rate. Maximum offsets reached 971m as a result of asymmetries in the spread. During the reoccupation of line 2, offsets of 2761 m were achieved by shooting off-end of a 60-channel spread.

