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The Genetic System Study of Gonghe EGS Geothermal Field in Qinghai by Geophysical Data

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The Gonghe geothermal filed with temperature of 236° at 3800m depth is the most important EGS site in China. We conducted the geophysical measurement such as MT, Seismology imaging, and Gravity &Magnetic method companying with geological survey. Using geophysical data and inversion results, we obtained the underground structure such as faults, granite rock, and stratum. According to the regional rock thermal parameters and regional heat flow, we build the concept model of the geothermal system based on the numerical simulation. And we conclude that the deep faults control the heat communication and exchange. The deep heat source along faults is the main factor to control the shallow thermal resource. Gonghe underground granite which located in the heat flow upward channel forming the Geonghe EGS thermal reserves has a huge prospects for sustainable use.