

Using of the MT method in the development of renewable geothermal energy in Uzbekistan

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**SUMMARY**

Anomalous areas of Heat Flow Density in Uzbekistan were identified at the stage of preliminary studies on the territory of the Republic. A Multidisciplinary Geophysical survey (Seismic monitoring, Magneto Telluric and Gravity exploration) now being implemented on the studied areas in Central Kyzylkum, Gissar and Aral regions. Of these three methods, geophysical research, or rather Magneto Telluric method is the dominant exploration method discussed in this report. The results of research within the framework of a World Bank grant (REP-1/5) for two areas are presented: (1) Gulistan in the Gissar region; (2) Urgench in the Aral region of the Republic of Uzbekistan. The goal of the development of geothermal resources are as follows: (1) develop a conceptual model to characterize the geology, geophysics and thermodynamics of resources; (2) develop, using this model, a cost-effective strategy for continuing exploration, delineating and evaluating a resource, that provide depth and quality data necessary for making decisions regarding plans for the further development of promising geothermal areas in Uzbekistan. The results of geophysical studies, used in combination with geological data, allowed the construction of three-dimensional depth models of the structure of the studied areas with the location of the heat source and provide targets for test (exploration) drilling.

**Keywords:** Uzbekistan, Heat Flow Density, Magneto Telluric method

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