

THE IMPORTANCE OF A MULTIDISCIPLINARY APPROACH TO GEOTHERMAL SYSTEMS

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Because of the hydrogeological and thermodynamic complexity of geothermal systems, efforts to delineate, characterize and evaluate them should follow a multidisciplinary approach. That is, field and laboratory activities should be planned and carried out by a team of geologists, geophysicists, geochemists, and reservoir engineers / hydrogeologists. Similarly, the analysis and integration of the collected data should be done by such a group. The varied technical experience and insight of the members of an interdisciplinary team are of great help when, for example, exploration plans and conceptual models are developed and exploitation schemes are designed for a given geothermal area. The studies done at the Cerro Prieto geothermal field of Baja California Norte, Mexico are used as an example of such a multidisciplinary approach. Geothermal exploration in the Mexicali Valley (southern part of the high heat flow, tectonically active Salton Trough) began in the late 1960s. The first power plant started to produce electricity in 1973. Since 1986 the installed capacity in the field has been 620 MW-electric; in the near future it will reach 720 MWe. From the early stages of the Cerro Prieto project, the geoscientific work was planned and carried out by an interdisciplinary team. It resulted in a very successful geothermal project which has generated large amount of electricity for more than 25 years and will continue doing so for the foreseeable future.