

Geoexchange/Geothermal Energy Rights and Servance Through Title and Inheritance Transfer

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SUMMARY

Geothermal and geoexchange systems harness the earth's thermal energy for heating, cooling, and potentially generating renewable electricity. Geothermal systems tap into naturally occurring or engineered subsurface heat sources, while geoexchange systems circulate heat in a closed loop with the ground, using the earth as a thermal reservoir. Though distinct in design, both technologies offer potential sustainable energy solutions. In the United States, and specifically Texas, ownership of geothermal and geoexchange energy rights typically resides with the surface estate owner unless explicitly severed by deed. This parallels mineral rights law, where ownership of subsurface resources like oil and gas may be separated from surface ownership. Severance of geothermal or geoexchange rights can occur during property sales or through estate planning documents such as wills. Importantly, geothermal and geoexchange estates are generally considered "dominant," granting their owners the legal authority to use the surface as reasonably necessary for energy exploration and extraction. This may include constructing access roads or drilling wells. However, such rights can lead to disputes if not clearly defined, especially during inheritance or property transfers. To prevent legal and financial complications, it is essential to include precise descriptions of geothermal and geoexchange rights in estate documents. Geospatial surveying and mapping plays a critical role in this process, offering detailed boundary and rights delineation. Without proper documentation, ambiguities in ownership and access can result in costly litigation and hinder energy development. This paper will define methods for integrating estate documents, legal land descriptions, and land management GIS tools to establish clear ownership boundaries and reduce disputes over geothermal and geoexchange rights.