Eastern Texas Geothermal Mapping

Maria Richards, Patrick Stepp, David Blackwell, Ramsey Kweik

SMU Geothermal Laboratory

Roy M. Huffington Department of Earth Sciences, Dallas, Texas 75275-0395

ABSTRACT

The idea of using oil and gas wells for geothermal energy production was brought to the forefront in 2005 and 2006 (McKenna et al., 2005; SMU Geothermal Energy Urbanization Conference, 2006; Erdlac et al., 2006). This concept has prompted a review of existing research in Texas from the 1970s to 1980s on geopressure and a new resource assessment based on oil and gas well data. The combination of new and previous data sets, a series of temperature maps at depths ranging from 7000 to 14,000 feet for eastern Texas have been created. South Texas has the highest temperatures (450°F). The Gulf Coast geopressure resource is best defined and closest to electric markets, making this an initial choice for development.