

## Geopressed Geothermal Systems

Sabodh K. Garg

Leidos Inc., San Diego, CA, USA

gargs@leidos.com

**Keywords:** Geopressed resources, well tests, Pleasant Bayou No. 2, Gladys McCall No. 1

### ABSTRACT

Wallace et al. (1979) carried out an assessment of geopressed geothermal resources located along the U.S. Gulf Coast; the amount of thermal energy and methane contained in geopressed systems was estimated to be  $1.07 \cdot 10^{23}$  J and  $1.67 \cdot 10^{15}$  m<sup>3</sup>, respectively. To better characterize this energy source, from 1975 to 1992, the U.S. Department of Energy funded a program of geopressed geothermal well drilling and testing. A total of 10 wells of opportunity and 4 design wells were tested under this program. The wells of opportunity, made available by various oil and gas companies, were used in short-term tests to obtain fluid samples and reservoir properties near the wellbore. Design wells were drilled in favorable geopressed geothermal prospects as determined by available geological and geophysical information. Long-term production tests of design wells were performed in order to investigate reservoir drive mechanisms and to demonstrate reservoir deliverability. Two of the design wells (Pleasant Bayou No. 2, Gladys McCall No. 1) were capable of producing at rates exceeding 20,000 bbl/day (~130 m<sup>3</sup>/hour). A hybrid power-plant (~1 MWe nominal capacity) was operated at the Pleasant Bayou wellsite for several months.

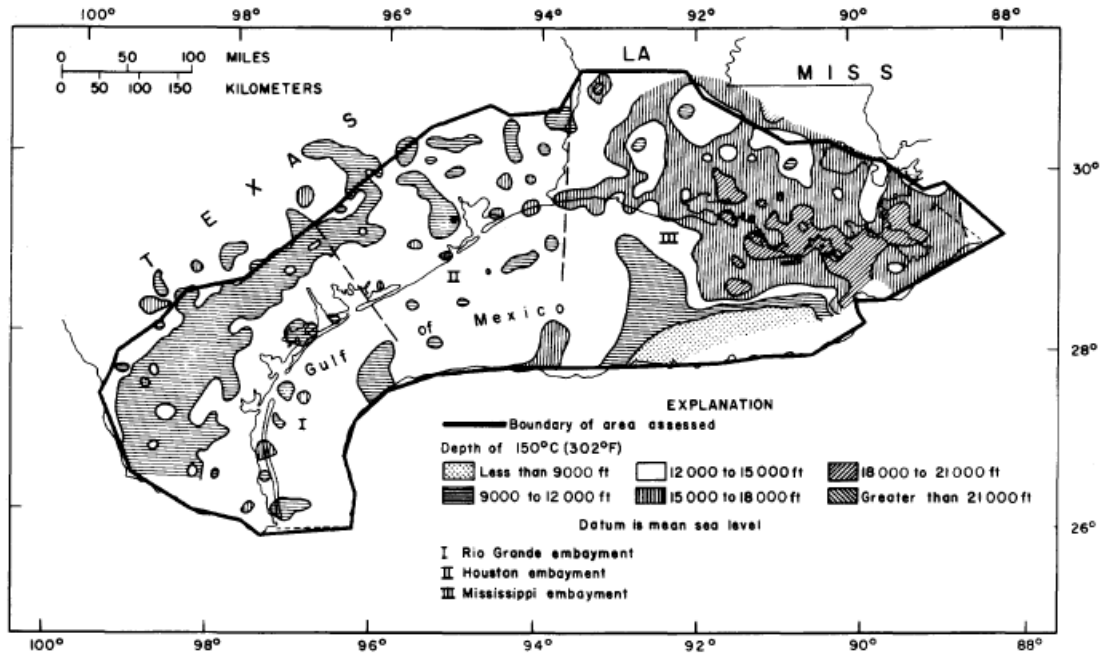


Figure 1: Geopressed location map. Reproduced from (Wallace et al., 1979).

### REFERENCES

Wallace Jr., R.J., Kremer, T.F., Taylor, R.E., and Wesselman, J.B.: Assessment of Geopressed-geothermal resources in the northern Gulf of Mexico basin, in *Assessment of Geothermal Resources of the United States – 1978*, USGS Circular 790, (1979), 132-155.