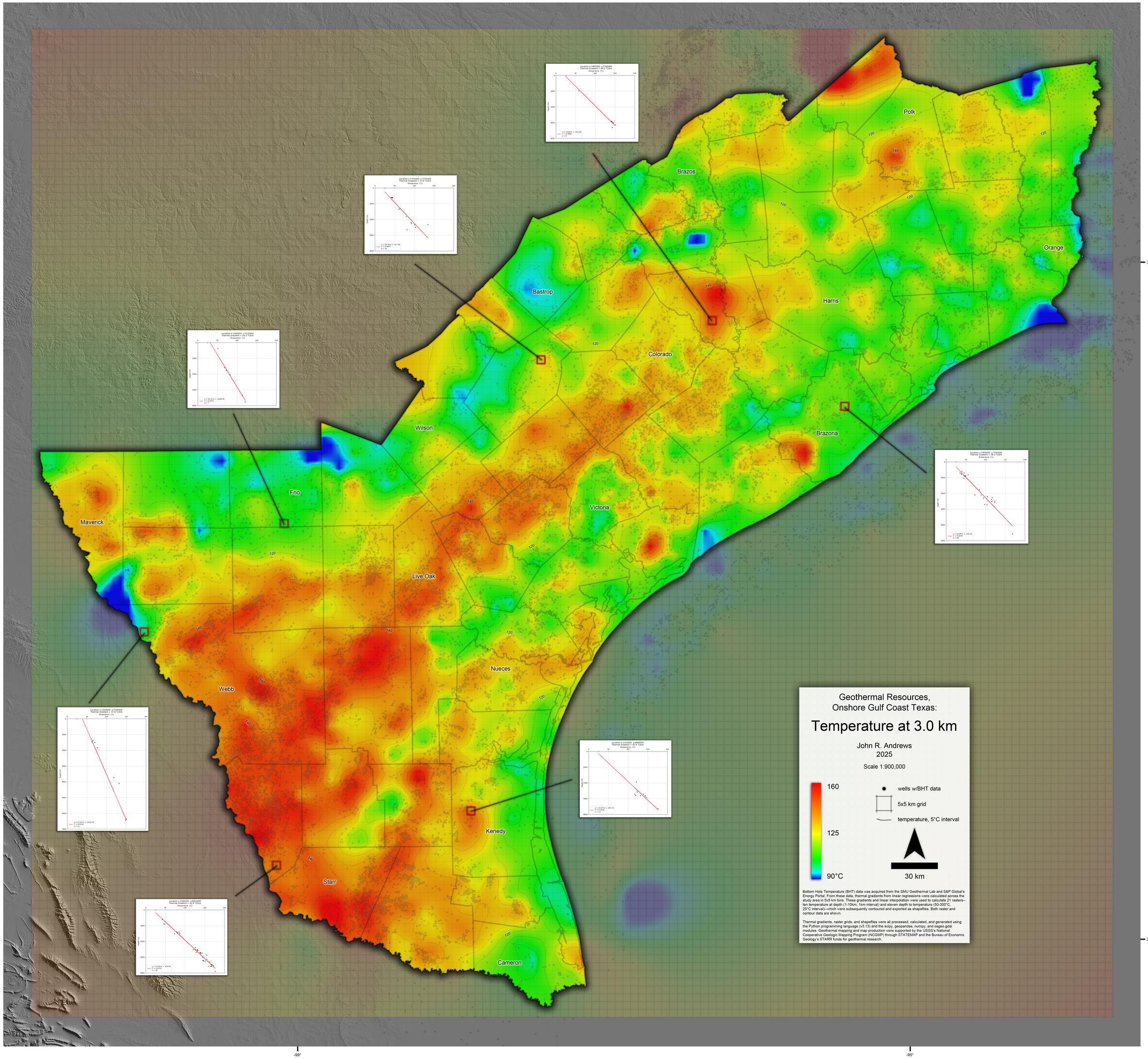
BUREAU OF ECONOMIC GEOLOGY
LORENA G. MOSCARDELLI, DIRECTOR
JACKSON SCHOOL OF GEOSCIENCES
THE UNIVERSITY OF TEXAS AT AUSTIN

In cooperation with the State of Texas Advanced Resource Recovery (STARR) Program and the U.S. Geological Survey National Cooperative Geologic Mapping Program under STATEMAP award No. G24AC00508, 2024.

GEOTHERMAL RESOURCES, ONSHORE GULF COAST TEXAS:
TEMPERATURE AT 3.0 KM
OPEN-FILE MAP NO. 306; SHEET 1
2025



Geothermal Resources, Onshore Gulf Coast Texas:

Temperature at 3.0 km

John R. Andrews
2025

Scale 1:900,000

160
125
90°C

wells w/BHT data
5x5 km grid
temperature, 5°C interval

30 km

Bottom Hole Temperature (BHT) data was acquired from the SMU Geothermal Lab and S&P Global's Energy Portal. From these data, thermal gradients from linear regressions were calculated across the study area in 5x5 km bins. These gradients and linear interpolation were used to calculate 21 rasters--ten temperature at depth (1-10km, 1km interval) and eleven depth to temperature (50-300°C, 25°C interval)--which were subsequently contoured and exported as shapefiles. Both raster and contour data are shown.

Thermal gradients, raster grids, and shapefiles were all processed, calculated, and generated using the Python programming language (v3.13) and the scipy, geopandas, numpy, and osgeo.gdal modules. Geothermal mapping and map production were supported by the USGS's National Cooperative Geologic Mapping Program (NCGMP) through STATEMAP and the Bureau of Economic Geology's STARR funds for geothermal research.

Copyright © Bureau of Economic Geology
QA595