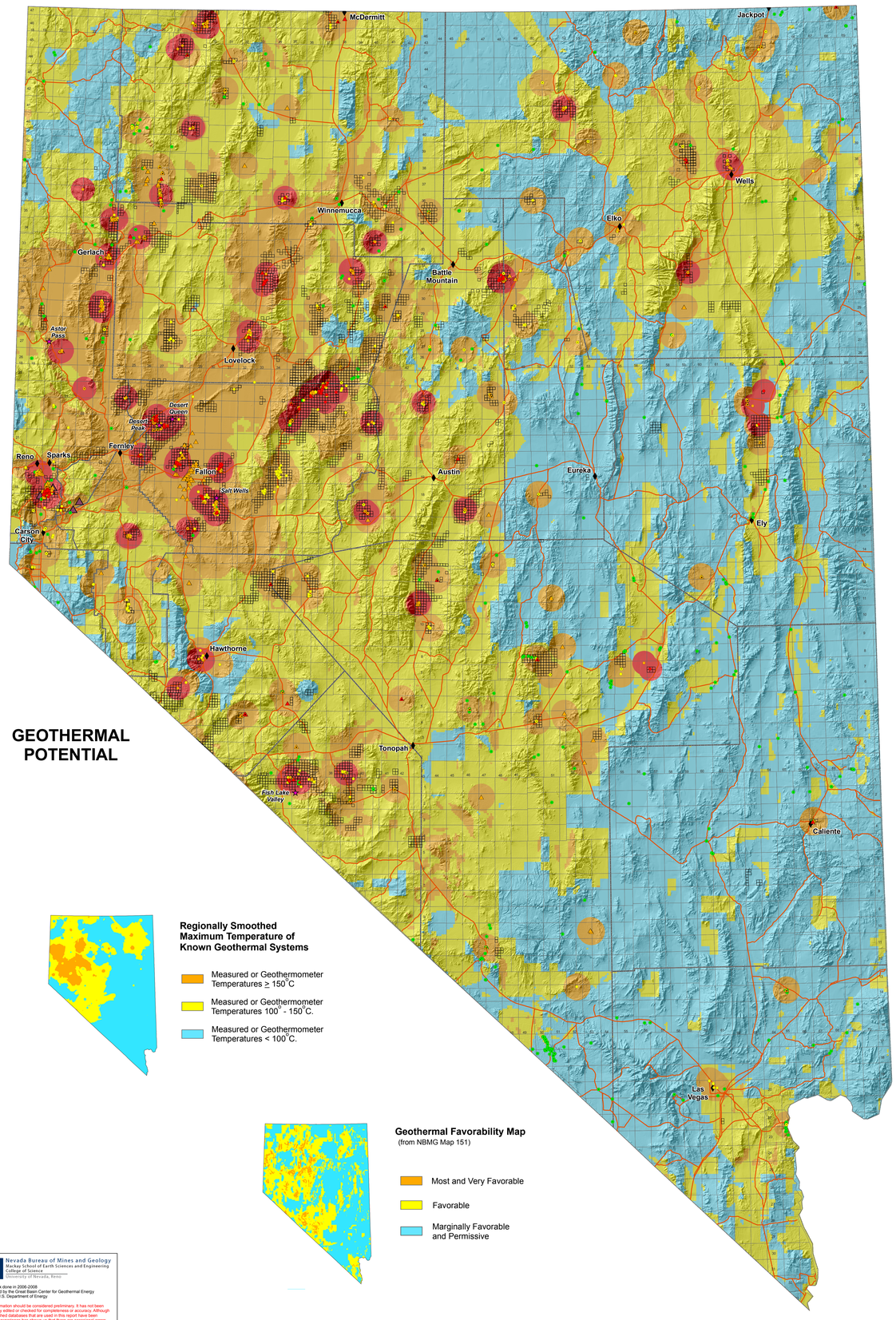
Prepared with support from the Great Basin Center for Geothermal Energy and the U.S. Department of Energy

PRELIMINARY GEOTHERMAL POTENTIAL AND EXPLORATION ACTIVITY IN NEVADA

Richard Zehner, Mark Coolbaugh, and Lisa Shevenell

2009

GEOTHERMAL POTENTIAL



Regionally Smoothed Maximum Temperature of Known Geothermal Systems

- Measured or Geothermometer Temperatures ≥ 150°C
- Measured or Geothermometer Temperatures 100° - 150°C.
- Measured or Geothermometer Temperatures < 100°C.

Geothermal Favorability Map
(from NBMG Map 151)

- Most and Very Favorable
- Favorable
- Marginally Favorable and Permissive

Nevada Bureau of Mines and Geology
Mackay School of Earth Sciences and Engineering
College of Science
University of Nevada, Reno

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Edited by Jordan Hastings
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www.nbmg.unr.edu; nbmgsales@unr.edu

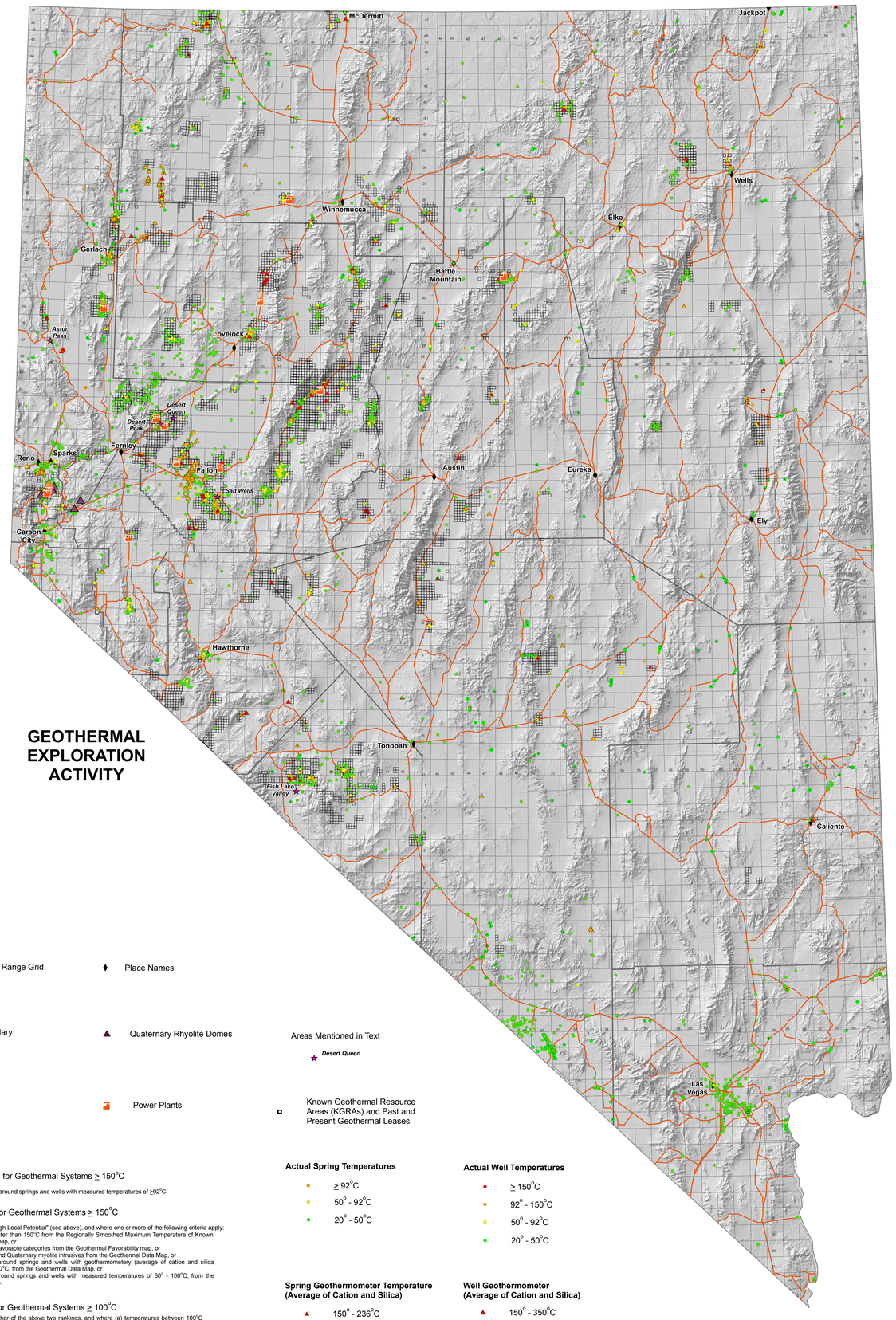
Projection: Lambert Conformable Conic
First Standard Parallel: 33°
Second Standard Parallel: 45°
False Easting: 0
False Northing: 0
Datum: NAD 27

Scale 1:1,000,000

1 inch equals approximately 16 miles

0 10 20 30 40 50 Miles
0 20 40 60 80 Kilometers

GEOTHERMAL EXPLORATION ACTIVITY



- Township and Range Grid
- County Boundary
- Roads
- Place Names
- Quaternary Rhyolite Domes
- Power Plants

Areas Mentioned in Text

★ *Desert Queen*

- Known Geothermal Resource Areas (KGRAs) and Past and Present Geothermal Leases

Geothermal Potential

High Local Potential for Geothermal Systems ≥ 150°C

Consists of a 7 km buffer around springs and wells with measured temperatures of ≥92°C.

Regional Potential for Geothermal Systems ≥ 150°C

Areas not classified as "High Local Potential" (see above), and where one or more of the following criteria apply:
(a) temperatures greater than 150°C from the Regionally Smoothed Maximum Temperature of Known Geothermal System map, or
(b) 'Most' and 'Very' Favorable categories from the Geothermal Favorability map, or
(c) a 5 km buffer around Quaternary rhyolite intrusives from the Geothermal Data Map, or
(d) an 8 km buffer around springs and wells with geothermometery (average of cation and silica geothermomters) >100°C, from the Geothermal Data Map, or
(e) an 8 km buffer around springs and wells with measured temperatures of 50° - 100°C, from the Geothermal Data Map.

Regional Potential for Geothermal Systems ≥ 100°C

Areas not classified by either of the above two rankings, and where (a) temperatures between 100°C and 150°C occur on the Regionally Smoothed Maximum Temperature of Known Geothermal Systems map or (b) areas comprising the 'Favorable' category on the Geothermal Favorability map.

Lower Regional Potential

Areas not classified in any of the above rankings. Includes (a) areas with temperatures less than 100°C from the Regionally Smoothed Maximum Temperature of Known Geothermal Systems map or (b) either the 'Marginally Favorable or 'Permissive' categories from the Geothermal Favorability map.

Actual Spring Temperatures

- ≥ 92°C
- 50° - 92°C
- 20° - 50°C

Actual Well Temperatures

- ≥ 150°C
- 92° - 150°C
- 50° - 92°C
- 20° - 50°C

Spring Geothermometer Temperature (Average of Cation and Silica)

- 150° - 236°C
- 100° - 150°C

Well Geothermometer (Average of Cation and Silica)

- 150° - 350°C
- 100° - 150°C

Spring and well data are from the Great Basin Groundwater Geochemical Database, which primarily contains groundwater geochemical data. Additional temperature and temperature gradient data are available from NBMG Map 161.