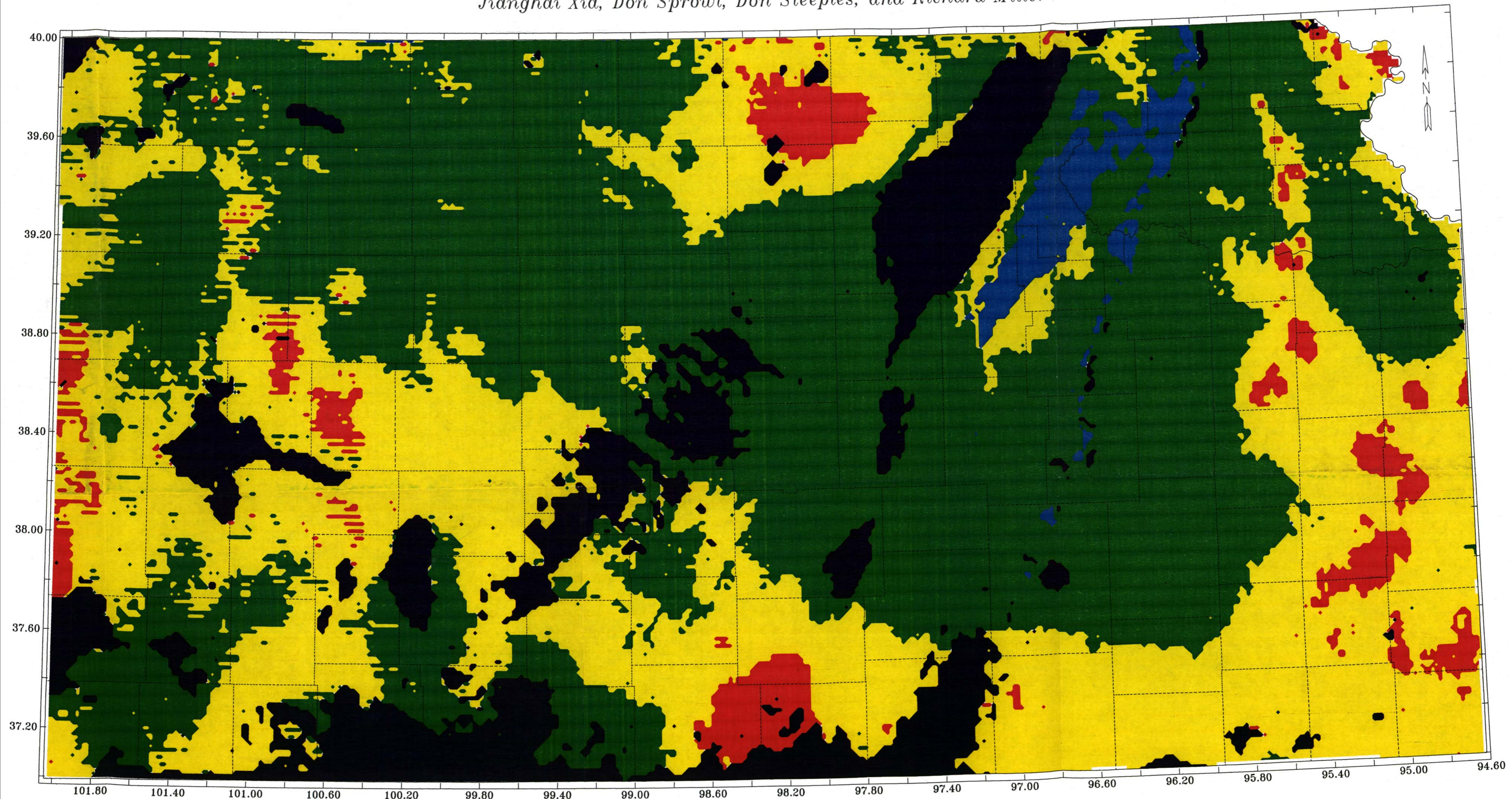


Model of Precambrian Geology of Kansas from Gravity and Aeromagnetic Data

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Scale 1:1,000,000
1 inch equals approximately 16 miles
0 mi 25
0 km 40

Lambert Conformal Conic Projection
with standard parallels of 33° and 45°

The data were gridded and shaded using SURFACE III developed
by Robert Sampson at the Kansas Geological Survey,
with the assistance of Dana Adkins-Helgeson.

This map defines areas in the upper part of the Precambrian with similar rock types. It is based on inversion of gravity and aeromagnetic data (Xia, 1992, "Three-dimensional inversion of potential-field data with application to Kansas," Ph.D. dissertation, University of Kansas, Kansas Geological Survey, Open-file Report 92-16). The particular classification of the rock within each defined area is based on drill data and results from Bickford et al. (1981, Geological Society of America Bulletin, Part I, 92, p. 323-341) and Yarger (1985, Society of Exploration Geophysicists, Special Volume, p. 213-232). Suggested by this map are the probable and average lithologies in the upper part (3-6 km of thickness) of the Precambrian. In some places the data are spatially aliased by the flight-line spacing, such as near 38.0°N, 100.6°W in southwest Kansas.

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|  Gabbro or basalt (1,100 m.y.) |  Epizonal granitic intrusion (1,350 m.y.) |
|  Epizonal granite (1,400 m.y.) |  Sandstone or other clastic sediments (1,100 m.y.) |
|  Mesozonal granite (1,625 m.y.) | |