



Data for this map were compiled from the county aeromagnetic maps published by the United States Department of the Interior, Geological Survey, in cooperation with the Indiana Department of Conservation, Geological Survey.

In order to present a regional magnetic map of Indiana, the detailed data on the county magnetic maps were reduced by averaging the values of the total magnetic field for each congressional township. This average was obtained by taking the value of the magnetic field at the corners, at the mid-point of each side, and at the center of each congressional township and then plotting the arithmetic average at the mid-point of the township. The values of the magnetic field were further reduced by removing the normal north-south gradient of 6.5 gammas per mile. Therefore, this map represents, on a regional basis, the variations in the total magnetic field at an approximate altitude of 1,000 feet above the ground.

The purpose of this map is to further the study of the pre-Cambrian rocks of Indiana, which are covered by Paleozoic sediments that range from 3,000 to 12,000 feet in thickness. Additional geological information for this study is provided by Miscellaneous Map No. 5, Map of Indiana showing gravitational intensity, published by the Indiana Geological Survey.

Variations in the magnetic field shown on this map are primarily due to differences in magnetic susceptibility of the pre-Cambrian rocks. Although the variation in depth of pre-Cambrian rocks does influence the magnitude of the magnetic field to a slight extent, this map should not be used directly as an indication of geologic structure.

Scale 500,000  
10 5 0 10 20 30 Miles  
Contour interval 50 gammas  
Relative to arbitrary datum

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MAP OF INDIANA SHOWING AVERAGE MAGNETIC INTENSITY

Base from Indiana Department of Conservation, Geological Survey  
Map of Indiana showing county boundaries, township and range  
lines, published November 1951.

Trim line