DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH
INDIANA DEPARTMENT OF CONSERVATION, DIVISION OF GEOLOGY

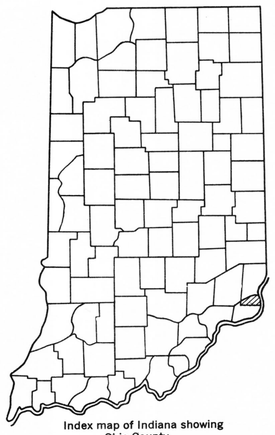
GEOPHYSICAL INVESTIGATIONS
MAP GP 88

EXPLANATION

Magnetic contours with flight-line intersections; contours dashed where data incomplete

Magnetic contour enclosing area of lower magnetic intensity

× Measured maximum or minimum intensity within closed high or closed low



Index map of Indiana showing Ohio County

This aeromagnetic map is one of a series of county maps based on a state-wide aeromagnetic survey of Indiana which was carried out during the periods September to November 1947 and September to November 1948 by the U. S. Geological Survey in cooperation with the Division of Geology of the Indiana Department of Conservation.

The survey was made to obtain information on the configuration of the crystalline basement rocks, on variations in their composition, and on their relation to structures in the overlying sedimentary rocks. The extensive area covered by the survey will also permit a study of the magnetic expressions of large scale features, such as the regional tilt of the surfaces of the basement rocks. It is expected that this information will aid in the search for geologic structures favorable to the accumulation of petroleum.

The measurements were made by a continuously recording AN/ASQ-3A airborne magnetometer installed in a Beechcraft AT-11 airplane. North-south traverse lines were flown approximately 1,000 feet above the ground at one-mile intervals. Aerial photographs were used for pilot guidance, and the flight path of the aircraft was recorded by a gyrostabilized continuous strip camera. The distance from plane to ground was measured with a continuously recording radio altimeter. A gyrostabilized vertical sight was used to increase positional accuracy.

Note

Aeromagnetic data are obtained and compiled along a continuous line, whereas ground magnetic surveys are made at separate points. Errors within the normal limits of any magnetic measurement may cause slight discrepancies between flight lines in an aeromagnetic map, which would be more obvious than similar discrepancies between points in a ground magnetic map. For this reason as much care should be exercised in evaluating magnetic features that appear as elongations along a single aeromagnetic traverse as in interpreting an anomaly indicated by a single ground station.

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.

Base from Indiana State Highway Map, corrected to January 1, 1941

TOTAL INTENSITY AEROMAGNETIC MAP OF OHIO COUNTY, INDIANA

RELATIVE TO ARBITRARY DATUM

1 1/2 0 1 2 3 4 MILES

Contour interval 10 gammas

Flown 1000 feet above surface

1951

Aeromagnetic survey 1948 by
J. R. Henderson and J. L. Meuschke
Compilation directed by J. R. Henderson

For sale by U. S. Geological Survey
PRICE 15 CENTS