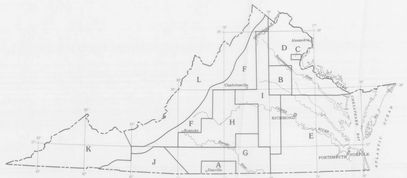
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
V. E. McKELVEY, DIRECTOR

Prepared in cooperation with the
COMMONWEALTH OF VIRGINIA
DIVISION OF MINERAL RESOURCES
JAMES L. CALVER, STATE GEOLOGIST

GEOPHYSICAL INVESTIGATIONS
MAP GP-915



INDEX MAP SHOWING SOURCES OF DATA

SOURCES OF DATA

Aeromagnetic surveys by the U.S. Geological Survey and others with spacing and elevation of flight lines and year flown listed below. All lines flown in an east-west direction except those in areas K and J, which were flown in a northwest-southeast direction.

A. ½ mile-spaced survey flown by U.S. Geological Survey, c. 1968 at 400 feet above ground (U.S. Geol. Survey, 1971a, 1972b, and 1972c).
B. ½ mile-spaced survey flown by U.S. Geological Survey in 1960 at 500 feet above ground (Bromery and others, 1963a).
C. ½ mile-spaced survey flown by U.S. Geological Survey in 1960 at 500 feet above ground (Bromery and others, 1963a and 1963b).
D. 1 mile-spaced survey flown by U.S. Geological Survey in 1960 at 500 feet above ground.
E. 2 mile-spaced survey flown by Geoterrex Ltd. for U.S. Geological Survey in 1972 at 500 feet above ground (U.S. Geol. Survey, 1972).
F. ½ mile-spaced survey flown by Lockwood, Kessler, and Bartlett, Inc. in 1972 for Virginia Division of Mineral Resources at 500 feet above ground (Virginia Division of Mineral Resources, 1969–1972).
G. ½ mile-spaced survey flown by Scintrex Mineral Surveys, Inc. in 1969 for Virginia Division of Mineral Resources at 500 feet above ground (Virginia Division of Mineral Resources, 1969–1972).
H. ½ mile-spaced survey flown by Lockwood, Kessler, and Bartlett, Inc. in 1970 for Virginia Division of Mineral Resources at 500 feet above ground (Virginia Division of Mineral Resources, 1969–1972).
I. ½ mile-spaced survey flown by Lockwood, Kessler, and Bartlett, Inc. in 1971 for Virginia Division of Mineral Resources at 500 feet above ground (Virginia Division of Mineral Resources, 1969–1972).
J. ½ mile-spaced survey flown by Aero Service Corp. in 1965 for Virginia Division of Mineral Resources at 500 feet above ground (Virginia Division of Mineral Resources, 1969–1972).
K. 1 mile-spaced survey flown by Aero Service Corp. in 1962 for Virginia Division of Mineral Resources at 5,000 feet above sea level (Virginia Division of Mineral Resources, 1962).
L. 3 mile-spaced survey flown by Lockwood, Kessler, and Bartlett, Inc. in 1972 for Virginia Division of Mineral Resources at 5,000 feet above sea level (Virginia Division of Mineral Resources, 1972).

EXPLANATION

Magnetic contours

Showing total intensity magnetic field of the earth in hundreds of gammas relative to arbitrary datum. Main magnetic field of the earth, from Fabiano and Peddle (1969), has been removed. Contour intervals 100 and 500 gammas. Light shading for areas with value of less than 10,800 gammas. Darker shading indicates areas of local minimum intensity.

MAXIMUM INTENSITY
15,500
15,000
14,500
14,000
13,500
13,000
12,500
12,000
11,800
11,600
11,400
11,200
11,000
10,800
10,600
10,400
10,200
10,000
MINIMUM INTENSITY

REFERENCES CITED

Bromery, R. W., Galer, G. A., and Chandler, E. J., 1963a, Aeromagnetic map of the Joplin quadrangle, Prince William and Stafford Counties, Virginia: U.S. Geol. Survey Geophys. Inv. Map, GP-394.

_____ 1963b, Aeromagnetic map of the Nokesville quadrangle, Prince William and Stafford Counties, Virginia: U.S. Geol. Survey Geophys. Inv. Map, GP-395.

Fabiano, E. B., and Peddle, N. W., 1969, Grid values of total magnetic intensity, ICSU–1968: U.S. ESSA Tech. Rept. C&GS 38, 55 p.

Neuschel, S. K., 1970, Correlation of aeromagnetics and aeroradioactivity with lithology in the Spotsylvania area, Virginia: Geol. Soc. America Bull., v. 81, p. 1881–1906.

U.S. Geological Survey, 1971a, Aeromagnetic map of the Danville quadrangle, Pittsylvania County, Virginia, and Caswell County, North Carolina: U.S. Geol. Survey Geophys. Inv. Map GP-745.

_____ 1971b, Aeromagnetic map of the Milton quadrangle, Halifax and Pittsylvania Counties, Virginia, and Caswell and Person Counties, North Carolina: U.S. Geol. Survey Geophys. Inv. Map GP-746.

_____ 1972, Aeromagnetic map of the Roxboro quadrangle, Halifax County, Virginia, and Person and Granville Counties, North Carolina: U.S. Geol. Survey Geophys. Inv. Map GP-747.

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Virginia Division of Mineral Resources, 1962, Interpretation of airborne magnetometer survey in southwest Virginia: Virginia Div. Mineral Resources Spec. Pub. 3, 1 p. (Aeromagnetic maps).

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_____ 1969–1972, [Aeromagnetic contour maps]: Virginia Div. Mineral Resources, open-file maps.

SCALE 1:500,000

10 0 10 20 30 40 50 60 70 80 90 MILES
10 0 10 20 30 40 50 60 70 KILOMETERS

LAMBERT CONFORMAL CONIC PROJECTION

AEROMAGNETIC MAP OF VIRGINIA

By

Isidore Zietz, James L. Calver, Stanley S. Johnson, and John R. Kirby

1977

Base from U.S. Geological Survey, 1973

For sale by Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202 and Virginia Division of Mineral Resources, Box 3667, Charlottesville, VA 22903