



Circular 101

Geophysical Instrument Company

DIVISION OF GEORATOR CORPORATION

ARLINGTON 9, VIRGINIA, U.S.A.

GEOVOLT APPARATUS



An aid in searching for:

Highly conducting ore-bodies Graphite Coal Petroleum

For studies of:

Geologic Structure Natural earth currents Corrosion and stray currents The Geovolt apparatus, while simple and inexpensive, is yet one of the most effective for prospecting purposes. Operating cost is a minimum; upkeep practically nothing. Readily operated by one man alone. Yet, highly valuable deposits may be discovered with it.

Operation is by a well-recognized principle—measurement of the natural earth voltages produced by the deposit sought. By a planned series of measurements such ores as pyrites, chalcopyrite, graphite, etc. may be located from the surface of the earth.



GEOPHYSICAL INSTRUMENTS FOR ALMOST TWO DECADES



Components of Apparatus

- The Geovolt-meter-A precision potentiometer
- (4) Geotrodes—Nonpolarising electrodes contained in
- A Geotrode Carrier
- A Georeel—A light weight cable reel fitted with
- 1000 feet of Geocable-High strength single conductor cable
- (1) lb. of Copper Sulphate crystals

Principle of Operation

Highly conducting ore-bodies in the earth act like a battery, one end becoming more highly positive than the other. This causes a flow of electric current through the earth, from one end of the ore-body to the other. This current, or the voltage resulting from it, may be detected at the surface of the earth above the ore-body. Maximum voltage is often directly over the ore-body.

Measurement of Geovoltage (earth voltage) must be made:

Without drawing current from the earth

Without introducing any extraneous potentials.

The Geovolt apparatus measures Geovoltage free of these disturbances.

Typical Operating Technique

The area to be prospected is laid off checker-board fashion, with two grids of parallel lines at right angles to each other. The intersections of these lines form the stations for measurement. One Geotrode is placed at one intersection and another at the next adjacent intersection. Both Geotrodes are connected to the Geovoltmeter; the Geovoltage measured and recorded. The second Geotrode is then moved to the next intersection, connected to the Geovoltometer through the Georeel and a second measurement made and recorded. The process is continued until the entire area has been covered.

The values of Geovoltage may now be plotted on a map, in a manner similar to the plotting of elevations on a contour map. "Contour lines" connecting points of equal Geovoltage are drawn and the point of maximum Geovoltage obtained. This point should be almost directly over the orebody.

Cat. No. 210 — Complete Geovolt Apparatus Note: Specifications are subject to change without notice



Showing Location of Orebody with Geovolt Apparatus

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GEOPHYSICAL INSTRUMENT CO. DIVISION

December 5, 1952.

H. Tracy Hall, Rsch. Assoc., Gen. Elec. Rsch. Lab., Box 1088, Schenectady, N. Y.

Dear Sir:

Through the kindness of the Editor of "New Equipment News" we have learned of your interest in our "Geovolt" Apparatus.

Our Circular No. 101 describing this apparatus is enclosed herewith. We hope that you will find it of interest and that you will not hesitate to write us for such information as may be required for your purposes.

The "Geovolt" apparatus has enjoyed successful world-wide use by mining concerns, Governments and professional prospectors.

The complete apparatus as described in the Circular sells for \$440.00 f.o.b., Arlington, Va.

Your interest is much appreciated. We hope to have the pleasure of hearing further from you.

Very truly yours,

GEORATOR CORPORATION,

BY: Shelley Vasnow

Shelley Krasnow, President.