COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION
EXECUTIVE DIVISION
STATE MUSEUM BUILDING
HARRISBURG

July 27, 1965

Mr. David Crownover
Secretary
The University Museum
33rd and Spruce Streets
Philadelphia 4, Pennsylvania

Dear Mr. Crownover:

Forwarded herewith, for your files, is a copy of Service Purchase Contract authorizing a geophysical survey of underground features, and of buried structures, at Graeme Park, Hope Lodge, and Ephrata Cloister.

When the contract has been completed, please forward your invoice, in triplicate, to this office.

Very truly yours,

WILLIAM J. WEWER
Executive Assistant

W k
Encl.

RESISTIVITY SURVEY OF HOPE LODGE

Whitemarsh, Pennsylvania

July, 1965

by

Henry Börstling
Applied Science Center For Archaeology
University Museum
University of Pennsylvania
Philadelphia

HISTORICAL BACKGROUND

Hope Lodge is one of the best examples of colonial architecture in Pennsylvania and at the same time it is a treasure house of historical memories. There is a tradition that the house was built in 1721-1723 from designs by Sir Christopher Wren. But there is no specific evidence of it. There is another belief indicating that this mansion might have been built about 1750. Hope Lodge has been the home of several distinguished gentlemen of Philadelphia. It also played an interesting role in the Battle of Whitemarsh during the Revolutionary War. Since 1957, the estate of Hope Lodge is the property of the Historical and Musuem Commission of the Commonwealth of Pennsylvania. The House serves as the museum exhibiting the architecture and furnishing of the Colonial Period of America.

SURVEY REPORT

The soil varied from soft, dark humus to hard, light-gray clay. Fortunately, most of the top-soil was soft and easy for the Geohm rods to poke into. Plots of the estate which were considered of interest were surveyed by the Resistivity Meter. The Proton Magnetometer was tried on July 20th and 21st. On both of these two dates, we had large, uncertain fluctuations. The cause of the disturbance is still unknown.

The Geohm survey started behind the mansion, near the barn. The rod spacing used was two feet and the line spacing was five feet for most of these small grids. At times, we had also used 2.5 feet for line spacing. The results of these small grid surveys were inspiring. Two or three shallow walls were found in these first grids (Grid 1). Next, the areas about the House and the large lawn before the mansion were systematically surveyed. On the right of the House, there was a large region of high resistance. From the excavation of that region or Grid 3, walls, gravels and stones were uncovered. The archaeologists thought that it might have been the site of a stable or even two stables of different periods. In Gride 4, the area by the House and the outer kitchen, a well was located. Also there was a high resistivity region which might tight in with Grid 3. Grid 5 was the garden. There were indications of disturbed pockets. At places in the garden we had high resistivity readings from the meter. Later it was discovered that it was caused by the light-gray clay. Grid 7 and several small adjacent areas are on the left side of the House. There am older garden wall was uncovered after being located by the instrument. This older wall was leaning against the present wall. Grid 8 is the large area in front of the mansion. Our intention at first was to find some sort of a path going towards the old road -- our present Bethleham Pike. We did not pick up such a path, but we had indication of a possible carriage path. Grid 9 is a long, narrow strip by the highway. In that grid a few old steps leading onto the Pike and part of a path leading towards the House were located and later confirmed by escavation. It ~~is~~ was strange that the instrument did not pick up such a similar path in front of the House. On the other hand, the estate had changed several hands, and probably each owner had done some alterations and constructions on the property. Grids 10 and 11 were plots in the field. There was no indication of interest.

SUMMARY

The survey at Hope Lodge was a thorough success. It helped the archaeologists to locate places of interests for excavations. It saved much time and labor. It was unfortunate that there was really not enough time to do a careful, systematic and complete survey. But our "spot" surveys have located plenty of interesting areas for the archaeologists to be busy for quite a while.

REFERENCE

Paul A.W.Wallace, Historic Hope Lodge, The Pennsylvania Magazine and Biography, Vol.LXXXVI, No.2,April, 1962

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RESISTIVITY SURVEY OF GRAEME PARK

Horsham, Pennsylvania

August, 1965

by

Henry Börstling
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University of Pennsylvania
Philadelphia

HISTORICAL BACKGROUND

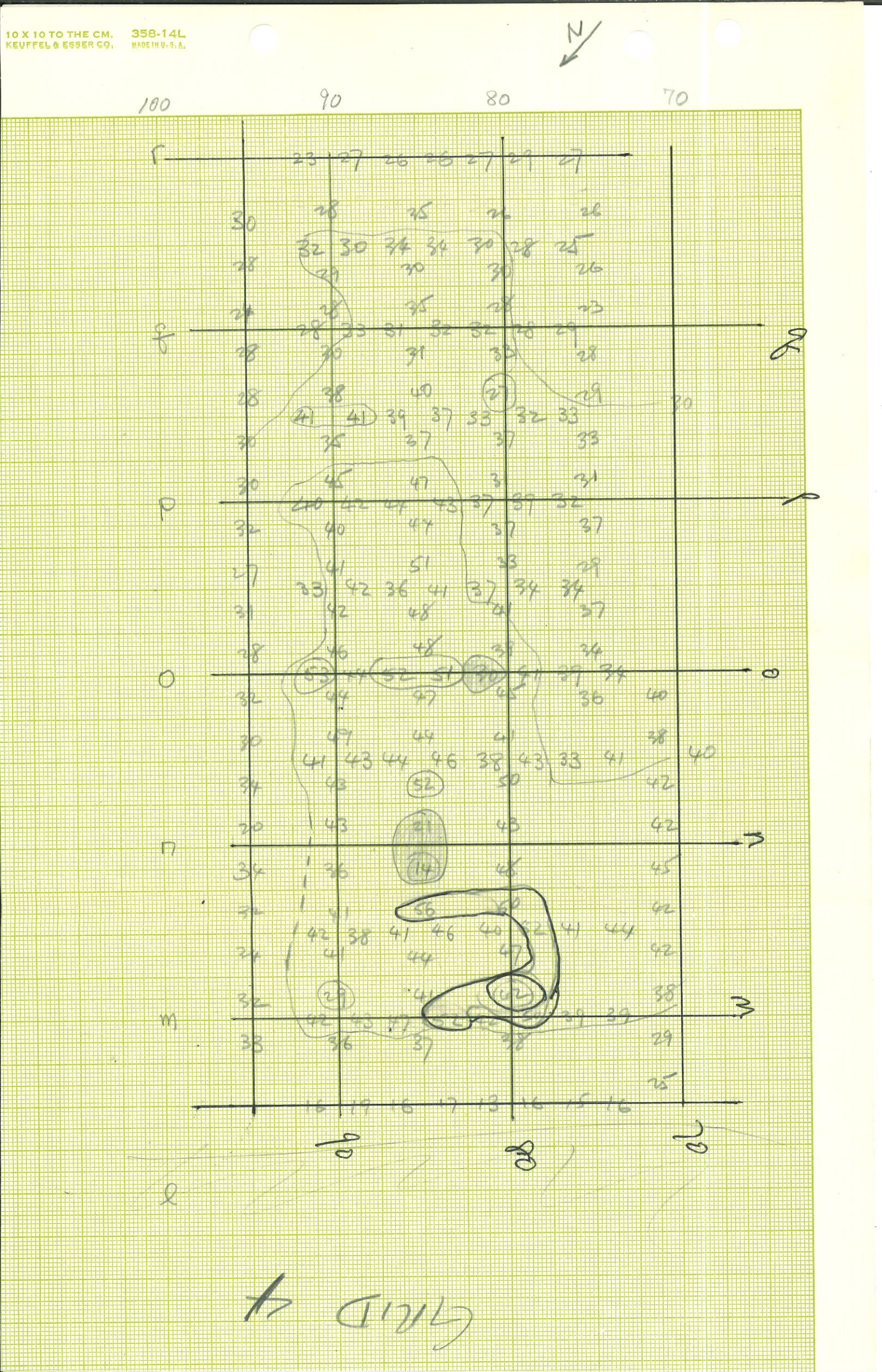
Graeme Park is a beautiful red-stone country house in Horsham Township, Pennsylvania. The estate was first purchased by Sir William Keith for the purpose of establishing a grain manufacturing settlement. The mansion was built in 1721-1722. There are suggestions that this structure was originally built as a malt house and later transformed into a dwelling. There are also indications that on this property once stood several other smaller structures.

SURVEY REPORT

The estate of Graeme Park is surrounded by small creeks. The soil is quite damp at places. The Resistivity Meter surveyed essential five areas with rod spacing at 2.5 feet and the line spacing usually at 10 feet. Grid 1 is an area between the creek and the sourthern side of the House. Grid 2 is between the eastern side of the House and the fence. Grid 3 is between the eastern fence and another creek. Grid 4 is the large area on the northern end of the estate. Grid 5 is south of Grid 1.

In Grid 1, the Geohm located the continuation of an already uncovered gravel path. There were a few other regions of high resistivity which were the sites of the cook-house,

ditches and a stone-path leading from the house towards the creek. In Grid 2, the meter picked up a narrow streak of high resistivity running from the house towards the eastern fence. There is another pocket of high resistivity which might tie im with Grid 3. Grid 3 is a long, narrow strip of 30 feet by 90 feet. It was bordered by excavation on two sides. There we located the high resistivity region which probably ties in with Grid 2. The survey of Grid 4 was started from the wrong end. We worked from east towards west. Except a few areas of some variation of resistivity, there did not seem of anything of interest. However, at the western end of the grid, adjacent to a ruined wall and what was believed to be a ditch, the instrument registered an abrupt rise in resistivity. By probing with a steel rod, we hit stones underneath at several places. This certainly would be a spot to pay attention to. Grid 5 is on the southern end of the property. It is bordered by a fence and a creek. On the eastern end of the grid near a fence, the Geohm located part of a path-- probably a carriage path. At about the middle of this grid, the resistivity readings indicated almost a 90 degree corner contour. Part of the raised western end of Grid 5 was probably a road. This was discovered by probing with the steel prober.



Bethlehem Pike

XI

0 110 100 90 80 70 60 50 40 30 20 10 0

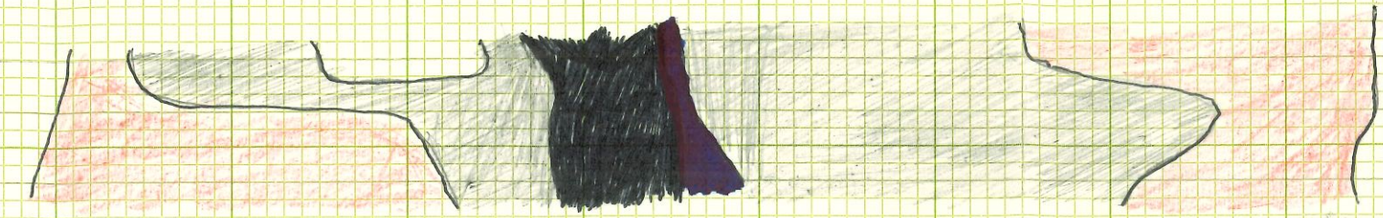
Post

stake

5—

8—

12—



Probing

found nothing → | mortar | mortar | mortar 1 ft deep | stone 1 ft deep | stone 1 ft deep | stone 0.5 ft deep | mortar 0.5 ft deep | mortar

■ x ≥ 70

■ 70 ≥ x ≥ 60

■ 60 ≥ x ≥ 50

■ 50 ≥ x ≥ 40

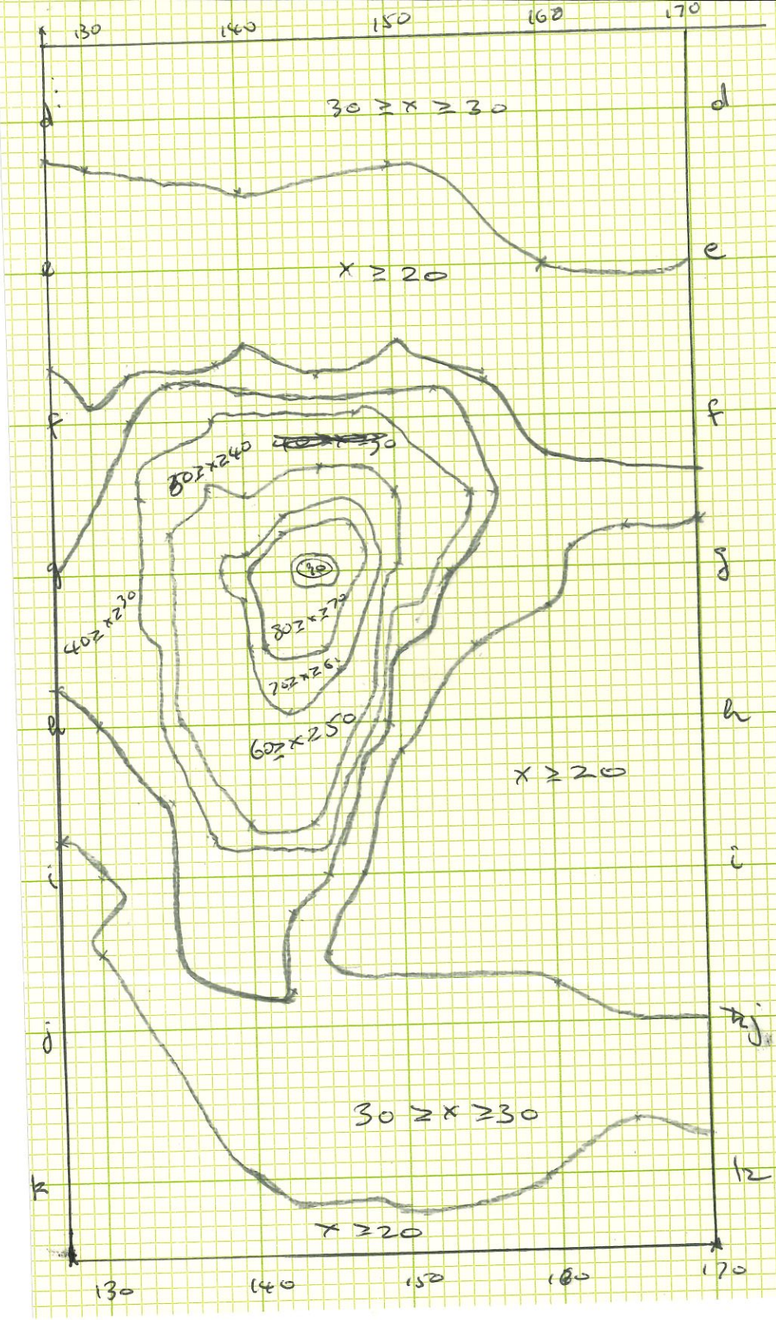
Probe Spacing : 2.5 ft

Line Spacing : —

There was practically nothing from 90 ft → 240

Hope Lodge, July 65.

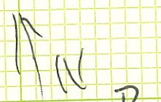
IX

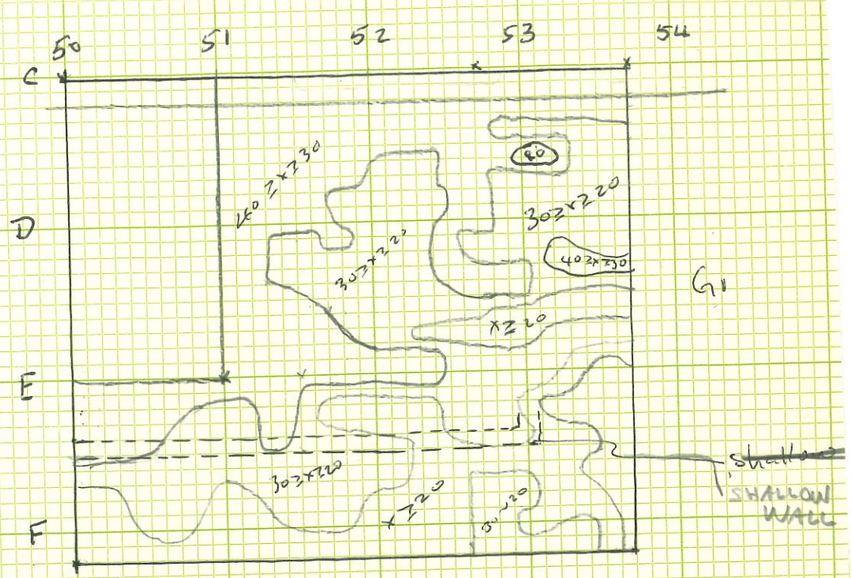


GRID #2

Rod Spacing: 2.5ft

Line Spacing: 5.0ft





Grid # 1.

Probe Spacing 2 ft.

Line Spacing 2.5 ft.