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BENT FARM, CONGLETON, CHESHIRE

Geophysical Survey 1976

At the request of the Inspectorate of Ancient Monuments a geophysical survey was undertaken at Bent Farm, Congleton. The purpose was to determine whether forthcoming sand extraction workings would destroy any part of a Roman earthwork, probably a marching camp. Trenching, reported by Professor B Jones, of an extant section of the main ditch and rampart lying in the field to the south-east of the farm, had revealed its structure-a V-cut, 10 ft wide by 4 ft deep into a subsoil of red clay. Although there were neither surface indentations of an archaeological nature nor cropmarks in the fields to the north-west of the farm, the historical evidence of Dr Gower in the 18th century and the name of the adjoining hamlet, Wallhill, suggested some continuations of the earthwork past the farm, rather than a return southwestward through the area of the farm and buildings.

Survey method:

Lying across the most likely route of the line of the ditch and rampart, Field 4716 was chosen as most suitable for investigation. A 30 m square area was surveyed using the Fluxgate gradiometer and AM Lab automatic plotting system. This area was also covered by resistivity traverses, 1 m probe-spacing, 10 m apart, which were extended to the hedges on either side. Borings down to 1 m with a 1" coring auger were made along the most promising traverse, and further traverses were made at intervals along the field, placed orthogonally to the supposed line of the ditch. For purposes of comparison a resistivity traverse was taken across the extant section of ditch, together with a scan with the gradiometer.

Plans following this text show the survey lay-out and its relationship to the locality.

Results:

Whilst showing no trace of any bank or ditch the magnetic survey revealed a large magnetic anomaly. Auger boring showed this apparently to be a large pit full of topsoil adulterated with burnt material. Comment from the farmer suggests a possible but unconfirmed burning and burial pit for animal plague carcasses.

Subsequent laboratory measurements of soil samples show no difference in magnetic susceptibility between topsoil, ditch fill, and subsoil, which means that only anomalies due to burning or direct magnetization (eg iron, kilns, etc) would be detectable in this geological area.

The resistivity results show that, whilst only the slightest hint of the extant ditch (traverse 1, arrowed) shows in the traverse across it, there are marked perturbations in the field in question, with no surface irregularities. This conforms closely to one part of the theory of shallow depth resistivity surveying in which variations in thickness of the overburden are detectable where a moisture difference exists between overburden and subsoil. The subsoil and topsoil surface descend together in passing across the ditch. Auger borings along Traverse 4 show the subsoil to rise and fall between 55 and 35 cms along the traverse, doing so correlatively with the resistivity results.

Conclusions:

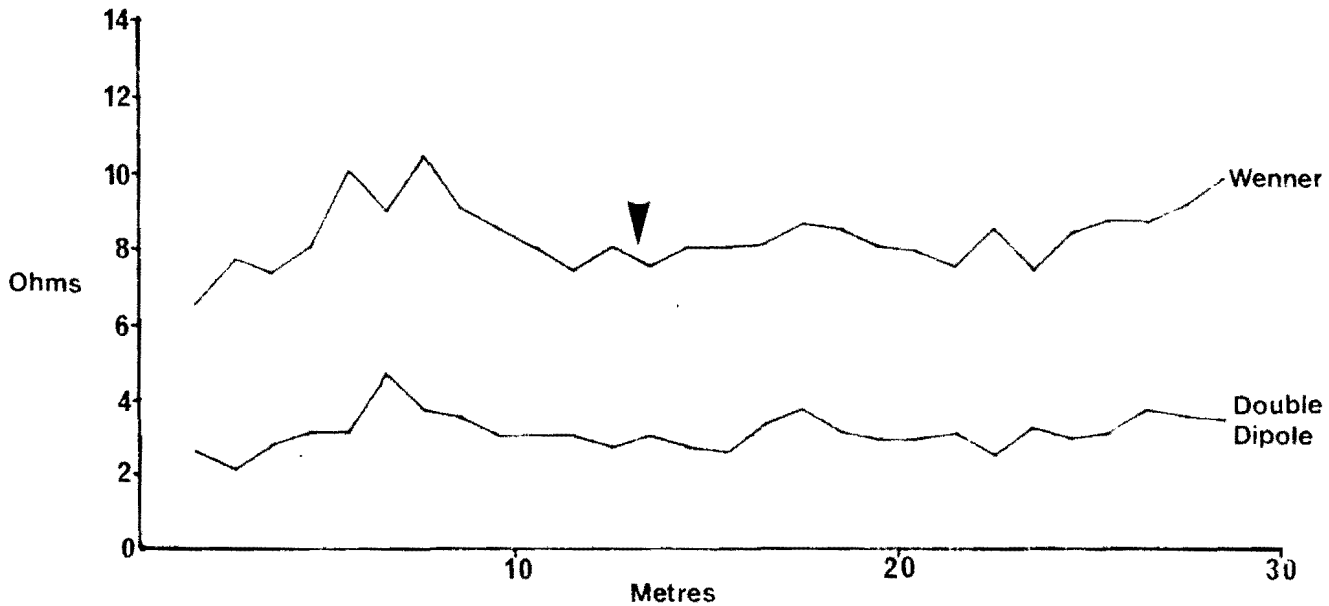
Since it seems evident that any subsoil variations present at this site would be detectable by the resistivity methods used, and since an overall comparison of the traverses reveals no clear and continous pattern running through them, it appears safest to conclude: firstly that no archaeological remains are present in this field, with the possible exception of the large magnetic anomaly, and secondly that the anomalies detected by resistivity in the traverses represent more probably decayed rigg and furrow rather than levelled defences. The lack of continuous pattern stands against this, but strongly marked rigg and furrow is still visible in the neighbouring north-western fields, and the writing of Dr Gower reported large scale, and in places thorough, agricultural levelling, which could conceivably have been most thorough close to the farm. The survey found no trace of the continuation of the defences northwestward past the farm buildings, which seems to add weight to the theory that they turn southwestward somewhere in the vicinity of these buildings.

D HADDON-REECE
A E U DAVID
Ancient Monuments Laboratory

March 1976

BENT FARM, CHESHIRE

TRAVERSE I



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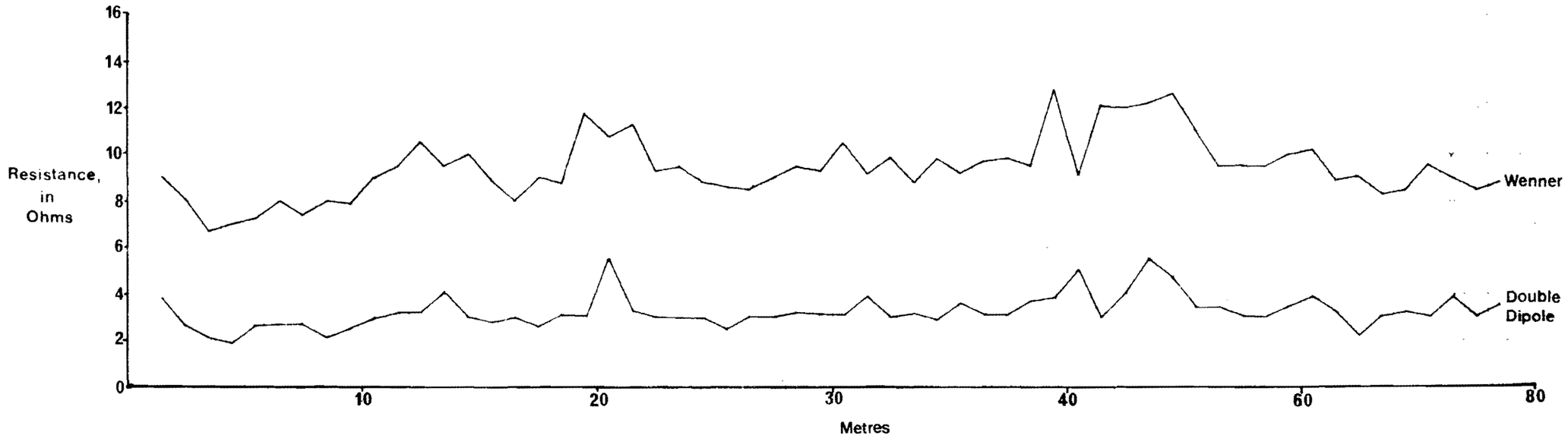
BENT FARM, CHESHIRE

TRAVERSE 2



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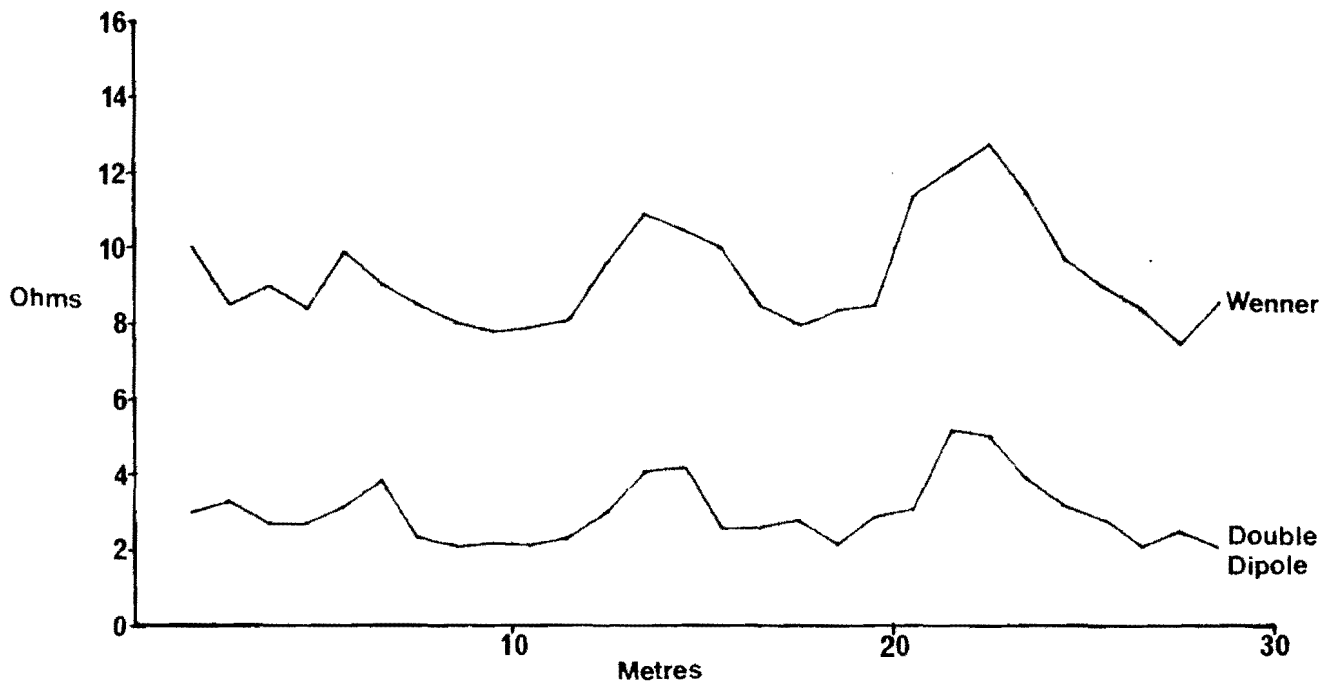
TRAVERSE 3



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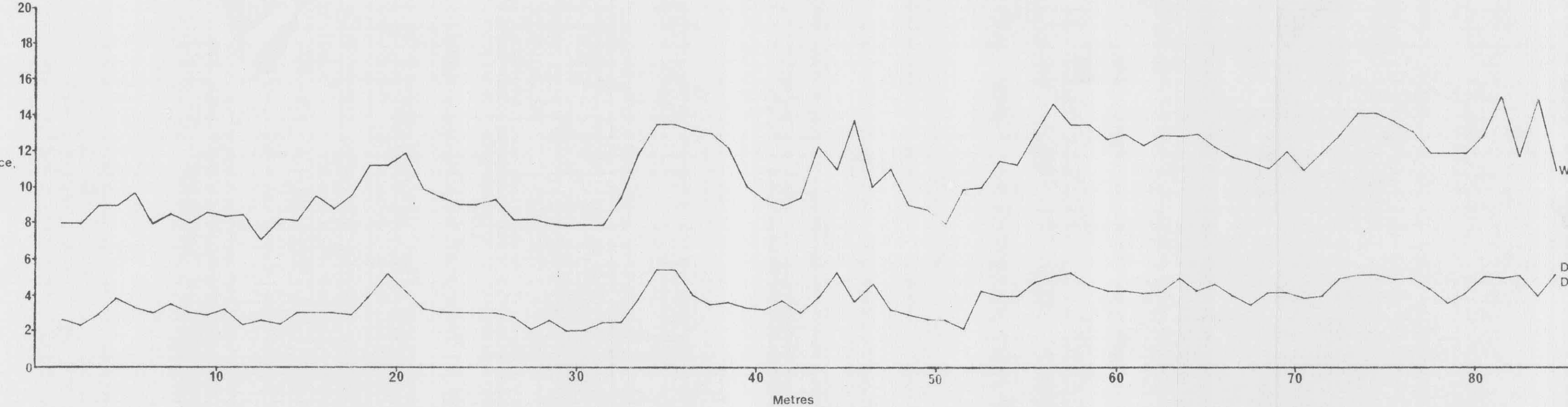
TRAVERSE 4



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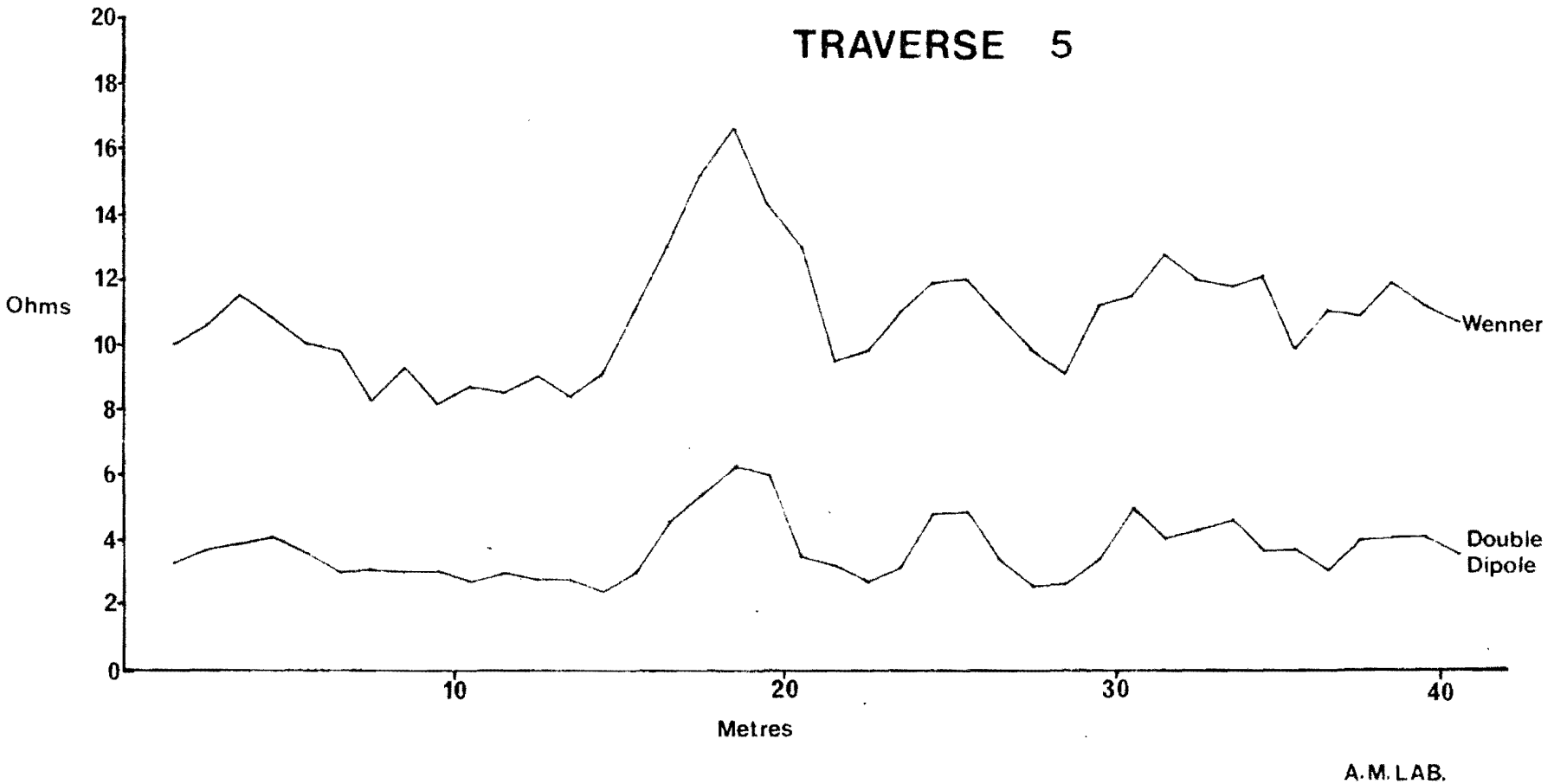
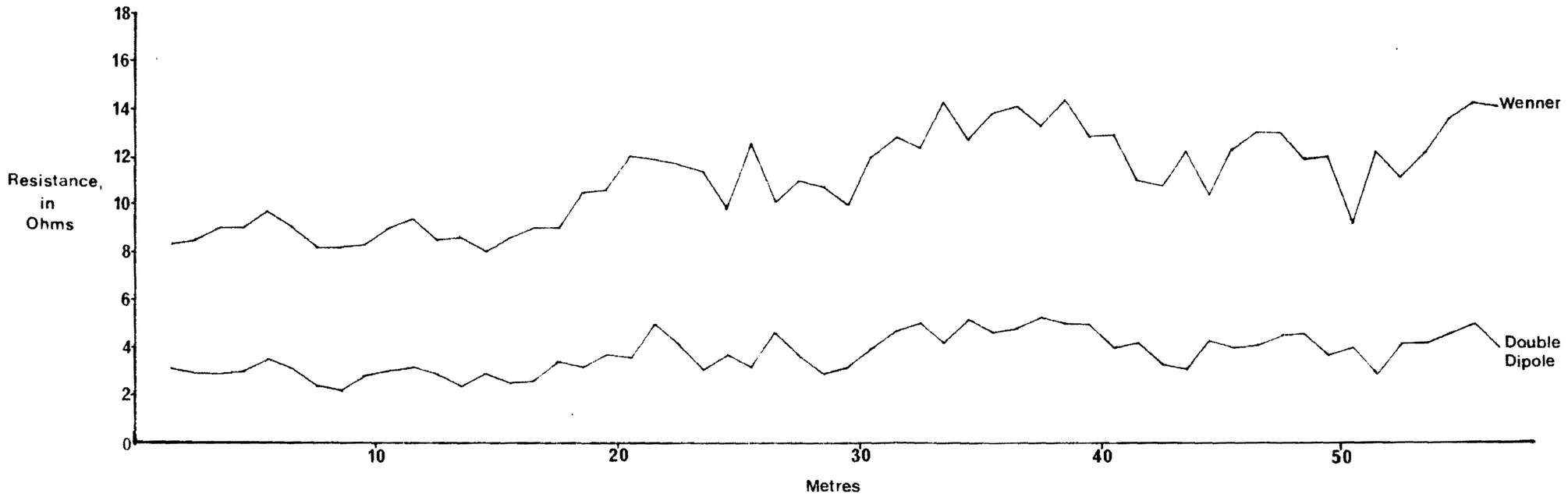


BENT FARM, CHESHIRE

TRAVERSE 6



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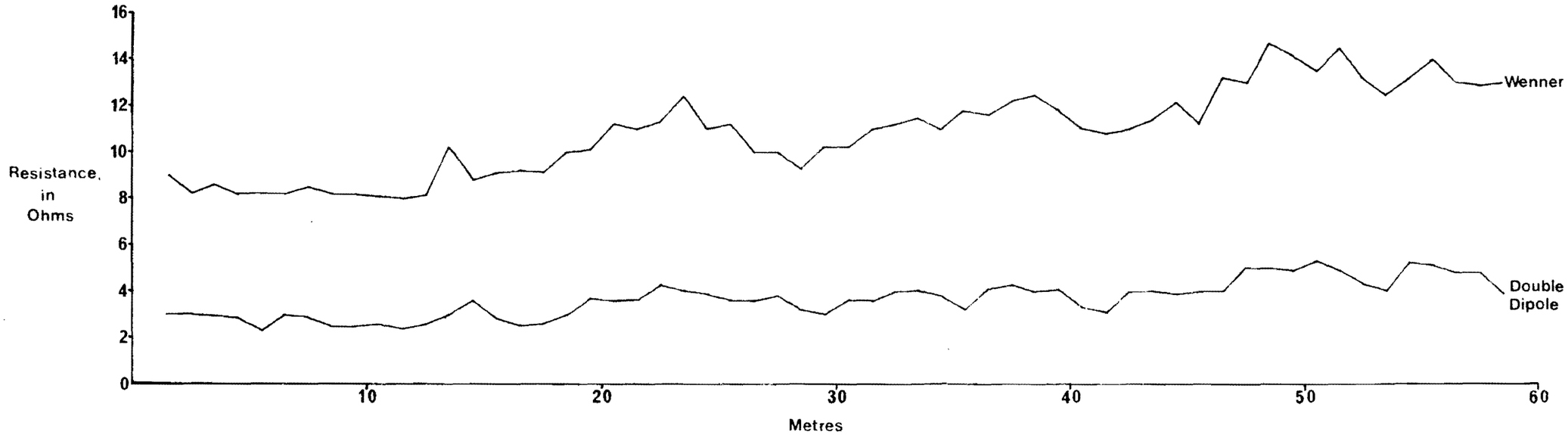
TRAVERSE 7



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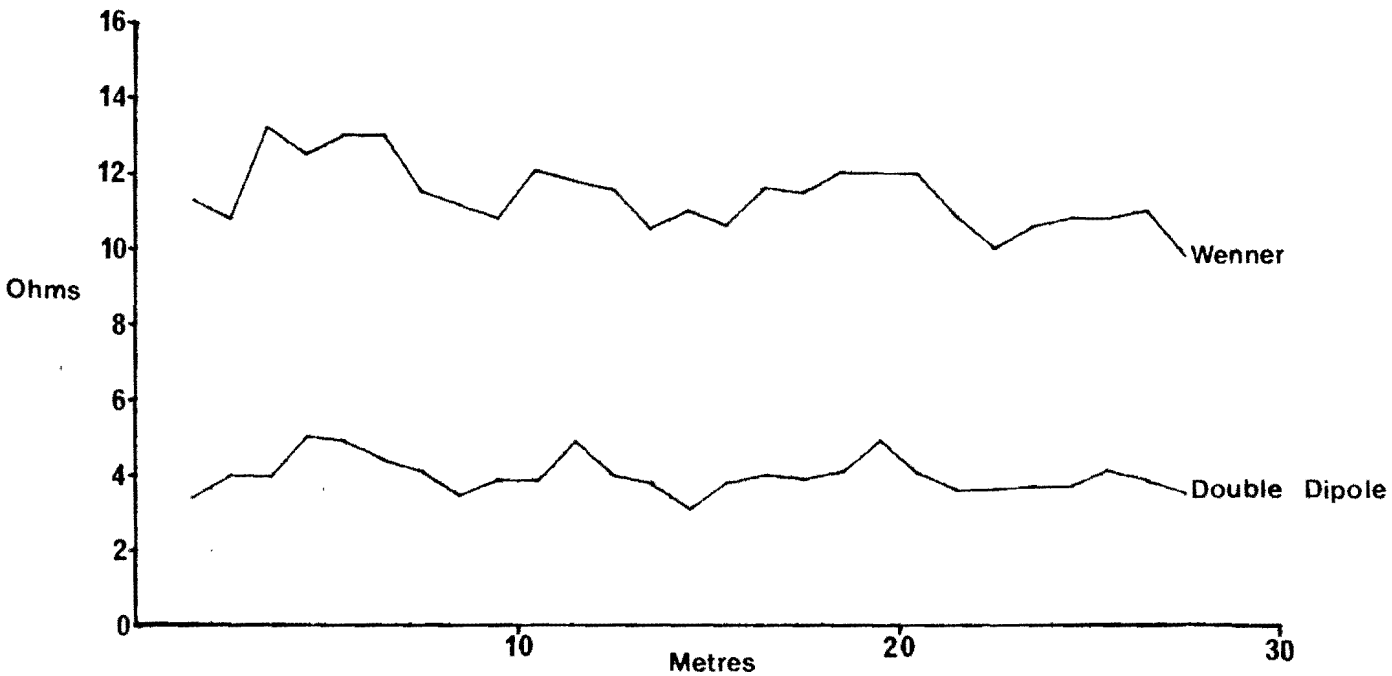
BENT FARM, CHESHIRE

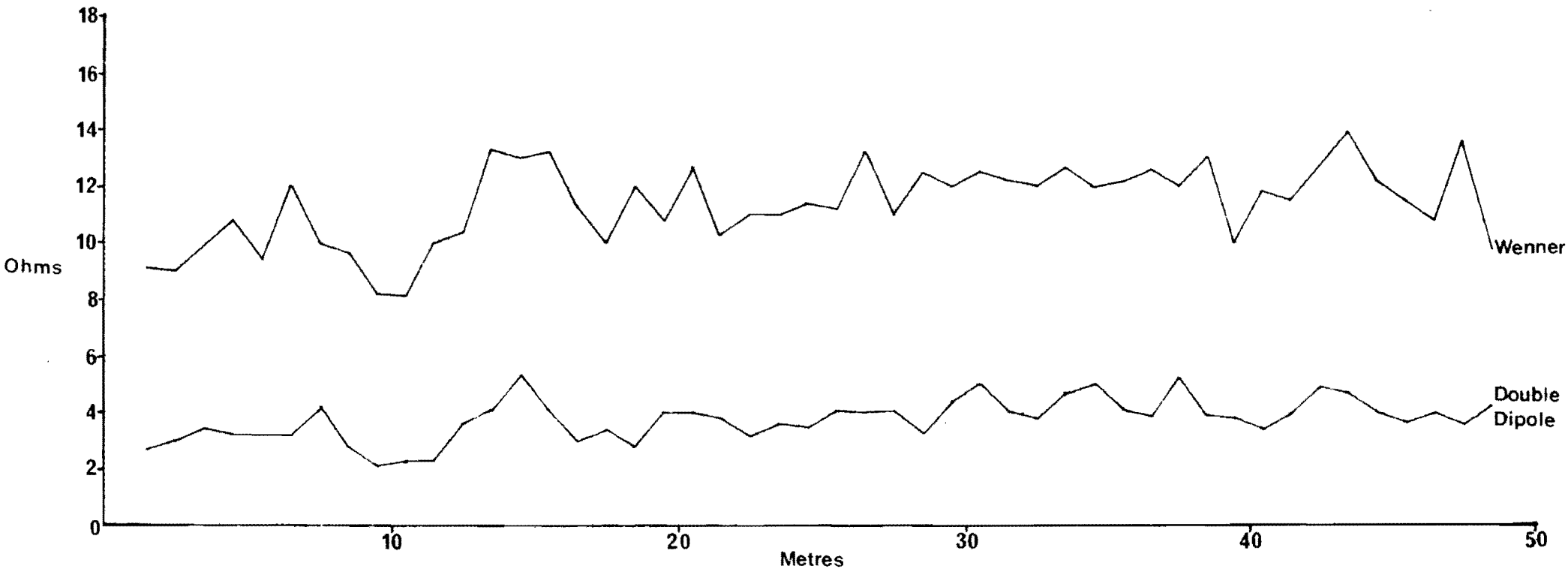
TRAVERSE 8



A.M.L AB.

BENT FARM, CHESHIRE

TRAVERSE 9



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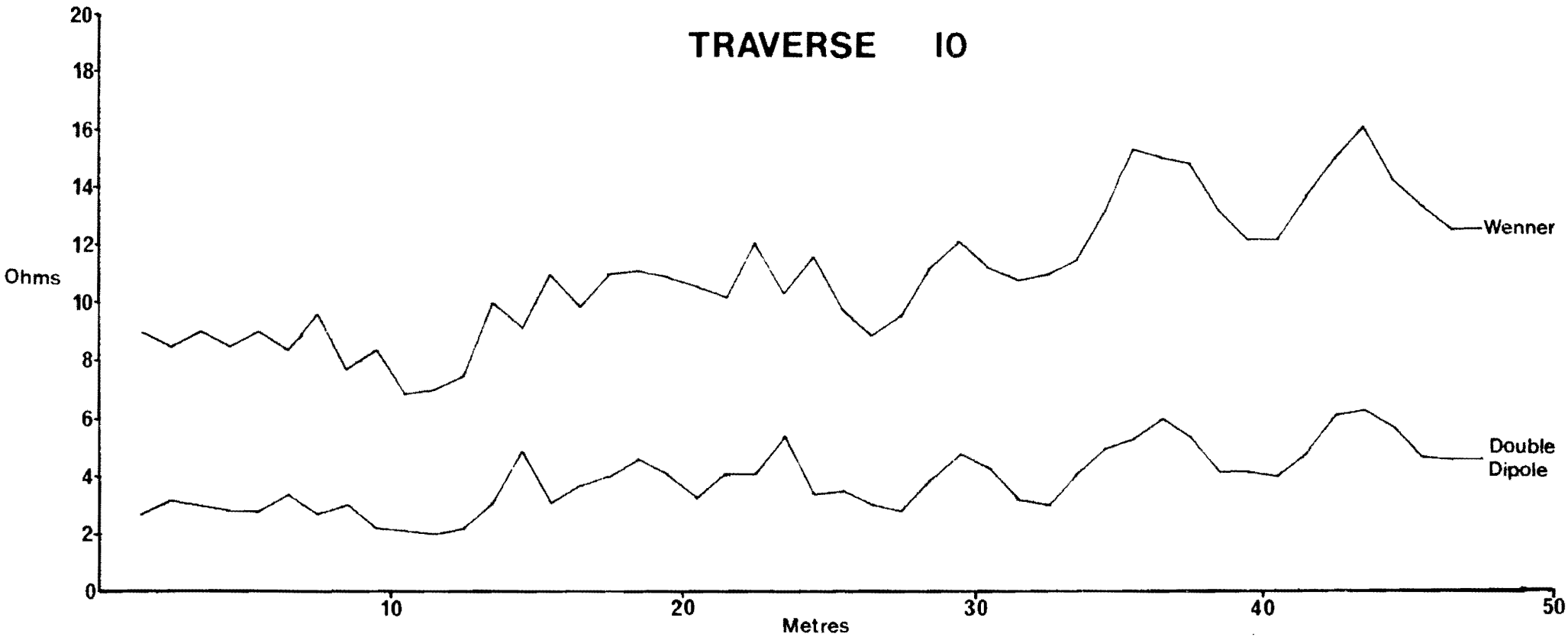
BENT FARM, CHESHIRE



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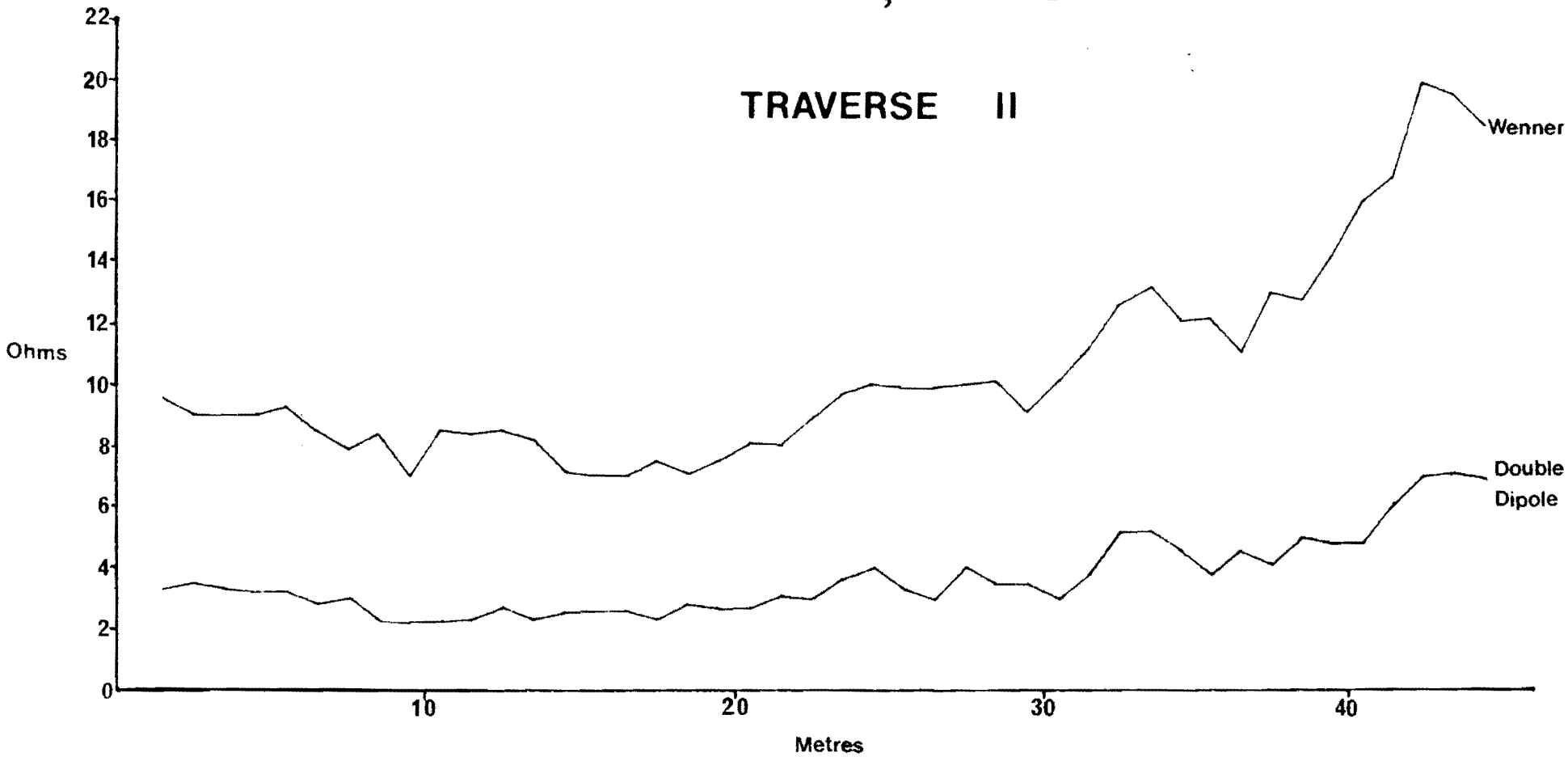

BENT FARM, CHESHIRE

MAGNETOMETER SURVEY, 1976

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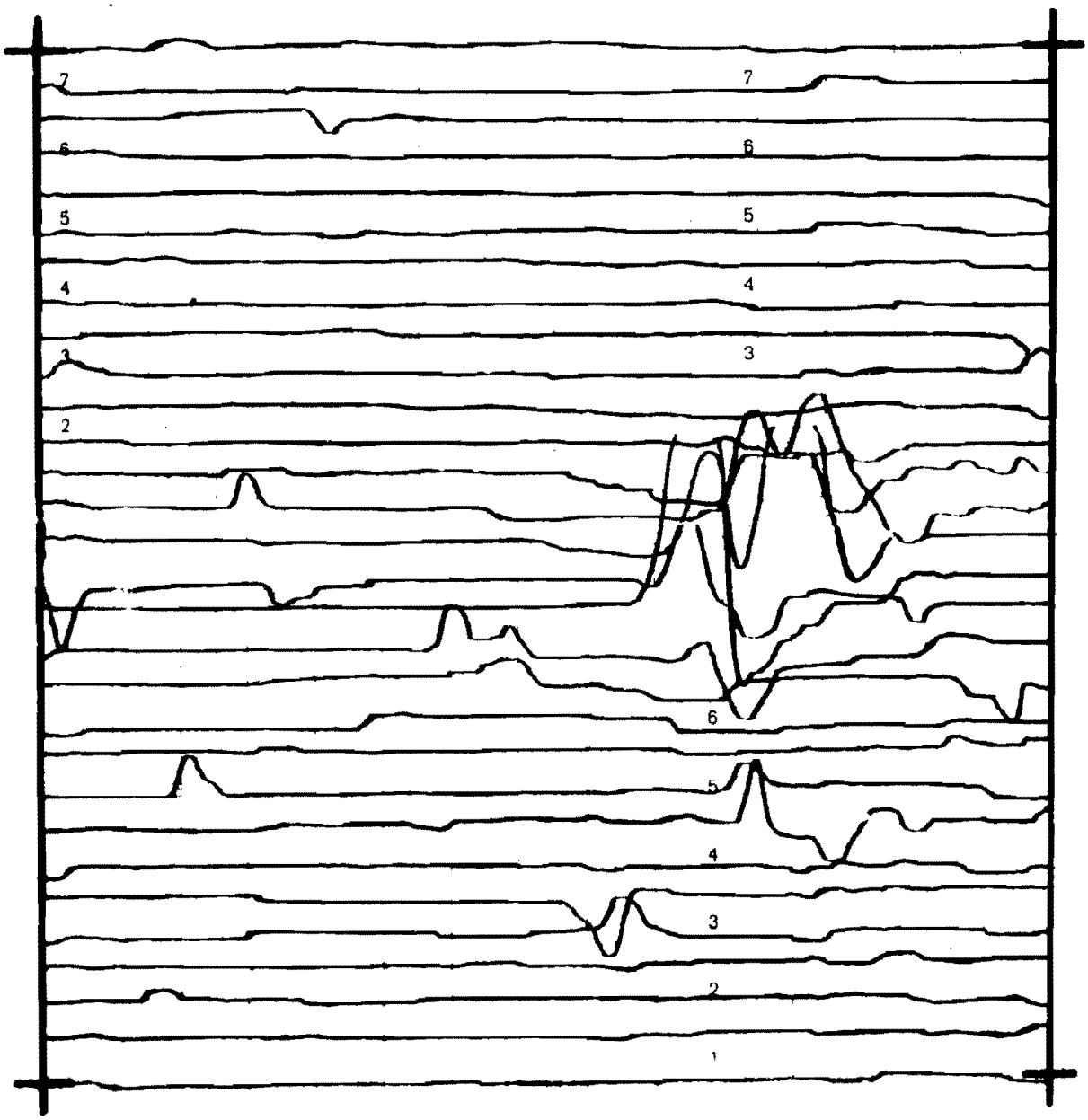

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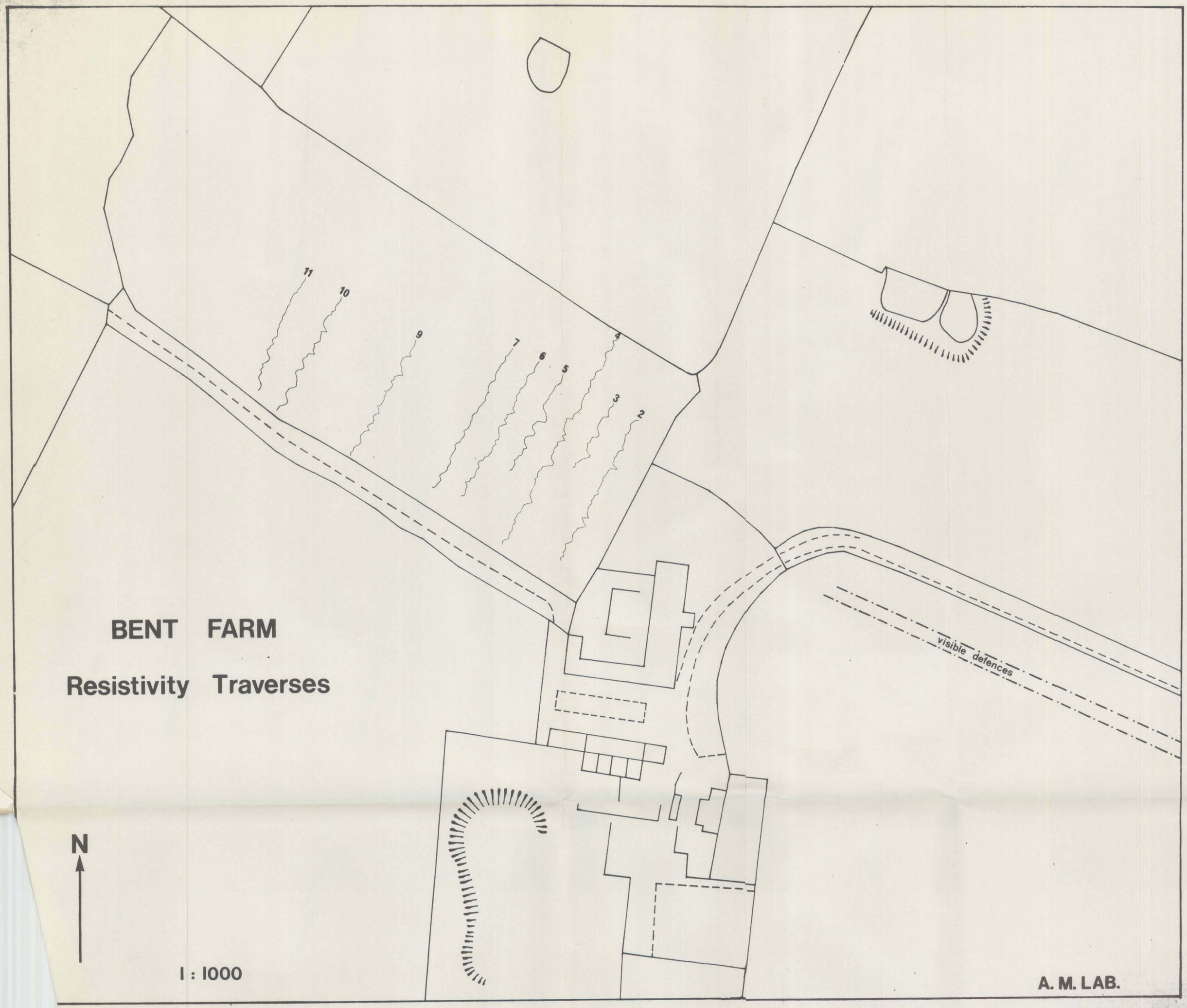
BENT FARM

Resistivity Traverses



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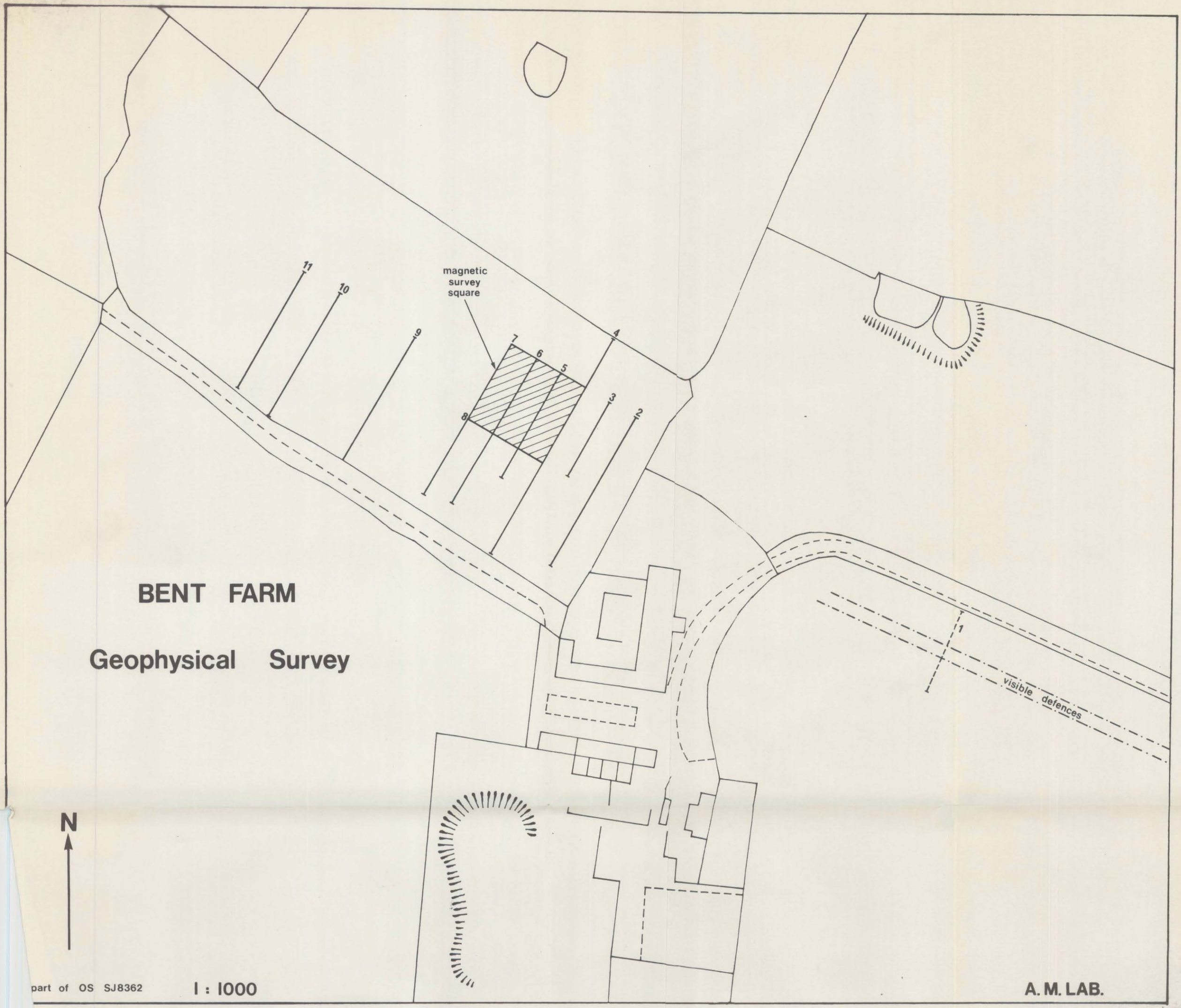
Geophysical Survey



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