ART. IV.—*The Roman tileries at Scalesceugh and Brampton.* By R. L. BELLHOUSE, B.SC.

Read at Grange-over-Sands, September 4th, 1970.

PRESENT-DAY Scalesceugh is a large house pleasantly situated, overlooking the wooded valley of the river Petteril about six miles south of Carlisle close by the Penrith road. Originally there were two farms here, High and Low Scalesceugh, and Low Scalesceugh was altered and added to in 1915/16 to become the present mansion known as Scalesceugh. It was during the digging of foundations for this house that Roman pottery was found, and the subsequent report to the Society established the site as a Roman tilery. After examining the Muncaster kilns (CW2 lx 1 f. and lxi 47 f.) I began to think about Scalesceugh and to wonder what might be found if some small-scale excavations could be attempted. Professor Birley had similar thoughts and very kindly sent me notes of the meagre references to the site in print, "enough to whet one's appetite for more", as he put it. In February 1961 Anthony Whitehead and I laid out a 50-foot grid and did some trial pitting, which we hoped would yield sufficient new information to justify a series of fairly ambitious excavations.

My purpose in this present paper is to set down the results of our trials, together with a summary of the relevant notes in *Transactions,* as a convenient brief for future work. The unexpected discovery in May 1963 of kilns at Brampton, where I was involved in rescue work in the early stages, provided experience which helped me to interpret features in our trials at Scalesceugh (CW2 lxv 133 f.).

Virtually nothing about the site has appeared in

print. In CW2 xvi 289 f., Linnaeus E. Hope, reporting to the Spring meeting of 27 April 1916, exhibited pottery from the site and said: "During the excavations for buildings at Scalesceugh in 1915/16 numerous fragments of pottery and tiles were discovered. Some were found near the mile-stone of the reign of Gordianus, described in this volume by Professor Haverfield, but the great majority were found while cutting a drain from the lodge to the river Caldew [recte the Petteril], about 200 yards further south. Here the potsherds were found at a depth averaging 2 feet and lay in forced earth on a subsoil of red clay. A considerable amount of charcoal and evidences of fire were noticed at certain points and the remains appear to spread over an area of perhaps one hundred square yards (*sic*)." Elsewhere in his report Hope describes the tiles and potsherds and records that Mr J. R. Harrison, owner of the estate, had given them to Carlisle Museum. The tiles found on this occasion included one of leg. XX V.V., and one of leg. V——, assigned to leg. VI Vic.; but CW2 xxii 456 f., in the Proceedings of the meeting of 13 September 1921, records the discovery at Scalesceugh, "while draining operations were in progress during the spring of this year in the park to the south of Scalesceugh", of a tile stamped LEG VIIII H.

The reports indicate two areas where pottery was found, where the house and garden now stands, and in the park between the lodge and the Petteril, and this is where we chose to explore. The late Mr F. H. K. Harrison (who died in April 1961) gave his permission and described the circumstances of the finding of the stamped tile in 1921 and indicated the place from which it came. The drain from the lodge to the river referred to by Hope is still traceable across the park. The tile draining of 1921 must have been in an area nearer the house, the main drain discharging at the

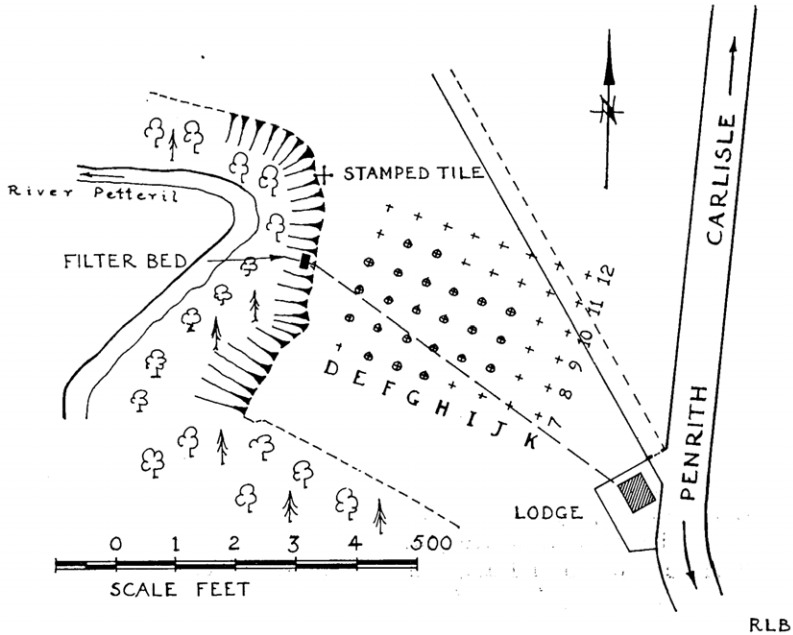

FIG. 1.—Scalesceugh. Site plan showing the area explored and the position of the 50-ft. reference grid.

field boundary above the river where the stamped tile was found. For our 50-foot grid we chose the area of the park traversed by the lodge drain and opened trial pits; we recorded soil variations from the surface down to the undisturbed red boulder-clay and the number of the pieces of pot and tile in each pit. In all, 23 pits were dug.

E 7 12 in. grey-brown loam, cobbled surface with fragments of wasters of tegula, imbrex, voussoir and pot.

F 7 15 in. grey loam, 18 pieces of tile.

G 7 15 in. grey-brown loam, 25 pieces of tile, 1 piece of grey pot.

D 8 12 in. brown loam, 12 rounded pieces of tile.

E 8 12 in. grey-brown loam on cobbles, 30 pieces of tile, some red potsherds.

F 8 18 in. grey-brown loam, 10 pieces of tile, part base of red pot.

G 8 15 in. grey-brown loam on cobbles, 7 pieces of tile, 1 piece grey pot, one piece of yellowish "water-pipe".
H 8 15 in. grey-brown loam, no sherds.
I 8 18 in. brown loam, 3 pieces of tile.
I 9 24 in. loamy brown soil on a grey surface with charcoal.
H 9 18 in. greyish loam, 9 in. grey sandy loam.
G 9 12 in. brown loam on brown sandy boulder-clay.
F 9 As G 9, 14 small rounded pieces of tile.
E 9 12 in. brown loam.
D 9 18 in. brown loam, 18 pieces of tile.
D 10 12 in. brown loam on brown boulder-clay, 1 piece of tile.
E 10 As D 10, 19 pieces of tile.
F 10 15 in. grey-brown loam, 14 pieces of tile on a rough cobbled surface.
G 10 12 in. grey-brown loam on brown sandy clay, 5 pieces of tile.
H 10 15 in. grey-brown loam, 6 in. grey loam on brown clay.
I 10 As H 10, 1 piece of tile.
E 11 10 in. grey loam, 15 in. sticky grey loam, 12 pieces of tile, 8 pieces of red pot.
F 11 27 in. brown loam, much charcoal, 2 pieces of tile, 2 pieces of yellow pot.

The pottery was all well worn, rather soft and mostly in a red sandy fabric; sherds were small.

(1) The largest sherd, part of a large jar with "thumbed" bead.
(2) Part handle of "flagon" type in hard gritty ware.
(3) Part spout of mortarium.
(4) Part reeded rim of large bowl in similar fabric.
(5) Part reeded rim of similar but smaller bowl.
(6) Two parts of pot base with pronounced footring in smooth buff-coloured fabric.
(7) Part base and wall of mortarium, no grit.
(8) Two base pieces of grey cooking-pot.
(9) Part rim of small jar.
(10) Two part bases of cooking-pot and many wall sherds, mostly over-fired and obviously wasters.
(12) One piece blue-grey pot.
(13) One piece, yellowish fabric, "water-pipe".

The finds are stored in Tullie House against the day when more might be discovered, or it becomes necessary to describe them more closely.

The trials in themselves tell us little, and nothing that could suggest the nearness of any structure like a kiln was seen, but the varying depth of grey-brown loam over the area and the worn appearance of the sherds must indicate a period of weathering and soil formation after the abandonment of the site, followed by centuries of natural soil creep, later speeded up by the plough. Since the present surface of the ground is fairly even, the variations in depth to the "natural" suggest that the Roman surface was uneven. It is possible to interpret the levels and draw tentative conclusions about the site in the light of unpublished work at the Brampton tilery (CW2 lxv 133 f.).

The colour of the "natural", the undisturbed subsoil, may be altered by natural soil-forming processes from the usual red of the local boulder-clay and the change may be significant. Brown may indicate a "fossil" soil, a soil buried under later deposits, I 8, E 10, F 9, G 9, D 10, G 10, H 10, I 10. Red may indicate that the topsoil has been stripped, D 8, D 9, F 10, G 7. Yellow may indicate the effect of impeded drainage on the ferric oxides at the transition between topsoil and subsoil, E 8, G 8, H 8, I 9, E 9, F 11. Grey colours usually indicate leaching, that is the solution and loss of iron as the result of long periods of waterlogging, E 11, F 8, H 9, F 7.

It is possible to explain these colour differences and the varying thicknesses of concealing "forced earth", as Hope described it, if we imagine the area covered by the trial pitting to have once had a number of shallow clay-pits within it and some working areas. When the Roman kilns were discovered at Brampton in May 1963, Miss K. S. Hodgson and I were the first on the site. The heavy-duty grader and scraper was at work on an area a little way from the obvious kilns and my most urgent task was to make a site plan to show everything already revealed and to add any new

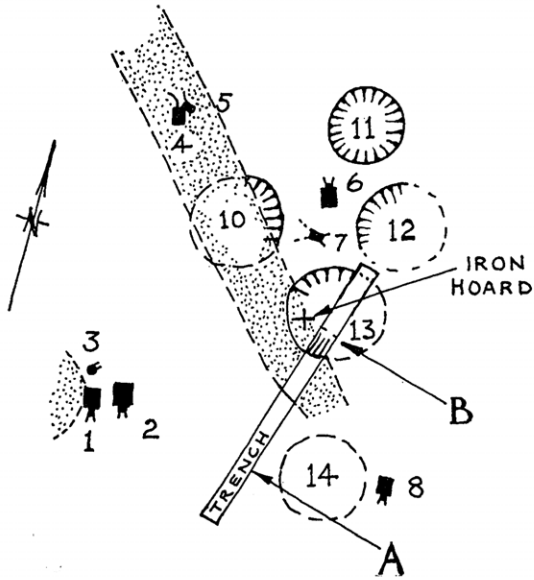

FIG. 2.—Brampton. Sketch plan showing the relative positions of kilns, numbered 1 to 8, and clay pits, numbered 10 to 14.

information as it came to light. The kilns themselves were quite plain to see but there were also clear outlines of circular features about 30 ft. across which were obviously clay-pits and into which charcoal and kiln débris had been dumped. As the scraper passed over the ground I was able to record successive levels and retrieve wasters from the brownish muddy clay near the pit bottom. The lowest level was a coarse leached sand (pit no. 12). Some time before the levelling work began, a wide sampling trench about 7 ft. deep had been dug from a point about halfway between kiln 2 and kiln 8 towards the north-east; it showed the clear profile of another clay-pit (number 13), the slope of one side sharply defined by a deposit of charcoal and a layer of bright red kiln waste. Collapse of the trench sides beyond this point prevented further investigation. The pits must have been about 4 ft.

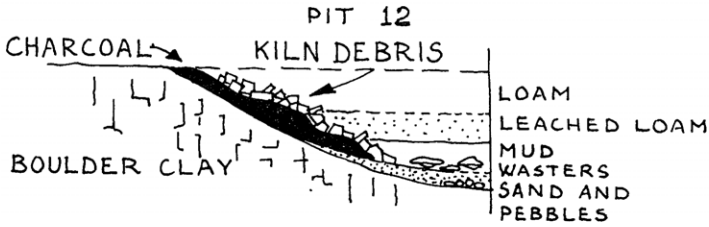

FIG. 3.—Part profile of clay pit 12 recorded while the immediate area was being dug away.

deep, because, before their lowest levels were reached, modern tile drains were uncovered running across the area to the north-east; I estimated the original depth of the drains as about 3 ft. The lowest deposits in the pits comprised rather coarse greyish sand with some pebbles, no doubt mainly the result of the usual rapid silting, with the pale colour the result of leaching of iron under waterlogged conditions which had also affected the red boulder-clay below, changing it to a pale yellow. The main deposit was soft brown mud from which the great bulk of the pottery found on the site was recovered. Charcoal, kiln rubbish and brown loam made up the rest. These clay-pits therefore were used as rubbish dumps; after each firing there must have been an amount of waste to get rid of. From all this I think it safe to infer that we were pitting a comparable area at Scalesceugh; the charcoal at 24 in. on a grey surface with yellow boulder-clay below in pit I 9, and at 27 in. in pit F 11, may be dumped material not very far away from a kiln.

The Brampton kilns have been thoroughly examined and reported by Mr Robert Hogg in *Transactions* (CW2 lxv), but there are some points of interest about the site arising from rescue operations there in the early stages which ought to be put on record. The first concerns the nature of the glacial drift of the site. The sample trench already referred to provided a most

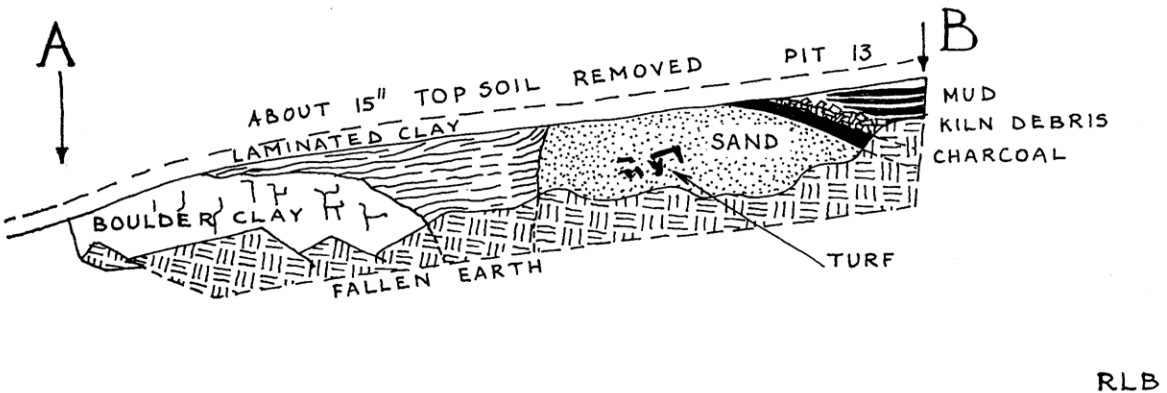

FIG. 4.—Deposits visible in the west side of contractor's proving trench between points A and B on Fig. 2.

interesting section for study; pit 13 had exploited boulder-clay to the edge of a sand-bar which could be traced right across the site but had previously been hidden under 3 or 4 ft. of clay. Kilns 4 and 5, certainly what remained of their flues, were built in sand, and pit 10 exploited the clay above the sand. The western edge of the sand-bar visible in the trench met distorted laminated clay in an almost vertical line, and these two very dissimilar materials requiring different conditions for their deposition could not possibly have been laid down together. Buried within the sand were angular lumps of black humose sand with Sphagnum moss attached, which I identified as ancient soil incorporated in the sand when frozen. The laminated clay towards the southern end of the trench partly overlaid a mass of reddish-brown boulder-clay with a purplish tinge, practically stone-free, which elsewhere would be regarded as Lower Boulder-Clay. An interesting feature of this deposit was the development of large prismatic structures, or peds, with root traces on the ped faces outlined by a greenish iron compound; the roots had not penetrated from the laminated clay above. We have here no doubt evidence for the Scottish Re-advance Glaciation, for only ice could pick up and transport large bodies of different materials and set them down again without mixing or resorting their constituents.

We shall never know why the Romans chose this site for their tilery. Suitable clays are found all over the Cumberland Plain, and within the last hundred years brick- and tile-works flourished at Botcherby, Cumwhitton, Abbeytown, Longtown, Aspatria, Sandysike, Langrigg, Bowness, Millrigg, Curthwaite, Longlands Head and a dozen or more other places. It is a pity that the idea that the Romans were very clever to detect and exploit laminated clays ever got into print (*Ibid.*, 135 and 165), for the pits at Brampton exploited

the massive boulder-clay and ignored the comparatively small wedge of laminated clay revealed in the sampling trench.

As regards the construction of the various kilns, while I agree that kiln 1 and kiln 2 were probably built first (*Ibid.*, 167 f.), there is a much simpler explanation than the one given, that is to say, until the first kiln has been made, using local materials, there is no brick and tile for making a better one.

The hoard of Roman ironwork found on the site in the following year in a pit 2 ft. in diameter and 3 ft. deep and which was estimated as having been 10 ft. deep when dug presents a problem, since it is impossible to dig to that depth in that width. However, when I added the location of the pit to my site plan, I found that it came within pit 13 which, if the iron had been buried when the works were abandoned, would have been open and about 3 or 4 ft. deep, and an obvious place to bury anything without too much effort. Moreover it would have been a dry pit because the sand-bar at one side would have allowed water to seep out. The report on the iron in CW2 lxvi 1 f. says, "The presence of a relatively deep, narrow pit in a tilery strongly suggests it was dug as a well to provide water for use in tile making." This pit was no well.