group of reservoirs, and Mr. Wm. Lockhart, C.E., of the Kirkcaldy and Dysart Waterworks for tracing of the new reservoir at Holl.

Gladhouse Reservoir (see Plate CVII.), the largest of the Forth reservoirs, lies at the base of the Moorfoot hills, about 13 miles south of Edinburgh. It is very irregular in outline, and 1½ miles in length from south-west to north-east, with a maximum breadth across the middle of nearly a mile. The superficial area is about 375 acres, or over half a square mile, and the drainage area about 12½ square miles. The reservoir is, on the whole, comparatively shallow, 84 per cent. of the floor being covered by less than 25 feet of water, and only one sounding was taken in depths exceeding 50 feet, viz. the maximum of 55 feet near the sluice at the northern end. Here deep water approaches close to the shore in places, but the bottom is very uneven. The volume of water is estimated at 269 million cubic feet, and the mean depth at 16½ feet.

When surveyed on July 2, 1903, the elevation was 888·6 feet above sea-level, and temperatures taken in the deepest part gave 60°·9 Fahr. at the surface, and identical readings of 58°·0 at depths of 30 and 45 feet.

Rosebery Reservoir (see Plate CVIII.) lies about a mile to the north of Gladhouse reservoir, and is extremely irregular in outline. The main body trends north and south, and is two-thirds of a mile in length; but its northern end sends off a branch in a south-easterly direction, so that a line drawn along the axis of maximum depth from end to end would be about a mile in length. The maximum breadth is less than a quarter of a mile, and the superficial area about 52 acres, whilst the area drained, including Gladhouse reservoir, is about 14 square miles. The maximum depth of 55 feet was recorded at the junction of the two arms of the reservoir near the outflow, where there is a small basin exceeding 50 feet in depth, equal to 11 per cent. of the total area, while 56 per cent. of the bottom is covered by less than 25 feet of water. The volume of water is estimated at 58 million cubic feet, and the mean depth at 25¼ feet, which is much greater than the mean depth of Gladhouse reservoir, though the maximum depth is identical.

When surveyed on June 30, 1903, the elevation was 731·5 feet above the sea. Temperatures taken in the deepest part showed a range from surface to bottom of 9°·2 Fahr., and the decrease occurred mostly between 30 and 35 feet, for within this interval of 5 feet of depth a fall of no less than 7½° was recorded—equal to a fall of 1½° per foot of depth; while between 32½ and 35 feet a fall of 4½° was recorded—equal to a fall of nearly 2° per foot of depth. The readings were as follows:—

Surface ..	57° 5 Fahr
30 feet . .	57°·0 ,,
32½ ,,	54°·0 ,,
35 ,,	49°·5 ,,
40 ,,	48°·5 ,,
50 ,, .	48°·3 ,,