

and long. $72^{\circ} 23' W.$ Its extent is not more than $2\frac{1}{2}$ miles, and from it Sandy Hook bears N.W. $\frac{1}{2} W.$, distant 89 miles.

It has been observed that in approaching Sandy Hook, the soundings to the southward are full of black specks, between the depths of 10 and 20 fathoms; in the true channel they are of mud; while to the northward, near Long Island, they are of black and white sand.

Foggy Weather, &c.—The instructions deduced from the foregoing observations will doubtless be of considerable service to masters of vessels in the night-time or in thick and hazy weather. Therefore, when coming from the eastward and striking soundings in more than 35 fathoms, green mud, steer to the northward of West, shoaling the water very gradually on that course. If beating against a westerly wind, do not stand into less than 18 fathoms on the northerly tack, till nearly up with Fire Island Lighthouse, for the soundings inside of 25 fathoms decrease very rapidly towards the Long Island shore, but very slowly towards that of New Jersey, a distinction that should be carefully borne in mind.

When coming from the southward a depth of 15 fathoms and upwards should be preserved, for to the northward of Barnegat Inlet 10 or 12 fathoms is found within $1\frac{1}{2}$ mile of the beach. When the water has decreased to 15 fathoms, the lead should be kept constantly going and the bottom examined; gravelly bottom indicates too near an approach to the land.

Remarks on approaching the land.—The appearance of Long Island is generally low and level, excepting a few hills, which lie 40 miles to the westward of Montauk Point. Along the south side of the island a flat extends all along the shore, which at the mouths of some of the inlets, especially those westward of Fire Island, runs off about a mile. Your course from Montauk Point to Sandy Hook is S.W. by W. $\frac{3}{4} W.$, 60 miles, and then W. $\frac{1}{4} N.$, 45 miles. At 12 miles southward of Montauk Point there are 20 and 23 fathoms, coarse grey sand and gravel with black specks, which depth is maintained at the same distance from the land until you get to about 20 miles eastward of Fire Island Lighthouse, when you will meet with soundings of 20 to 18 fathoms, thence decreasing to 16, 15, 14, and 13 fathoms, and again deepening to 16 fathoms as you approach the harbour of New York. Within this distance from the shore it is not safe for a large ship to approach without a commanding breeze, because the coast of Long Island is steep-to, having 6 and 7 fathoms immediately off the edge of the flat, and the line of 20 fathoms approaches Montauk Point to within 7 miles, the soundings between decreasing very rapidly. In the vicinity of Fire Island Inlet, the depth is shoaler, there being 12 to 15 fathoms at 8 miles from the shore. Outside the depth of 20 and thence to 40 fathoms, the character of the bottom changes so rapidly that constant reference must be made to the chart, as no general description would be at all applicable. The difference in latitude between Montauk Point and Sandy Hook is only about 37 miles, but there will be no difficulty in determining which of the two you are approaching, as the character of the lights and that of the soundings afford an infallible distinction.

In passing the Nantucket Shoals between latitudes 39° and $39^{\circ} 30'$, you should take notice, if possible, when you have crossed the Gulf Stream; as, at the distance of 10 leagues, within it, you may expect soundings; so soon as you obtain which, you will possibly experience a S.W. current.

Should you now be running for the New Jersey Coast, to the northward of Great and Little Egg Harbours, you may suddenly strike one of the Mud Holes previously mentioned as existing in a south-easterly direction from Sandy Hook. In that case it will be necessary to take particular notice of your position, because many ship-masters have been deceived, especially by those near Sandy Hook, and fancying themselves at a greater distance from the coast of New Jersey than they really were, have run on and put themselves to considerable inconvenience, and even danger. It should be remembered that the coast of New Jersey is steep-to, there being 6 to 10 fathoms immediately off it.

If beating to windward of Sandy Hook, in from 12 to 15 fathoms, when waiting for a pilot or a wind, either by day or night, when the lighthouse bears nearly West, you will be sufficiently near to Long Island.

Should you fall in so far to the southward as to approach Cape Hatteras, be very cautious of its shoals, and bear away to the N.N.E., so as to obtain soundings on the Jersey shore. When you have gained 28 or 26 fathoms in latitude 40° , haul in to make the land.