

tude and longitude, by circummeridian and equal altitudes, daily if possible, and from those points, or the hills or bluffs near by, observations will be made with the theodolite, on all distant points or mountain ranges, with a view to ascertain the actual position of peaks, their extent and height, and to form a connexion with your work.

For this purpose, I recommend large trees to be barked or white-washed, which will be found the most convenient signal, and easily distinguished on each side of the straits. An old piece of canvass whitewashed and placed against a dark ground, or cut into a triangular form, and tied between branches of trees, forms a mark easily distinguished, and may be left standing.

It is extremely desirable that the points astronomically ascertained, should be brought directly into connexion with each other by triangulation, and no opportunity of getting the bearing of points in transit should be neglected.

The bays, harbours, &c., will be on the scale of four inches to the mile, but the general chart you will plot on the scale of two inches, which will include all distant points.

The officers will be particular in sketching in the shores, and tracing the topography. It is expected that the soundings will be full and no part omitted, and that every part of the harbours that are surveyed will be attended to in this respect, as few things give so unsightly an appearance to a survey as an irregularity of soundings.

In order, therefore, to have a full view of your work done, it is necessary that it should be plotted immediately, and the work kept up daily.

The number of officers under your command will leave no excuse why it should not be done, and it will be expected by me that this part of your duty will be attended to with the greatest attention.

You will endeavour to obtain all the information that may lay in your power relative to the geological formation, and capabilities of the soil for agriculture, near and about the parts surveyed; also all the minerals; and water-courses or brooks affording water for shipping, will be particularly noticed.

You will likewise pay great attention to the tides, their height and fall, set of currents, and the time of high and low water at full and change. This may be done in a few hours by marking a staff stuck in the water, a few feet from the shore, and an hour or two before high and low water, noting the time by the watch at the same time, and again when the water rises to the same point: the mean will give you the high and low water on that day, which, applied to the age of the moon, will give it on full and change.