

1st. The names of tribes of Indians, and their number.

2d. Manners, customs, modes of living, disposition, &c.

3d. The sources and courses of rivers and their branches, with their latitude and longitude, and also of lakes, their extent, and whether head waters of rivers, or having any outlet.

4th. Climate, degrees of heat and cold; if not thermometrically observed, get the time when trees blossom and fruits come in.

5th. How long the posts or forts have been occupied, state of fur trade in the interior, number of forts established, where, and among what tribes.

6th. Timber, kinds and qualities, soil, and all other information, together with accounts, tales, and histories of adventures, that you may hear well authenticated.

You will observe the following instructions relative to your times and modes of observing, viz. :

You will keep an accurate map of your route, noting on it the latitude and longitude of all your stopping-places, from which position you will take the bearings and angles on all distant hills and mountains, direction of ranges, courses of rivers, &c. You are provided with a chronometer, sextant, artificial horizon, prismatic compass, barometer, and thermometers. Your means for obtaining observations will be great: I shall therefore expect you to be very particular and untiring in their use, as much of the information derived from them will depend entirely on your own exertions.

Observations you will obtain daily, if possible, both for latitude and longitude. When the meridian altitude of the sun is not obtained, you will have frequent opportunities by the north star. This observation you will find easy after a little practice, by bringing the two reflected images to cover each other, and having your mean time, any time of night you will be able to obtain your latitude.

I also wish you to use the stars for getting your time. The observations of two stars east and west, will give you it with great accuracy. The best mode of observing stars in the artificial horizon is to clamp your index nearly to its altitude, and await its coming, and when they cover, mark the time. Stars nearly east and west of you are to be preferred, altitude about twenty or thirty degrees.

All your observations must be worked up as soon after they are taken as possible. I enclose you herewith a few azimuth formulas.

When you take an azimuth, which ought to be daily, take it on some well-defined object, and note carefully the bearing of it by the prismatic compass. It is particularly desired to multiply these observations.