

parties working from both sides. This region had hitherto been a *terra incognita*, unexplored by white men; and described by the Indians as a vast and treacherous swamp, the freezing of which was retarded by the overlying snow. These swamps were found to be quite impassable for wheeled vehicles or pack-horses during the open season; but by making a *detour* from Red River towards the south for 25 miles, access was obtained to a point on the boundary, 57 miles west of Red River. From this point progress in either an east or west direction was impeded by swamp, and the work was continued with much difficulty till winter set in and the surface of the swamps gradually froze. As the winter advanced and the snow increased in depth, the working parties were supplied with leather clothing and extra buffalo-robes, and the men acquired readily the use of snow-shoes, while the transport of stores and provisions to the most advanced parties was accomplished by dog-trains. Although it was generally supposed that as soon as winter set in, field operations would necessarily be suspended, it was found that the advent of the frost afforded the greatest assistance to the work, for both men and transport animals were spared the excessive fatigue of working through the unfrozen swamps. It was soon ascertained, too, that the winter was the only time in which the country between Red River and the Lake of the Woods could be surveyed, as the swamps were almost continuous, and only intersected at intervals by belts of timber. Although the cold was at times intense, the thermometer often showing 40° below zero, and on one occasion 51° below zero, the working parties were for the most part protected in camp by the woods, and as long as the air was still, no great discomfort was experienced. The least wind, however, caused much suffering and many frost-bites. In using the astronomical instruments, care had to be taken not to touch the metal of the instrument with the bare hand. The observer would occasionally find his eyelid frozen to the eye-piece of the instrument, as experienced by the Russian officers in Siberia. While on the march in a cold wind, the traveller would frequently find his eyelids for the moment frozen together. A severe snowstorm swept over the country on the 7th, 8th, and 9th of January, 1873, causing great loss of life in Minnesota, farmers with their families being caught when driving in sleighs, attempting journeys of a few miles from neighbouring houses. I have a vivid recollection of the storm, in consequence of being out in the open country at the time travelling on snow-shoes, in company with two attendants, and a dog-train carrying blankets and provisions. The dogs were stung so pitilessly in their eyes and ears by the drifting snow, that it was impossible to get them to face it; and they continually