On the trip to Teslin lake I was able, with the instruments I had with me, and the favourable weather, to determine the latitude of the following points:—Egnell post, the Nahlin river where it is crossed by the trail, the eastern outlet of Disella lake, and the mouth of Whiteswan river. The latitude of the southern extremity of Teslin lake was also determined. I had not been able to obtain this on a previous trip because of unfavourable weather and pressure of time due to the lateness of the season. I could not help noticing, on my arrival at the lake, the changes which a dry spring season had made on its surroundings. At the mouth of Whiteswan river, which enters the lake at its southern extremity, are alluvial flats where a great quantity of wild hay grows; at a much later date in the previous year these were covered with water and inaccessible for horses. The meadows were not only dry, but the deep channel of the river which separates them from the mainland was perfectly dry. As a consequence of the drought the level of the lake was considerably lower.

When travelling on the trail to the lake, we passed droves of sheep and cattle which were being taken to the Yukon. This I believe is the first time that the trail has been utilized for the purpose. On July 5 a drove of forty head of cattle, which had been brought from the United States as a speculative venture, was met in the vicinity of Hatin lake, sixty-five miles distant from Teslin lake. They had, therefore, at the time covered more than half of the distance between Glenoru and the lake. They appeared as fat and fit for market as any cattle I have ever seen. The drovers informed me that they had experienced no difficulty in finding an abundance of good feed in close proximity to the trail. Their intention after reaching the lake was to take the cattle on rafts to Dawson, where they expected to obtain a good price for them. I was informed later on that they had succeeded beyond their expectations, and that another party had, by the same means, taken several hundred sheep down the river.

The moment I reached the lake, preparations were commenced for the exploration,

which was to begin by the survey of the Nisutlin river.

Our three acme canvas boats, when taken out of their crates, were found none the worse for being packed over the trail; all the parts were in perfect order. With the aid of the concise directions accompanying each, all the pieces were soon fitted together and put in their proper places. The boats were sixteen feet long and four feet beam; being flat-bottomed, their carrying capacity is remarkable. They easily carry 1,500

pounds and two men, with five inches to spare above the water line.

The Nisutlin river had been reported to me as being so swift over the greatest part of its course that polling would have to be resorted to in order to ascend it if any kind of progress was to be made against its current. To counteract the great strain to which the boats would be subjected and to give them the additional strength necessary for the better performance of the special work which would be required of them in polling or tracking against strong currents, two extra pieces of wood a little longer than the boat, three inches wide in the middle and tapering to one and a half inches at the ends, were added to each side of the boat. These pieces were placed longitudinally outside the boats, and pressed tightly against them when fastened at their extremities. Both pieces were well fastened together, but the end which carried the tow line was depressed to the indicated water line when the boat was loaded to its full capacity. The reason for tying the line low is that in coming to a ripple or in trying to avoid dangerous places we had a better control over the boat which would otherwise, the instant it struck swift water, be carried into midstream by the action of the current. When the rope is tied higher the tension caused by the united efforts of the crew in their endeavour to bring the boat back towards the shore tends only to hasten the overturning of the boat, entailing not only the loss of its contents but generally that of the boat also. Thus improved, we had at all times complete control over our boats, and the worst sections of the river were passed without accident.

As soon as the improvements to the first boat were completed and found satisfactory, I set the men to improve the other ones in the same manner. Knowing that this would occupy some time, I started with one man for the foot of Teslin lake, where I intended to observe for latitude; on the way I made the survey of the castern

shore, thus completing the work commenced in the autumn of 1897.

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