

Ingraham Hotel Co. Ltd.

H. MADSEN, MANAGER

Yellowknife, N.W.T.

CANADA

25 Nov 51.

Dear Dr. Kay,

Jack & I arrived safely enough after an uneventful trip. The air was perfectly smooth the whole way, for which I was very thankful.

Dr. Rakt was on the plane with us from Edmonton. He had another pressing piece of work awaiting him at Kimberley after he finished up here, but did not want to leave here until he was certain that we had all the information we needed & had collected our samples. So for that reason we changed the itinerary somewhat & collected all the con samples this week. Con's safety man, Don Spain, has been collecting their samples regularly, & he drove us around to his (our) sampling locations, & we took ^{vegetation} samples together.

There is not much snow here, & in our opinion there is no point in taking any snow sample on land, as it would be impossible to avoid contaminating it with the earth or vegetation below it. Consequently, we have taken snow samples only over the ice, at points where we have also taken water samples. The snow has varied in depth at

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these places from 2 to 4 inches.

Perhaps you remember that when we were discussing the location of sampling points for water ~~samples~~, Jack suggested that we take samples at the ~~at~~ various water ~~intake~~ system intakes if stave lines were being used to pipe the water. As they are using iron pipe, there should be no difference between the water at the intake & the water coming out of the taps.

Therefore we propose not taking water samples over the intakes. This means eliminating #'s 13, 16 (& 21), & 24. If you do not agree with this proposal, we can get them this week.

The airport is wrongly located on the map; it should be moved north about an inch, first to a point just below the lake marked 624'. As the airport draws its water from the town, sample # 14 is eliminated. However, as quite a number of people use this lake water (Long Lake, it is) as drinking water in summertime, we took a sample & called it # 15.

The Devin's are away just now, but some other family is operating the farm for them.

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They said they draw their water from town, & use the well only to water the cattle. We therefore took a sample of this & called it # 79. Number 19 was also taken as it is a regular sampling point for Con.

Con regularly takes a vegetation sample at Sand Lake near the skating rink. This is our # 68. As this is only about 2 or 3 blocks from # 69's location, we deleted the latter.

O.K.?

The shore opposite Snooker Island is the water intake point for Con. & according to the book we should have taken snow sample # 45 here & deleted vegetation sample # 71. However, the snow was very badly drifted in this area, so that it would not be representative of the arctic fall there. So we deleted # 45 & took # 71. C'est correct?

Of the eight vegetations that Con takes regularly, three locations are additional to those we had plotted. These, along with the numbers assigned to them, are as follows:

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- # 80. Rat Lake outlet creek, where it enters Yellowknife Bay. This is at the bottom right hand corner of the square shaded area on the map.
- # 81. South end of Kam Lake Road. The road shown on the west side of Kam Lake actually goes on to the end of the lake, instead of stopping as shown on the map. I marked this number in the bottom left corner of the map.
- # 82 Cemetery Road. As I mentioned the airport is incorrectly shown, so is the road. Instead of turning sharply left to the airport as shown, the road actually swings east slowly & then swings left again, parallel to the portage until it gets to the "real" airport on Long Lake (624'). The Cemetery Road branches east off the main road at approximately the point where the map shows it turning left to the airport. Confusing, don't you think?

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Although the snow is less than six inches deep, we find that a 2 square foot sample gives us lots of water. We scrounged 20 ^{one} gallon bottles from the Con cook house, & the melted snow from 2 square feet nearly fills them. One sample yesterday that was 4 inches deep melted down to more than a gallon. We cannot discard any of the water because some of the arsenic may be in solution, while some of it may be in the sediment, of which there is a good deal.

We took three extra water samples.

- # 83. Underground at Con. 250 foot level.
Seepage directly below Rat Lake.
- # 84. ~~Sump~~ Underground at Con. Sump on 500 foot level. All waste water in the mine are pumped to this sump, which pumps them to surface.
- # 85. Underground at Con. 2350 foot level.
Highly saline water from a diamond drill hole. This is squirting out under terrific pressure.

One of the mine officials thought it would be a good idea for us to take another sample of this saline water & analyse it

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completely. I still have it here, but intend pouring it down the drain before I leave, unless you think I should send it in. It would probably make a good gargle.

Dr. Henderson is very busy with the school children during the day & ~~in the~~ evening with hospital records in the evening. I have helped him on two evenings, as it is a slow tiring job for one person to do. He is wondering whether he can look forward (?) to receiving the urine bottles before he leaves, so that he can put them directly under the care of the person who will be responsible for collecting & shipping them.

Tomorrow morning we are taking our samples over to Steve's office. He is arranging to get packing material & to have his stenographer pack everything. This will save us considerable time.

Since we arrived, the high has been about 3 or 4 below, the low around 30. I notice you have been working in 40 above or so. By the time we get back you will probably have read up all the warm weather. Incidentally, we

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think we shall be able to leave here on
Monday Dec 3. I should then like to take
a few days stat. leave in Winnipeg before
returning to the daily chore. In any case, I
shall send you a wire when we know our
departure date definitely.

Sincerely
Jack W.