

AYK Region
Ns/Kotz Salmon
Salmon Escapement
Report #48

1987 Kotzebue Chum Salmon
Escapement Sampling
Trip Reports

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Lower Kobuk River (Squirrel and Salmon Rivers)
August 31 to September 5, 1987

Gary Knuepfer and Helen Hamner left Kotzebue late Monday afternoon, August 31 in a Cessna 172 with Lee Staley, Sr of Lee's Seair out of Kiana. Originally, we had arranged a free helicopter flight with BLM. That was cancelled at the last minute and we had difficulty locating another pilot. It took two trips to fly us in to a gravel bar just above the second river above the North Fork on the Squirrel River (Figure 1 and 2). The first flight left Kotzebue at 5:20 PM and the second flight landed at our destination at 7:15 PM. Our gear included a 10 foot Achilles raft, a 9.9 hp motor, a 15 fathom 2 1/2 inch stretched mesh beach seine net, one 6 gallon cruise tank, a cooler, a large waterproof bag (sleeping bags and clothes), two fish spears, two burlap sacks (tent, pads, and rain gear) and day packs.

We started floating at 7:45 PM. We sampled 14 fish and camped at 10:30 PM. The next day we sampled about 60 carcasses in the same slough on the south bank where we saw our first major concentration of fish last year (Figure 1). We estimate that 200 fish were spawning here. On Wednesday, September 2, we floated through the major spawning areas between the cutbank above the 'unnamed creek' and the North Fork (Figure 3). This is where we originally wanted to land but were unable to because of unsuitable gravel bars for the 172. The water was clear and there was little rain and wind, so we could easily see fish in the water. Chum salmon were often swimming with large schools of grayling. There were many carcasses both on the river bottom and on the gravel bars. After sampling a total of 230 fish from the Squirrel River, we concentrated on reaching a camp site near Henry Jackson's cabin where we were to meet Lee Staley the next morning. A school of approximately 5,000 whitefish was in the slough next to the cabin.

The next day was very foggy so Lee was unable to fly in until late in the afternoon. It took two trips with a SuperCub on floats to fly us in to the Salmon River, just below the Kitlick (Figure 4 and 5). The backwater area just below the Kitlick, where we had sampled so many carcasses last year, was dried up. The bar adjacent to this area was covered with over 200 salmon heads left by bears. We had hoped to sample most of the fish in this area. We found very few unconsumed carcasses on the Salmon River. Also unlike the Squirrel River, there were relatively few carcasses on the river bottom. Therefore, it took more time and effort than we expected to reach our sample goal of 450 chums for both rivers. All scales were easily removed from the carcasses and mounted in the field. It took two and a half hours to boat

from the Salmon River to Kiana. Six gallons of gas was just the right amount. We arrived in Kiana about 8:30 PM and arranged a flight with Lee Staley Jr. back to Kotzebue. However, fog prevented us from leaving so we spent the night with the Staleys. We left the next day, Sunday, for Kotzebue.

In retrospect, the seine was unnecessary. We did seine up some fish on the Squirrel River but there were plenty of carcasses downstream from the cutbank. Since the seine is bulky and heavy, it should be left behind unless it is determined that samples can't be collected any other way, i.e. prespawning, carcasses washed away by high water, etc. The area should be flown beforehand and sampling effort should be concentrated between the cutbank and the North Fork. Also it would be wise to sample more fish in this area and not rely on sampling 250 fish on the Salmon River. If water conditions allow, the sampling party should try to estimate numbers of fish, even though they may be passed over very quickly. We didn't think of this until we had already passed a couple of large groups. However, a rough estimate of 2700 and 2200 chum salmon was made for the areas we covered on the Squirrel and Salmon Rivers, respectively.

Airfare for this trip was more than expected since air charter fares have increased and we flew with a more expensive charter operation. Also weather conditions forced us to follow the river when flying from the Squirrel to the Salmon River instead of taking a direct route.

Airfare for this trip totalled \$1590 for 7 hours and 49 minutes of flying. This includes two trips from Kotzebue to the Squirrel River in a C172, two trips from the Squirrel to the Salmon River in a Supercub on floats, and one trip from Kiana to Kotzebue in a Cherokee. All flights were chartered with Lee's Seair in Kiana.

Lower Noatak River
September 17-18, 1987

We boated up to the hatchery egg-take camp, approximately 6 miles below Noatak village, Thursday September 17 (Figure 6 site A). The hatchery crew had seined and deposited over 500 fish carcasses on the opposite bank. We sampled about 200 of these that evening. We had a difficult time pulling scales from the first few fish so we decided to cut skin patches from the rest. We camped with the egg-take crew and sampled 250 more fish the next day. All samples were from fish seined on September 16, 17 and 18. Time constraints and low water prevented us from sampling fish seined in another location above Noatak Village. We returned to the hatchery by mid-afternoon, stored the boat, and chartered with Shellabargers back to Kotzebue. It took 2 man-days to mount the scales (3-4 scales per fish) on gum cards. Although, the scales can be easily removed after dipping the skin patch in hot water, it is very time consuming.

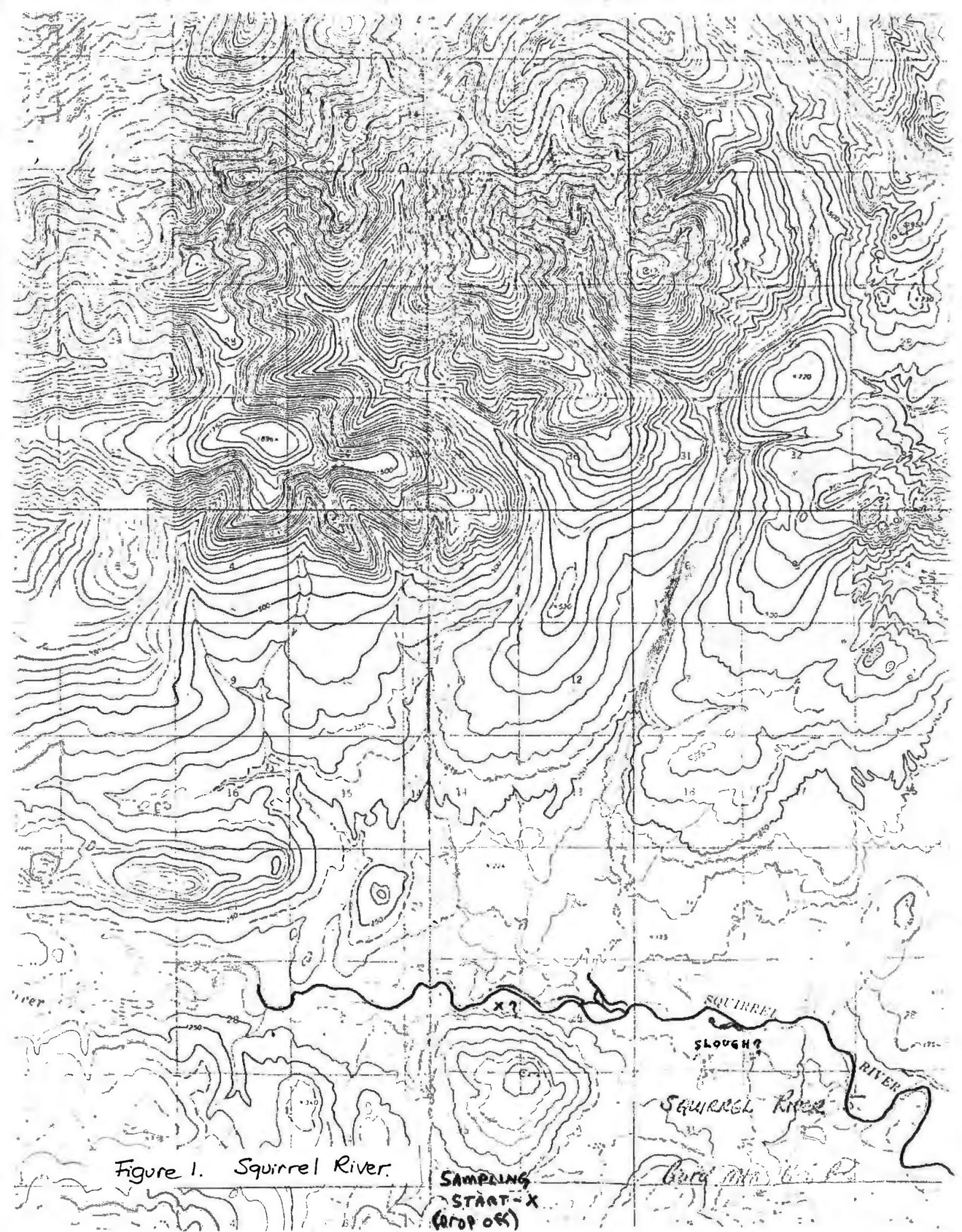


Figure 1. Squirrel River.

SAMPLING
START - X
(PROP OK)

SQUIRREL RIVER

SLOUGH?

SQUIRREL

RIVER

Barry M. M. M. M.

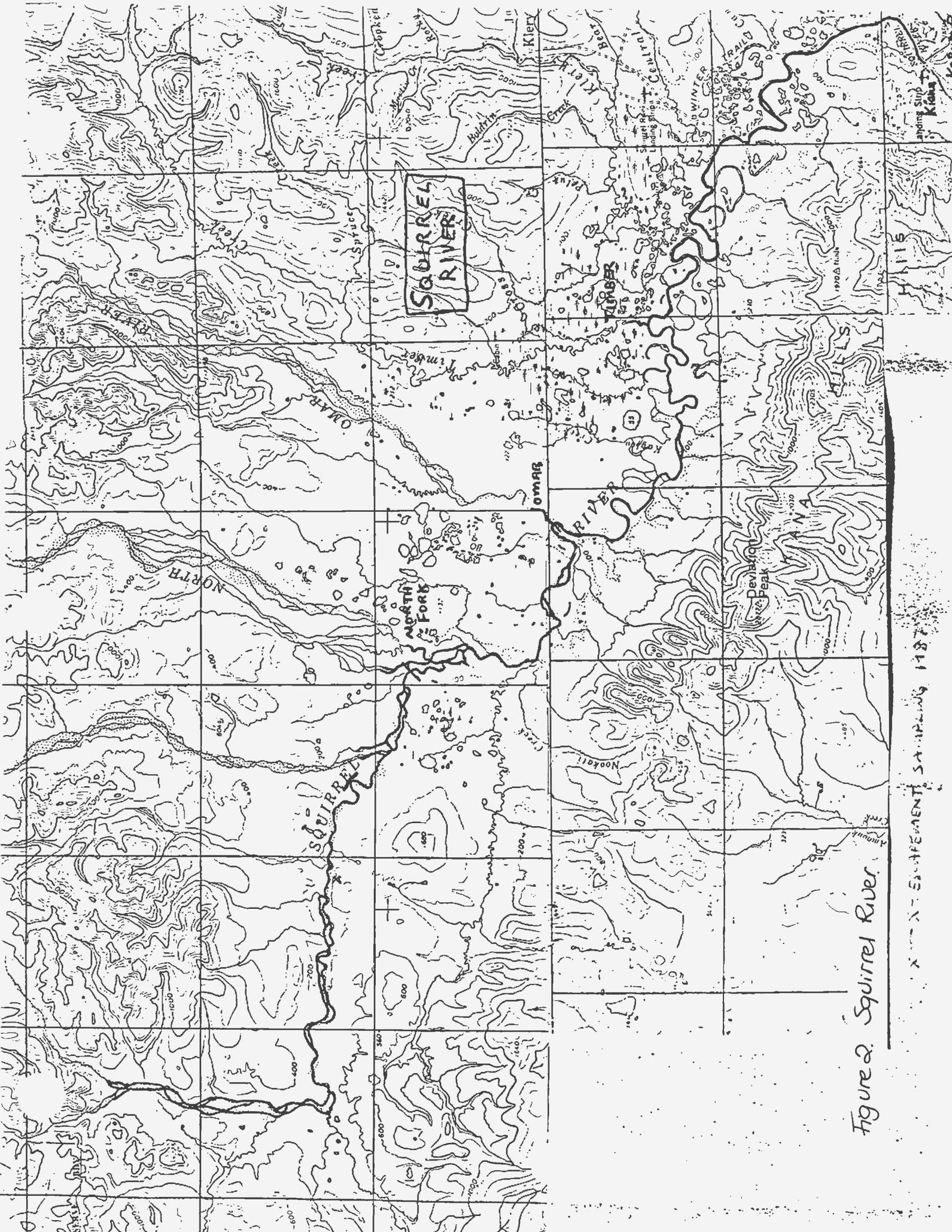


Figure 2. Squirrel River.

ESSENTIAL SAMPLING 1187



Figure 3. Squirrel R.

FISH SPAWNING CONCENTRATIONS (CHUM)
END OF SAMPLING X

KITLIK →

← SALMON

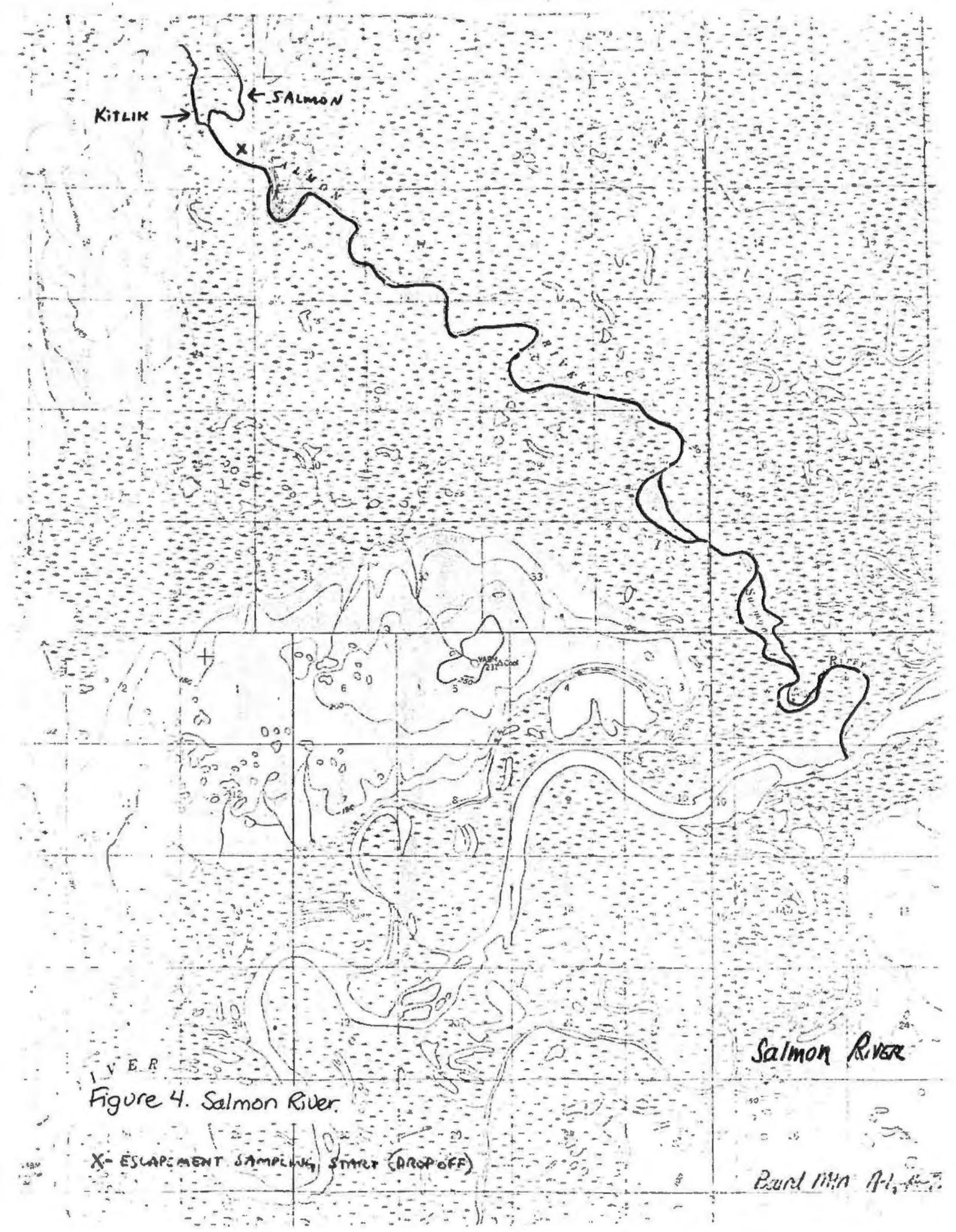
X

Salmon River

IVER
Figure 4. Salmon River

X - ESCAPEMENT SAMPLING SITE (DROPOFF)

Board 11111 11-1-11



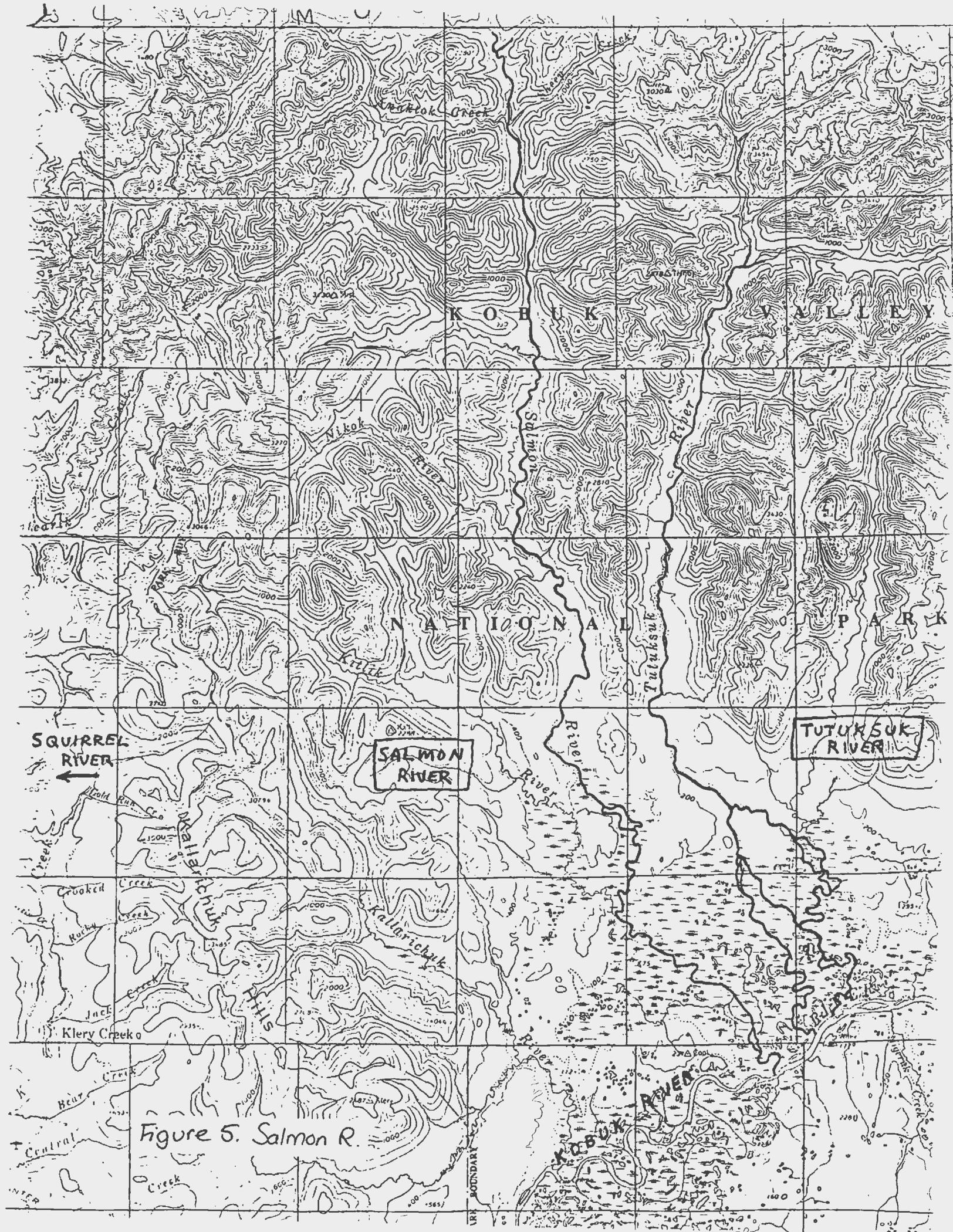


Figure 5. Salmon R.

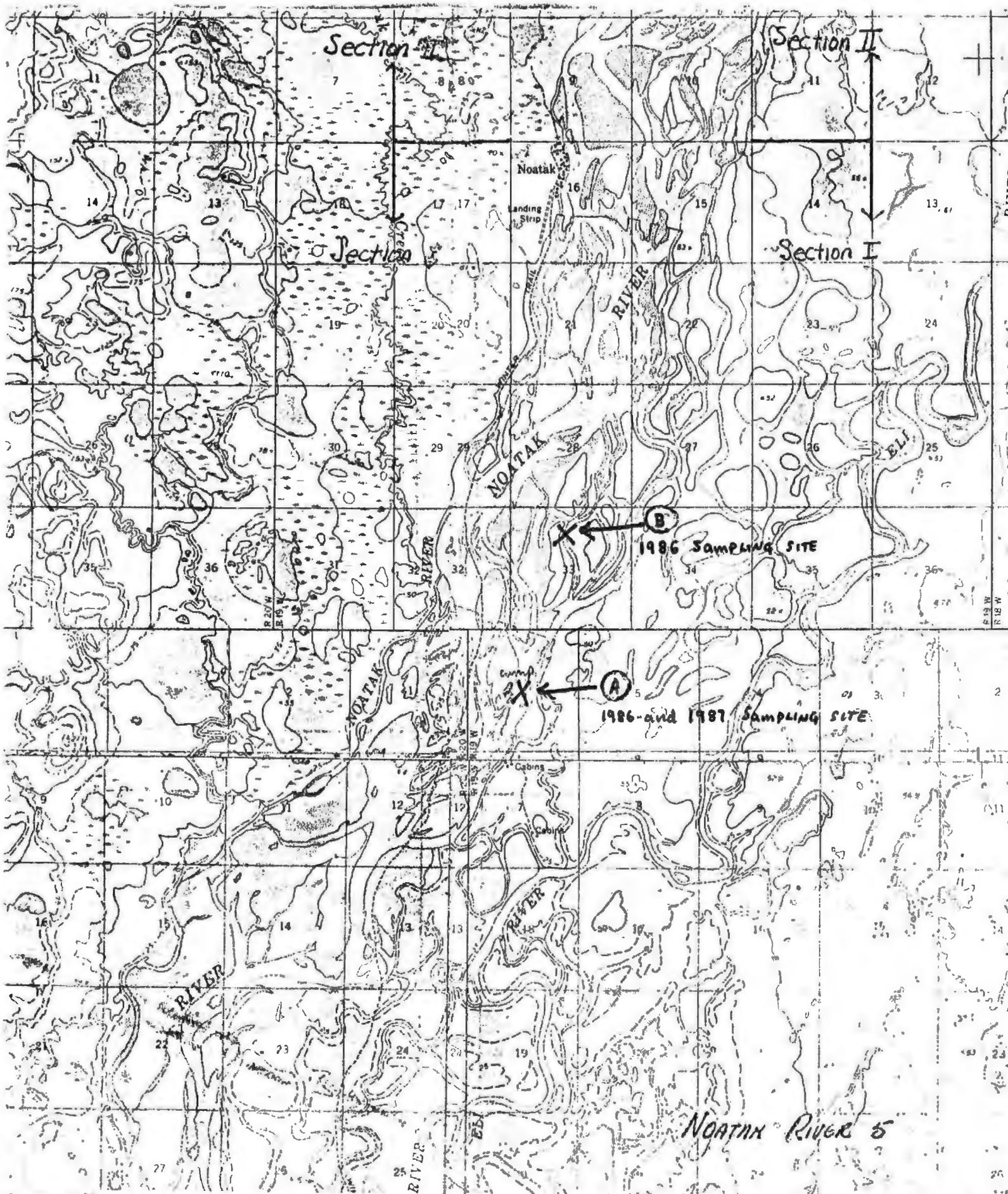


Figure Noatak River (Maratuk Slough and Noatak Village).

Noatak B-2, B-3

Noatak C-2, C-3