State of Alaska
Department of Fish and G[illegible]
Nomination for Waters
Important to Anadromous Species

1986
Year of Revision

OK

UNNAMED
Name of Waterway STRAIGHT CREEK

AWC# of Waterway 331-00-10080-2060

AWC Volume & Number 5

USGS Quad NOATAK C-4

Addition X
Deletion

Correction
Change

Change to X
Atlas
Catalog
Both

86 487

Approved

Al Hulett 12-31-85
Regional Supervisor Date

OK SFS 1/2/86

Tom Ruccio 1-2-86
Drafted

ALASKA DEPT. OF
FISH & GAME

DEC 31 1985

REGION II
HABITAT DIVISION

Species	Date(s) Observed	Spawning	Rearing	Migration
Arctic Char	8/28/84		X	

Comments: Provide any clarifying information, including number of fish observed, location of fish survey data, etc.

SEE HIGHLIGHTED PORTIONS OF ATTACHED REPORT (DAMES & MOORE, 1984)

Attach a copy of a map showing location of mouth and upper points of each species, specific stream reaches identified for spawning or rearing, locations of barriers, such as falls. Attach a copy of the fish survey data, if available.

Name of Observer (please print)

Date: Signature:

Address:

JOB REPORT

1984 FISH SURVEY ALONG THE PROPOSED COMINCO ALASKA INC. ACCESS ROUTE

October 12, 1984

Dames & Moore

5438-078-20

made on the main Omikviorok River and on Dud Creek (Dames & Moore, unpublished data).

This report compiles and includes information from those earlier surveys along with results from the 1984 surveys.

2.0 MATERIALS AND METHODS

The primary method used for sampling fish in 1984 was a Smith-Root Type VII electroshocker fished in the pulsed DC mode. In 1982 and 1983 work, a Type XI electroshocker was used. In all 3 years, aerial stream surveys for spawning fish were conducted from helicopters. All streams with reasonable potential for spawning by anadromous fish were flown for several miles both up and downstream during late August or early September of at least one of the study years.

At all crossings surveyed, the nature of the stream habitat was qualitatively described and the stream then electroshocked for up to 100 meters up and downstream. Lesser distances were sampled in streams with moderate to high densities of fish. Fork length was measured on all salmonids captured and total length was recorded for cottids.

3.0 RESULTS AND DISCUSSION

3.1 GENERAL

A total of 17 potential stream crossings was surveyed between August 21 and 24, 1984. Of these, 14 were found to contain fish in the immediate vicinity of the crossing. In addition, the Lake Fork of the Omikviorok and the upper North Fork of Evaingiknuk Creek had fish downstream of the crossing, although none was taken at the crossing. Arctic char (Salvelinus alpinus) was the predominant species taken, followed by the sculpin (Cottus cognatus). Surprisingly, no juvenile Arctic grayling (Thymallus arcticus)

only faint parr marks suggestive of a resident (vs. migratory) race; however, its gonads were very immature. In August, 1982, grayling fry (50-60 mm) were taken just downstream of the present crossing.

3.3 OMIKVIOROK RIVER SYSTEM

The Omikviorok River is a large system draining most of the west side of the southern Mulgrave Hills and emptying into Ipiavik Lagoon. The system includes five major tributaries, called (from south to north) the South Fork, Quartz Fork, Dry Fork, and Main Fork; the Main Fork divides just above the crossing into the Summer and Winter forks. The Winter Fork carries by far the greatest flow, about 45 percent of the total flow in these five forks as measured in August 1982. Aufeis is common on the Winter Fork, particularly in Sec. 19 and 20 of T27N, R21W. A second major aufeis area extends for about 2 miles downstream of the Dry Fork confluence in Sec. 34, T27N, R24W.

A peculiarity of this system is that lower reaches of all the major tributaries lose substantial quantities of flow between about 400 and 200 feet of elevation. For example, the Main Fork, which had 150 cfs combined flow at about 325 feet elevation, dropped to 37 cfs at the 130 foot elevation in mid-August 1982. The Dry Fork is just that (dry) for several miles above its confluence with the Main Fork for most of the summer. Much of this subsurface flow reenters the channel in the large aufeis area mentioned above; resultant springs in fact account for the aufeis.

These spring areas are also the focus of spawning by char as well as pink (Onchorhynchus gorbuscha), chum (O. Keta), and other species of salmon. Presence of char in all significant upper tributaries of the Omikviorok suggests either:

a) long upstream migrations by anadromous juveniles, or
b) presence of overwintering areas permitting survival of resident breeding populations.

No anadromous char spawning has been discovered in tributaries except in the Winter Fork (see Crossing No. 9 below).

Crossing No. 4 West Branch, South Fork - Omikviorok River (Aufeis Creek)

At the crossing (NE 1/4, Sec. 27, T26N, R23W), this stream has a shallow incised channel with dense willow brush on the banks. Flow was measured below the confluence with the East Branch at 27 cfs on August 17, 1982. The channel is relatively straight at the crossing with moderate to high gradient riffles and a coarse cobble/gravel bed. If a culvert is used here, the centerline should be moved upstream about 15-20 m to a lower gradient run. At greater distances from the crossing, the stream is sinuous with some large gravel bars on the inside of the bends.

Fish habitat is excellent in lower gradient areas and char density was moderate. Fry (59-66 mm) and two possible size classes (92-101; 123-124 mm) of juveniles were taken. The larger size class had light orange spots suggesting stream residency; gonads were very small. Arctic grayling adults and fry were taken in August 1982 just below the confluence with the East Branch.

Crossing No. 5 East Branch, South Fork - Omikviorok River (East Fork - Aufeis Creek)

This crossing (NW 1/4 1/4, Sec. 26, T26N, R23W), is generally similar to No. 4. The stream is partially incised and moderately sinuous with occasional gravel bars on the inside of bends. The gradient is moderate to high in the overall reach, but less steep than at the crossing No. 4 centerline. The streambed is coarse gravel to boulders; banks are either willow, grass or gravel bar. Fish habitat is excellent and char juveniles (104-126 mm) were taken.

Crossing No. 6 Quartz Fork - Omikviorok River (Deadman Creek)

At the surveyed centerline (NW 1/4 1/4, Sec. 24, T26N, R23W), the Quartz Fork was running some 5 cfs in a shallow riffle of moderate gradient.

The streambed is gravel and cobbles with a high quartz content and a noticeable amount of interstitial silt. A steep eroding bluff on the west side will require considerable regrading as the east side of the stream is flat and scarcely above the stream surface. This flat area appears to be an aufeis zone and has little vegetation other than annuals. Flood flows likely also sweep over this flat.

Fish habitat did not appear to be exceptionally good because of the lack of pools and absence of cutbanks or streambank vegetation. However, char yearling (90-95 mm) density was high and a single char fry (62 mm) and a single sculpin (92 mm) were also present. In the 1982 survey just downstream, a single grayling fry, but no char, were taken.

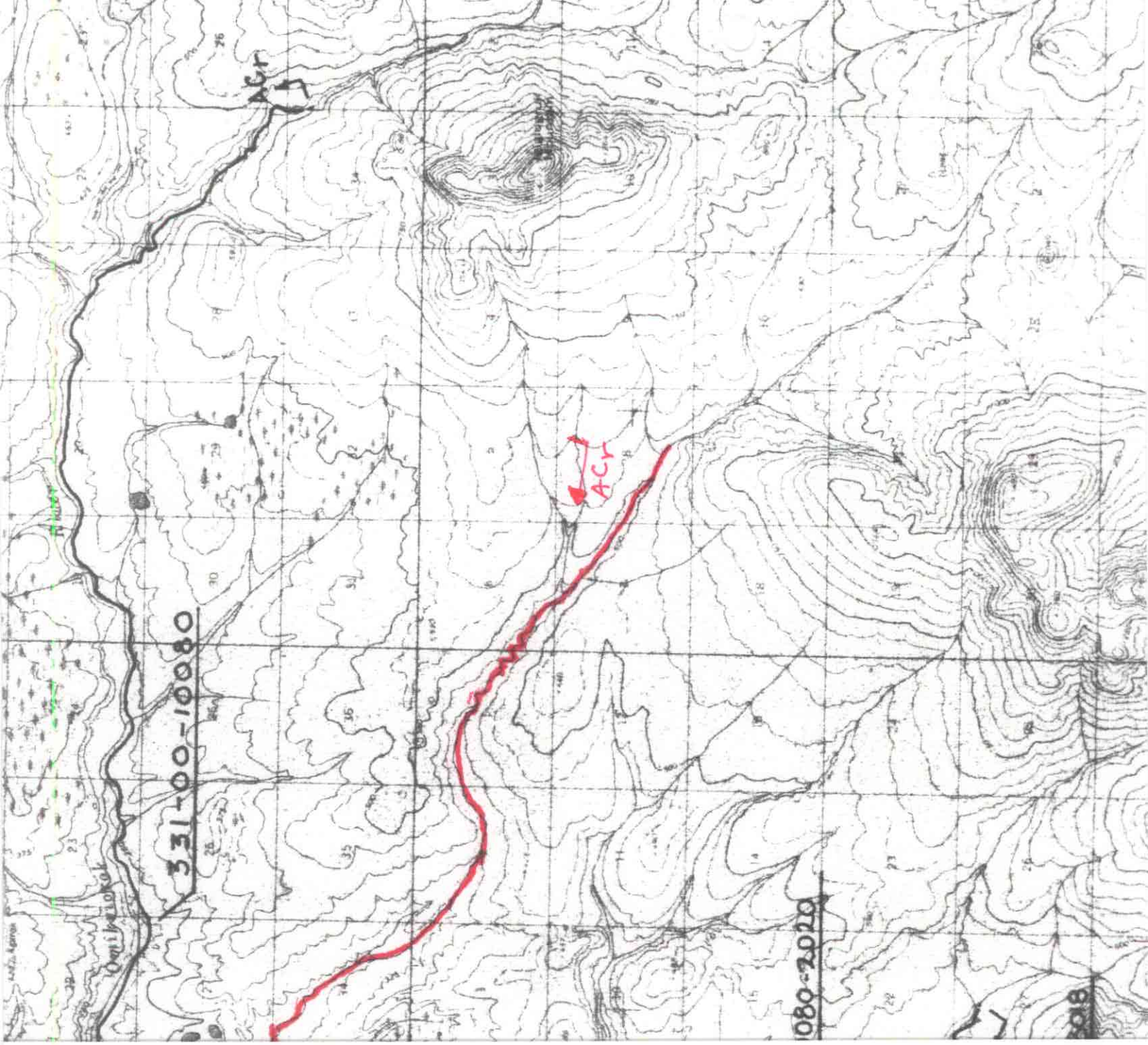
Crossing No. 7 Main Branch, Dry Fork - Omikviorok River (Straight Creek bridge)

At this crossing (west border, Sec. 8, T26N, R22W), Dry Creek is in a relatively straight channel flowing in a broad flat-bottomed flood plain which had been recently flooded. The gradient is low at the surveyed centerline but increases both up and downstream. The streambed is of coarse gravel and cobble; the banks are either willow brush or grass and coarse gravels. Flow was estimated at about 15 cfs. Fish habitat is excellent and fish densities are moderate. Two size classes of char juveniles (90-98; 141-150 mm) and a single sculpin (123 mm) were taken. The larger char had orange spots suggesting that they are a resident (cf. anaromous) population. Likewise, in 1982 only larger char size classes (120-153 mm) were taken.

Crossing No. 8 North Branch, Dry Fork - Omikviorok River (Straight Creek culvert)

At the crossing (extreme NW corner, Sec. 8, T26N, R22W) this minor tributary runs in a narrow (1-2 m), deeply incised channel (about 1 m deep) with low sinuosity. The channel appears rather stable between grassy banks.

Flow on August 23, 1984, was estimated at 1-2 cfs over a coarse gravel/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