

State of Alaska
 Department of Fish and Game
 Nomination for Waters
 Important to Anadromous Fish

AWC Volume SE SC SW W AR **IN** USGS Quad HUGHES (B-6) / A-6
 Anadromous Water Catalog Number of Waterway 334-40-11000-2125-3355-4045-5036-6014
 Name of Waterway COMEBACK CREEK USGS name X Local name _____
 Addition X Deletion _____ Correction _____ Backup Information _____

For Office Use

Nomination # <u>96 022</u>	<u>M. Kretzinger</u>	<u>10-26-95</u>
Revision Year: <u>96</u>	Regional Supervisor	Date
Revision to: Atlas _____ Catalog _____	<u>Dean W. Hughes</u>	<u>1-26-96</u>
Both <u>X</u>	<u>Thomas R. Arone</u>	<u>2/5/96</u>
Revision Code: <u>A-2</u>	Drafted	Date

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Migration	Anadromous
<u>Oncorhynchus keta</u>	<u>7-16-95</u>	<u>X</u>			<u>X</u>

Provide any clarifying information, including number of fish observed, location of fish survey data, etc. Attach a copy of the fish survey data, if available. 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.

Comments:

Flew upstream along Comeback Cr. from its confluence with
Alpha Creek for several miles. Chums were spawning within the
stream up to a point 0.8 miles from the mouth. Coordinates
of upstream spawning are: 66° 15.238' N; 155° 41.935' W. Total number
of chums counted - 400.

Name of Observer (please print) CARL F. KRETSINGER
 Date: 8-15-95 Signature: Carl F. Kretzinger
 Address: Bureau of Land Management
Northern Districts Office
1150 University Avenue
Fairbanks, Alaska 99709-3899
 Signature of Area Biologist: [Signature] 10.26.95

ALASKA DEPT. OF FISH & GAME
 OCT 31 1995
 REGION II AND RESTORATION DIVISION
 HABITAT

Rev. 12/91

A-Y-K SALMON ESCAPEMENT OBSERVATIONS

LATITUDE		LONGITUDE				DATE			STREAM NAME		DRAINAGE	
N		W				M	D	Y	Alpha Creek		Clear CREEK	
						0	7	16				
								95				

CARD NUMBER	LIVE KING	KING CARCASS	KING REDD	LIVE CHUM	CHUM CARCASS	LIVE PINK	PINK CARCASS	LIVE SOCKEYE	SOCKEYE CARCASS	LIVE COHO	COHO CARCASS
100				3380	204						
101											
102											
103											
104											
105											
106											
107											
108											
109											
110											
111											
112											

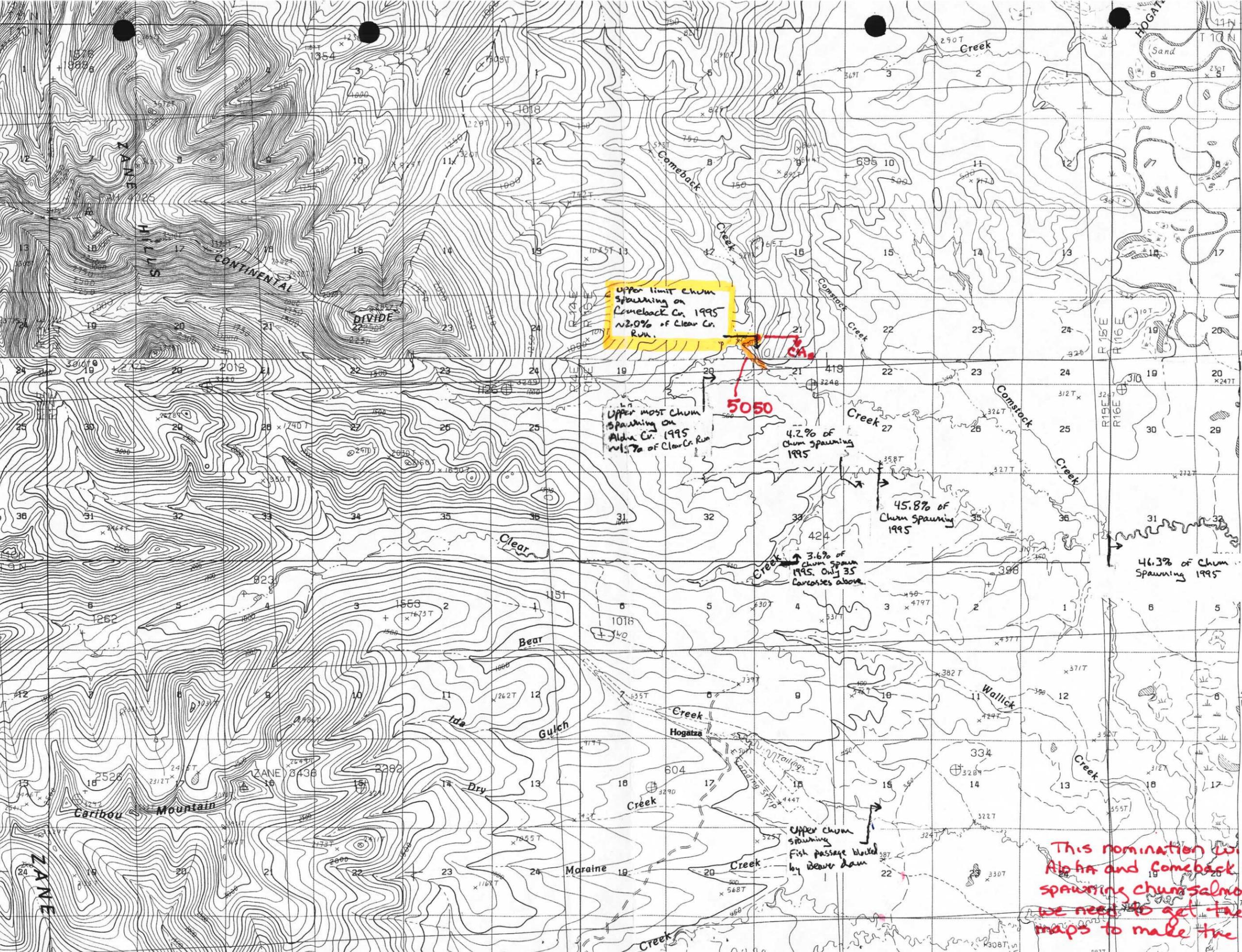
CARD NUMBER	UNIDENTIFIED SALMON	SURVEY METHOD	WIND	WEATHER	WATER	WATER VIC.	BOTTOM	TIME	DISTANCE SURVEYED	SPAWN STAGE	RATING	OBSERVER	OBSERVING AGENCY
200		07	1	2	3	3	2	1		1	2	CK	BLM

Distance surveyed approx. 7.8 stream miles - from the mouth to beaver dam (barrier to fish) at LAT/Long. (66° 14.72' N; 155° 43.00' W).

Surveyed Comeback Creek from mouth (LAT/Long: 66° 14.924' N; 155° 41.486' W) to (66° 15.238' N; 155° 41.935' W). Within a distance of 0.8 stream miles 400 Chum salmon were observed spawning (included in total counts).

* Approx. 15% of Chum run within the Clear Creek drainage was within Alpha Creek, based on aerial co-pilot and company: Don Willey; Trans Alaska Helicopters
 Speed and Elevation: 210 knots; 100 FT.

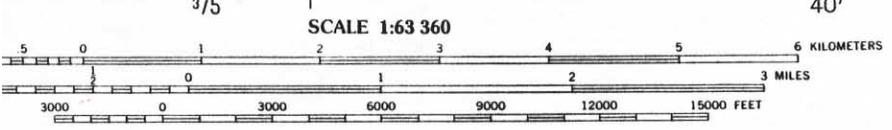
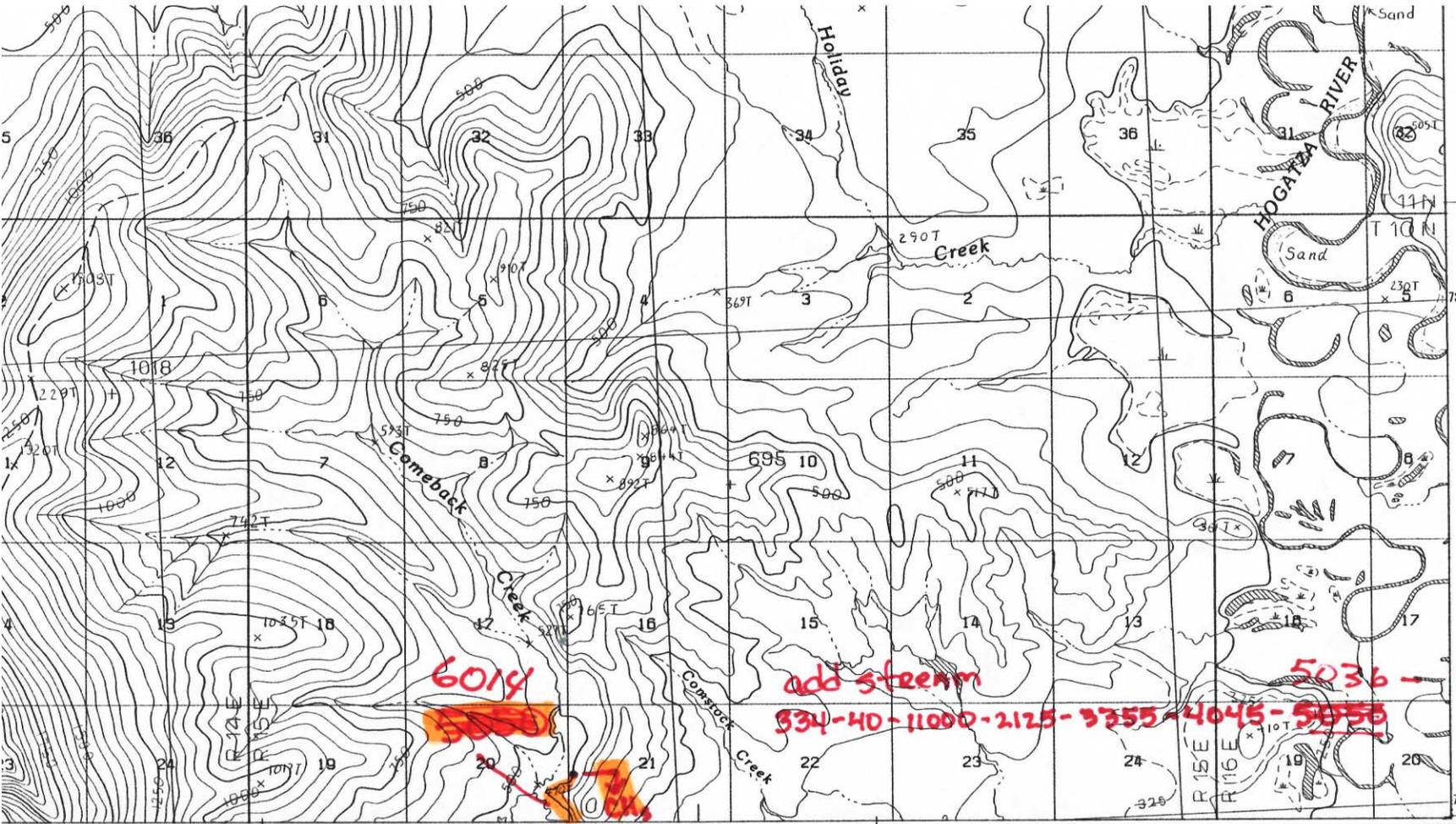
4500000 FEET
7355
66° 15'
7350000N
7345
4460000 FEET
10'



HUGHES (B-6)
HUGHES (A-6)
" A-S

Clearcreek
↓
4045

This nomination will include Alpha and Comeback creek for spawning chum salmon, however, we need to get the new 1:63,361 maps to make the nomination Dist



SCALE 1:63 360
 CONTOUR INTERVAL 50 FEET
 SUPPLEMENTAL CONTOUR INTERVAL 25 FEET

To convert meters to feet multiply by 3.2808
 To convert feet to meters multiply by .3048



QUADRANGLE LOCATION

ROAD LEGEND
 No roads or trails in this area

1	2	3	1 Shungnak (C-1)
			2 Hughes (C-6)
			3 Hughes (C-5)
4		5	4 Shungnak (B-1)
			5 Hughes (B-5)
			6 Shungnak (A-1)
6	7	8	7 Hughes (A-6)
			8 Hughes (A-5)

ADJOINING QUADRANGLE NAMES

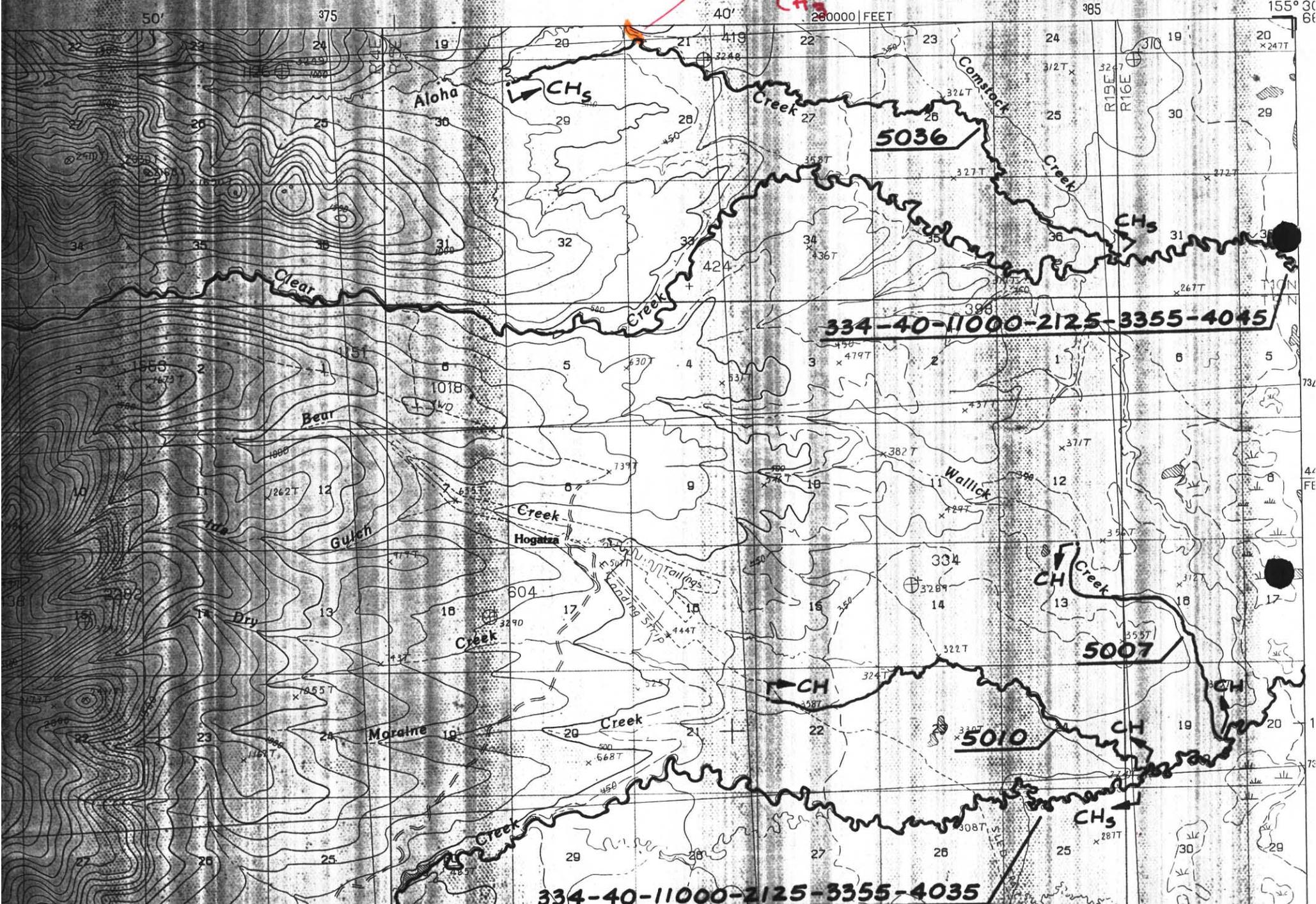
HUGHES (B-6), ALASKA
 PROVISIONAL EDITION 1986

66155-C5-TF-063

FOR SALE BY U.S. GEOLOGICAL SURVEY, FAIRBANKS, ALASKA 99701
 DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092

HUGHES (A-6) QUADRANGLE
ALASKA
1:63 360 SERIES (TOPOGRAPHIC)

ADD STREAM 5050
CH_s



334-40-11000-2125-3355-4045

5007

5010

334-40-11000-2125-3355-4035



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

NORTHERN DISTRICT OFFICE
1150 University Avenue
Fairbanks, Alaska 99709-3899

ALASKA DEPT. OF
FISH & GAME

DEC 01 1995

REGION II
HABITAT AND RESTORATION
DIVISION

Ed Weiss
Habitat and Restoration Division
Alaska Department of Fish and Game
333 Raspberry Rd.
Anchorage, Alaska 99518

Dear Ed:

Attached is a summary of fish sampling efforts as authorized by collecting permit No. SF-95-055. Sampling was not conducted on Clear or Aloha Creek within the Hogatza River watershed. If you have any questions regarding the attached reports please call me at (907) 474 - 2345.

Sincerely,

Carl F. Kretsinger

Carl F. Kretsinger

No nomination from this packet report. The DV captured in this report were resident DV. This was confirmed in a 1-25-96 phone call to Carl Kretsinger

ALASKA DEPT. OF
FISH & GAME

DEC 01 1995

REGION II
HABITAT AND RESTORATION
DIVISION

NO NOMINATIONS
FROM THIS
DV - were resident



STATE OF ALASKA
DEPARTMENT OF FISH AND GAME
P.O. Box 25526
JUNEAU, ALASKA 99802-5526

Permit No. SF-95-055

Expires 12/31/95

FISH RESOURCE PERMIT

(Scientific Collections)

This permit authorizes Carl Kretsinger, U.S. Bureau of Land Management, Kobuk District Office
person, agency or organization
of 1150 University Avenue, Fairbanks, AK 99709-3844 to conduct the following
address
activities from June 5, 1995 to December 31, 1995 in accordance with AS 16.05.930.

Capture and collect fish from interior Alaska.

Purpose: To conduct fish abundance surveys in specific locations and habitats for assessing environmental impacts, primarily from mining activities.

Location: Fish may be captured from Bear Creek and Ida Gulch, tributaries to Caribou Creek in the Hogatza River watershed; Clear and Aloha Creeks within the Hogatza River watershed; and Pioneer Creek, tributary to Eureka Creek.

Species Collected: Any species of fish may be captured.

Method of Capture: Fish may be captured by means of seine net, hook-and-line gear, and electroshocker. See contingencies.

-continued on back page-

REPORT DUE January 31, 1996. The report shall include species; numbers; dates and locations of collection and disposition; sex, age and breeding condition; lengths and weights of fish; other information as required.

GENERAL CONDITIONS, EXCEPTIONS AND RESTRICTIONS

1. This permit must be carried by person(s) specified during approved activities who shall show it on request to persons authorized to enforce Alaska's fish and game laws. This permit is nontransferable and will be revoked or renewal denied by the Commissioner of Fish and Game if the permittee violates any of its conditions, exceptions or restrictions. No redelegation of authority may be allowed under this permit unless specifically noted.
2. No specimens taken under authority hereof may be sold or bartered. All specimens must be deposited in a public museum or a public scientific or educational institution unless otherwise stated herein. Subpermittees shall not retain possession of live animals or other specimens.
3. The permittee shall keep records of all activities conducted under authority of this permit, available for inspection at all reasonable hours upon request of any authorized state enforcement officer.
4. Permits will not be renewed until detailed reports, as specified above, have been received by the department.
5. UNLESS SPECIFICALLY STATED HEREIN, THIS PERMIT DOES NOT AUTHORIZE the exportation of specimens or the taking of specimens in areas otherwise closed to hunting and fishing; without appropriate licenses required by state regulations; during closed seasons; or in any manner, by any means, at any time not permitted by those regulations.

Mark Schwan
Division of Sport Fish

Frank A. ...
Commissioner

6-6-95
Date

Final Disposition: All fish must be released unharmed at the capture site, however, incidentally killed specimens may be retained as voucher specimens for identification purposes.

Authorized Personnel: The following personnel may participate in collecting activities under terms of this permit:

Cark Kretsinger
Bob Karlen

Contingencies: 1) John Burr, Sport Fish Area Management Biologist in Fairbanks, must be notified prior to the initiation of collecting. 2) MS 222 is not allowed for use on any fish with the potential of being captured and consumed by people within 14 days after administration of the drug. 3) **Electroshocking is not permitted in waters when spawning fish are present.** 4) A valid Alaska sport fishing license must be possessed by any individual using hook-and-line gear. 5) A report of all collecting activities must be submitted to Mark Schwan, Sport Fish Biologist, Juneau, within 30 days after the expiration of this permit. This report must summarize all collections, and include the number of fish incidentally killed by capture and handling. A report should also be forwarded to Ed Weiss, Habitat & Restoration Division, ADFG, 333 Raspberry Rd. Anchorage, Alaska 99518.

cc: Fred Andersen, Sport Fish, Fairbanks
John Burr, Sport Fish, Fairbanks
Al Ott, Habitat, Fairbanks
FW Protection, Fairbanks

Bear Creek Bypass, June 1995

Bear Creek electrofishing data (stream bypass)				
Date: 22 June 1995	Personnel: C. Kretsinger and M. Fisk			
Location: within a stream bypass located approximately nine miles upstream from the mouth of Bear Creek above patented land. Bear Creek is tributary to Caribou Creek and lies within the Hogatza ACEC.				
Latitude/Longitude: 66°12.187'N; 155°45.880'W				
Water Quality: see Bear Cr electrofishing data (undisturbed reach); 23 June 1995				
Length of stream sampled: 61m				
Area: 243 m2	Average depth:15.2 cm.; maximum depth: 36.6 cm			
Habitat type: 100% riffle w approx. 3.7m2 pocket pool				
Cover: 1.8m2 undercut bank and 2.8 m2 overhanging vegetation.				
Substrate: large gravel and rubble				
Note: banks of bypass were sized by the 1994 fall flood. The vegetation mat has undercut and sloughed over much of the constructed stream bank creating a bypass that appears to be fairly stable. The bypass is one year old.				
Method: Fish capture Smith-Root Model 15A backpack shocker set at 90Hz @ 600v.				
Reach blocked off with 3mm square mesh seines. Weights were obtained using a Pesola 2Kg scale.				
Time shocked: First Pass (412 sec.), Second Pass (396 sec.), Third Pass (379 sec.).				
Number of fish killed or retained for identification : none				
	Dolly Varden	Dolly Varden	Dolly Varden	Sculpin
	First Pass	Second Pass	Third Pass	Combined
	FL (mm)	FL (mm)	FL (mm)	FL (mm)
	156	100	78	92
	146	115	50	95
	161	117	82	75
	130	130		88
	138	99		
	156	105		
	113	100		
	95	112		
	107	49		
	106	60		
	142	48		
	110			
	90			
	100			
	73			
	83			
	98			
	76			
	90			
	108			
	120			
	102			
	81			
	54			
Total No.	24	11	3	4
Total wt. (g)	480	140	20	27
Statistics (using Microfish 3.0 software; J.S. Van Deventer and W.S. Platts 1989):				
Removal Pattern: 24, 11, 3				
Total Catch = 38				
Population estimate = 39				

Bear Creek (Undisturbed reach); June 1995

Bear Creek electrofishing data (undisturbed reach)				
Date: 23 June 1995		Personnel: C. Kretsinger, A. Morkill, M. Fisk		
Location: Approximately 9.5 miles upstream from the mouth of Bear Creek above patented land and above mining disturbance. The site is marked by a ~ 50ft. tall white spruce located 10 ft. from left edge of water. The limbs were removed from the upper 1/3 of the tree.				
Bear Creek is tributary to Caribou Creek and lies within the Hogatza ACEC.				
Latitude/Longitude: 66°12.12'N; 155°47.23'W				
Time: 1300		Turbidity: 0.3 NTU	Sulfate: 0.5 mg/L	
Air Temp.: 13°C		pH: 7.6	Flow*: 7.41 cfs	
Water Temp.: 5.0°C		Alkalinity: 10.2 mg/L	chan. slope**: 1.4%	
Conductivity: 48.0 umhos/cm				
Notes:				
*stream flow was measured in the bypass channel approx. 0.5 mile downstream.				
**channel slope was measured in a portion of the natural channel circumvented by the stream bypass approx. 0.5 mile downstream.				
Length of stream sampled: 31m				
Area: 93 m ²	Average depth: 42.7 cm.; maximum depth: 85.3 cm			
Habitat type: 30% pool and 70% riffle				
Cover: 3.9 m ² undercut bank; 55.7 m ² overhanging vegetation; 2.8 m ² of small woody debris.				
Substrate: large gravel and rubble				
Method: Fish capture Smith-Root Model 15A backpack shocker set at 90Hz @ 600v.				
Reach blocked off with 3mm square mesh seines. Weights were obtained using a Pesola 2Kg scale.				
Time shocked (seconds): First Pass (310), Second Pass (220), Third Pass (254), Fourth pass (215).				
Number of fish killed or retained for identification : none				
	Dolly Varden	Dolly Varden	Dolly Varden	Dolly Varden
	First Pass	Second Pass	Third Pass	Fourth Pass
	FL (mm)	FL (mm)	FL (mm)	FL (mm)
	145	178	162	138
	86	140	145	165
	78	155	133	102
	97	139	56	72
	135	80	65	
	95	62	117	
	140		84	
	75		84	
	91		62	
	68			
	90			
	103			
Total No.	12	6	9	4
Total wt. (g)	170	180	160	100
Statistics (using Microfish 3.0 software; J.S. Van Deventer and W.S. Platts 1989):				
Removal Pattern: 21, 9, 6, 4				
Total Catch = 31				
Population estimate = 38				
Chi Square = 0.129				
Pop est. standard error = 6.990				
*Lower Confidence Interval = 31.000				
Upper Confidence Interval = 52.161				
Capture Probability = 0.337				

**Fisheries Investigations within the Upper Pioneer Creek watershed,
Manley area, 1995**

Project: to determine species distribution and abundance of fish in the headwater area of Pioneer Creek, tributary to Eureka Creek near Manley.

Issue: Tim Kelly's Plan of Operation and EA for mining North Fork Creek, tributary to Pioneer Creek, will be due for renewal in 1996. Currently little has been documented concerning fishery values in the area of the Kelly operation and no fishery information is available for North Fork, Deadwood, or upper Pioneer Creeks.

Date: 7 September 1995

Crew: Carl Kretsinger, Bob Karlen, Dave Parker, Steve Lundeen

A Smith-Root model 15-A backpack electroshocker was used to sample Deadwood Creek, Pioneer Creek, and the bypass of North Fork Creek. No fish were found in any of the streams. Shocker settings varied between 60 and 90Hz and 400 and 500v. The sampling crew consisted of two people netting and one person shocking. No block nets were used with the exception of Pioneer Creek in which an 1/8 inch mesh seine (50' x 6') was used to block the lower end of sample reaches. Only 60 feet of the North Fork bypass was sampled; from the confluence upstream to a three foot high headcut which looked as though it would effectively block fish passage (total shocking time: 32 seconds). Pioneer Creek was sampled approximately 400 feet downstream of the confluence of Deadwood and North Fork Creeks. A 50 foot long riffle and a 50 foot long pool/glide were sampled for a total shocking time of 175 seconds. Approximately 400 feet of Deadwood Creek was sampled, from the mouth to a point about 200 feet upstream of the confluence with the North Fork bypass. Total shocking time was 308 seconds.

Observations:

Between 1110 and 1215 hrs, the air temperature was 7.5°C and water temperatures of all three streams varied between 3.0 and 3.5°C (North Fork Creek effluent channel being the warmest). Water was clear in Deadwood Creek (1.5 NTU) and the North Fork Creek bypass (not measured). A turbid discharge in the North Fork effluent channel (25.3 NTU) resulted in a slight turbidity in Pioneer Creek (2.4 NTU). The mine was not in operation on the day we visited due to mechanical problems, however, recent rains in the area had increased discharge in many of the local streams which may account for some of the turbidity. Other water quality parameters measured for the streams are summarized in Table 1.

Deadwood Creek above the North Fork Creek bypass was an incised channel with deeply undercut banks (3-4 feet). The habitat looked ideal for various species fish and yet none were found. Pioneer Creek had substrate that was quite embedded and it appeared that the system has been subjected to a great influx of fines over a period of many years.

Following our sampling of Pioneer Creek we walked to the mouth of Eureka Creek to verify if there was a fish passage problem in Eureka Creek, the receiving waters for Pioneer Creek. We had heard rumor that sediments, stemming from mining activity dating back to 1910, had deposited near the mouth of Eureka Creek preventing fish passage into the system. What we found was a large beaver complex with a dam at the mouth of Eureka Creek.

The head difference between Baker Creek and the water surface above the dam was approximately six feet. Several hundred of what appeared to be grayling fry (approx. 40mm in length) were present just below the beaver dam. At this time it appears that the beaver complex may present a barrier to upstream passage of fish into Eureka Creek and its tributaries, however, several small secondary channels appear to circumvent the dam at higher flows and may provide passage to fish at other times of the year. The question of fish passage into the Eureka Creek watershed remains somewhat of a question and should be investigated further.

Table 1. Summary of water quality measurements taken in the upper Pioneer Creek watershed on 7 September 1995.

	H ₂ O °C	pH	Conduct. (umohs/cm)	Turbidity (NTU)	Alkalinity (mg/L)	Sulfate (mg/L)	Discharge (cfs)
N.F. effluent channel; 200' from mouth	3.5	7.3	376	25.3	148.4	50	1.4
Deadwood Cr. ; 50' above mouth	3.0	7.6	177	1.5	94.0	15	9.4
Pioneer Cr.; 500' below Deadwood Cr.	3.0	7.5	170	2.4	98.8	26	10.8

Ida Gulch electrofishing data and fish observations, June 1995

Date: 23 June 1995

Personnel: C. Kretsinger, A. Morkill, M. Fisk

Ida Gulch was too small and overgrown to conduct catch-depletion sampling. We were able to do some spot shocking and document that the stream is inhabited by Dolly Varden 60-80mm in size. The spot shocking was conducted within a 61m reach of undisturbed stream immediately above the current dredging operation. In this reach the stream is a mixture of riffle and pool with an average width of five feet and pool depths up to 46cm. Willow and alder form a canopy over 95 % of the reach with abundant cover consisting of large and small woody debris, undercut bank, and cobble edge. Ten Dolly Varden were captured or observed in this reach during a single pass (223sec) using a Smith-Root model 15A backpack electroshocker set at 90 Hz and 700v. This number of fish was similar to the number of Dolly Varden (12) captured during the first pass (310sec) on an undisturbed segment of Bear Creek, the receiving waters for Ida Gulch. Other parameters collected on Ida Gulch included: stream flow (4.4cfs), air temperature (20.0°C @ 1808 hrs), water temperature (7.0°C @1808 hrs), pH (7.7), and conductivity (41 umhos/cm). Turbidity was not measured but appeared clear both above mining and within the bypass.