CATALOGUE OF

FISH AND STREAM RESOURCES

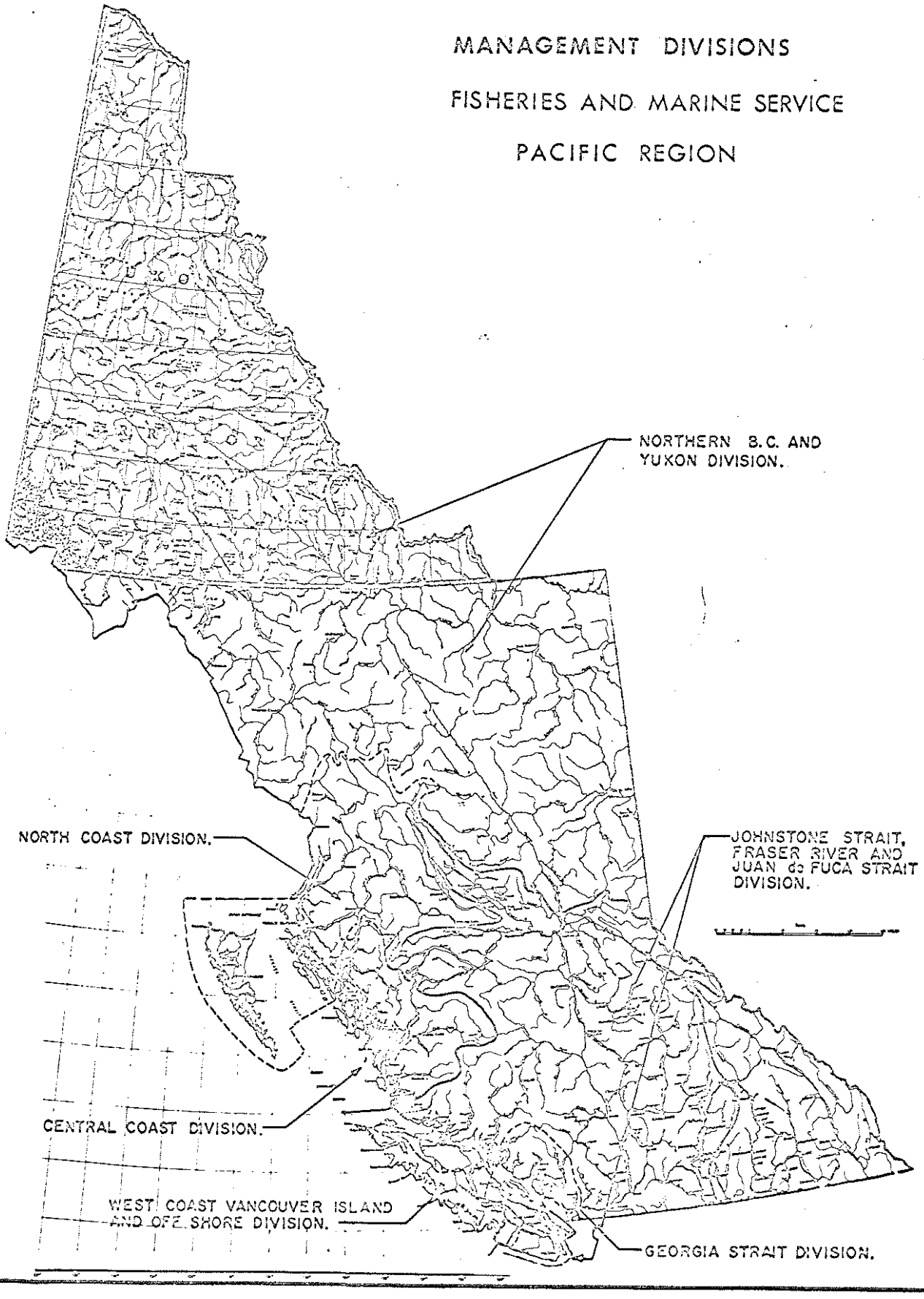
OF AREA 23

(preliminary)

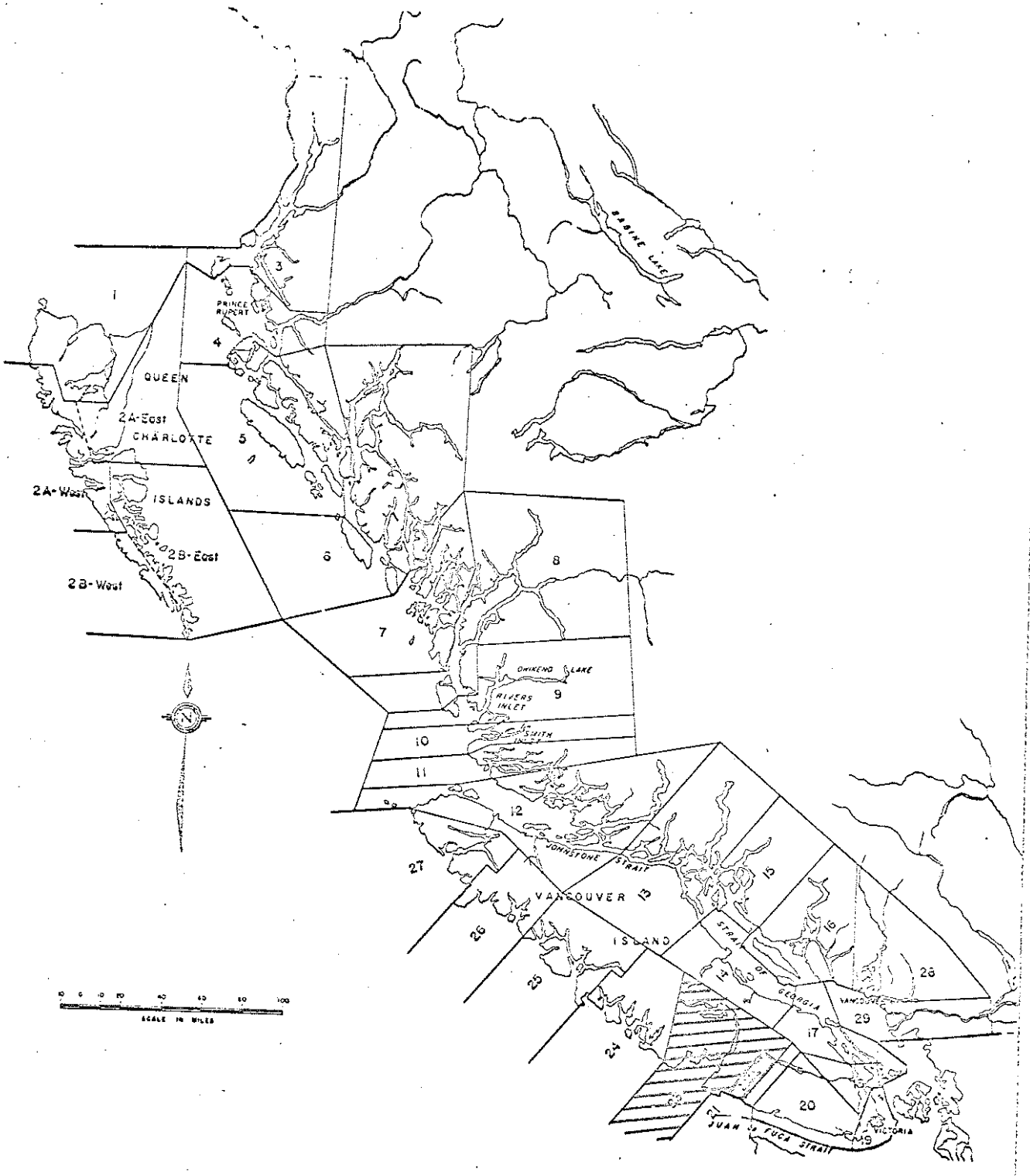
MANAGEMENT DIVISIONS

FISHERIES AND MARINE SERVICE

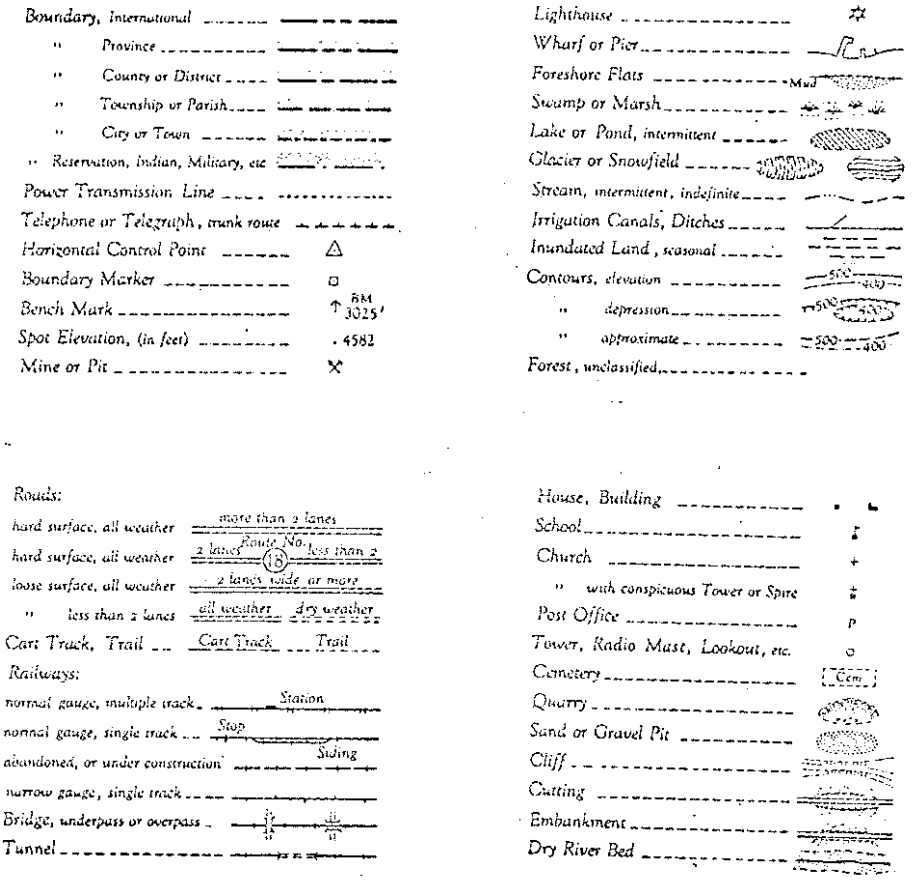
PACIFIC REGION



STATISTICAL AREAS
PACIFIC REGION



MAP REFERENCE



Falls ----------

Culvert ----------

Passable ----------

Impassable ----------

Narrow canyon containing large boulders ----------

Falls with large boulders ----------

Passable only to coho and steelhead ----------

Sharp rise ----------

Log jam ----------

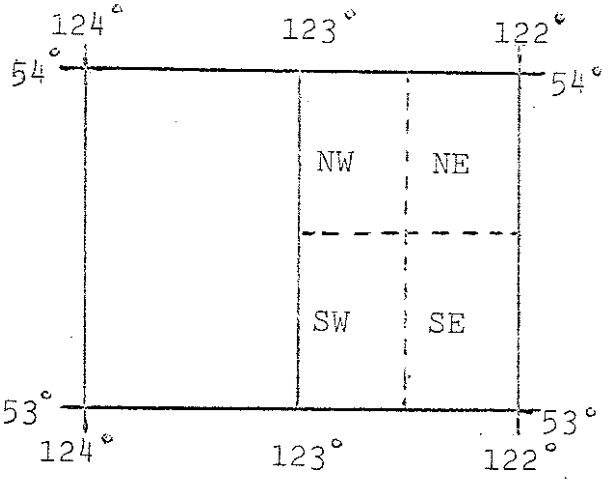
STANDARDS USED ON DESCRIPTION PAGE

Name of Stream: Name as given in Gazetteer of Canada, British Columbia edition; other names are added in lower case type.

Conservation District: As defined by the Conservation and Protection Service (April 1965)

Statistical Area: As defined by Department of Fisheries statistical map (June 1957)

Location and Position: Defined by quadrant indexing. Each geographical quadrilateral of the earth's surface of 1 degree in extent in latitude and longitude is divided into the SE, SW, NE and NW quarters. The south-east corner of each quadrilateral gives the initial point for the figure of reference (Gazetteer of Canada).



Length: Mainstem only

Width: Average width, estimated to nearest foot

Drainage: Area in square miles of the entire drainage basin feeding the stream

Stream Bed Category Definitions:

Bedrock	bedrock
Boulder	> 256 mm (> 10")
Coarse	50.9 - 256 mm (2 - 10")
Fine	3.37 - 50.8 mm (1/8 - 2")
Sand and silt	< 3.37 mm

Gradient: Average vertical drop per thousand linear feet

Wetted Area: Number of square yards of stream bed under water at average flows within the described length

Spawning Area: Estimated square yardage of stream bed suitable for salmon spawning within the described length

Discharge: Mean annual discharge. Maximum and Minimum values are either daily means or instantaneous discharges. The latter are identified by (Inst.). Discharge data is taken from "Historical Stream Flow Summary", British Columbia, Water Survey of Canada.

Temperature: As described

Barriers and Points of Difficult Ascent: Complete and partial barriers to salmon and their distance from the stream mouth. Species likely to be affected may be listed. Both natural and man-made obstructions are defined.

Spawning Distribution: Distribution is indicated by brief comments opposite species.

Fisheries Potential of Inaccessible Portion of Stream

General Remarks: Emphasize features of stream and of spawning population. Also includes industrial activity, routes of accessibilty, etc.

Escapement Record: The escapement represents the mid point of the coded range of escapement for each species. For example, 5,000-10,000 would be entered as 7,500. Where absolute numbers are provided by Fisheries Personnel these numbers are entered. N.O. means no fish observed; UNK means some fish were seen but no estimates were made.

The timing is in reference to spawning:
E - early (first 10 days of month)
M - middle of month
L - late (last 10 days of month)

CONTENTS

Nitinat River

Pachena River

Pipestem Inlet Creek

Poett Nook Creek

Salmon Creek

Sandy Creek

Sarita River

Sechart Creek

Snug Basin Creek

Somass System

Sugsaw Creek

Toquart River

Two Rivers East

Two Rivers West

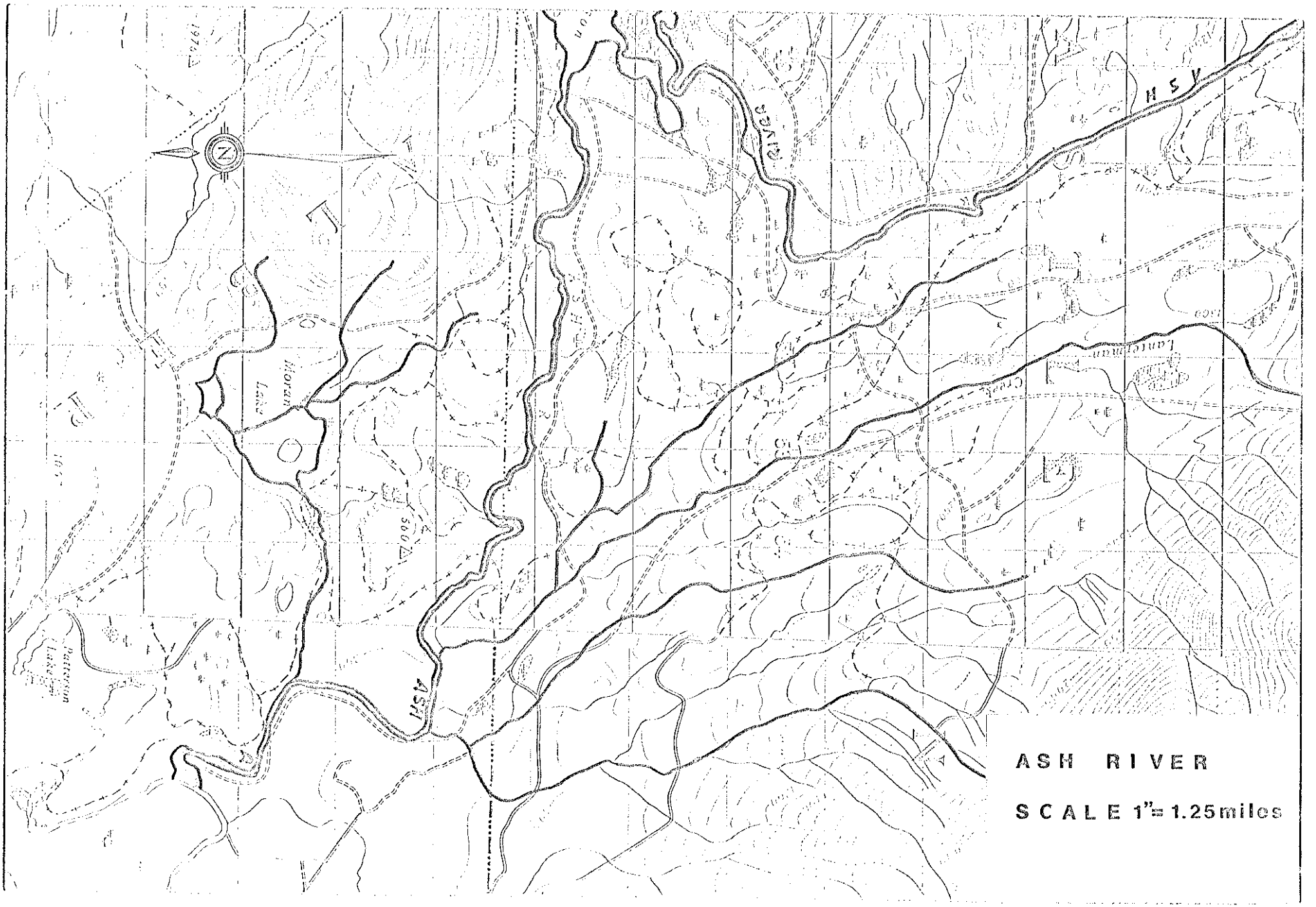
Uchuck Creek

Useless Inlet Creek

Vernon Bay Creek

West Creek

Metric Equivalents, Water Quantities and Flow Measurements


ASH RIVER
SCALE 1"= 1.25miles

NAME OF STREAM ASH RIVER

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows E and SE into Stamp River, NE of Great Central Lake - Alberni District. POSITION 49 124 SW

LENGTH _____ MI. WIDTH _____ FT. DRAINAGE 146.0 Sq. Mi.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____

SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 -10.0	
> 10.0	

WETTED AREA _____ SQ.YD. SPAWNING AREA _____ SQ.YD.

DISCHARGE 650.0 CFS MAX. 21900 CFS MIN. 85.5 CFS 16/08/65

TEMPERATURE _____

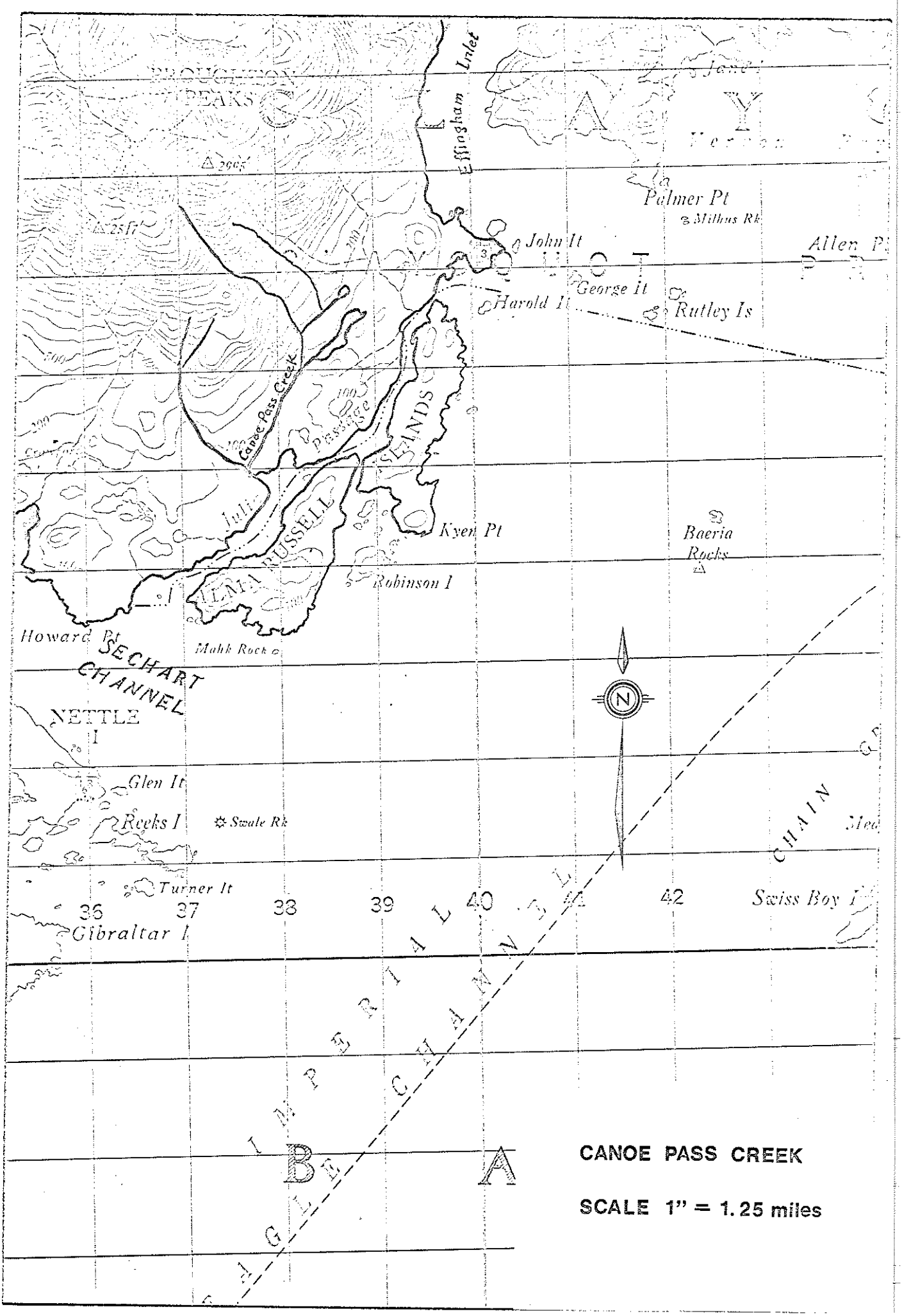
BARRIERS OR POINTS OF DIFFICULT ASCENT _____

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
SPRINGS	
COHO	
CHUM	
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS: Escapements included in Somass River system.


Effingham Inlet
Palmer Pt
Millbus Rk
John It
George It
Harold It
Rutley Is
Allen P
Canoe Pass Creek
Passage
ISLANDS
Julia
RUSSELL
Kyen Pt
Baeria Rocks
Robinson I
ALMA
Howard Pt
Mahk Rock
SECHART CHANNEL
NETTLE I
Glen It
Reeks I
Swale Rk
Turner It
Gibraltar I
Swiss Boy I
CHAIN
N
35
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41
42
IMPERIAL GLACIER
B
A
CANOE PASS CREEK
SCALE 1" = 1.25 miles

NAME OF STREAM CANOE PASS CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows SW into Sechelt Channel - Barclay Sound.

POSITION 48 125 NE

LENGTH _____ MI. WIDTH 12 FT. DRAINAGE 2 Sq. Mi.

COMPOSITION: BEDROCK 15% BOULDER 20% COARSE 20% FINE 10%

SILT & SAND 20% UNCLASSIFIED 15%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.2 miles; 0.9 - 1.1 miles
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	0.2 - 0.9 miles

WETTED AREA 7,700 SQ.YD. SPAWNING AREA 2,300 SQ.YD.

DISCHARGE 20 CFS MAX. _____ MIN. 5 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Cascades 0.8 miles from mouth of stream, form log jams from time to time.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	.3 - 1.1
CHUM	0 - .25
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM N/A

GENERAL REMARKS: Typical small west coast stream draining a tiny lake and swamp. Stream is subject to predation by bears and birds.

ESCAPEMENT RECORD FOR CANOE PASS CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			200	75		
49			750	200		
50			75	1500		
51			200	750		
52			200	1500		
53			25	200		
54			75	200		
55			25	200		
56			25	75		
57			200	75		
58			75	200		
59			200	200		
60			75	200		
61			200	75		
62			200	25		
63			25	75		
64			200	200		
65			25	25		
66			25	400		
67			75	200		
68			75	200		
69			200	200		
70			200	75		
71			75	75		
72			75	200		
73			75	200		
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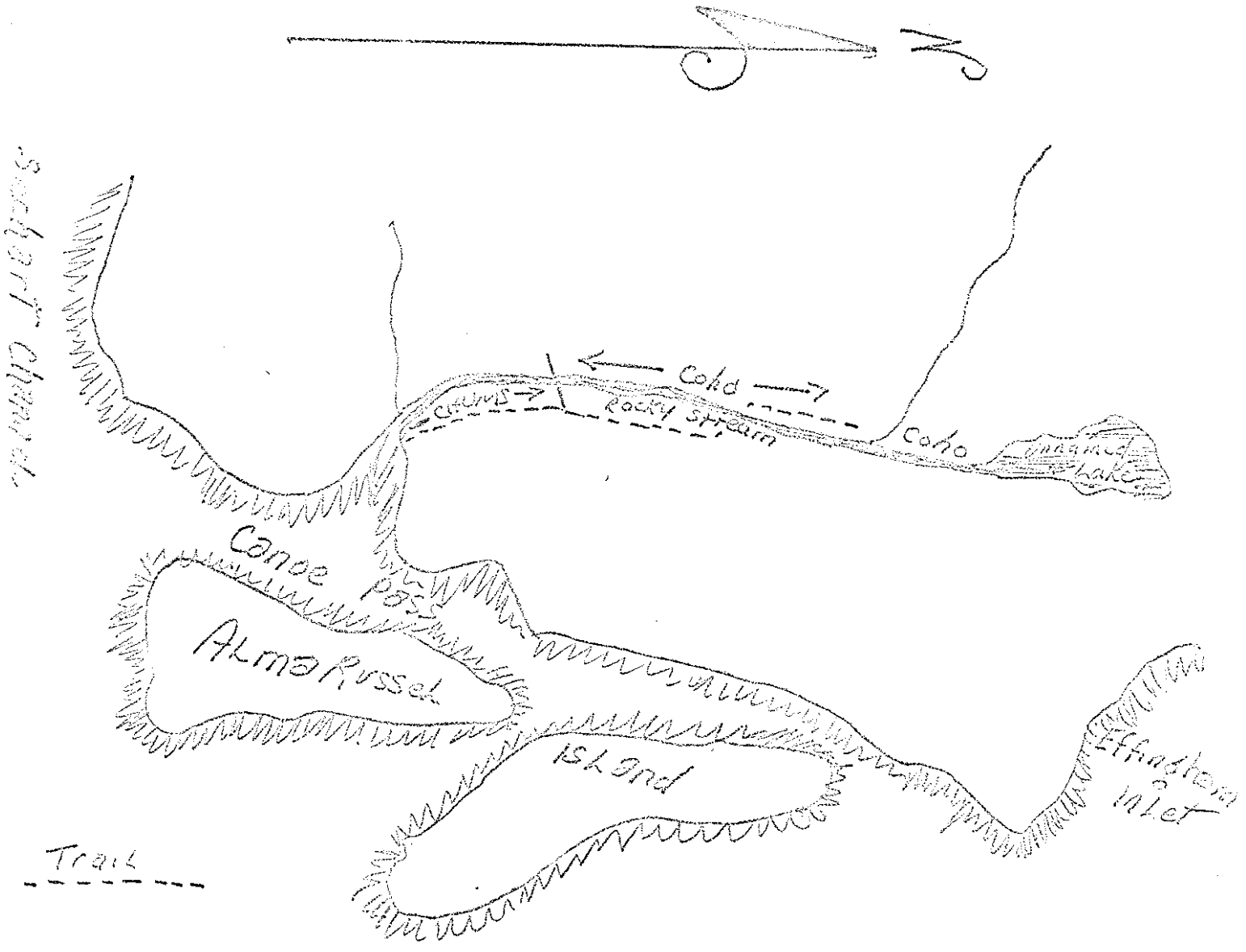
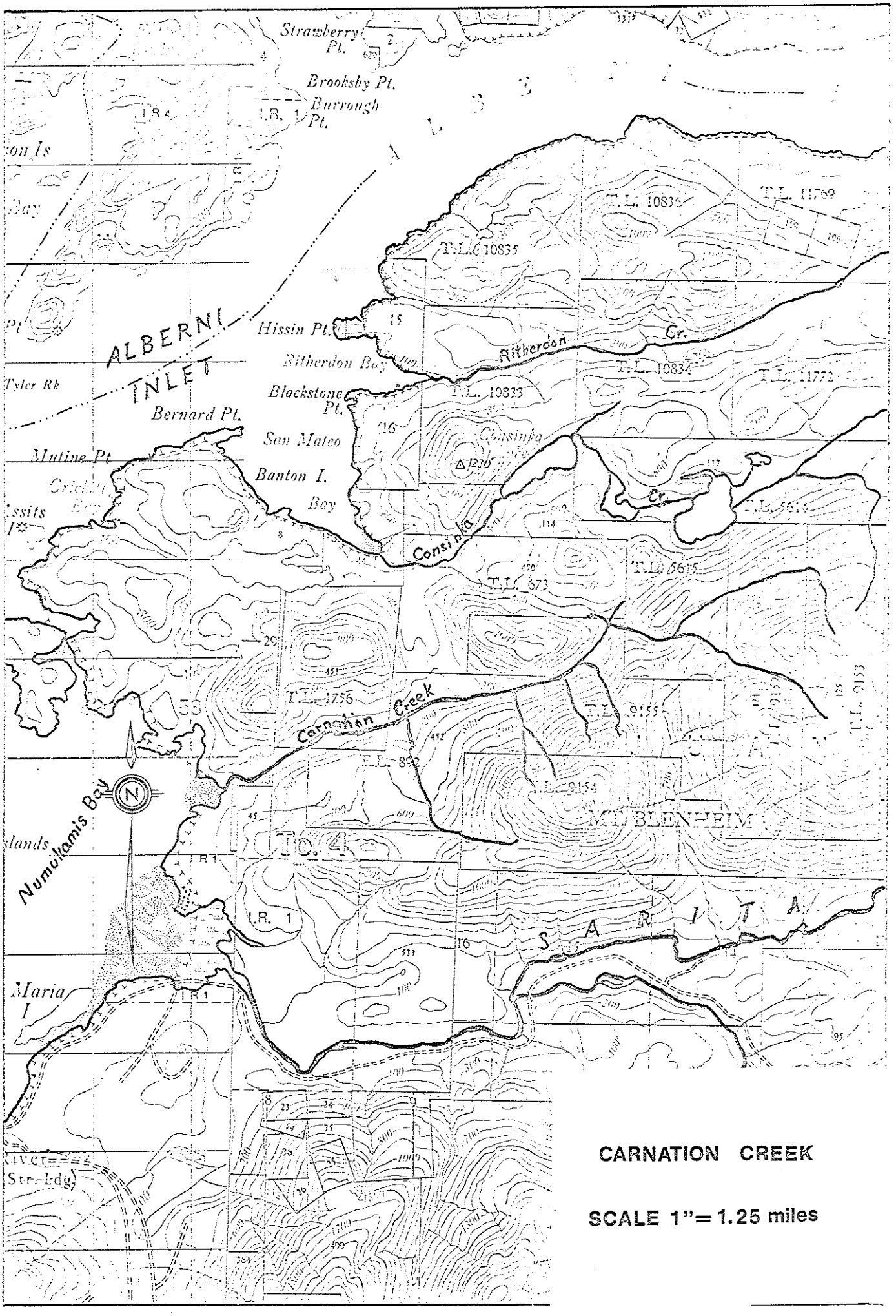
REMARKS



Canoe Pass Creek

Scale: 3" = 1 mile

Sketch, 1969.



CARNATION CREEK

SCALE 1"= 1.25 miles

NAME OF STREAM CARNATION CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows SW into Numukamis Bay, Trevor Island, 1 mile N of Sarita River POSITION 48 12' NW

LENGTH 7½ MI. WIDTH 18 FT. DRAINAGE 4 Sq. Mi.

COMPOSITION: BEDROCK 15% BOULDER 20% COARSE 20% FINE 20%

SILT & SAND 10% UNCLASSIFIED 15%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.25
2.5 - 5.0	0.25 - 1.0
5.0 - 7.5	
7.5 - 10.0	1.0 - 1.5
> 10.0	1.5 - 3.0

WETTED AREA 31,000 SQ.YD. SPAWNING AREA 9,500 SQ.YD.

DISCHARGE 30 CFS MAX. _____ MIN. 20 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Nil.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
SPRINGS	
COHO	0.5 - 2.5
CHUM	0 - 2.0
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS: Fisheries Research Board and Resource Development Branch have been doing a pre-logging study of this stream. Chum reluctant to pass counting fence (located at head of high tide) 500 chum above fence and 3600 below fence. Some predation by eagles and bears.

ESCAPEMENT RECORD FOR CARNATION CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			1500	255		
49			1500	3500		
50			1500	1500		
51			400	750		
52			400	750	25	
53			400	1500		
54			75	1500	75	25
55			25	400	N/L	25
56			25	200	25	25
57			25	1500	N/L	25
58			25	1500	200	25
59			25	400		25
60			25	200	75	25
61			25	750		25
62			25	400	25	25
63			25	200		25
64			75	1500		25
65			75	750		
66			75	750		
67			200	1500		
68			200	1500	25	
69			75	3500		
70			400	3500		
71			200	1500		25
72			200	3500		25
73			192	4168		10
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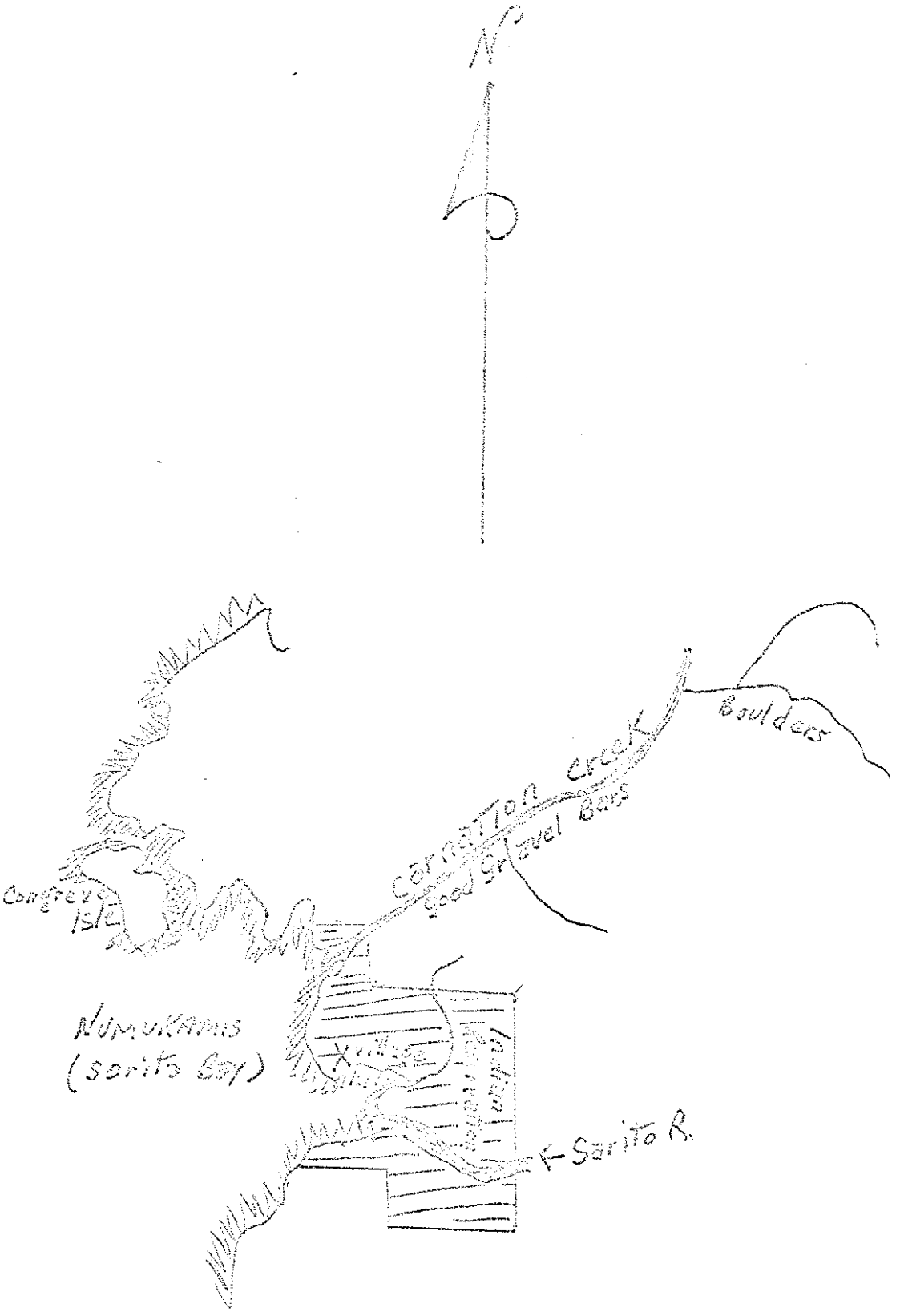
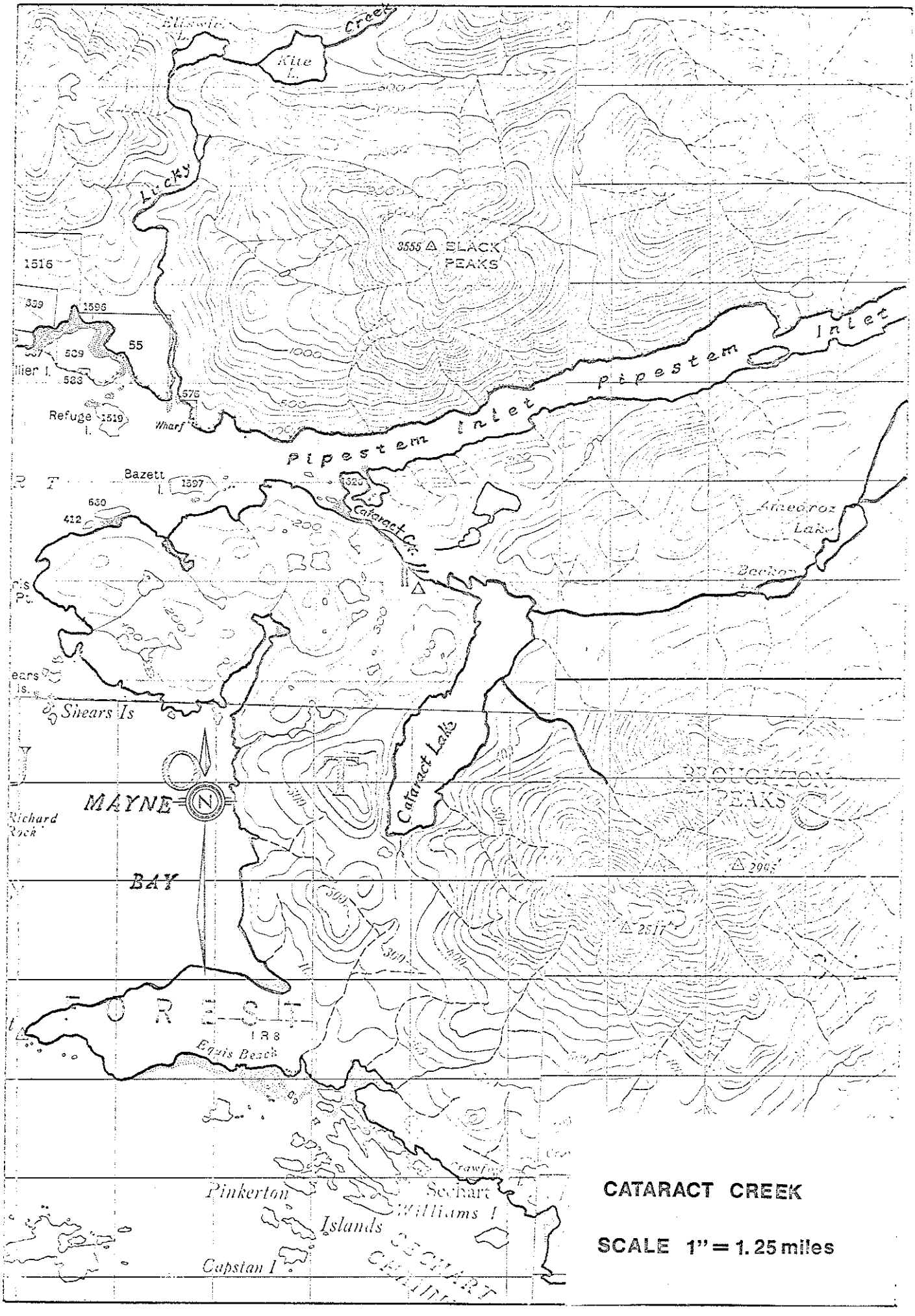
REMARKS



Carnation Creek

Scale: 1 inch = 1 mile

Sketch, 1964



CATARACT CREEK

SCALE 1" = 1.25 miles

NAME OF STREAM CATARACT CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows NW from Cataract Lake into Pipestem Inlet - Clayoquot District. POSITION 49 12S SE

LENGTH 4 1/3 MI. WIDTH 18 FT. DRAINAGE 8.0 Sq. Mi.

COMPOSITION: BEDROCK 30% BOULDER 30% COARSE 20% FINE 10%

SILT & SAND _____ UNCLASSIFIED 10%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 -10.0	
> 10.0	0 - 0.25

WETTED AREA 2.640 SQ.YD. SPAWNING AREA 600 SQ.YD.

DISCHARGE _____ CFS MAX. _____ MIN. 15 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable 10' vertical rock falls at mile 0.25.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	
CHUM	0 - 0.25
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil. Cascades, falls and bedrock.

GENERAL REMARKS: Lake 2.0 x 0.4 miles, 0.8 miles from mouth of stream. Some predation by birds and bears. Small steep stream with very limited spawning area. Mouth to lake approximately 1 mile.

ESCAPEMENT RECORD FOR CATARACT CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48				147		
49				400		
50				400		
51				750		
52				200		
53				750		
54				200		
55				400		
56				200		
57				750		
58				1500		
59				750		
60				400		
61				200		
62				200		
63		2		75		
64				200		
65				200		
66				400		
67				400		
68				400		
69				400		
70				400		
71			25	75		
72			25	750		
73			25	75		
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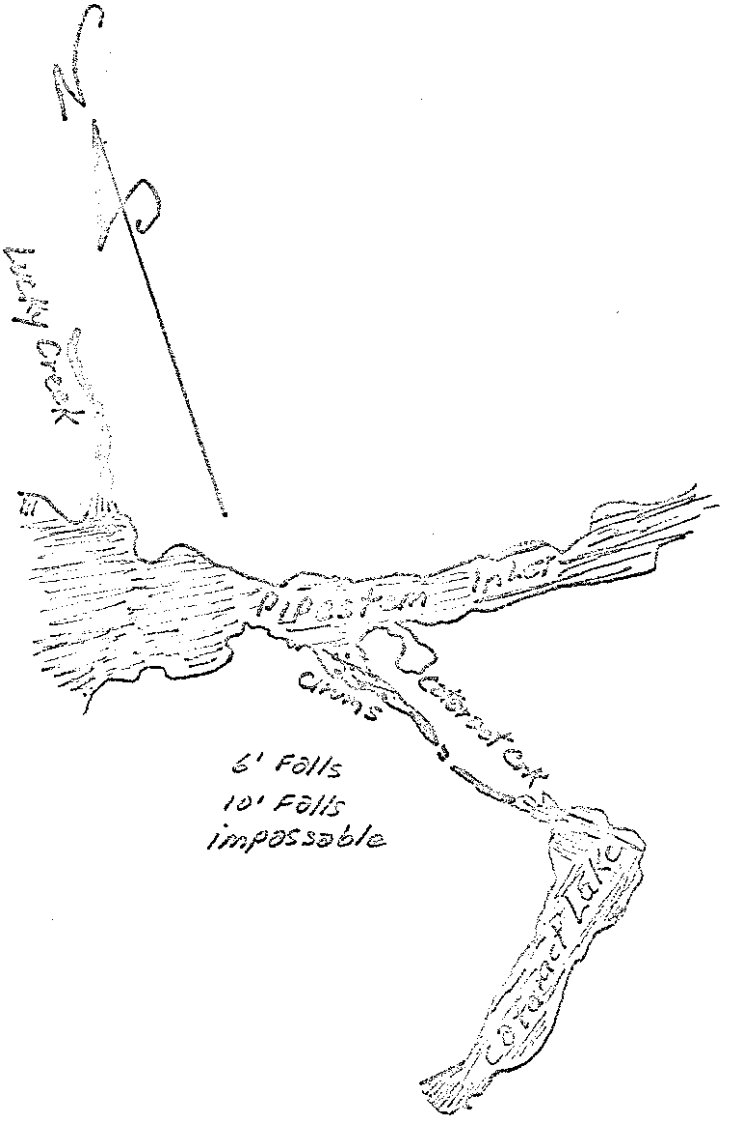
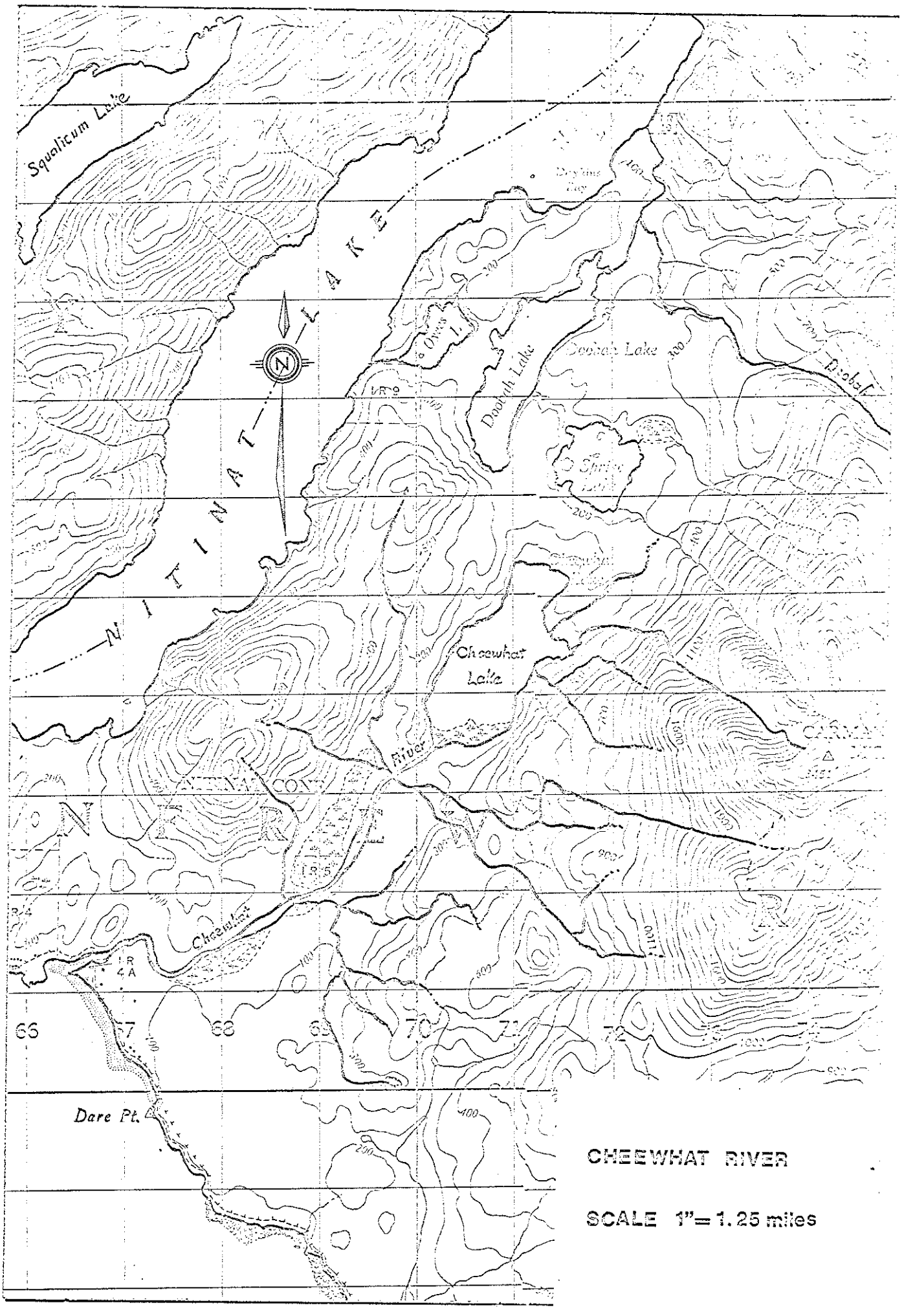
REMARKS



Scale: 1¼" = 1 Mile

Cataract Creek

Sketch, 1969



CHEEWHAT RIVER

SCALE 1"= 1.25 miles

NAME OF STREAK CHEE - WHAT RIVER

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows SW into Pacific Ocean, S of Nitinat Lake - Renfrew District. 1½ miles above lake POSITION 48 123 NW

LENGTH 5 MI. WIDTH 30 below FT. DRAINAGE 6 Sq. Mi.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE 10% FINE 40%

SILT & SAND 30% UNCLASSIFIED 20%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 -10.0	
> 10.0	

WETTED AREA 35,000 SQ.YD. SPAWNING AREA 7,000 SQ.YD.
DISCHARGE _____ CFS MAX. _____ MIN. _____
TEMPERATURE _____
BARRIERS OR POINTS OF DIFFICULT ASCENT Nil.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	Chee - What Lake
CHINOOK	
COHO	Tributaries
CHUM	0 - 2.0 miles
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: Creek sockeye (1-1½lbs.) early run, February, March, and April. No commercial potential, moderate coho and chum producer. Sockeye fished for food purposes by Nitinat Indians. Chee-What River is to be included in Pacific Rim National Park. Some predation by bears and birds.

ESCAPEMENT RECORD FOR CHEE-WHAT RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48	1500		1500			
49	1500		1500			
50	1500		1500			
51	1500		1500			
52	1500		750			
53	1500		750			
54	1500		750			
55	1500		400			
56	1500		750	75		
57	1500		400	75		
58	1500		400	75		
59	1500		750	75		
60	1500		75	75		
61	1500		400	200		
62	1500		400	25		
63	1500		75	25		
64	1500		400	200		
65	1500		400	75		
66	1500		400	75		
67	1500		75	400		
68	200		75	200		
69	75		75	25		
70	400		200	25		
71	75		25	no.		
72	750		75	75		25
73	75		200	25		
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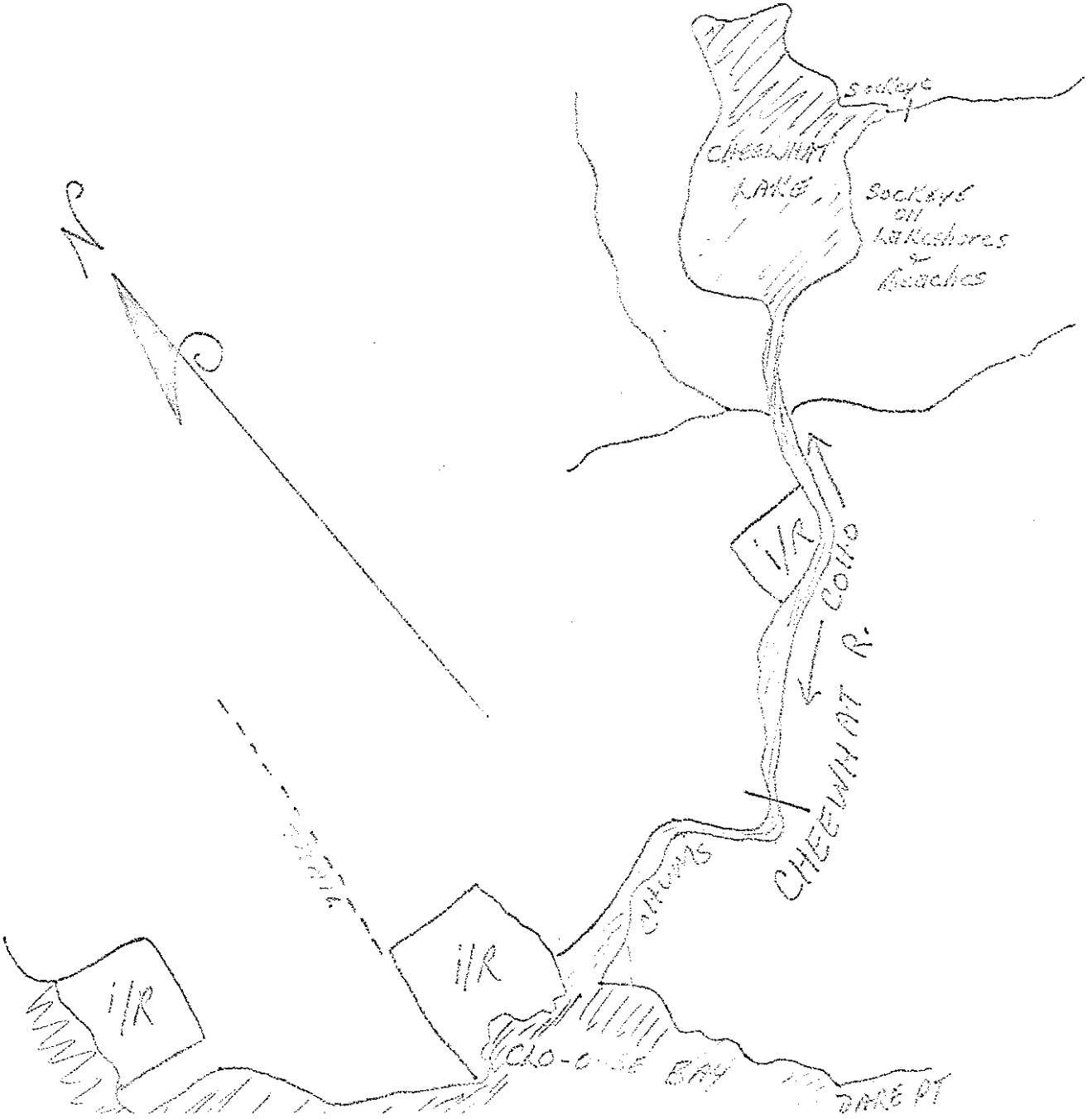
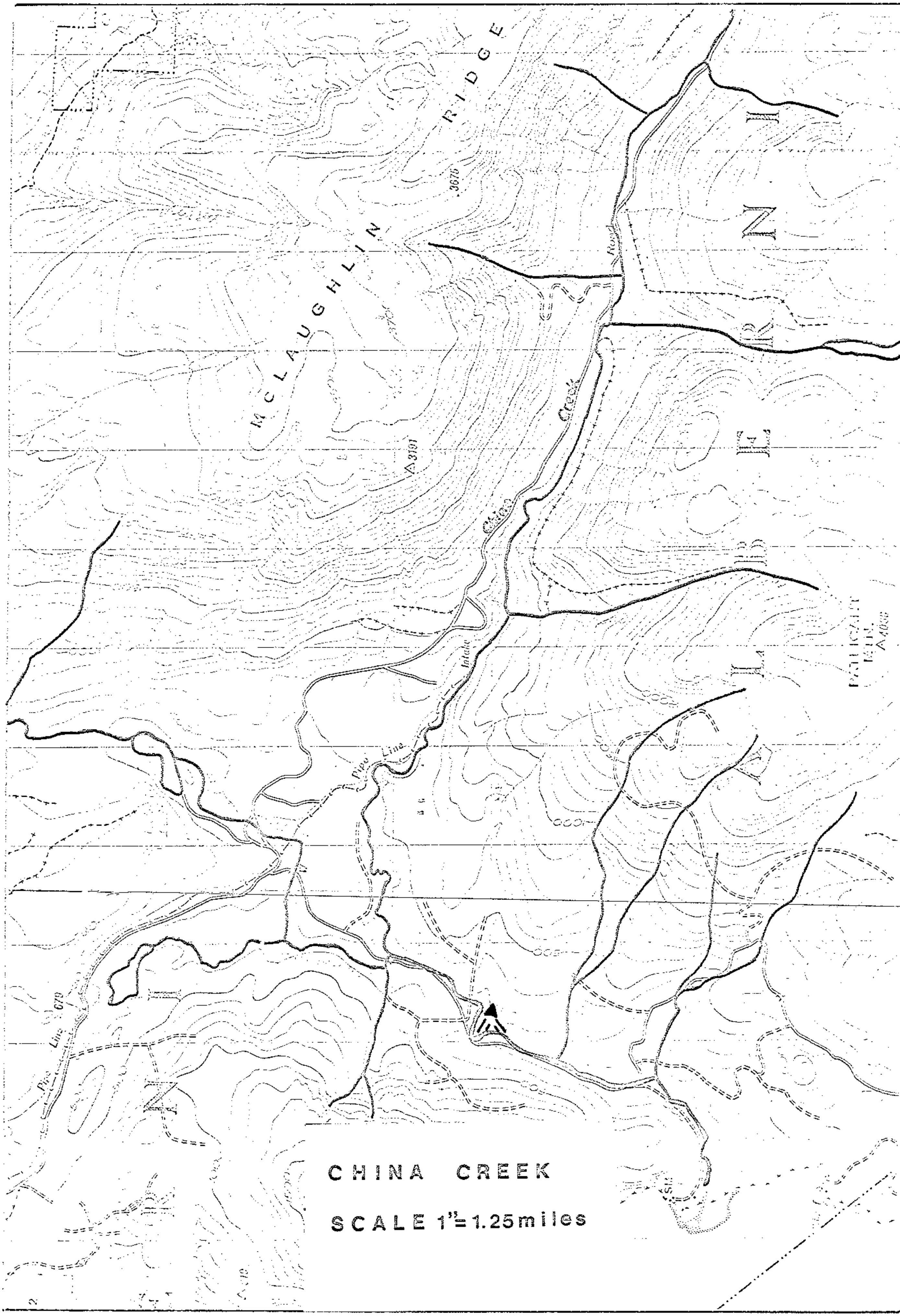
REMARKS

Sketch of Cheewhat River, 1969.

Scale: 2 inches = 1 mile




McLAUGHLIN RIDGE
China Creek
Road
Intake
Pipe Line
CHINA CREEK
SCALE 1"=1.25miles

NAME OF STREAM CHINA CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows SW into Alberni Inlet - Alberni District.

POSITION 49 124 SW

LENGTH _____ MI. WIDTH 36 FT. DRAINAGE 28 Sq. Mi.

COMPOSITION: BEDROCK 30% BOULDER 10% COARSE 25% FINE 15%

SILT & SAND 5% UNCLASSIFIED 15%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.25
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	0.25 - 3.0

WETTED AREA 63,300 SQ.YD. SPAWNING AREA 15,000 SQ.YD.

DISCHARGE 100 CFS MAX. _____ MIN. 15 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable falls and dam 3 miles from mouth of stream.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	to 3 miles, scattered
COHO	to 1 mile and tributaries
CHUM	½ mile
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM No potential due to the city of Port Alberni water supply. (Placer lease not working)

GENERAL REMARKS: Stream is subject to some predation by birds and bears.

ESCAPEMENT RECORD FOR China Creek

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			1500	1500		750
49			400	1500		750
50			750	1500		750
51			200	400		200
52			400	200		750
53			75	75		400
54			25	200		400
55			N/o	200		400
56			25	25		400
57			75	25		400
58			75	75		400
59			25	75		400
60			25	25		WINTER & SUM.
61		200	75	75		400
62			25	25		400
63		25	75	25		400
64		25	200	25		400
65		25	75	25		WINTER & SUM.
66		25	750	25		WINTER & SUM.
67		N/o	200	200		
68		75	750			WINTER & SUM.
69		N/o	75	25		
70		N/o	75	N/o		WINTER & SUM.
71		N/o	75	N/o		200
72		N/o	200	25		200
73		25	75	75		
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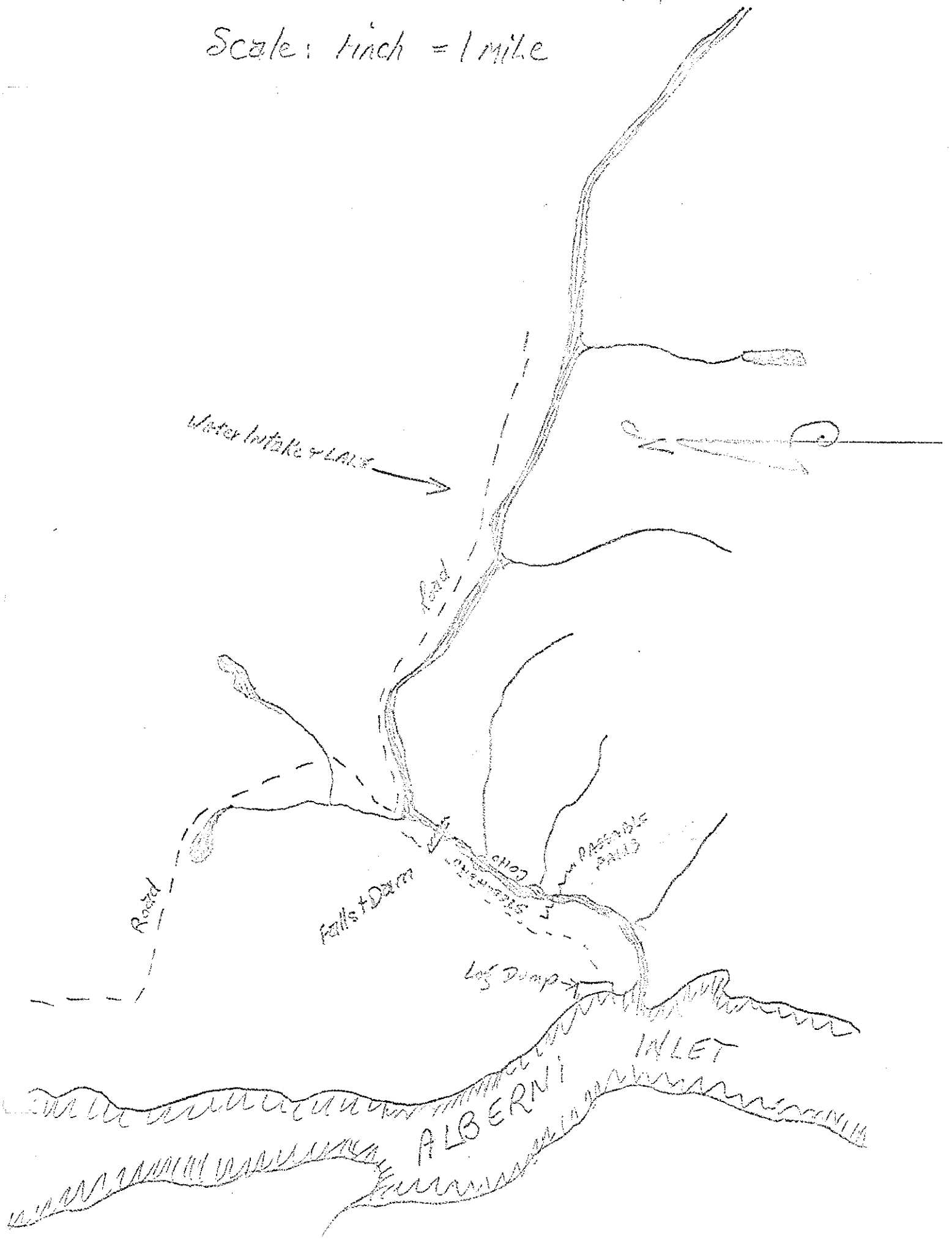
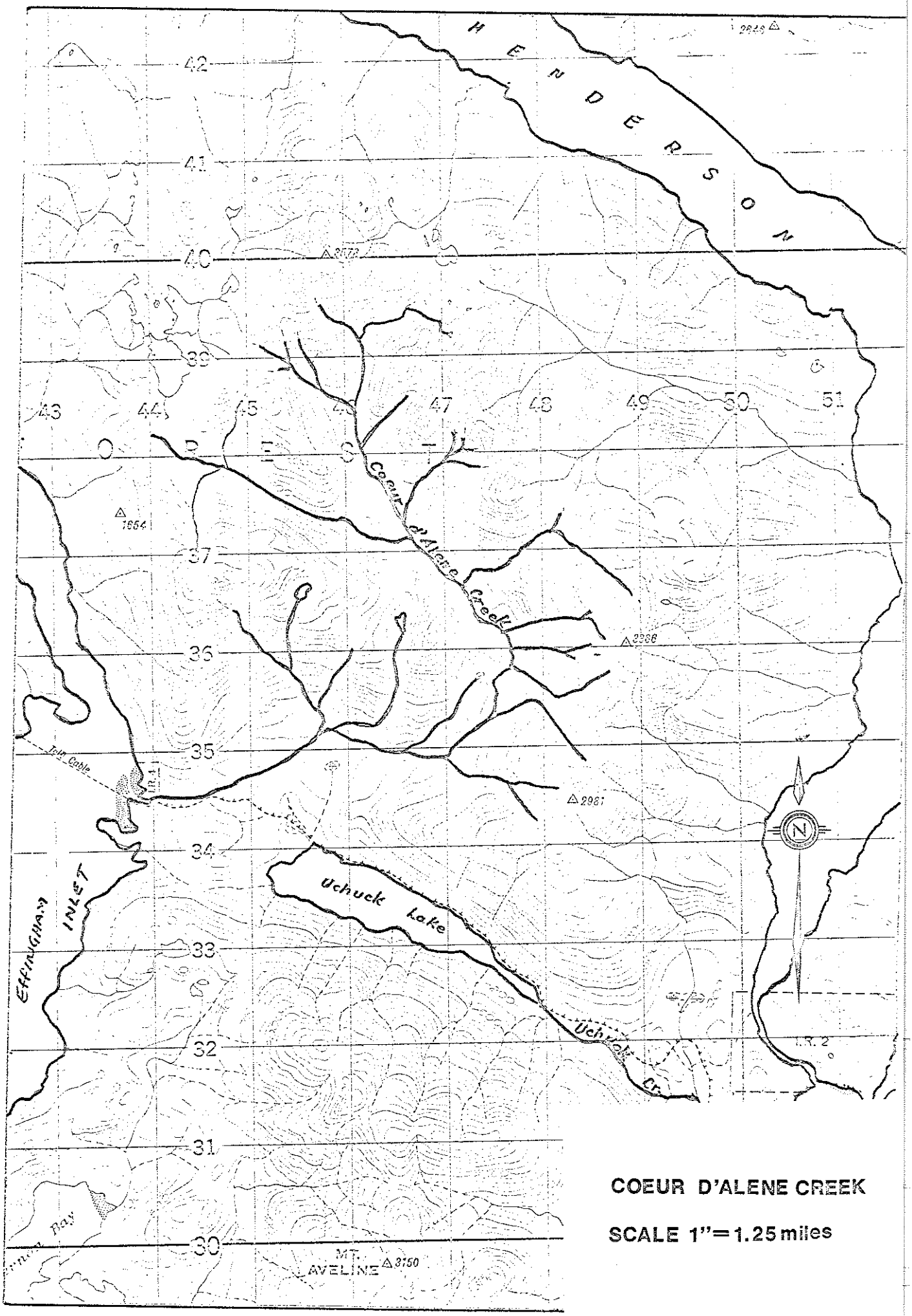
REMARKS

Sketch of China Creek, 1969.

Scale: 1 inch = 1 mile





COEUR D'ALENE CREEK

SCALE 1"=1.25 miles

NAME OF STREAM COUR DE ALENE CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows SW into east shore of Effingham Inlet, 4.7 miles from head. POSITION 49 125 SE

LENGTH 9 MI. WIDTH 30 FT. DRAINAGE 7 Sq. Mi.

COMPOSITION: BEDROCK 20% BOULDER 40% COARSE 10% FINE 10%

SILT & SAND 10% UNCLASSIFIED 10%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.1
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	0.1 - 0.75

WETTED AREA 13,000 SQ.YD. SPAWNING AREA 1,800 SQ.YD.
DISCHARGE 70 CFS MAX. MIN. 25 CFS
TEMPERATURE
BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable falls 0.75 miles from mouth of stream.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	to falls
COHO	to falls
CHUM	0 - 0.5 miles
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil. Too steep and little gravel. Many cascades.

GENERAL REMARKS: Typical west coast chum stream. Stream is subject to predation by bears and birds.

ESCAPEMENT RECORD FOR Cook-De-Alena Creek

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48				75		
49			25	400		
50			400	750		
51			750	200		
52			75	75		
53			25	75		
54			200	400		
55			75	75		
56			400	200		
57			75	400		
58		25	75	400		
59		25	75	750		
60		25	25	200		
61			200	75		
62			75	200		
63		?	25	25		
64		n/c	75	75		
65		n/o	25	75		
66		n/o	25	75		
67		n/o	200	750		
68		n/o	200	750		
69		n/o	75	750		
70		25	200	200		
71		25	25	75		
72		25	25	750		
73		25	200	400		
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REMARKS

Sketch of Cour-de-Alene Creek, 1969.

Scale: 1 inch = 1 mile

COLEMAN CREEK

SCALE 1"=1.25 miles

NAME OF STREAM COLEMAN CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows NW into Alberni Inlet, E shore, 18 miles from head. POSITION 48 124 NW

LENGTH 14 MI. WIDTH 30 FT. DRAINAGE 20 Sq. Mi.

COMPOSITION: BEDROCK 30% BOULDER 20% COARSE 15% FINE 10%

SILT & SAND 10% UNCLASSIFIED 15%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.25 miles
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	0.25 - 6.0 miles

WETTED AREA 105,000 SQ.YD. SPAWNING AREA 15,000 SQ.YD.

DISCHARGE 80 CFS MAX. _____ MIN. 15 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable 30' rock falls 6.0 miles from mouth of stream. Impassable falls on Parsons Creek tributary 1.5 miles from junction.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
SPRINGS	
COHO	to mile 4 and Parsons Creek
CHUM	to mile 0.50
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	to mile 6

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Parsons Creek tributary has three miles of good coho rearing stream approximately 20' wide above falls. No potential above Coleman Creek falls.

GENERAL REMARKS: Good steelhead stream, seems to prelude coho production. Some predation by birds and bears.

ESCAPEMENT RECORD FOR Coleman Creek

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			750	200		
49			300	200		
50			400	1500		
51			200	400		
52			25	25		
53			25	25		
54			25	25		
55			25	25		
56			25	25		
57			25	25		75
58			25	25		5
59			25	25		75
60			25	25		75
61			25	25		75
62			25	25		75
63			25	25		DEC., JAN.
64			75	25		75
65			25	25		DEC. JAN.
66			25	400		DEC. JAN.
67			25	75		
68		25	200	400		WINTER SUM.
69		N/O	75	75		
70			200	200		WINTER SUM.
71			25			" " "
72		N/O	75	1500		400
73			200	N/O		
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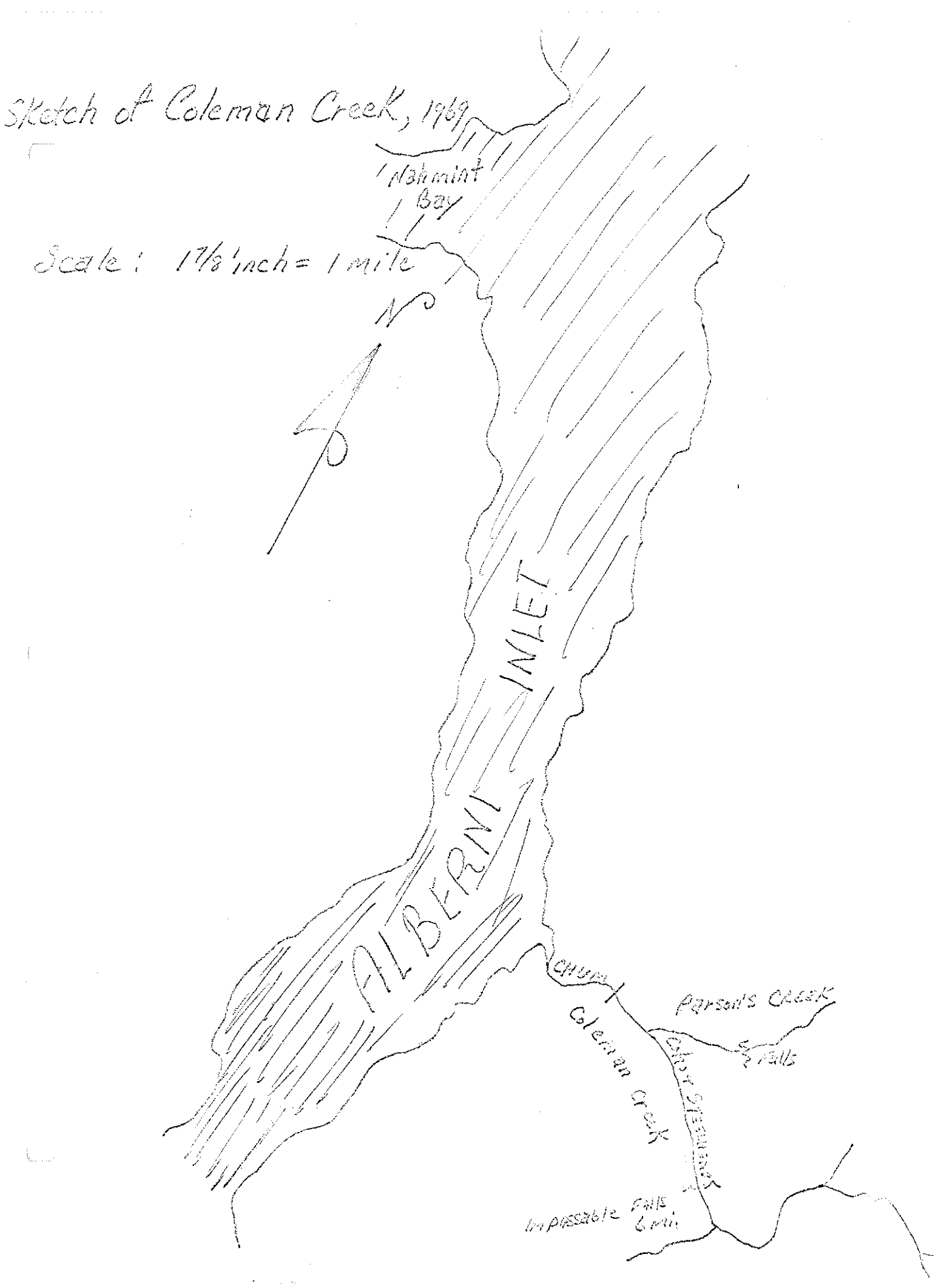
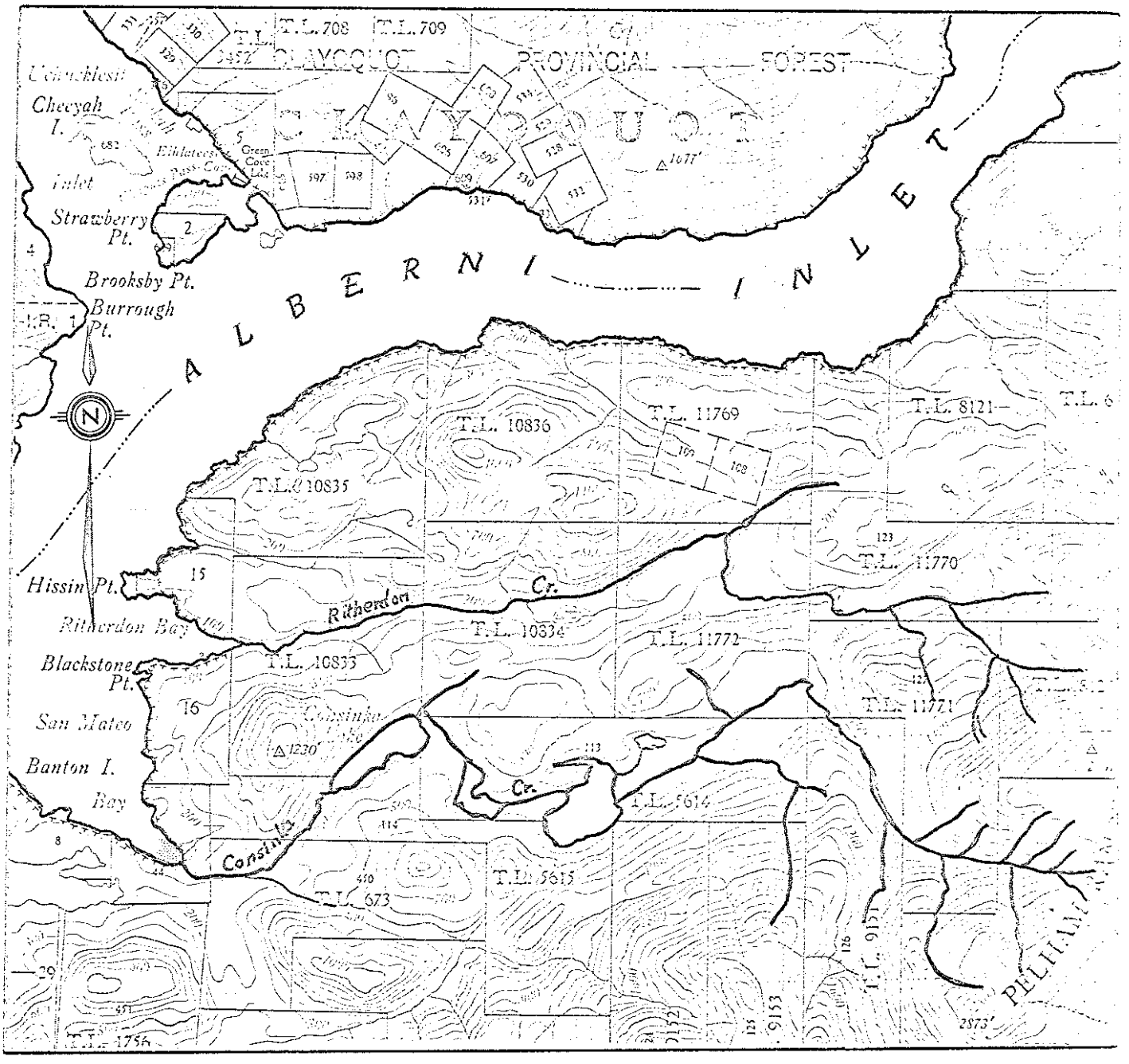
REMARKS


Sketch of Coleman Creek, 1969
Nahmint Bay
Scale: 1 7/8 inch = 1 mile
ALBERNI INLET
Parson's Creek
falls
Coleman Creek
Impassable falls 6 mi



CONSINKA CREEK

SCALE 1"=1.25 miles

NAME OF STREAM COMSENKA RIVER (WOOD)

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows W into San Mateo Bay - Barclay District.

POSITION 48 124 NW

LENGTH 7 MI. WIDTH 12 FT. DRAINAGE 4 Sq. Mi.

COMPOSITION: BEDROCK 10% BOULDER 20% COARSE 20% FINE 20%

SILT & SAND 10% UNCLASSIFIED 10%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.1
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	0.1 - 0.5

WETTED AREA 1,700 SQ.YD. SPAWNING AREA 500 SQ.YD.

DISCHARGE 20 CFS MAX. MIN. 5 CFS

TEMPERATURE

BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable falls 0.25 miles from mouth of stream.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	to mile 0.25
CHUM	to mile 0.25
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil. Too steep and many cascades.

GENERAL REMARKS: Typical small west coast chum stream. Stream is subject to predation by bears and eagles.

ESCAPEMENT RECORD FOR Consuma (Wood) River

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			400	750		75
49			400	400		75
50			400	1500		75
51			400	750		75
52			200	400		75
53			25	750		75
54			25	1500		25
55			25	750		25
56			25	400		25
57			25	200		25
58			25	200		25
59			25	750		25
60			25	200		25
61			25	200		25
62			25	200		25
63			N/C	200		25
64			25	75		N/C
65			25	200		25
66			25	400		APRIL - JUNE
67			25	200		
68			25	750		
69			25	400		
70			75	750		
71			25	500		
72			25	750		
73			200	500		
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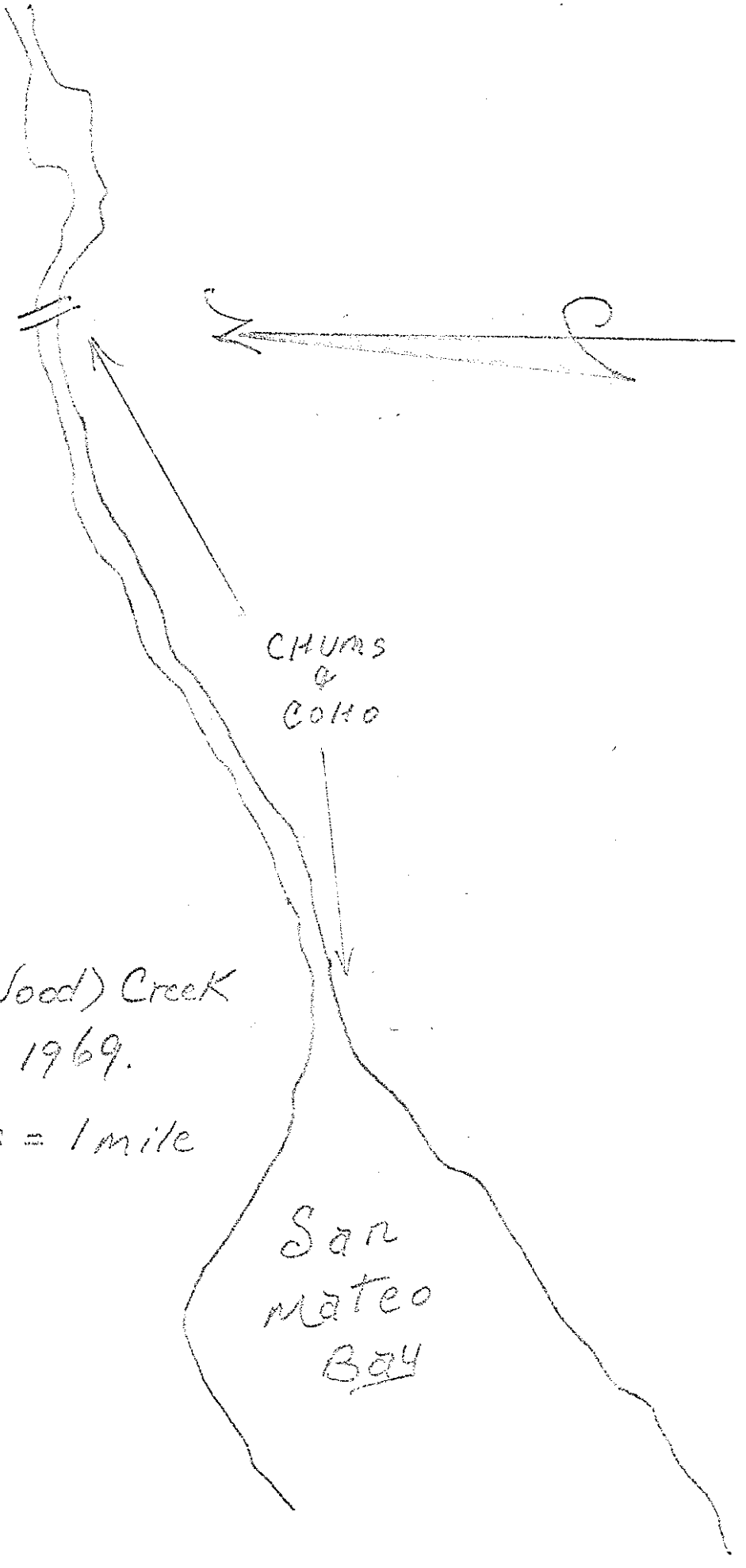
REMARKS



Consinka (Wood) Creek
Sketch, 1969.

Scale: 5 inches = 1 mile

COUS CREEK

SCALE 1" = 1.25 miles

NAME OF STREAM [illegible]

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows SE into Stamp Narrows, Alberni Inlet - Alberni District. POSITION 49 124 SE

LENGTH 14 1/3 MI. WIDTH 40 FT. DRAINAGE 16 Sq. MI.

COMPOSITION: BEDROCK 50% BOULDER 5% COARSE 10% FINE 5%

SILT & SAND 5% UNCLASSIFIED 25%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.5
2.5 - 5.0	
5.0 - 7.5	
7.5 -10.0	
> 10.0	0.5 - 7

WETTED AREA 178,000 SQ.YD. SPAWNING AREA 15,000 SQ.YD.

DISCHARGE 100 CFS MAX. 2000 ? MIN. 20 CFS

TEMPERATURE

BARRIERS OR POINTS OF DIFFICULT ASCENT Passable cascades and canyon from mile 0.75 to 4.0.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	scattered to mile 1.5
COHO	coho to mile 5
CHUM	mile 0 - .25 (intertidal)
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	to mile 7

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil. Too steep.

GENERAL REMARKS: Good steelhead stream, very light coho fry. Watershed logged off. Though upper reaches of this stream are apparently accessible to coho, the light runs may indicate excessive competition for rearing area and predation by birds and bears.

ESCAPEMENT RECORD FOR Cook Creek

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			400	1500		
49			75	1500		
50			750	1500		
51			400	1500		200
52			75	400		
53			75	200		
54			75	750		75
55			N/O	N/O		75
56			75	200		75
57			25	200		75
58			25	750		75
59			75	200		75
60			75	75		200
61			75	200		200
62			200	200		200
63			75	75		200
64		25	75	25		200
65		25	200	200		[illegible]
66		25	750	400		
67		25	200	200		
68		N/O	400	400		W.
69		25	400	3500		W. (Summer?)
70		N/O	200	750		650
71		25	75	200		750
72		25	75	1500		750
73		25	200	750		750
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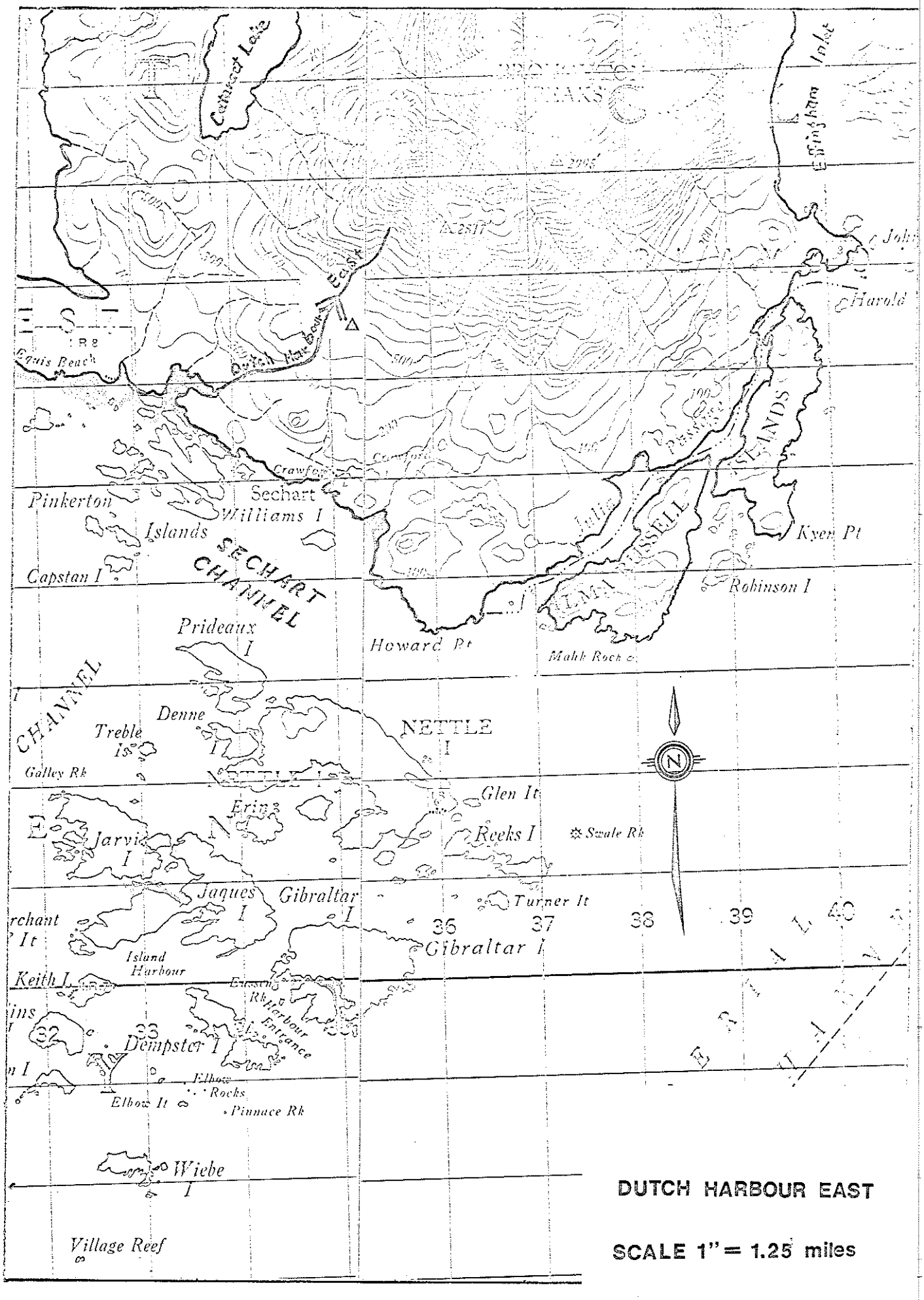
REMARKS

Sketch of Cous Creek, 1969.

Scale: 1 inch = 1 mile



DUTCH HARBOUR EAST

SCALE 1" = 1.25 miles

NAME OF STREAM DUTCH HARBOUR RIVER (EAST)

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Sechart Channel. North of Pinkerton Islands.

POSITION 48 125 NE

LENGTH 2½ MI. WIDTH 15 FT. DRAINAGE 2.0 SQ. MI.

COMPOSITION: BEDROCK 5% BOULDER 20% COARSE 40% FINE 20%

SILT & SAND 10% UNCLASSIFIED 5%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	0 - 0.2
5.0 - 7.5	
7.5 -10.0	0.2 - 0.5
> 10.0	0.5 - 1.5

WETTED AREA 13,000 SQ.YD. SPAWNING AREA 5,000 SQ.YD.

DISCHARGE 20 CFS MAX. MIN. 8 CFS

TEMPERATURE

BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable falls 1.5 miles from mouth of stream.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	0.2 - 1.5 miles
CHUM	0 - 0.2 miles
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: Typical west coast stream, mainly salmon. Stream is subject to predation by bears and birds. This stream is well protected physically and is un-logged.

ESCAPEMENT RECORD FOR DUTCH HARBOR RIVER (23)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			750	7500		
49						
50						
51			150	0		
52			75	3500		
53			75	3500		
54			75	7500		
55			75	1500		
56			25	3500		
57			25	3500		
58			75	7500		
59			75	3500		
60			25	750		
61			25	750		
62			25	400		
63			25	750		
64			25	400		
65			25	25		
66			75	750		
67			25	200		
68			75	400		
69			25	350		
70			400	1500		
71			25	75		
72			25	1500		
73			700	200		
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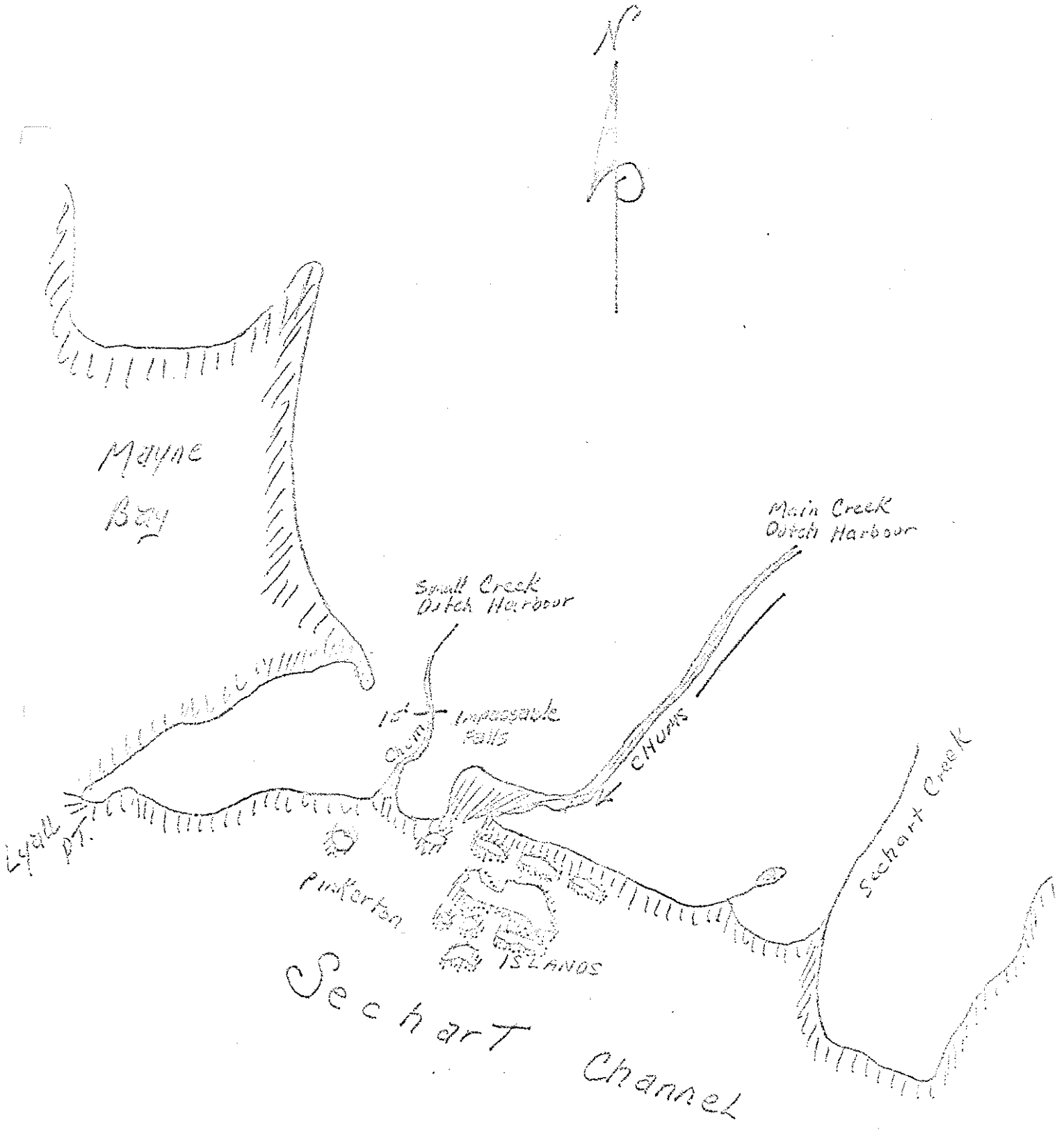
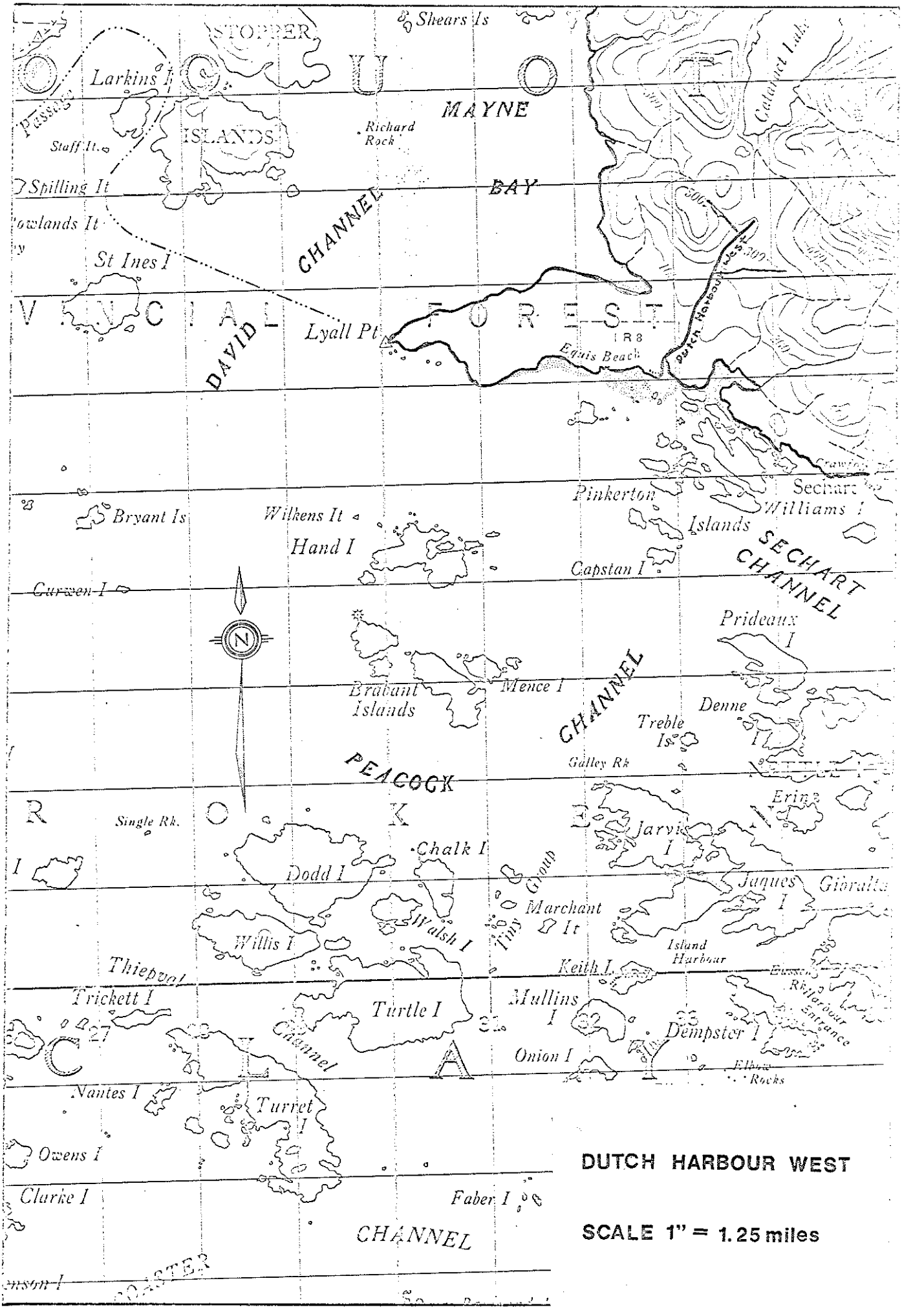
REMARKS



Sketch of Dutch Harbour East Creek, 1969.

Scale: 1 inch = 1 mile



DUTCH HARBOUR WEST

SCALE 1" = 1.25 miles

NAME OF STREAM DUTCH HARBOUR (WEST)

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Sechart Channel, North of Pinkerton Islands.

POSITION 48 125 NE

LENGTH 1 3/4 MI. WIDTH 24 FT. DRAINAGE 2.0 SQ. MI.

COMPOSITION: BEDROCK 5% BOULDER 10% COARSE 30% FINE 30%

SILT & SAND 15% UNCLASSIFIED 10%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.15
2.5 - 5.0	
5.0 - 7.5	0.15 - 0.5
7.5 -10.0	
> 10.0	

WETTED AREA 7,000 SQ.YD. SPAWNING AREA 3,000 SQ.YD.

DISCHARGE 25 CFS MAX. MIN. 8 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable falls 15' high at mile 0.5.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	0.1 - 0.5
CHUM	0 - 0.5
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: Typical small west coast stream. Stream is subject to predation by bears and birds.

ESCAPEMENT RECORD FOR Dutch Harbor West

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
46						
49						
50						
51						
52						
53			20 RECORDS FOR THIS PERIOD			
54			25	750		
55			25	750		
56			25	750		
57			25	1500		
58			25	1500		
59			25	1500		
60			25	400		
61			25	200		
62			25	75		
63			25	75		
64			25	75		
65			25	75		
66			25	750		
67			25	200		
68			400	750		
69			25	750		
70			75	750		
71			25	75		
72			25	750		
73			25	400		
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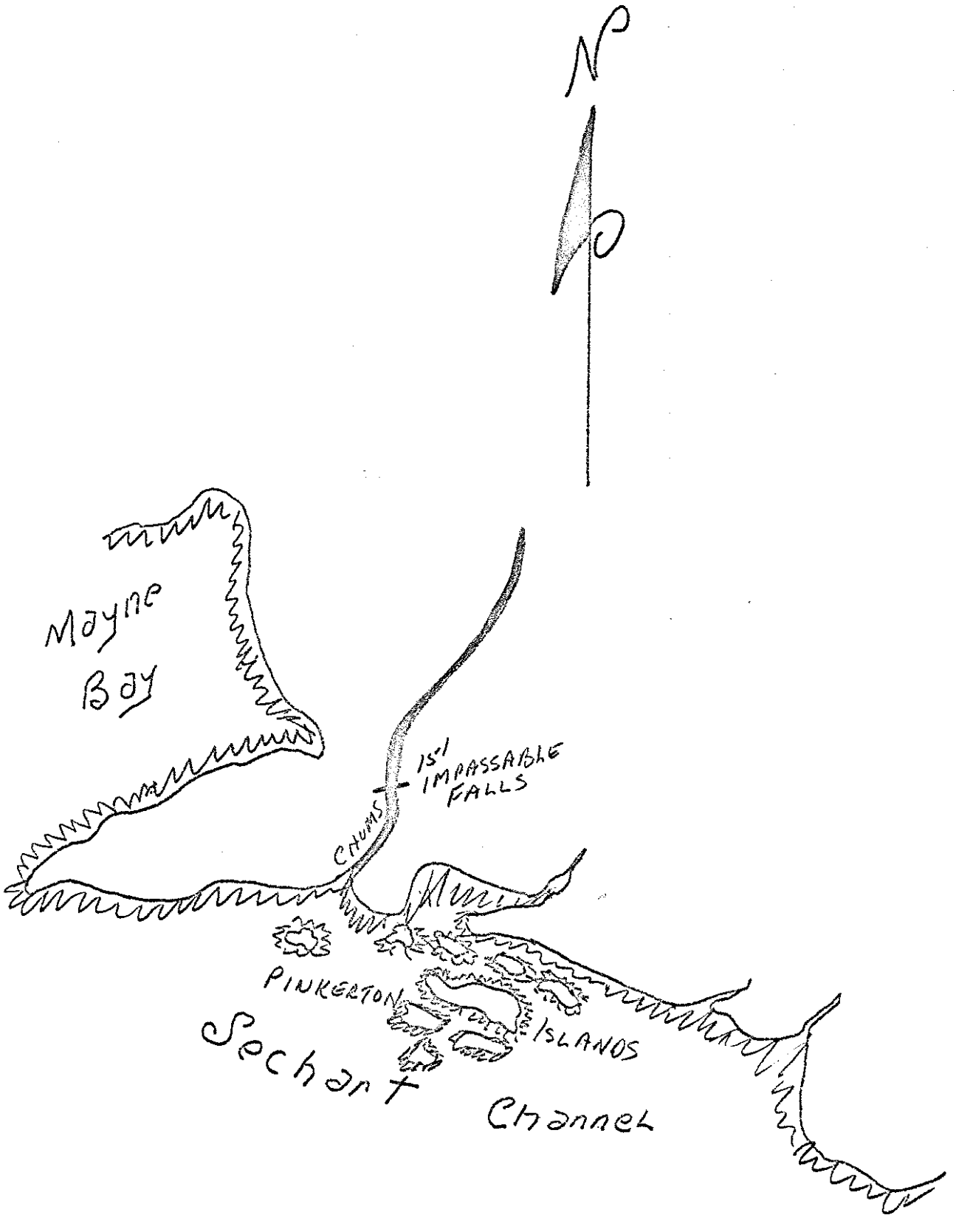
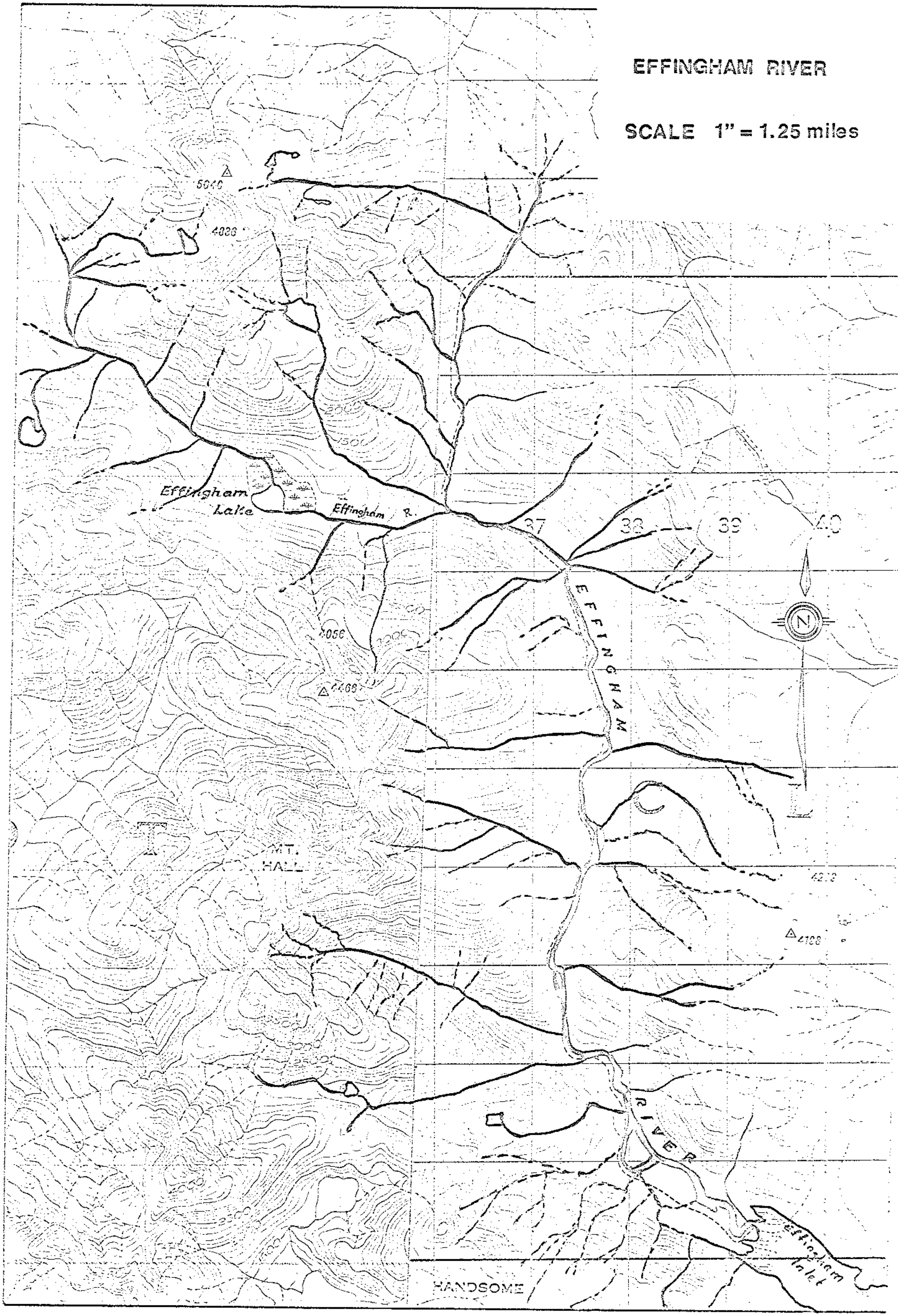
REMARKS



SKETCH OF DUTCH HARBOUR WEST, 1969.

Scale: 1½ inch = 1 Mile


EFFINGHAM RIVER
SCALE 1" = 1.25 miles
Effingham Lake
Effingham R.
EFFINGHAM
RIVER
MT. HALL
Effingham Inlet
HANDSOME
37
38
39
40
N

NAME OF STREAM EFFINGHAM RIVER

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows SE into N end of Effingham Inlet - Clayoquot District.

POSITION 49 125 SE

LENGTH _____ MI. WIDTH 30 FT. DRAINAGE 15 SQ. MI.

COMPOSITION: BEDROCK 20% BOULDER 30% COARSE 30% FINE 10%

SILT & SAND 5% UNCLASSIFIED 5%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.2
2.5 - 5.0	0.2 - 0.75
5.0 - 7.5	
7.5 -10.0	0.75 - 1.5
> 10.0	1.5 - 4.5

WETTED AREA 80,000 SQ.YD. SPAWNING AREA 28,000 SQ.YD.

DISCHARGE 120 CFS MAX. _____ MIN. 40 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Canyon and cascades at mile 1.5 - 2.5. Passable.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	to mile 2.0
COHO	to mile 4.5
CHUM	to mile 1.5
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	to mile 4.5

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: Logging in watershed has deteriorated water conditions. Very heavy rainfall area, flash flooding. Early run coho (1st Sept.) in this system. Recent survey shows good regeneration of forest cover. Logging in this watershed is now finished for some time. (1971) Stream is subject to predation by bears and eagles.

ESCAPEMENT RECORD FOR Effingham River

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			200	75		
49		25		1500		
50		75		7500		
51			1500	1500		
52	25	25	750	750		
53		25	400	1500		
54		N/C	200	7500		
55		25	200	3500		
56	NIL	25	200	3500		
57		25	400	7500		
58		25	400	7500	75	
59		N/C	400	3500		N/C
60		25	400	3500		
61		25	750	1500		
62		25	400	750		N/C
63		25	400	750		N/C
64		25	1500	3500		25
65		25	3500	1500		WINTER SOM.
66		25	3500	7500		" " "
67		25	1500	7500		
68		25	750	15000		WINTER
69	N/C		400	3500		WINTER SOM.
70		N/C	750	9000		200
71		25	750	200		75
72		25	750	15000		75
73		50	1500	7500		75
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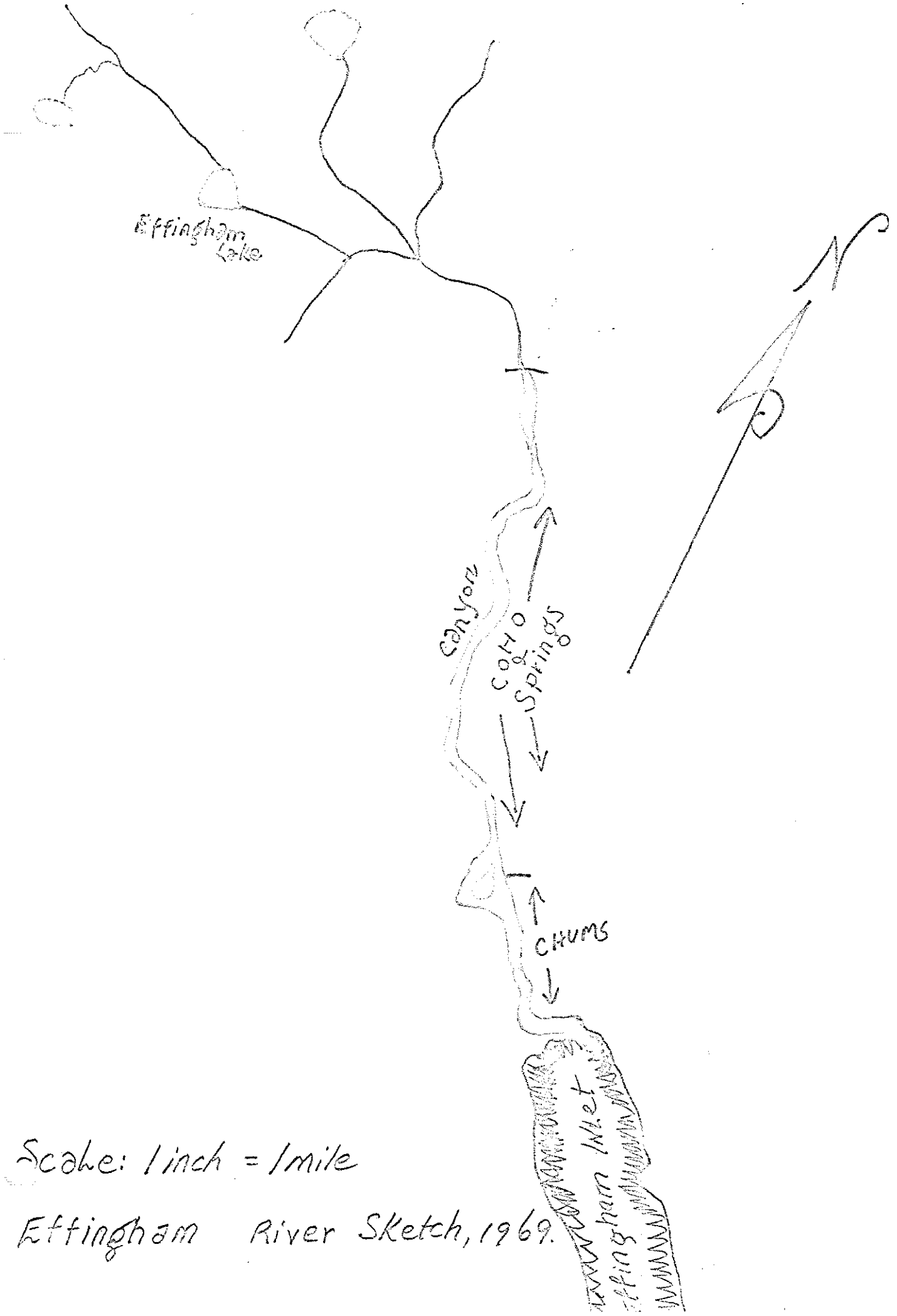
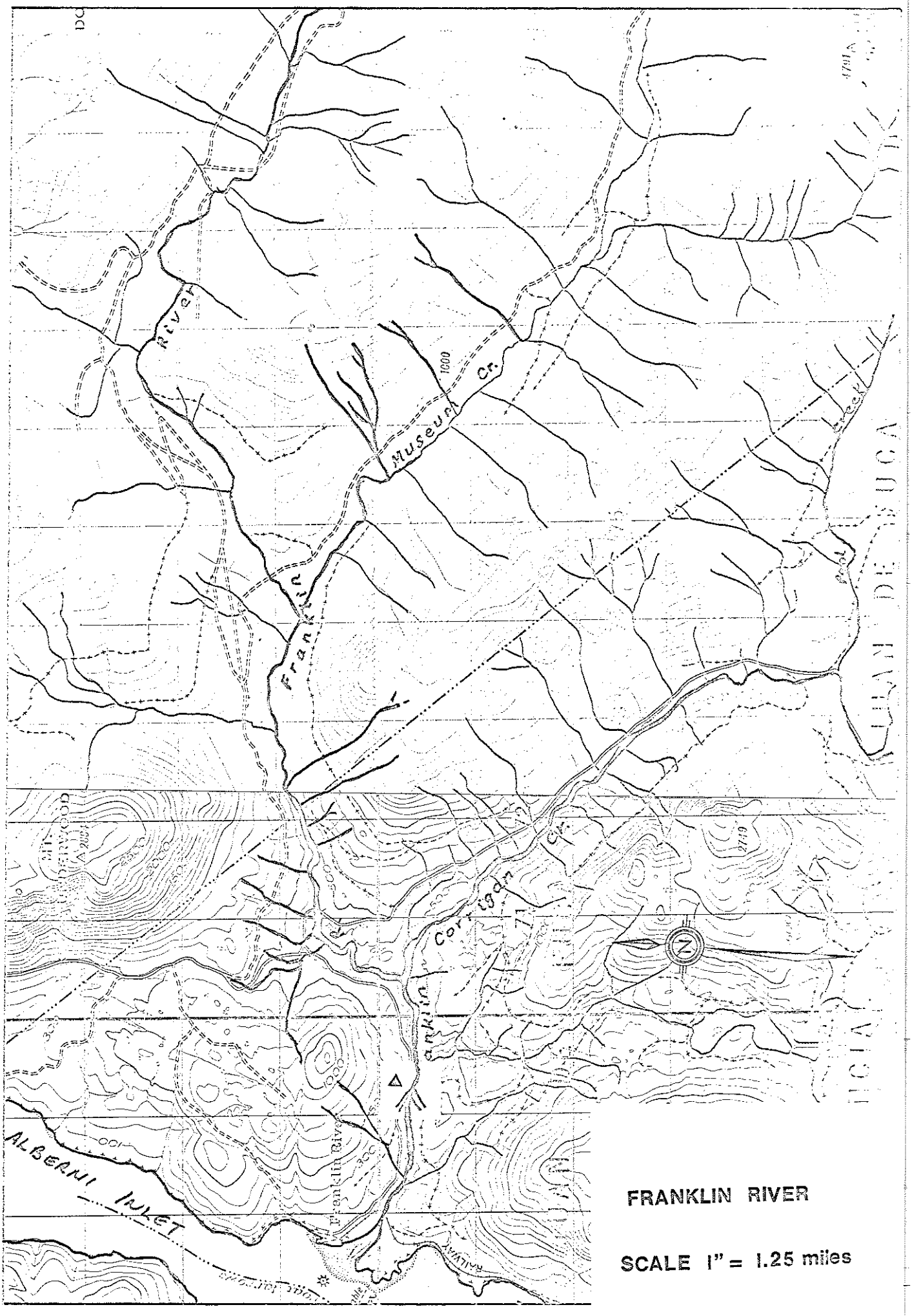
REMARKS



Scale: 1 inch = 1 mile

Effingham River Sketch, 1969.



FRANKLIN RIVER

SCALE 1" = 1.25 miles

NAME OF STREAM FRANKLIN RIVER

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH East side of Alberni Inlet, 10 miles from head.

POSITION 49 124 SW

LENGTH 1½ MI. WIDTH 40 FT. DRAINAGE 30 SQ. MI.

COMPOSITION: BEDROCK 25% BOULDER 25% COARSE 30% FINE 10%

SILT & SAND _____ UNCLASSIFIED 10%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.2
2.5 - 5.0	
5.0 - 7.5	
7.5 -10.0	
> 10.0	0.2 - 1.75

WETTED AREA 40,000 SQ.YD. SPAWNING AREA 12,000 SQ.YD.

DISCHARGE 80 CFS MAX. _____ MIN. 20 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable falls 7 and 12' vertical at mile 1.75. Also falls and cascades on Corrigan Creek 0.3 miles from fork.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	1.0 - 1.75
COHO	0.5 - 1.75
CHUM	0 - 0.5
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	0.5 - 1.75

POTENTIAL OF INACCESSIBLE PORTION OF STREAM 2 miles of coho area available in Corrigan Creek above rock falls.

GENERAL REMARKS: Logged off watershed. Second growth well established.

ESCAPEMENT RECORD FOR FRANKLIN RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			750	200		200
49			750	200		75
50			400	1500		75
51			400	200		200
52			750	400		200
53			200	200		400
54			25	200		400
55			200	75		75
56		25	25	200		75
57		25	75	75		400
58		25	75	200		400
59		N/O	200	25		400
60		N/O	25	25		200
61		25	25	25	25	200
62		25	25	75	N/O	400
63		N/O	25	25		200
64			25	400		200
65			75	200		200
66			400	1500		WINTERS SURV.
67			400	750		
68		25	400	750		" " "
69		N/O	75	75		" " "
70		25	200	75		75
71		25	25	25		75
72		25	75	200		25
73		75	200	75		75
74						
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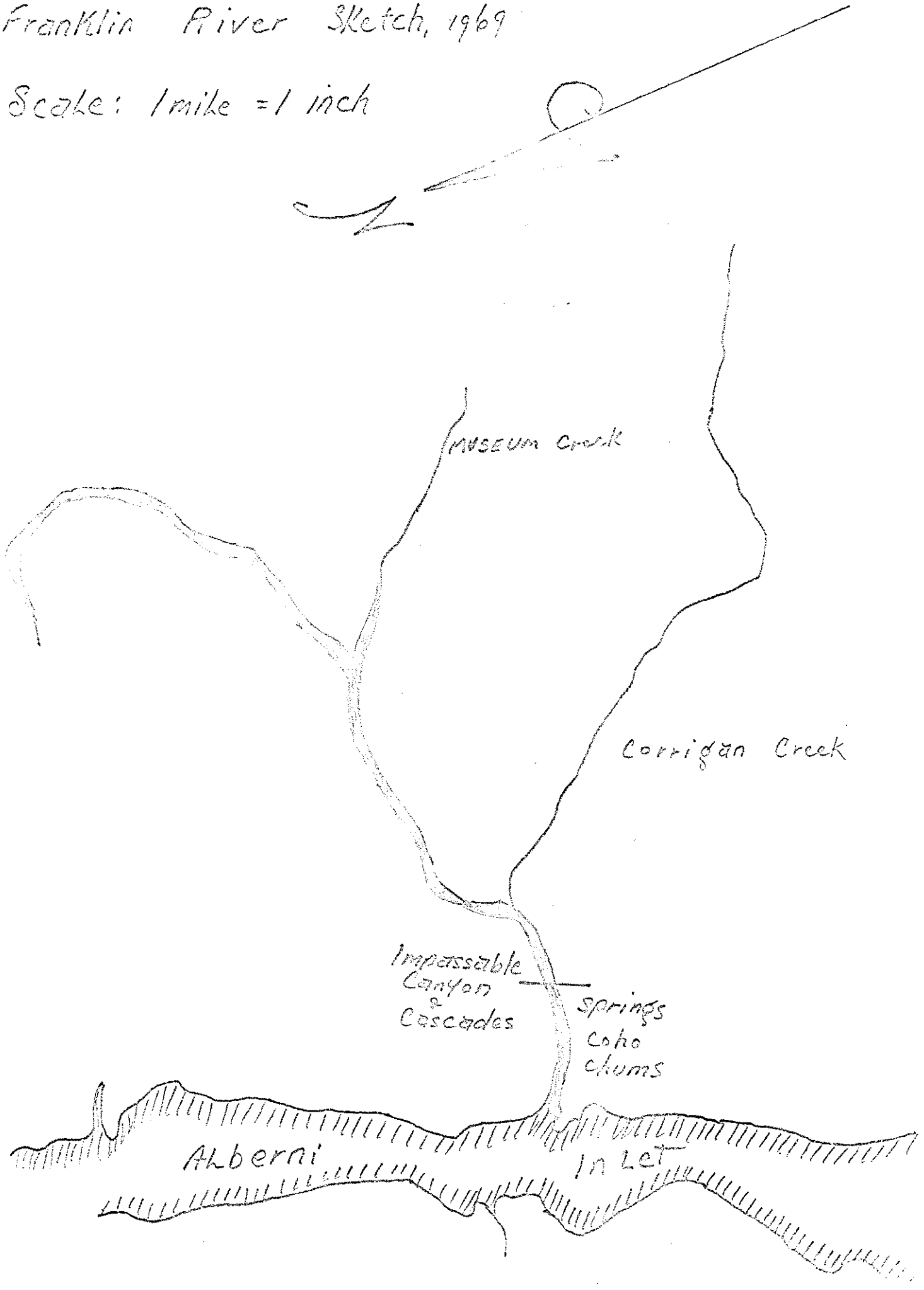
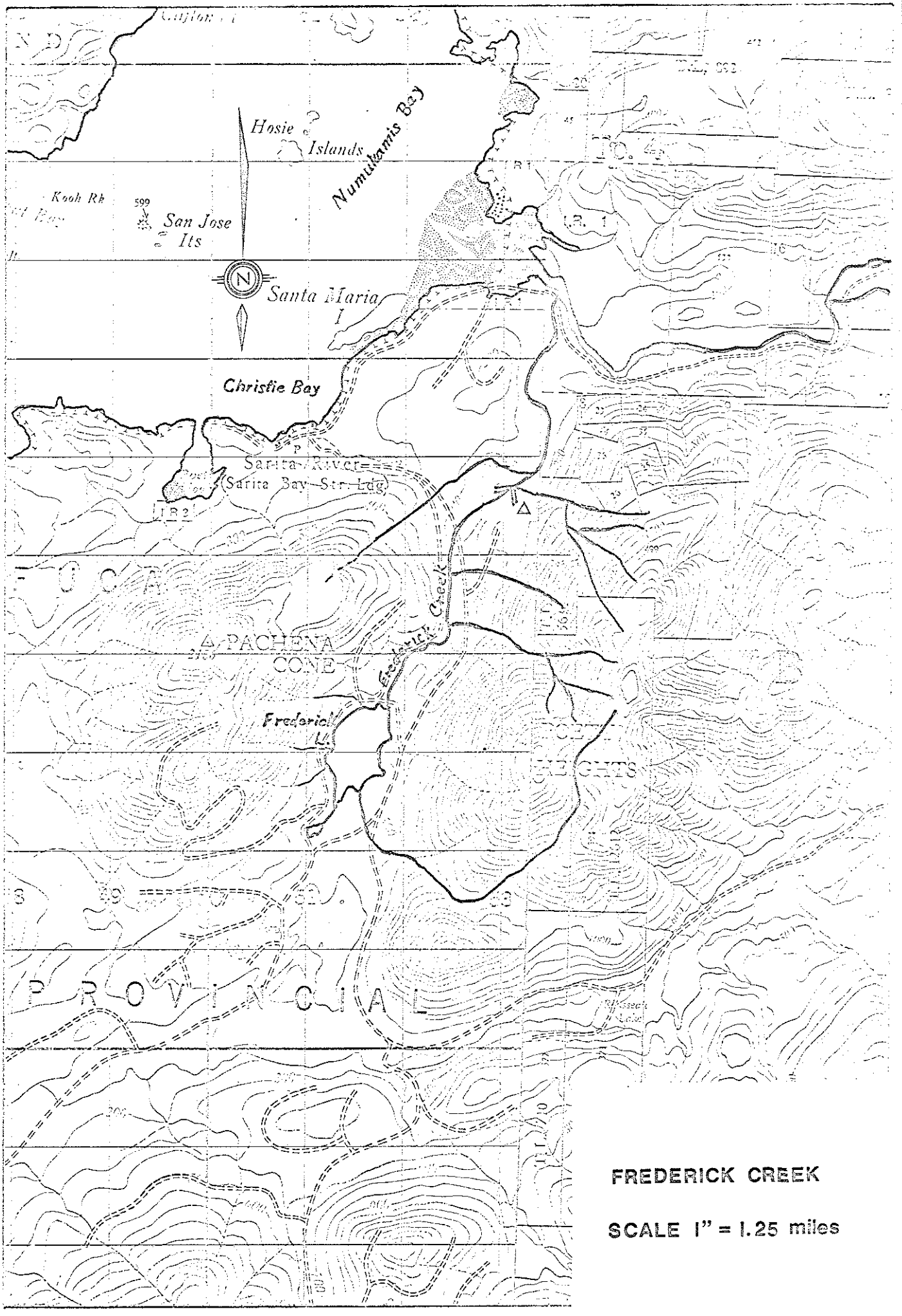
REMARKS

Franklin River Sketch, 1969

Scale: 1 mile = 1 inch





FREDERICK CREEK

SCALE 1" = 1.25 miles

NAME OF STREAM FREDERICK CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH South side of Sarita River estuary near mouth.

POSITION 48 124 NW

LENGTH 5½ MI. WIDTH 20 FT. DRAINAGE 4 SQ. MI.

COMPOSITION: BEDROCK 20% BOULDER 20% COARSE 20% FINE 20%

SILT & SAND 10% UNCLASSIFIED 10%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.5
2.5 - 5.0	
5.0 - 7.5	0.5 - 0.75
7.5 - 10.0	
≥ 10.0	0.75 - 2.5

WETTED AREA 30,000 SQ.YD. SPAWNING AREA 9,000 SQ.YD.

DISCHARGE 50 CFS MAX. MIN. 15 CFS

TEMPERATURE

BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable 10' and 25' falls at 2.5 miles.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	0.25 - 2.5
CHUM	0 - 1.5
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: Typical small west coast stream. Subject to predation by bears and eagles.

ESCAPEMENT RECORD FOR Frederick Creek

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			200	400		
49			200	700		
50			400	1500		
51			200	200		
52			750	200		
53			200	200		
54			200	400		
55			75	400		
56			75	25		
57			200	200		
58			75	200		
59			75	200		
60			25	25		
61			200	200		
62			75	75		
63			25	25		
64			200	25		
65			75	200		
66			75	200		
67			200	3500		
68			200	2500		
69			25	3500		
70			200	400		
71			75	750		
72			35	750		
73			200	1500		
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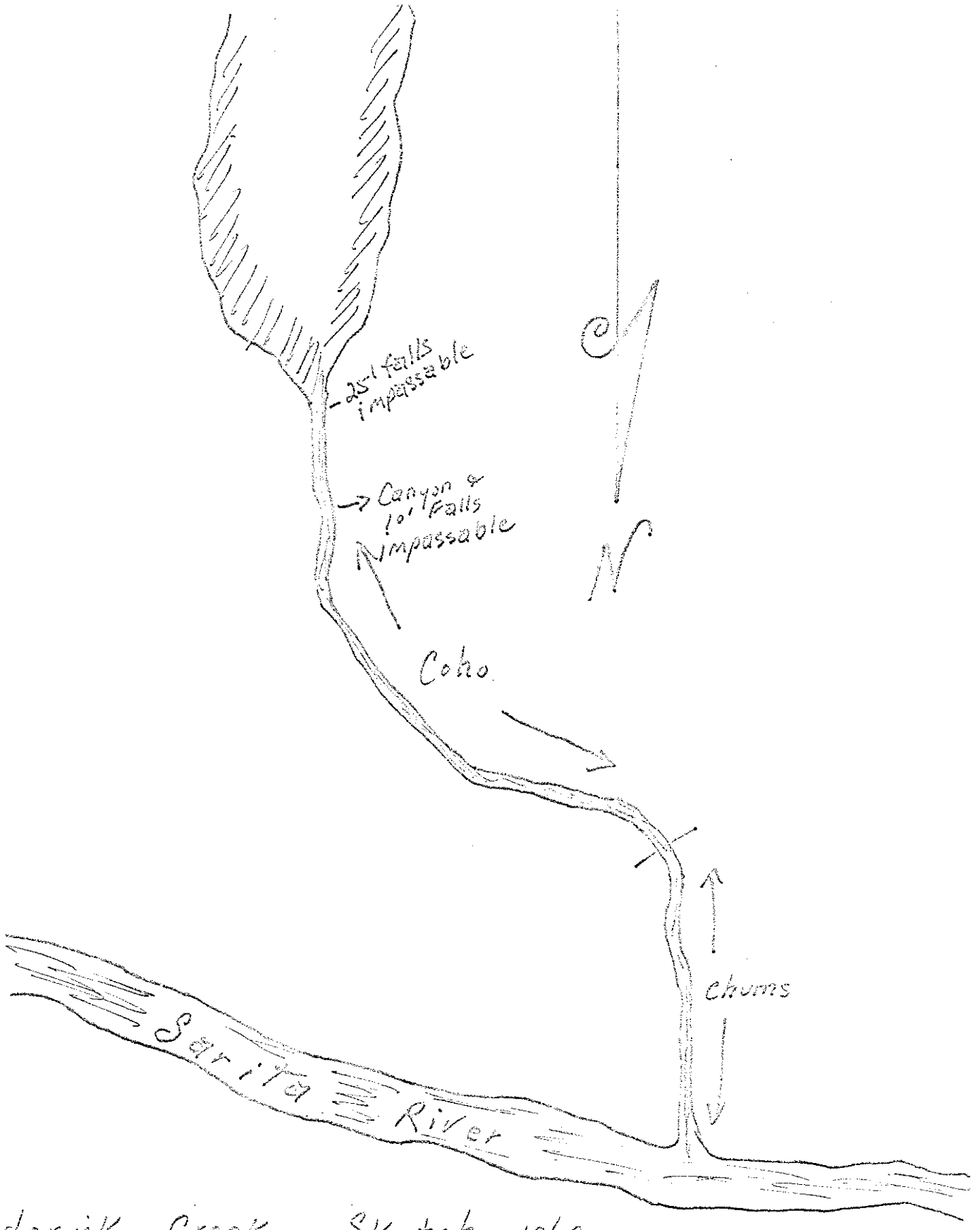
REMARKS



Frederick Creek Sketch, 1969.

Scale: 2 inches = 1 mile


Henderson Lake
Scale 1 inch = 1.25 miles

NAME OF STREAM HENDERSON (ANDERSON) RIVER

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH NE of Barkley Sound, W of Alberni Inlet - Clayoquot District. POSITION 49 125 SE

LENGTH _____ MI. WIDTH _____ FT. DRAINAGE 55.0 Sq. Mi.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____

SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0.0 - lake, 0.0 - 0.5 mi. on Clemens Creek
2.5 - 5.0	
5.0 - 7.5	0.5 - 2.5 mi. Clemens Creek
7.5 - 10.0	
> 10.0	2.5 - 6.0 mi. Clemens Creek

WETTED AREA _____ SQ.YD. SPAWNING AREA _____ SQ.YD.

DISCHARGE _____ CFS MAX. _____ MIN. _____

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Nil. Approximately 13 miles from mouth to furthest point of access.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	
CHUM	
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: Lower Henderson River 0.6 miles x 120 feet = 42,000 sq. yds. x 45% = 19,000 sq. yds. of gravel. Composition - 20% bedrock, 30% boulders, 25% coarse, 20% fine, 5% silt & sand.
Henderson Lake - 10.5 mi. x .85 mi. (9.0 sq. mi.) 2.0 mi. of beach spawning (sockeye) approximately 35,000 sq. yds. of gravel.
Clemens Creek - 3.5 mi. x 45 ft. = 92,000 sq. yds. x 60% = 55,000 sq. yds. of gravel. Composition - 5% bedrock, 15% boulder, 40% coarse, 20% fine, 20% unclassified.
Sockeye hatchery on lake until 1930. Special conservation measures taken to insure adequate sockeye seeding. Sample taken from run (100)

GENERAL REMARKS Contd. and handed to FRB for age group studies etc. (1973) Logging in this watershed proposed in next few years. (1972)

ESCAPEMENT RECORD FOR Anderson (Henderson) River

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48	35 000	1500	1500	3500		400
49	15000	1500	1500	3500		400
50	15 000	1500	3500	3500		400
51	15 000	750	1500	1500		400
52	15 000	750	7500	1500		400
53	15 000	1500	5500	35000		400
54	35 000	400	750	7500		400
55	15 000	750	3500	1500		400
56	7500	750	3500	3500		400
57	7500	750	750	7500		400
58	15 000	1500	1500	7500		400
59	15 000	750	1500	3500		400
60	7500	400	750	3500		400
61	15 000	1500	3500	3500		400
62	35 000	750	1500	1500		400
63	15 000	400	1500	750		400
64	35 000	400	3500	3500		400
65	15 000	750	1500	3500		UNK.
66	75000	750	1500	3500		UNK
67	75000	400	750	3500		
68	35 000	400	1500	7500		UNK.
69	15 000	200	400	3500		—
70	1 000	200	400	3500		
71	7500	750	400	750		
72	3500	400	200	3500	400	—
73	40000	250	500	750		
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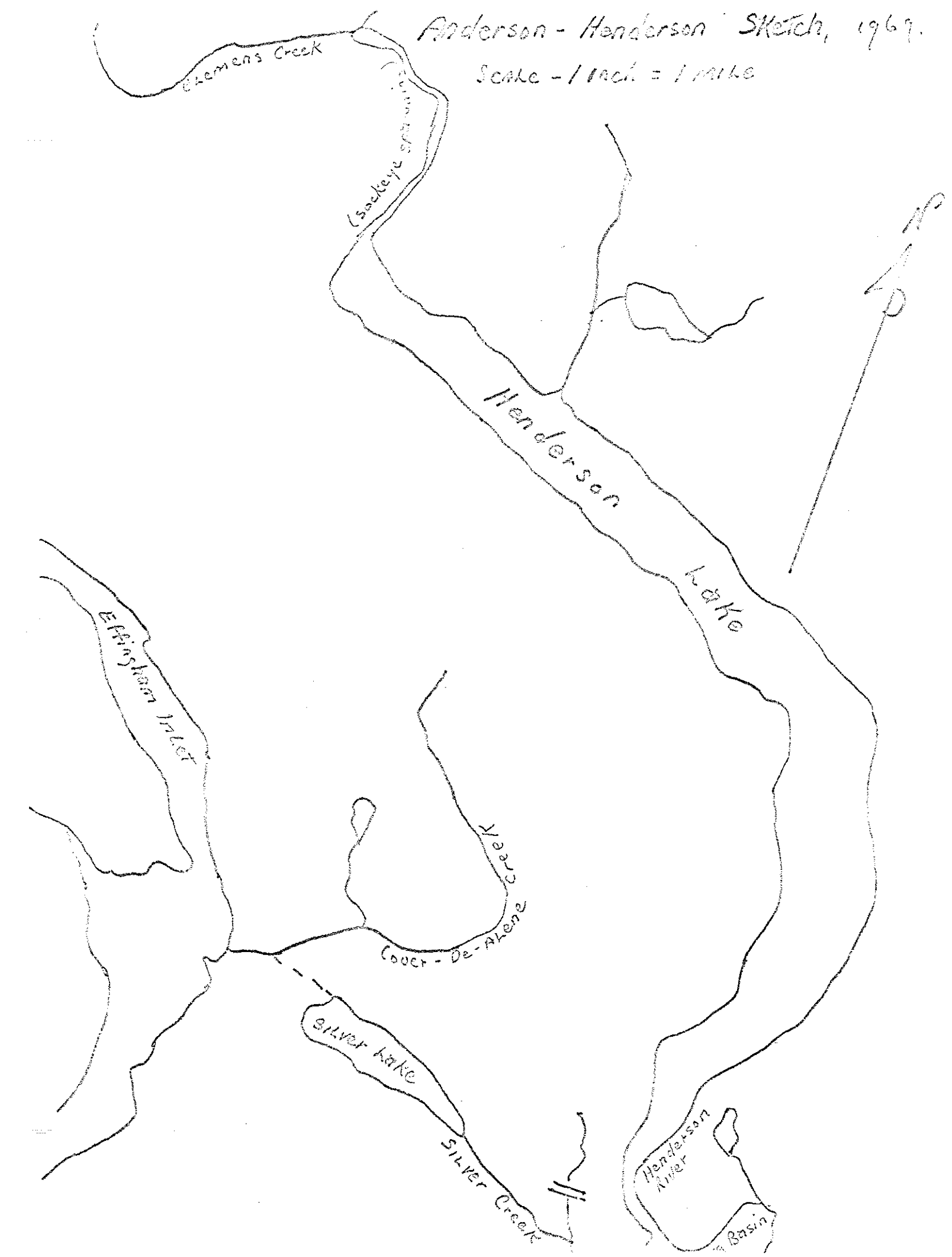
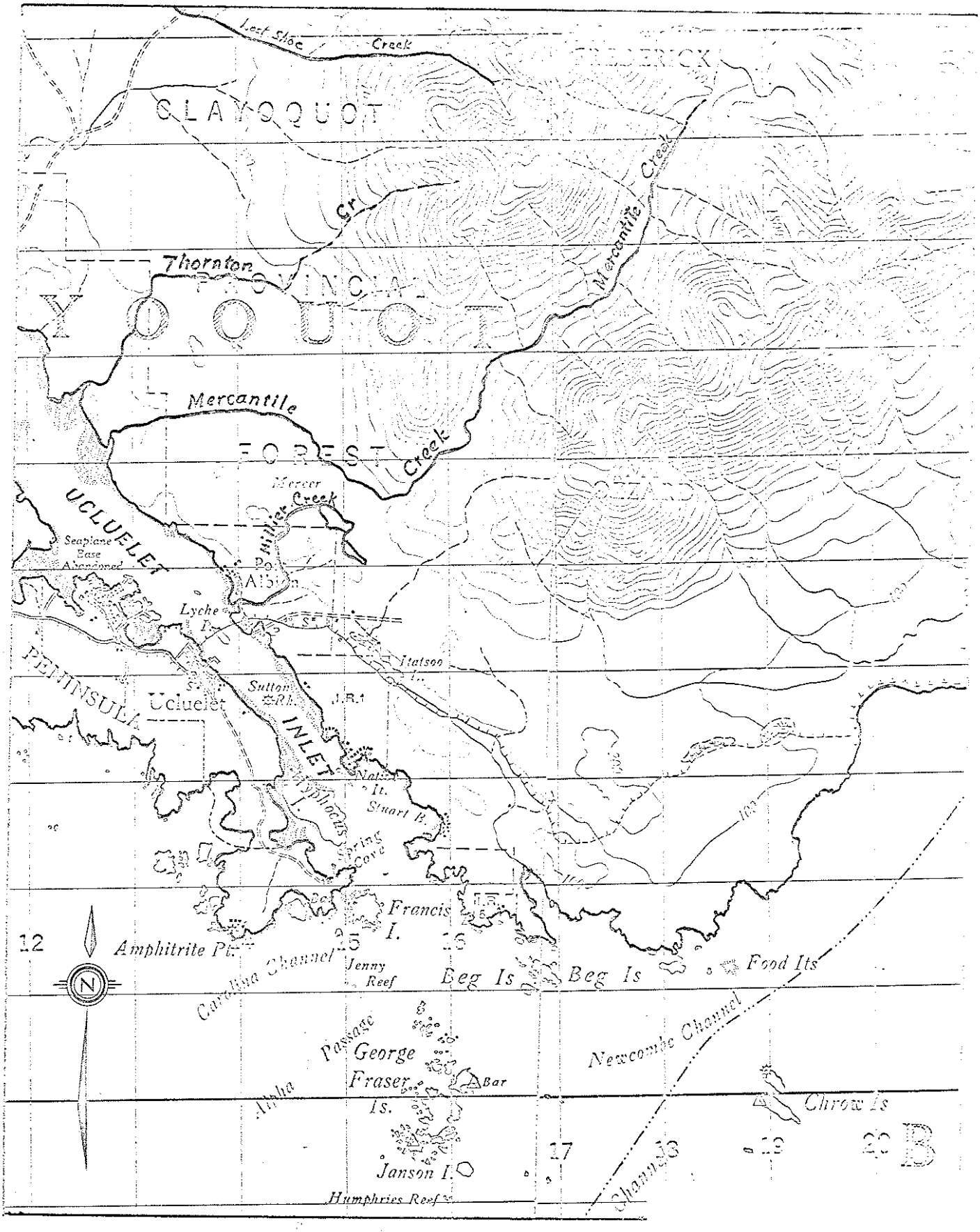
REMARKS


Anderson - Henderson Sketch, 1969.
Scale - 1 inch = 1 mile
Clemens Creek
Sockeye Creek
Henderson Lake
Effingham Inlet
Kaarr Creek
Coeur-De-Alene
Silver Lake
Silver Creek
Henderson River
Basin



HILLIER CREEK

SCALE 1" = 1.25 miles

NAME OF STREAM: HILLIER CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Ucluelet Inlet at Port Albion.

POSITION 48 125 NW

LENGTH 2 MI. WIDTH 20 FT. DRAINAGE 1.5 SQ. MI.

COMPOSITION: BEDROCK 25% BOULDER 25% COARSE 20% FINE 10%

SILT & SAND 10% UNCLASSIFIED 10%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.2
2.5 - 5.0	
5.0 - 7.5	0.2 - 0.5
7.5 -10.0	
> 10.0	0.5 - 1.2

WETTED AREA 14,000 SQ.YD. SPAWNING AREA 4,000 SQ.YD.

DISCHARGE 30 CFS MAX. MIN. 5 CFS

TEMPERATURE

BARRIERS OR POINTS OF DIFFICULT ASCENT Nil.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	
CHUM	0 - 0.5
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: Typical small west coast chum stream. Stream is subject to predation by birds and bears.

ESCAPEMENT RECORD FOR HILLIER CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48				1500		
49				1500		
50				1500		
51				400		
52				750		
53				750		
54				1500		
55				200		
56				400		
57				400		
58				750		
59				750		
60				75		
61				400		
62				400		
63				200		
64				750		
65				200		
66				3500		
67				750		
68				750		
69				3500		
70				1500		
71				400		
72				1500		
73				750		
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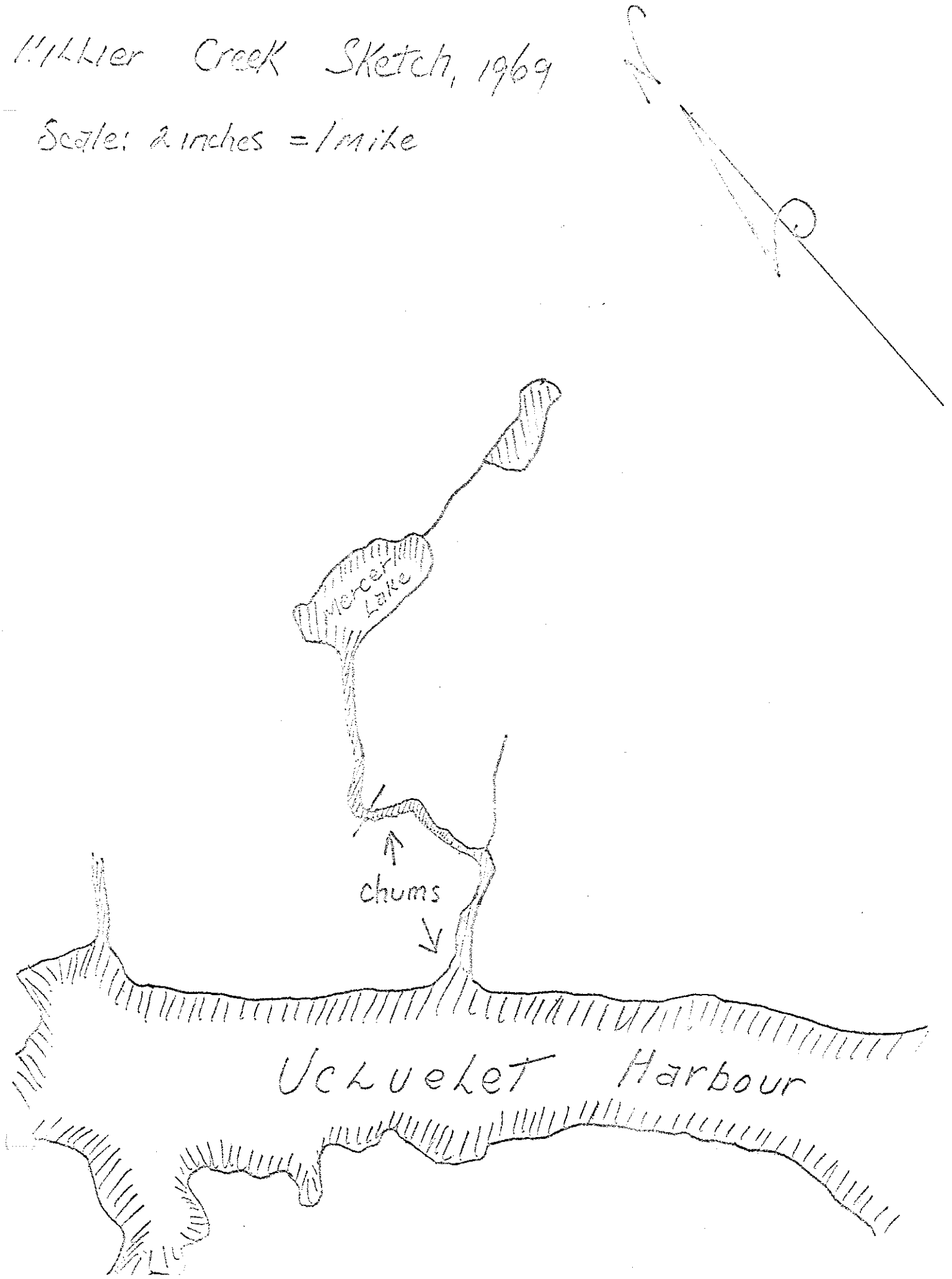
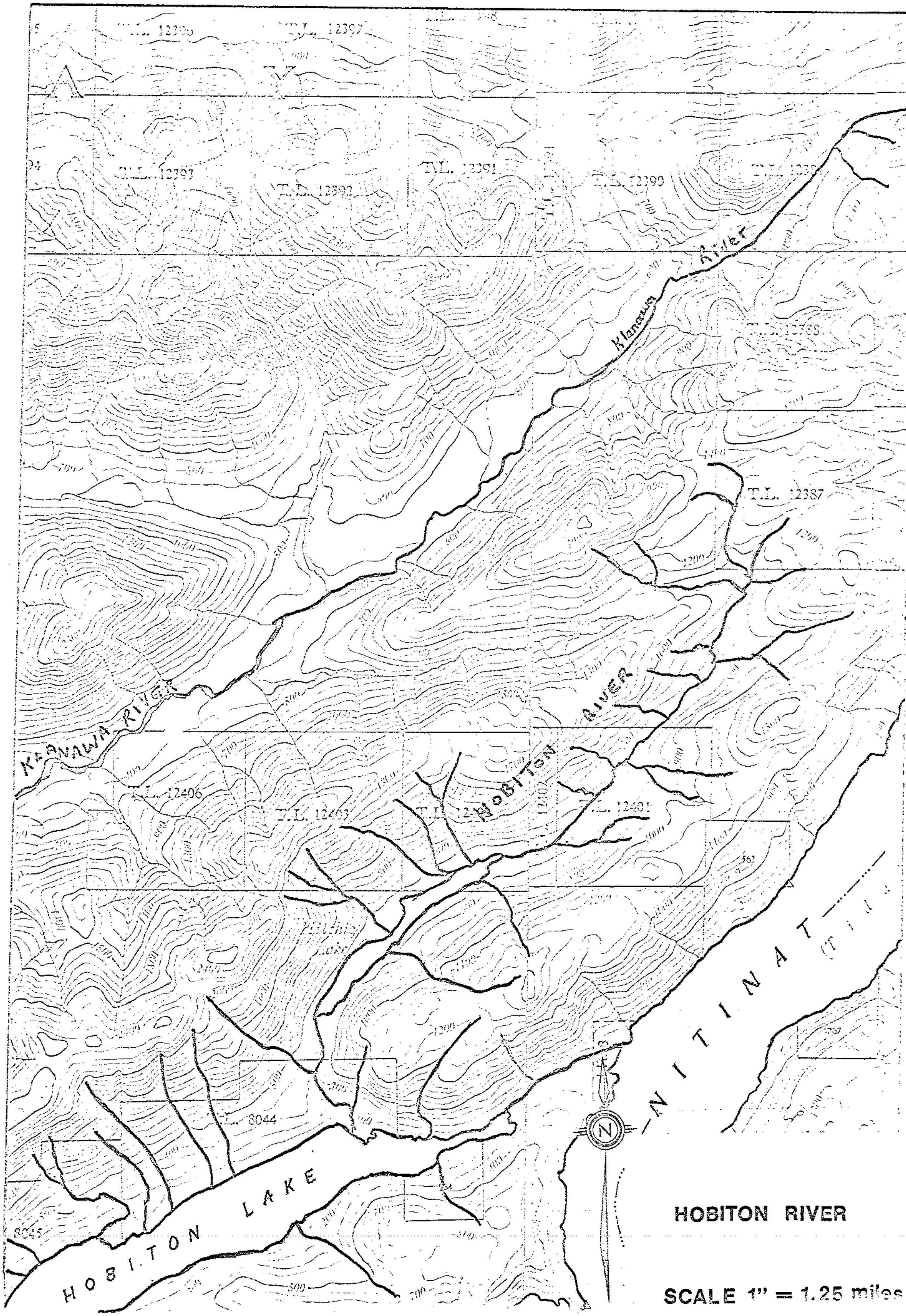
REMARKS

Miller Creek Sketch, 1969

Scale: 2 inches = 1 mile





HOBITON RIVER

SCALE 1" = 1.25 miles

NAME OF STREAM HOBARTON RIVER AND LAKE (HOBITON)

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Nitinat Lake, West shore, 4 miles from head of Lake. 5½ mi. above lake, 1½ mi. below lake. POSITION 48 124 NW

LENGTH _____ MI. WIDTH 40 FT. DRAINAGE 15 SQ. MI.

COMPOSITION: BEDROCK 15% BOULDER 30% COARSE 30% FINE 20%

SILT & SAND _____ UNCLASSIFIED 5%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 -10.0	
> 10.0	0 - 1 mile

WETTED AREA _____ SQ.YD. SPAWNING AREA _____ SQ.YD.

DISCHARGE 60 CFS MAX. _____ MIN. 20 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Nil.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	Lake beaches
CHINOOK	
COHO	in tributaries
CHUM	lower river from mouth to lake
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil. 7.0 miles from mouth to furthest point of access.

GENERAL REMARKS: No major tributaries. Beach spawning. Sockeye ½ mile beach, 10,000 sq. yds. Lower river 11,000 yards spawning area. Early run sockeye - April 15 - July. Heavy food fishery off mouth. Moritorium on further logging by order of the Provincial Government in 1972. River is subject to predation by bears, birds and seals.

ESCAPEMENT RECORD FOR HOBARTON (NOBITON) RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48		UNABLE TO DETERMINE NO. OF SPAWNERS				
49	7500		750	1500		
50	7500		750	3500		
51	1500		750	3500		
52	7500		N/C	7500		
53	7500		N/C	7500		
54	7500		N/C	7500		
55	1500			7500		
56	3500			7500		
57	3500		25	7500		
58	3500		25	3500		
59	3500		25	7500		
60	3500		25	7500		
61	7500		25	7500		
62	3500		25	3500		
63	3500		25	1500		
64	3500		25	7500		
65	7500		25	3500		
66	3500		25	400		
67	8000		75	3500		
68	2300		200	7500		
69	3500		25	3500		
70	2500		25	3500		
71	7500		25	3500		
72	3500		25	7500		
73	1500		25	6000		
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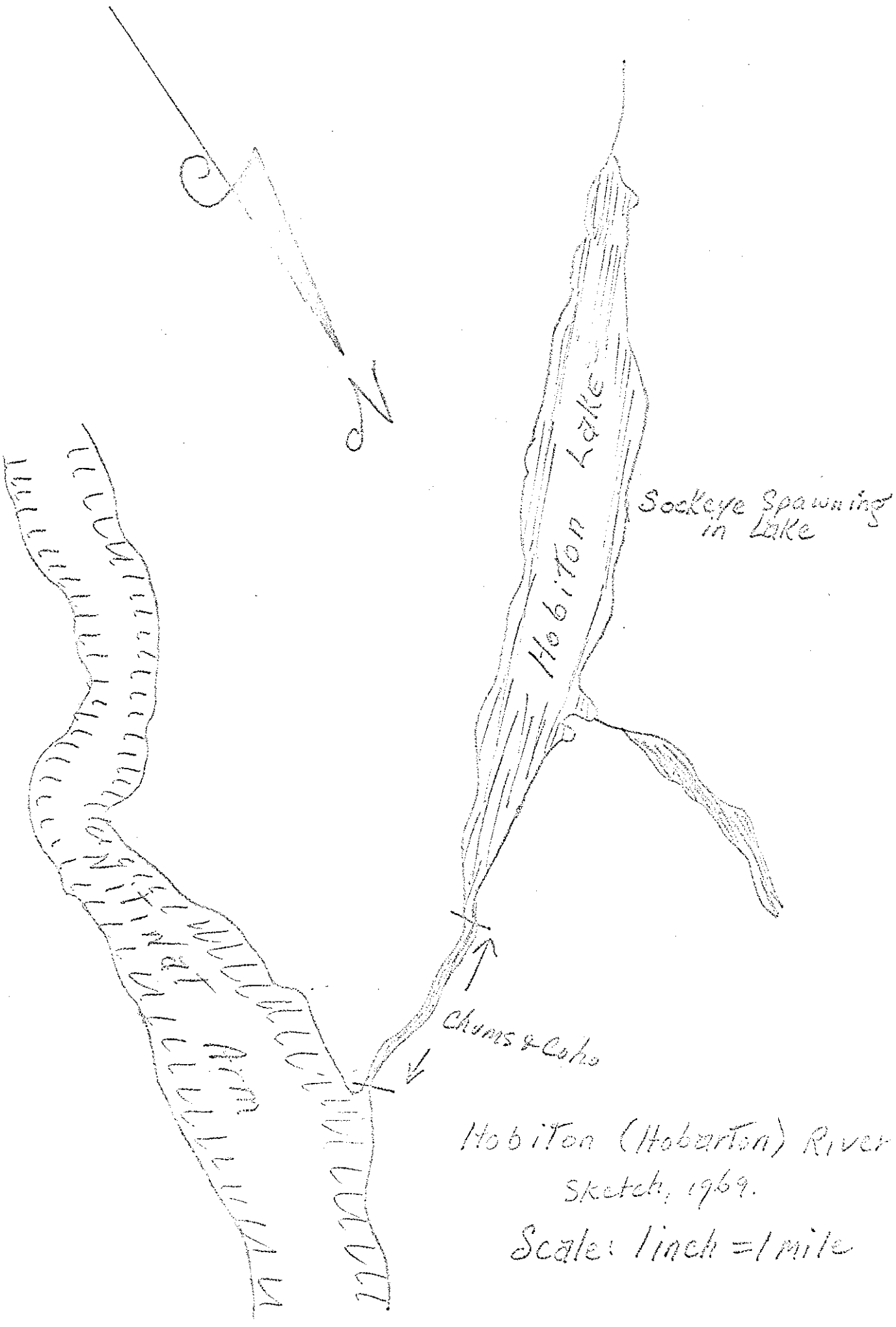
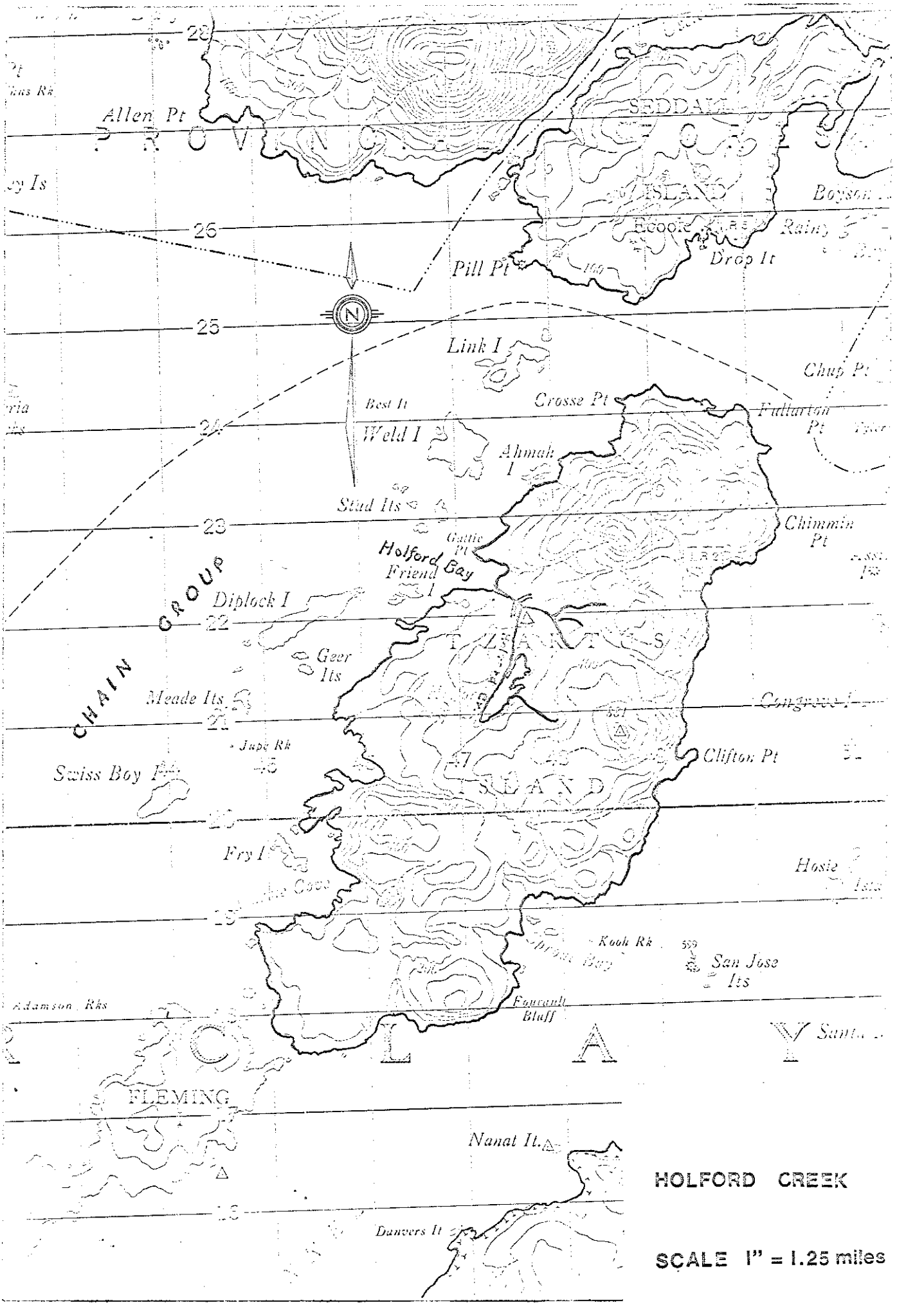
REMARKS



Hobiton (Hobarton) River
Sketch, 1969.
Scale: 1 inch = 1 mile


Allen Pt
SEDDALL
ISLAND
Boyson
Brooks
Rainy
Drop It
Pill Pt
Link I
Chup Pt
Crosse Pt
Fullarton Pt
Best It
Weld I
Ahmah I
Stad Its
Chimmin Pt
Gattie Pt
Holford Bay
Friend I
Diplock I
CHAIN GROUP
Geer Its
Meade Its
Congreve I
Jupe Rk
Swiss Boy Pt
Clifton Pt
ISLAND
Fry I
Hosie
Koch Rk
San Jose Its
Adamson Rks
Fauvaud Bluff
FLEMING
Nanat It.
Danvers It
HOLFORD CREEK
SCALE 1" = 1.25 miles

NAME OF STREAM HALFORD BAY CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows NW into Halford Bay, W side of Tzartus Island - Barclay District. POSITION 48 125 NE

LENGTH 1 ¼ MI. WIDTH 10 FT. DRAINAGE 1.5 SQ. MI.

COMPOSITION: BEDROCK 10% BOULDER 20% COARSE 50% FINE 10%

SILT & SAND 10% UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 -10.0	
> 10.0	

WETTED AREA _____ SQ.YD. SPAWNING AREA _____ SQ.YD.

DISCHARGE _____ CFS MAX. _____ MIN. _____

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable falls at 0.25 miles.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	scattered from tidewater to 0.25 mile
CHUM	scattered from tidewater to 0.25 mile
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: Typical small west coast stream. Some predation by eagles.

ESCAPEMENT RECORD FOR Hanford River

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48				500		
49				400		
50				1500		
51				750		
52				200		
53				750		
54				1500		
55				1500		
56				400		
57				750		
58				750		
59				400		
60				750		
61				750		
62				200		
63				400		
64				750		
65				750		
66				750		
67				1500		
68				750		
69			75	3500		
70			75	400		
71			25	200		
72			25	750		
73			75	1000		
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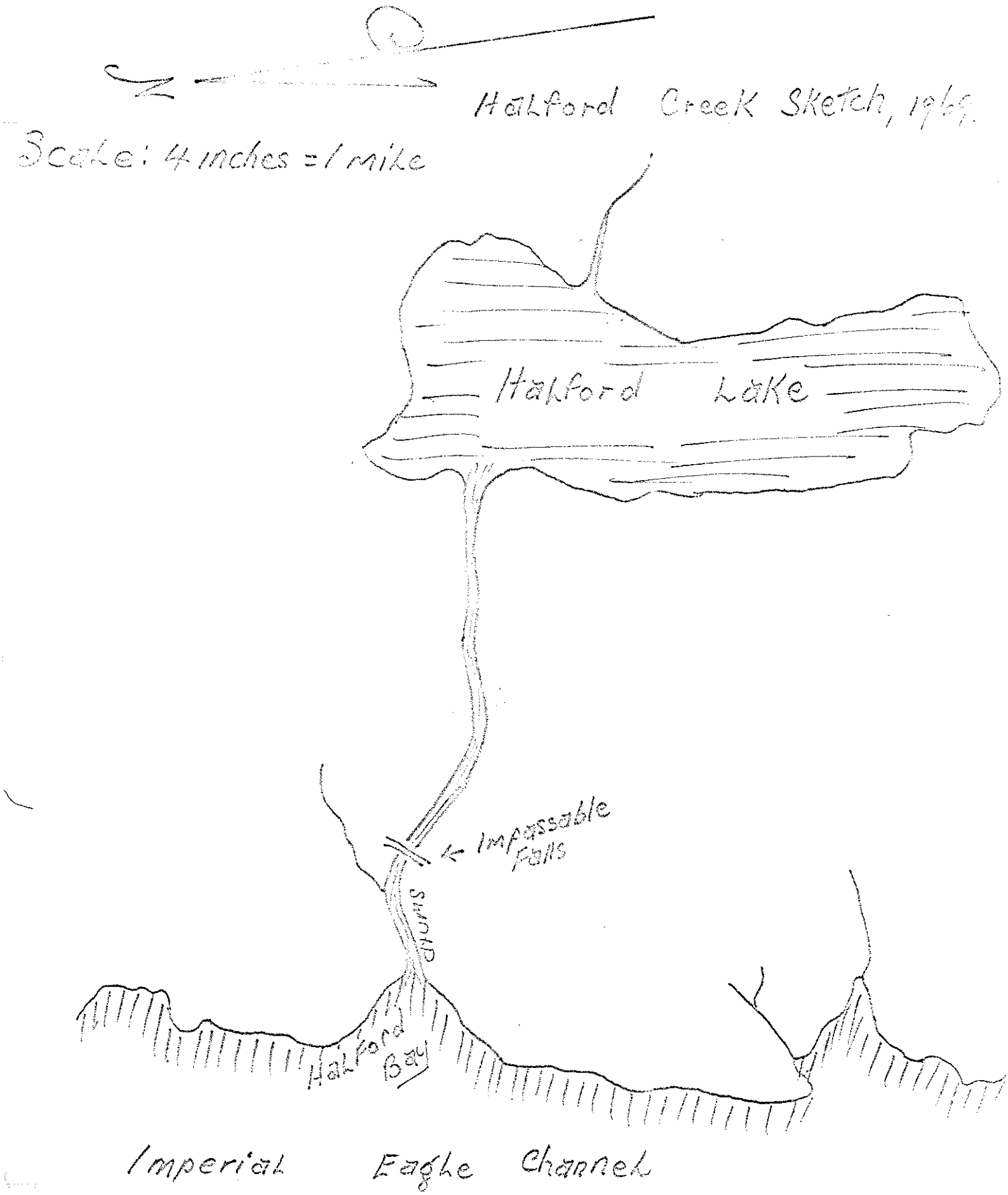
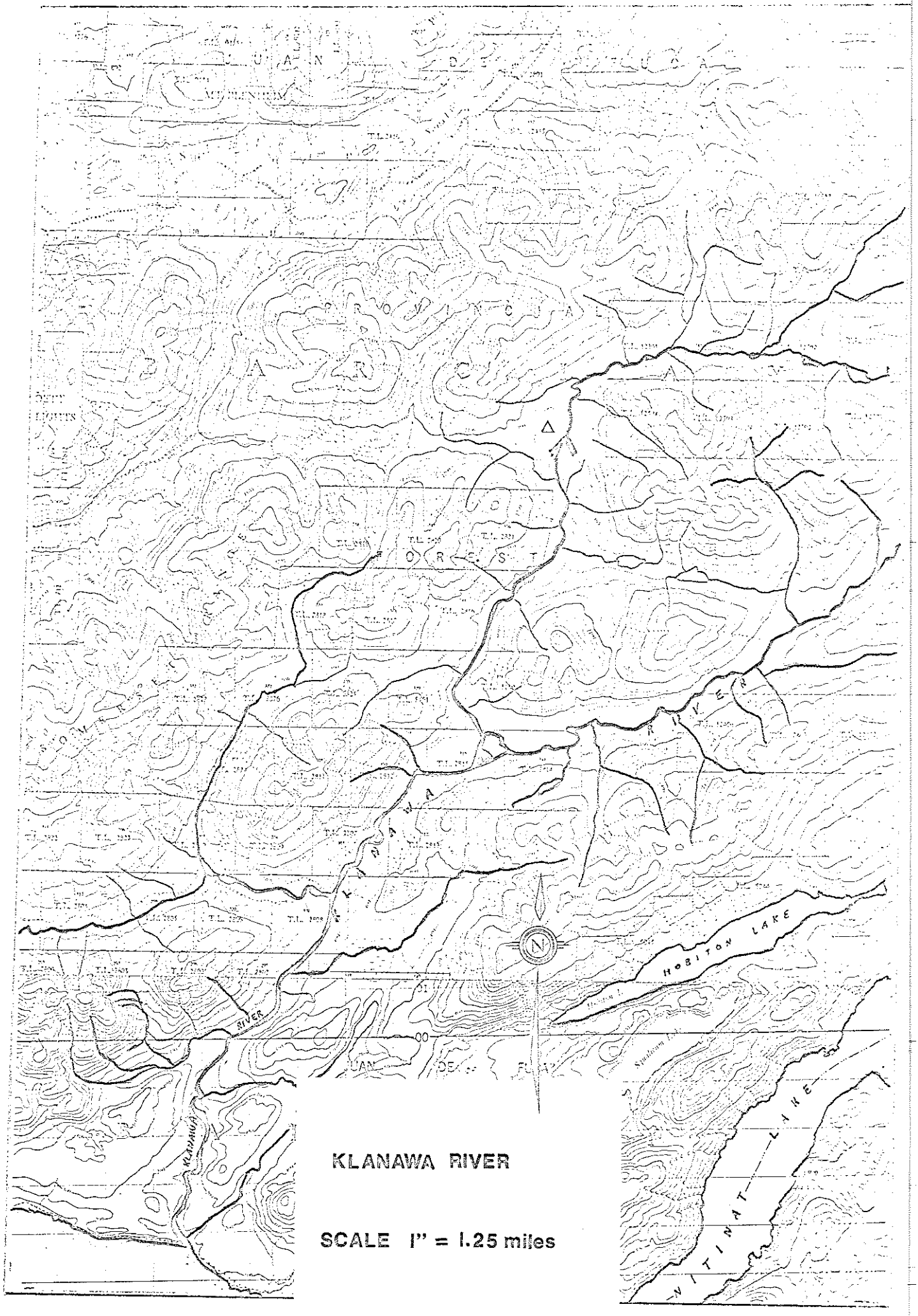
85						

REMARKS


N
Halford Creek Sketch, 1969.
Scale: 4 inches = 1 mile
Halford Lake
Impassable falls
Halford Bay
Imperial Eagle Channel


KLANAWA RIVER
SCALE 1" = 1.25 miles

NAME OF STREAM KLANAWA RIVER

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows SW and S into Pacific Ocean, W of Nitinat Lake

Barclay District. 7½ mi. mainstem. POSITION 48 124 XX

N fork 7½ mi. W fork 5 mi.
LENGTH _____ MI. WIDTH 50 FT. DRAINAGE 65 SQ. MI.

COMPOSITION: BEDROCK 15% BOULDER 20% COARSE 20% FINE 30%

SILT & SAND 10% UNCLASSIFIED 15%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.3 miles
2.5 - 5.0	0.3 - 3 miles
5.0 - 7.5	
7.5 -10.0	3 - 10 miles
> 10.0	10 - 14 miles

WETTED AREA 420,000 SQ.YD. SPAWNING AREA 126,000 SQ.YD.
DISCHARGE 500 CFS MAX. _____ MIN. 75 CFS
TEMPERATURE _____
BARRIERS OR POINTS OF DIFFICULT ASCENT Nil on main stream and west fork. North fork has 30' vertical falls 4 miles from main river. Impassable.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	unknown
COHO	scattered to upper reaches
CHUM	lower 4 miles
PINK (Odd Yr.)	unknown
PINK (Ever Yr.)	unknown
STEELHEAD	to upper reaches

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Some good coho rearing area on north fork. 3miles x 40 feet although main river is not fully exploited.

GENERAL REMARKS: Heavily logged watershed in upper reaches. A very inaccessible stream and not too well inspected. The potential appears to be much greater than shown to date. Annual aerial inspections indicate this system not all well used by salmon. Coho and fry observed to 14 miles. Other species poor or not observed.

ESCAPEMENT RECORD FOR KLANAWAH RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			750	75		
49			75	400		
50			—	—		
51			—	—		
52						
53		75	400	750		
54		75	400	3500	N/O	
55		NO FISH SEEN DUE TO EXTREME HIGH WATER.				
56				1500		
57						
58						
59						
60		N/O	N/O	200	N/O	
61		N/O	N/O	750		N/O
62		N/O		400		N/O
63		N/O	400	N/O	N/O	N/O
64			750	400		200
65			400	N/O		
66		750		400		WINTER & SUMMER
67			200	400		
68			750	400		WINTER & SUMMER
69		N/O	400	N/O.		WINTER & SUMMER
70			200	N/O		
71			25	N/O		UNK
72			75	N/O		WINTER & SUMMER
73			200	N/O		
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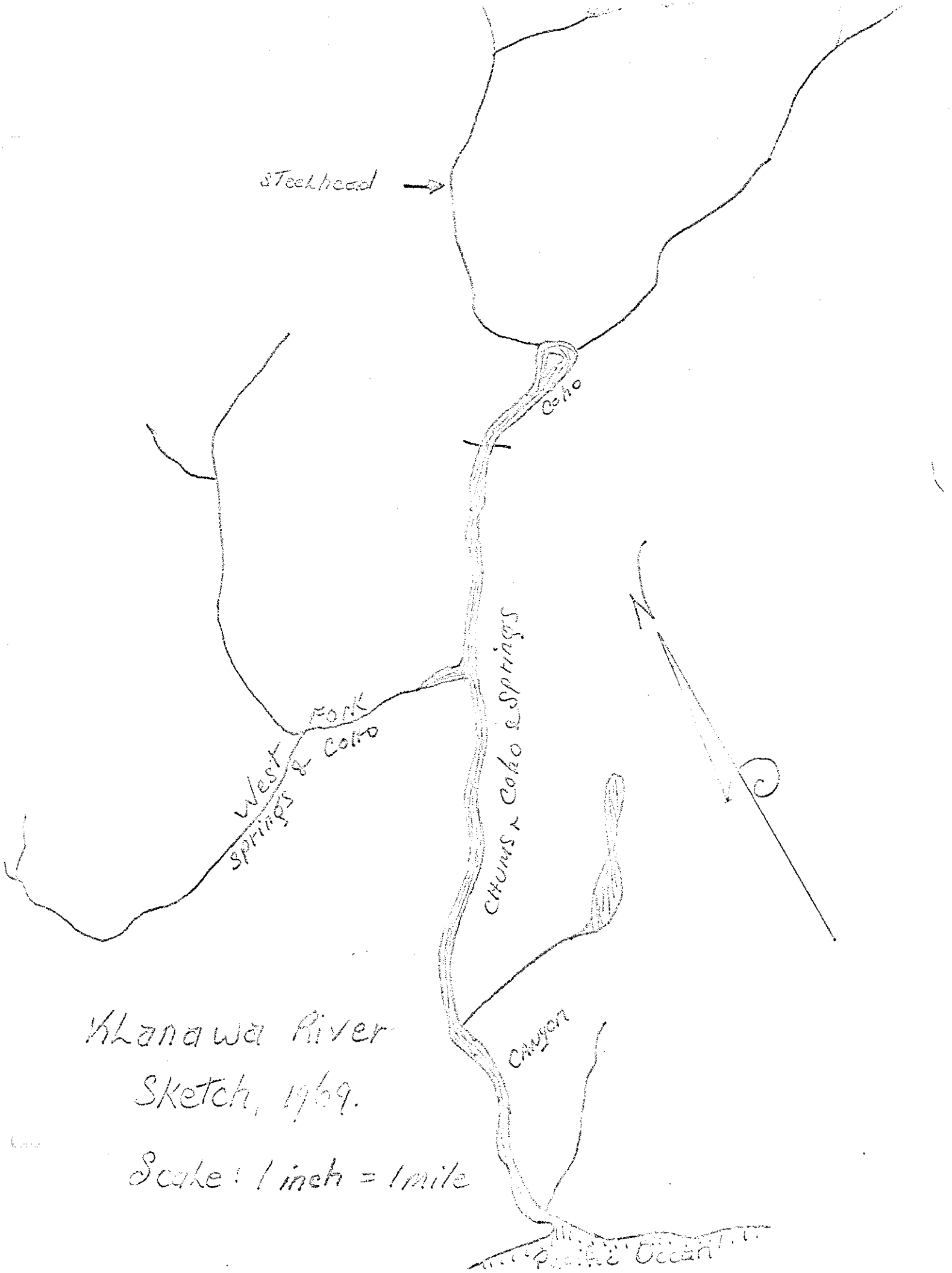
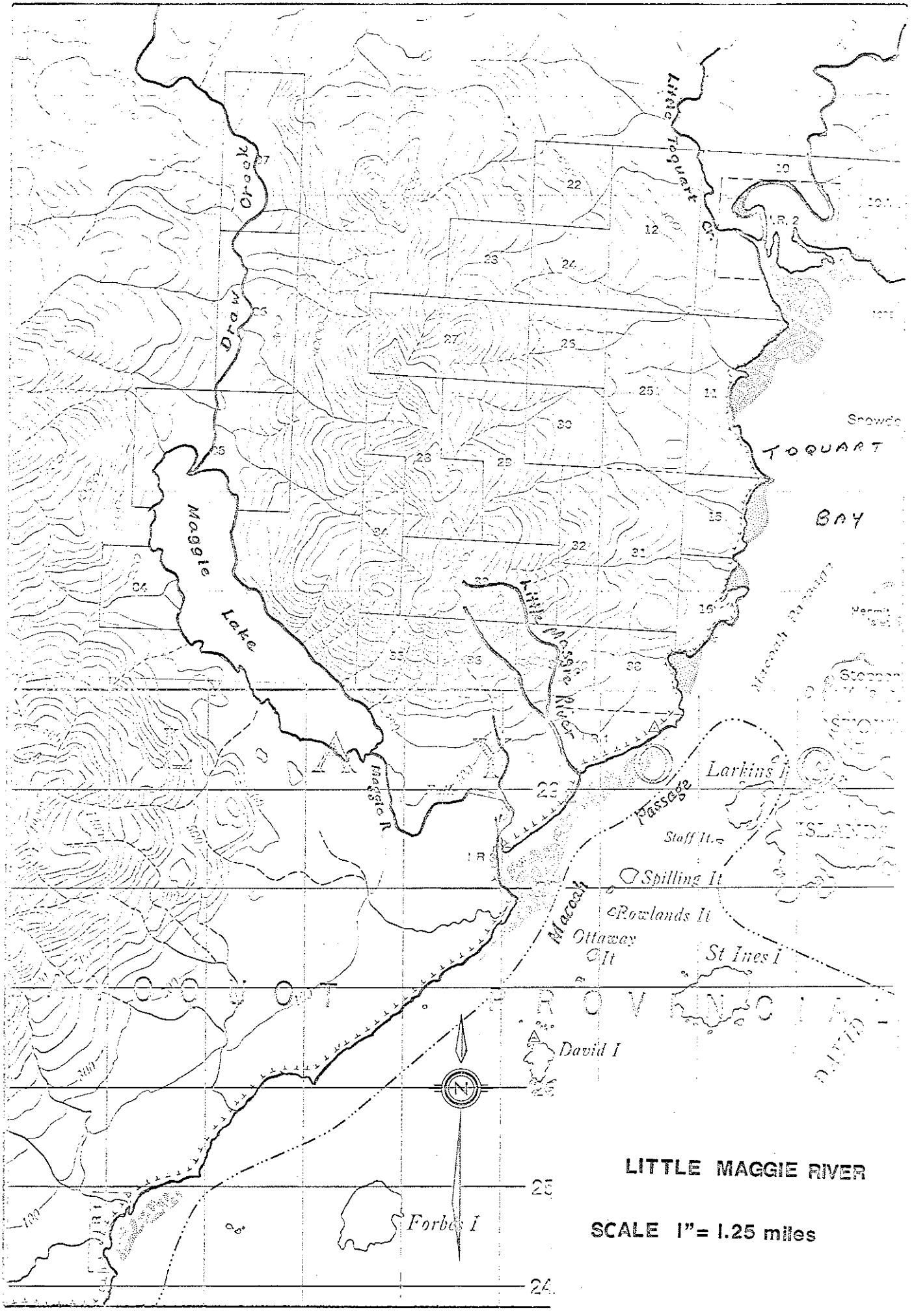
REMARKS



Klanawa River
Sketch, 1969.

Scale: 1 inch = 1 mile



LITTLE MAGGIE RIVER

SCALE 1"= 1.25 miles

NAME OF STREAM LITTLE ARGUE RIVER

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH _____

_____ POSITION 48 125 NE

LENGTH 2½ MI. WIDTH 9 FT. DRAINAGE 74 SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE 40% FINE 40%

SILT & SAND 10% UNCLASSIFIED 10%

GRADIENT: FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 -10.0	
> 10.0	entire stream

WETTED AREA 2,500 SQ.YD. SPAWNING AREA 1,500 SQ.YD.

DISCHARGE 10 CFS MAX. _____ MIN. 0 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Nil. 0.25 miles from mouth to furthest point of access.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	0.1 - 0.3
CHUM	0 - 0.3
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: Typical small west coast stream. Fishway rebuilt in 1971, no fish problem.

ESCAPEMENT RECORD FOR LITTLE MAGGIE RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54			25	750		
55			25	75		
56			25	25		
57			25	400		
58			25	400		
59			25	750		
60			25	200		
61			75	400		
62			25	75		
63			25	75		
64			25	75		
65			25	200		
66			75	750		
67			25	200		
68			75	200		
69			25	400		
70			25	75		
71			400	75		
72			75	750		
73			75	400		
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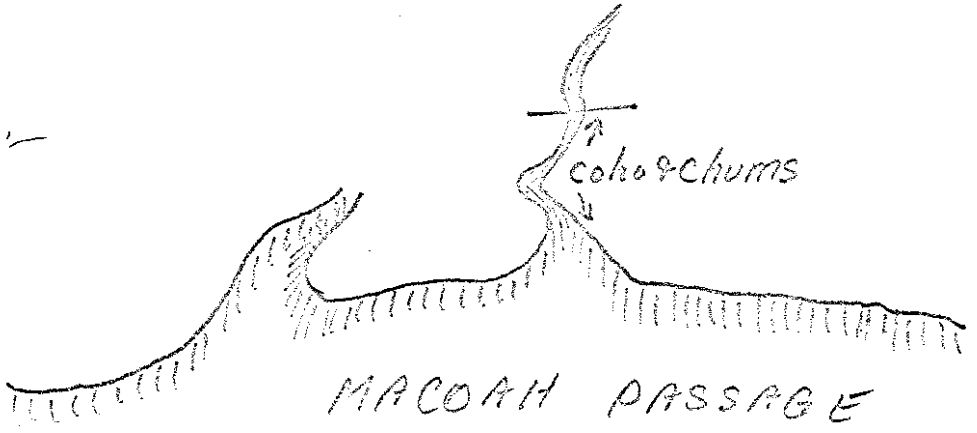
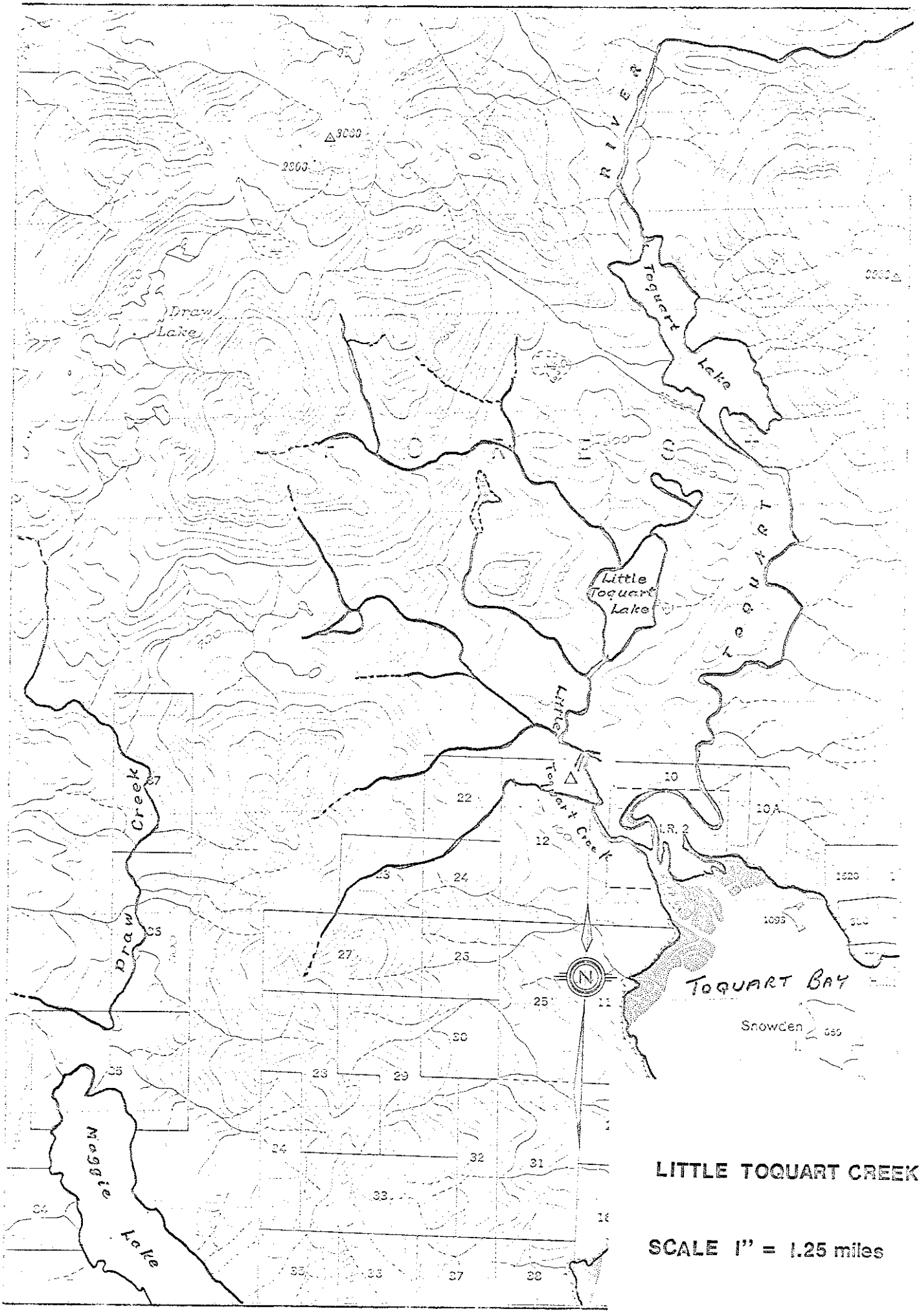
REMARKS



Little Maggie River
Sketch, 1969.
Scale: 1 inch = 1 mile



LITTLE TOQUART CREEK

SCALE 1" = 1.25 miles

NAME OF STREAM LITTLE TOQUART RIVER

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows SE into Toquart Bay, W of Toquart River - Clayoquot District. Above lake 3 3/4 mi POSITION 49 125 SE
Below lake 2½ mi.

LENGTH _____ MI. WIDTH 15 FT. DRAINAGE 4.5 SQ. MI.

COMPOSITION: BEDROCK 5% BOULDER 10% COARSE 20% FINE 40%

SILT & SAND 15% UNCLASSIFIED 10%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 1.0
2.5 - 5.0	
5.0 - 7.5	1.0 - 1.5
7.5 -10.0	
> 10.0	1.5 - 1.7

WETTED AREA 15,000 SQ.YD. SPAWNING AREA 6,000 SQ.YD.

DISCHARGE 30 CFS MAX. _____ MIN. 15 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Rock falls and cascades approx. 20' in height at mile 1.7. Impassable.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	0 - 1.7
CHUM	0 - 1.2
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

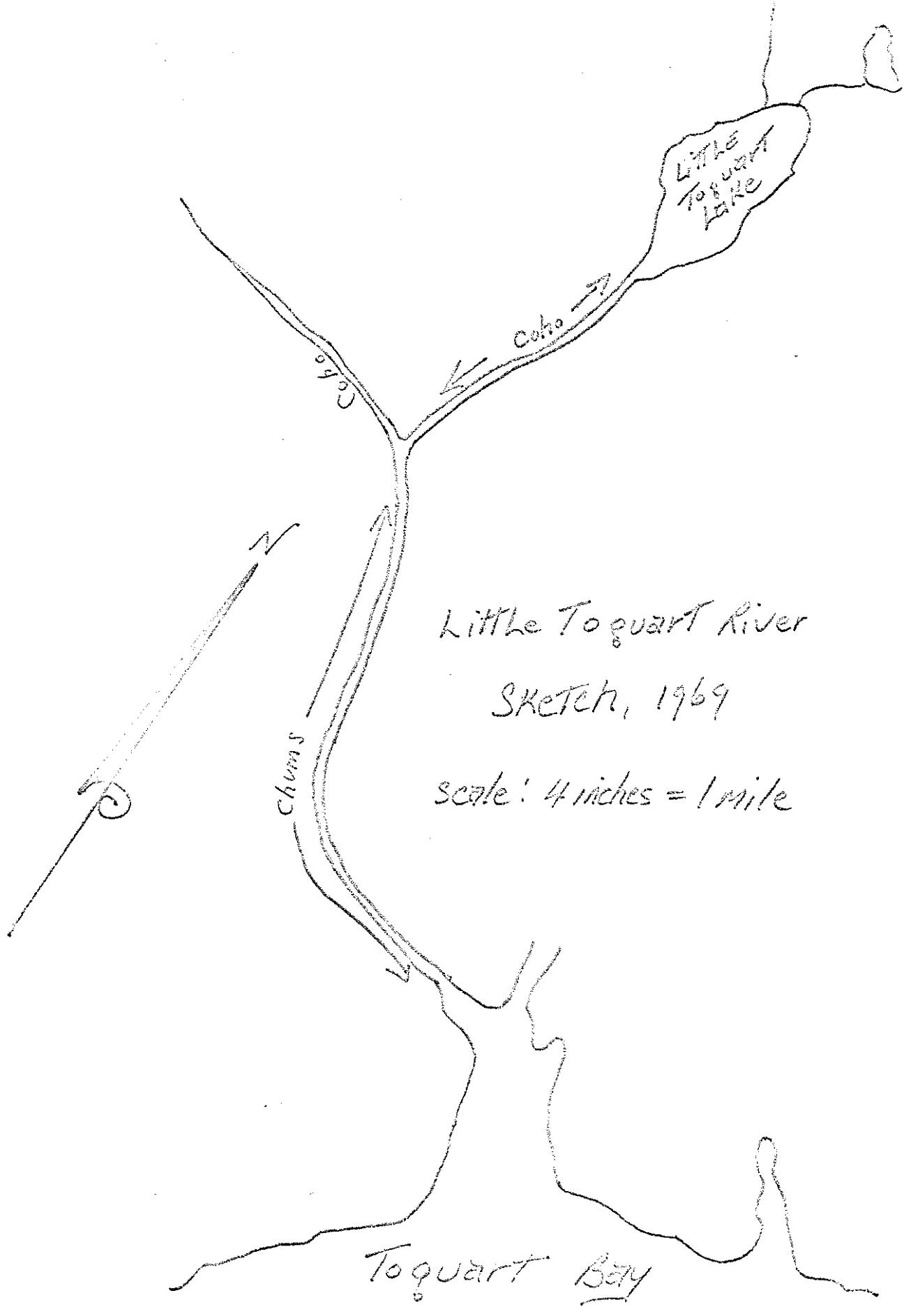
POTENTIAL OF INACCESSIBLE PORTION OF STREAM 250 acre lake and swamps for coho rearing area available above construction.

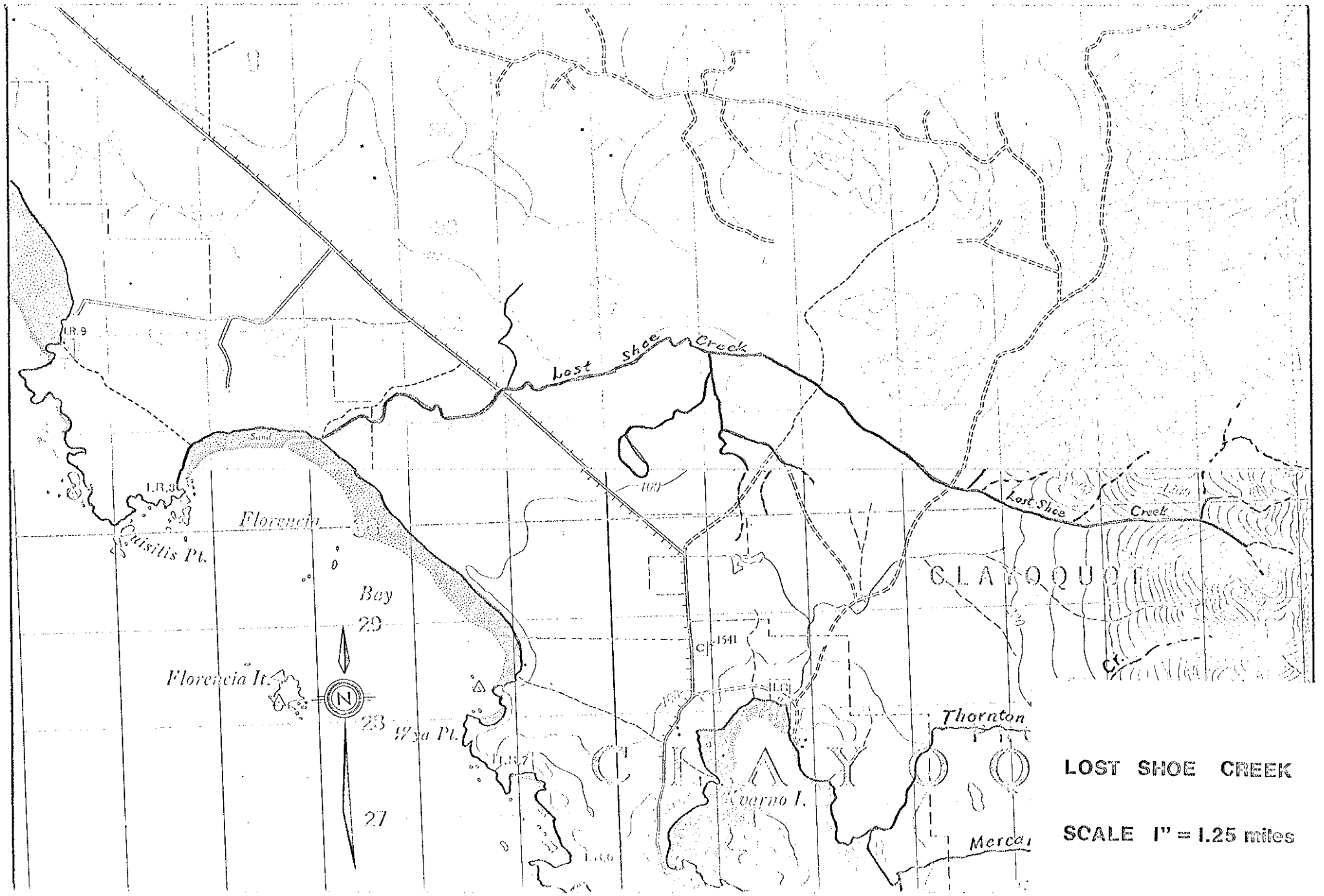
GENERAL REMARKS: Typical small west coast chum stream. Stream is subject to predation by bears and eagles.

ESCAPEMENT RECORD FOR LITTLE TOQUART CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			25	7500		
49				3500		
50				15000		
51						
52						
53						
54			25	15000		
55			25	400		
56			25	1500		
57			25	15000		
58			25	15000		
59			25	3500		
60			25	3500		
61			25	3500		
62			25	3500		
63			25	750		
64			25	750		
65			25	750		
66			75	7500		
67			75	750		
68			75	3500		
69			75	3500		
70			200	3500		
71			75	400		
72			75	7500		
73			300	5000		
74						
75						
76						
77						
78						
79						
80						
81						
82						
83						
84						
85						

REMARKS


Little Toquart Lake
Coho
Coho
Chums
Little Toquart River
Sketch, 1969
scale: 4 inches = 1 mile
Toquart Bay



LOST SHOE CREEK

SCALE 1" = 1.25 miles

NAME OF STREAM LOST SHOE CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows W into N end of Florencia Bay - Clayoquot District. POSITION 49 125 SW

LENGTH 11¼ MI. WIDTH _____ FT. DRAINAGE 4.5 SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____

SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 -10.0	
> 10.0	

WETTED AREA _____ SQ.YD. SPAWNING AREA _____ SQ.YD.

DISCHARGE _____ CFS MAX. _____ MIN. _____

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Scattered windfalls, passable.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	throughout
CHUM	lower ½ mile
PINK (Odd Yr.)	
PINK (Even Yr.)	lower ½ mile
STEELHEAD	

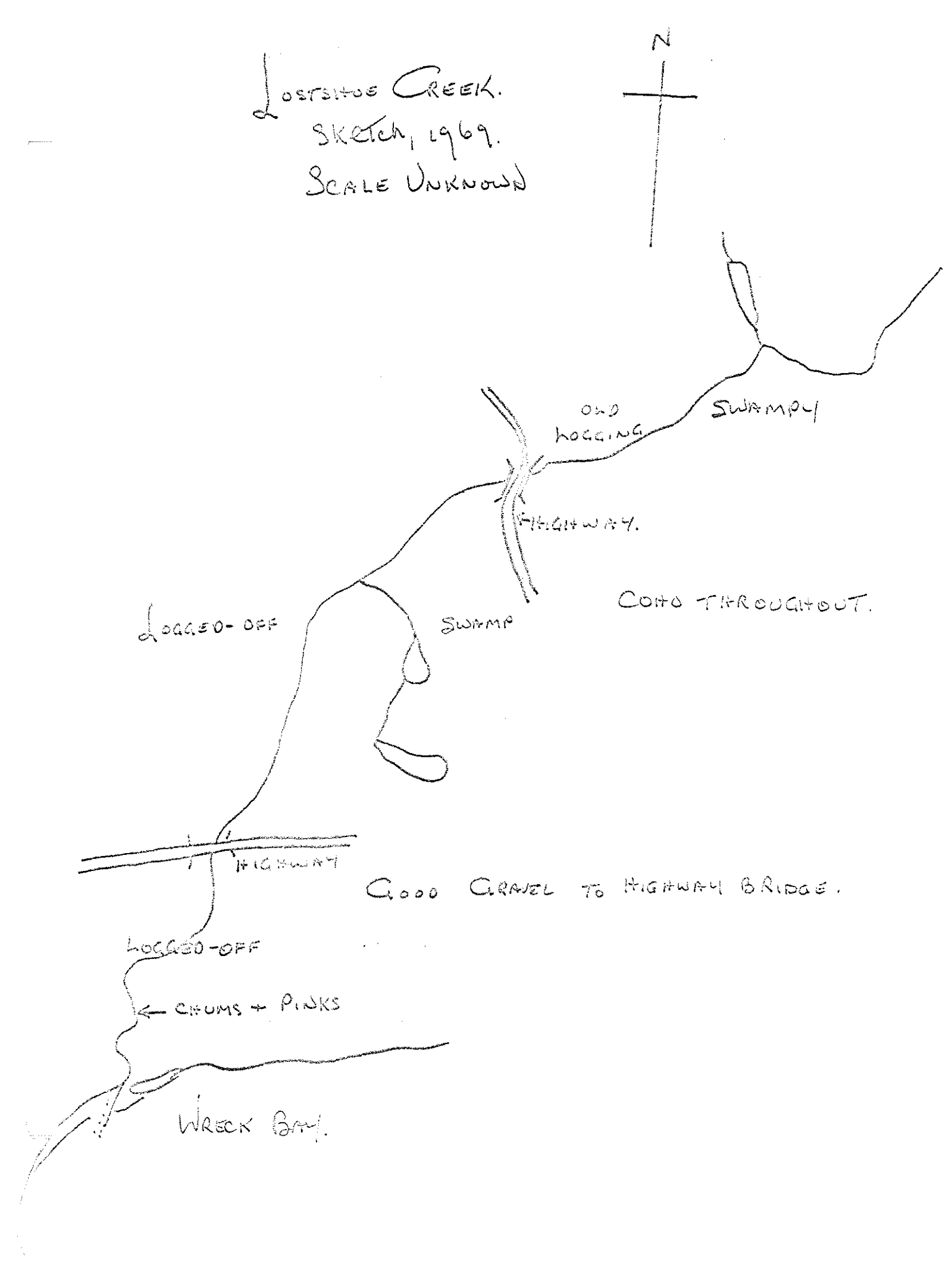
POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

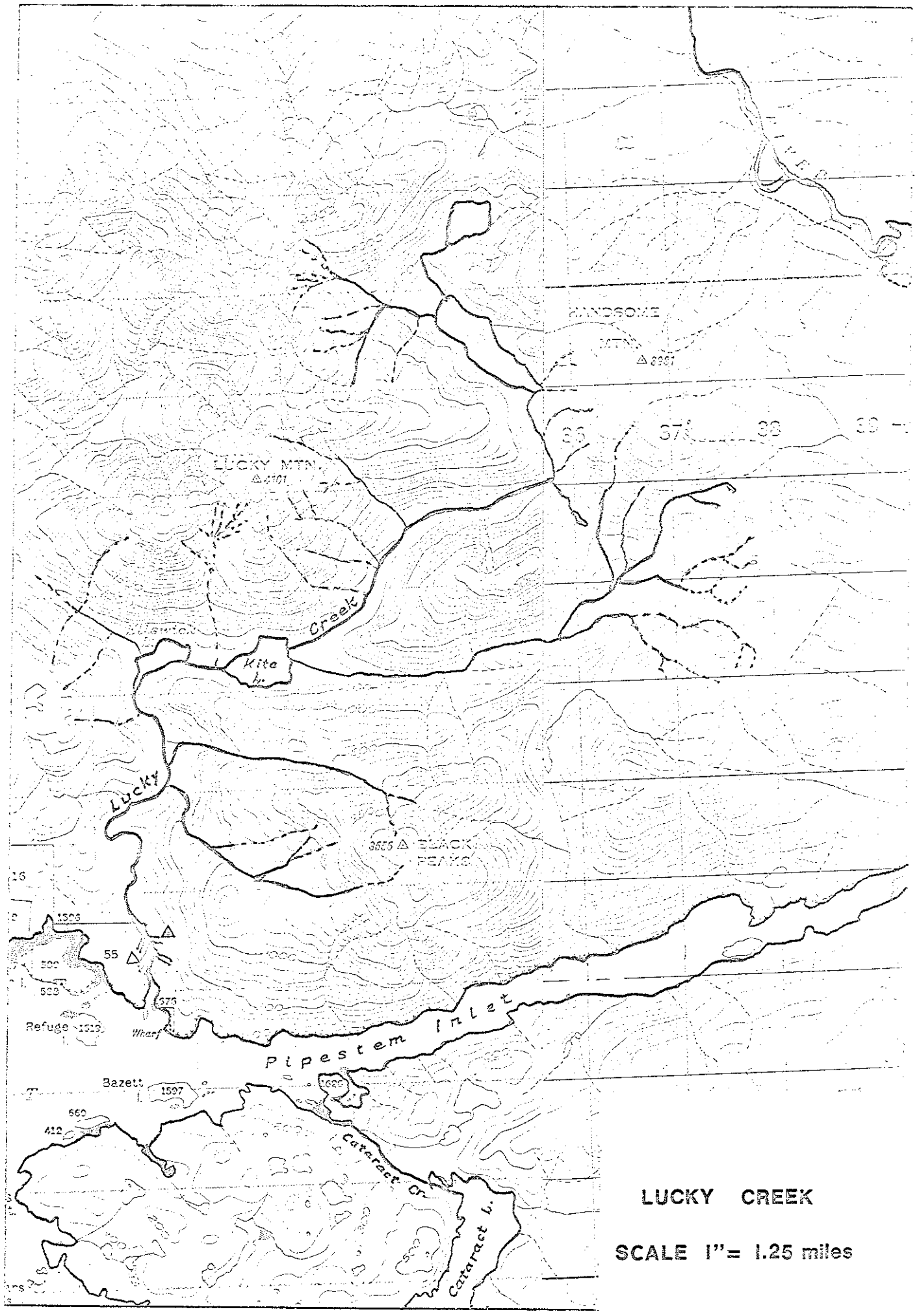
GENERAL REMARKS: Subject to some bear predation. Second growth has improved this stream considerably. (1973)

ESCAPEMENT RECORD FOR LOSTSHOE CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48				400		
49				400		
50						
51			25	75		
52				200	400	
53				200		
54				400		
55				300		
56				200		
57				200		
58				200		
59				100		
60				25		
61				200		
62				75		
63			25	25		
64			25	25		
65			25	75		
66			750	75		
67			200	25		
68			400	75	75	
69			400	25	25	GOOD RUN
70			200	75	25	GOOD LATE FALL RUN
71			400	N/O	N/O	FEW
72			400	N/O	N/O	N/O
73			75	25	N/O	N/O

REMARKS


LOBSTICK CREEK.
SKETCH, 1969.
SCALE UNKNOWN
N
OLD LOGGING
SWAMPY
HIGHWAY.
COHO THROUGHOUT.
LOGGED-OFF
SWAMP
HIGHWAY
GOOD GRAVEL TO HIGHWAY BRIDGE.
LOGGED-OFF
← CHUMS + PINKS
WRECK BAY.



LUCKY CREEK

SCALE 1"= 1.25 miles

NAME OF STREAM LUCKY CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows S into Pipestem Inlet, W of Effingham Inlet - Clayoquot District. POSITION 49 125 SE

LENGTH 10½ MI. WIDTH 20 FT. DRAINAGE 7 SQ. MI.

COMPOSITION: BEDROCK 20% BOULDER 30% COARSE 30% FINE 10%

SILT & SAND 10% UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 -10.0	
> 10.0	

WETTED AREA 6,000 SQ.YD. SPAWNING AREA _____ SQ.YD.

DISCHARGE 35 CFS MAX. _____ MIN. 10 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT #1 - 5' falls at mile 0.3 (tidewater), passable to coho. #2 - 20' vertical falls at mile 0.5, impassable.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	to falls
CHUM	tidewater
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	to falls

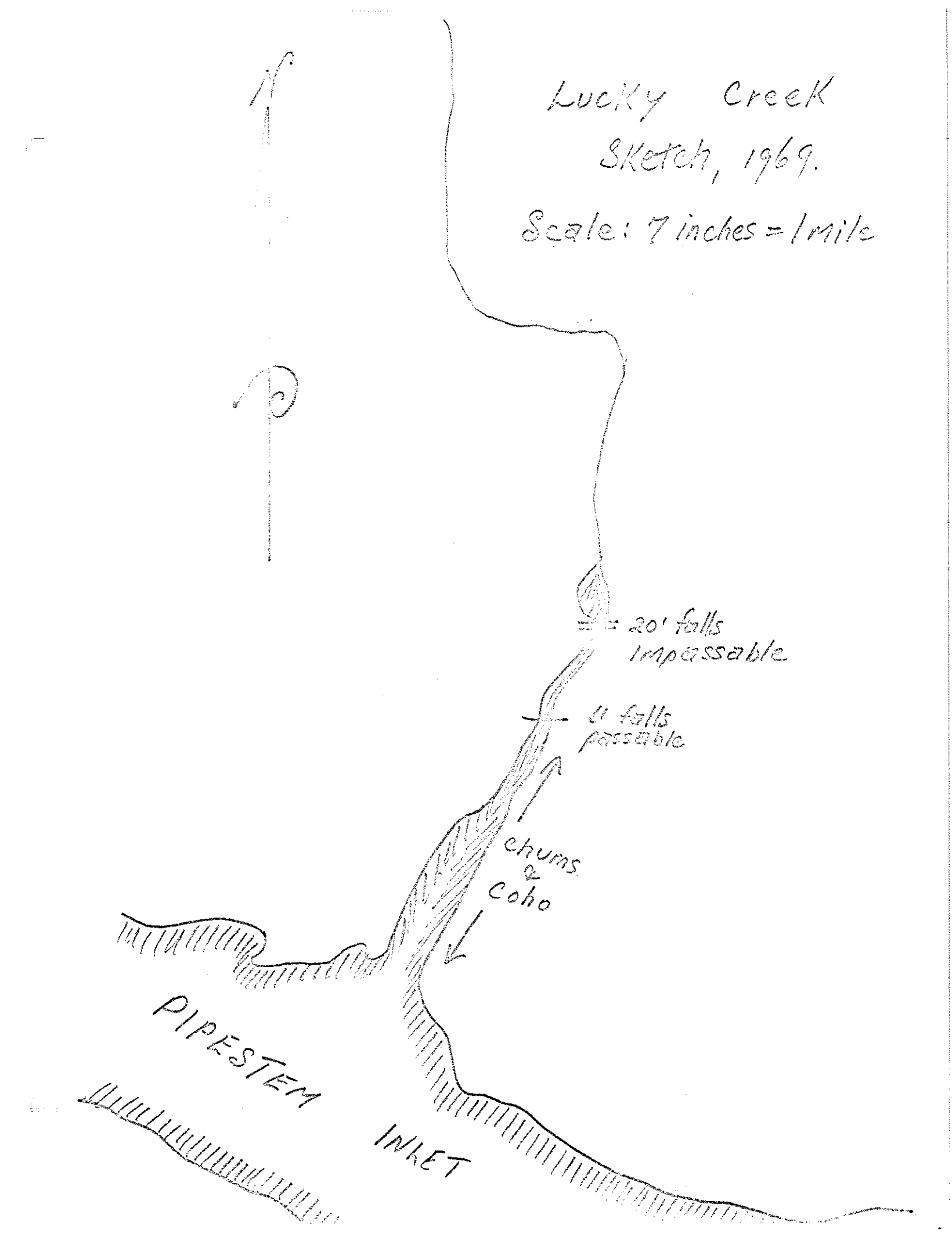
POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

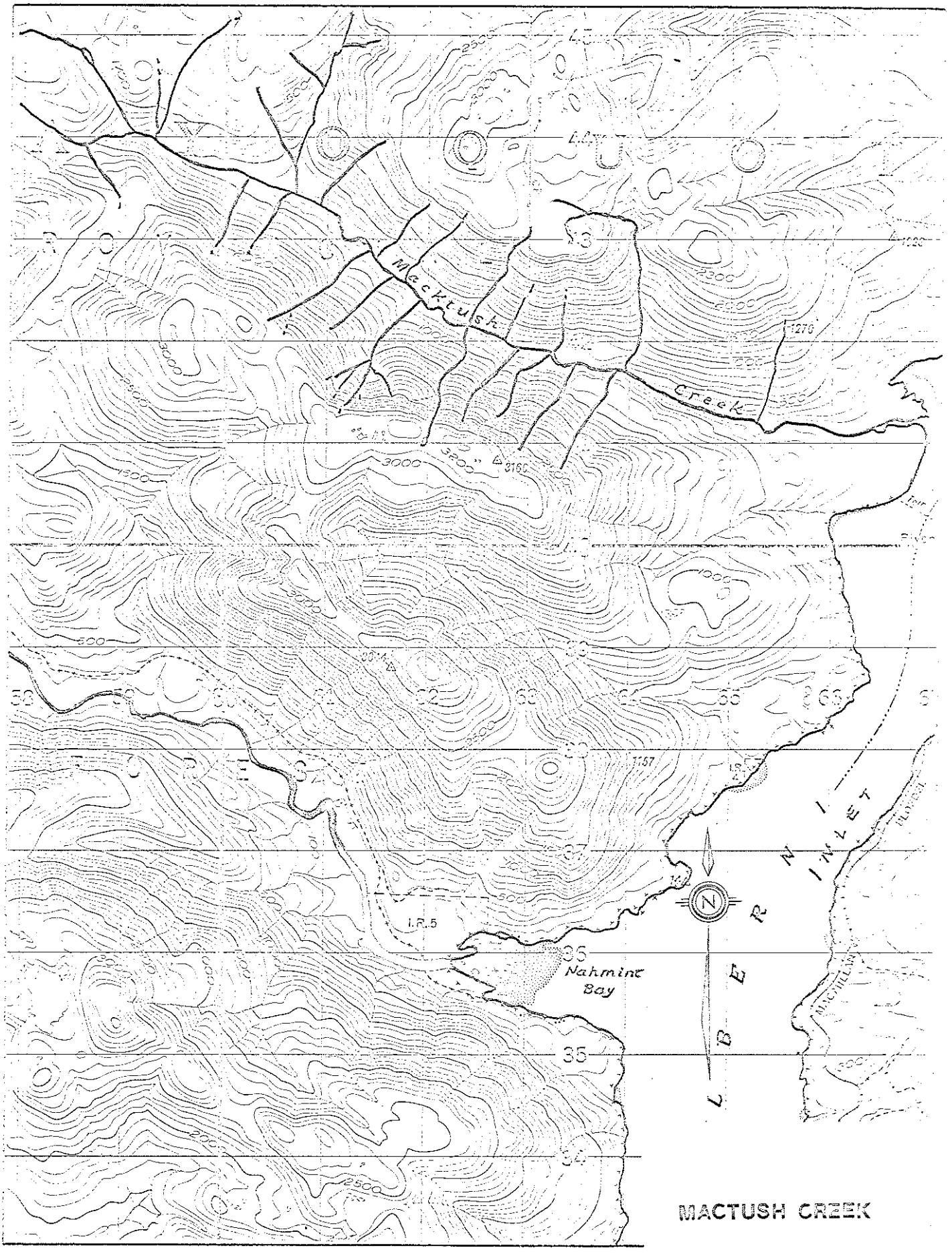
GENERAL REMARKS: Typical small west coast stream.

ESCAPEMENT RECORD FOR Lucky Creek

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48				200		
49				200		
50				750		
51			700	1500		
52				75		25
53			75	1500		25
54			25	400		25
55			75	75		25
56			125	400		
57			25	750		25
58			25	750		75
59			25	200		75
60			25	75		75
61			75	400		75
62			25	75		200
63			25	200		200
64			75	200		75
65			25	200		75
66			75	750		
67			260	400		
68			75	750		
69			25	400		
70			25	75		
71		25	25	400		
72		N/O	75	200		

REMARKS


Lucky Creek
Sketch, 1969.
Scale: 7 inches = 1 mile
N
20' falls
impassable
4' falls
passable
chums
&
Coho
PIPESTEM
INLET



SCALE 1" = 1.25 miles

NAME OF STREAM MACKTUSH CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows E into Sproat Narrows, Alberni Inlet - Clayoquot District. POSITION 49 124 SW

LENGTH 10 3/4 MI. WIDTH 25 FT. DRAINAGE 9 SQ. MI.

COMPOSITION: BEDROCK 15% BOULDER 30% COARSE 30% FINE 10%

SILT & SAND 10% UNCLASSIFIED 5%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.1
2.5 - 5.0	
5.0 - 7.5	0.1 - 0.5
7.5 -10.0	
± 10.0	0.5 - 3.0

WETTED AREA 40,000 SQ.YD. SPAWNING AREA 12,000 SQ.YD.

DISCHARGE 25 CFS MAX. _____ MIN. 0 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Nil. 5 miles from mouth to furthest point of access.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	0.5 - 3.0
CHUM	0 - 0.5
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

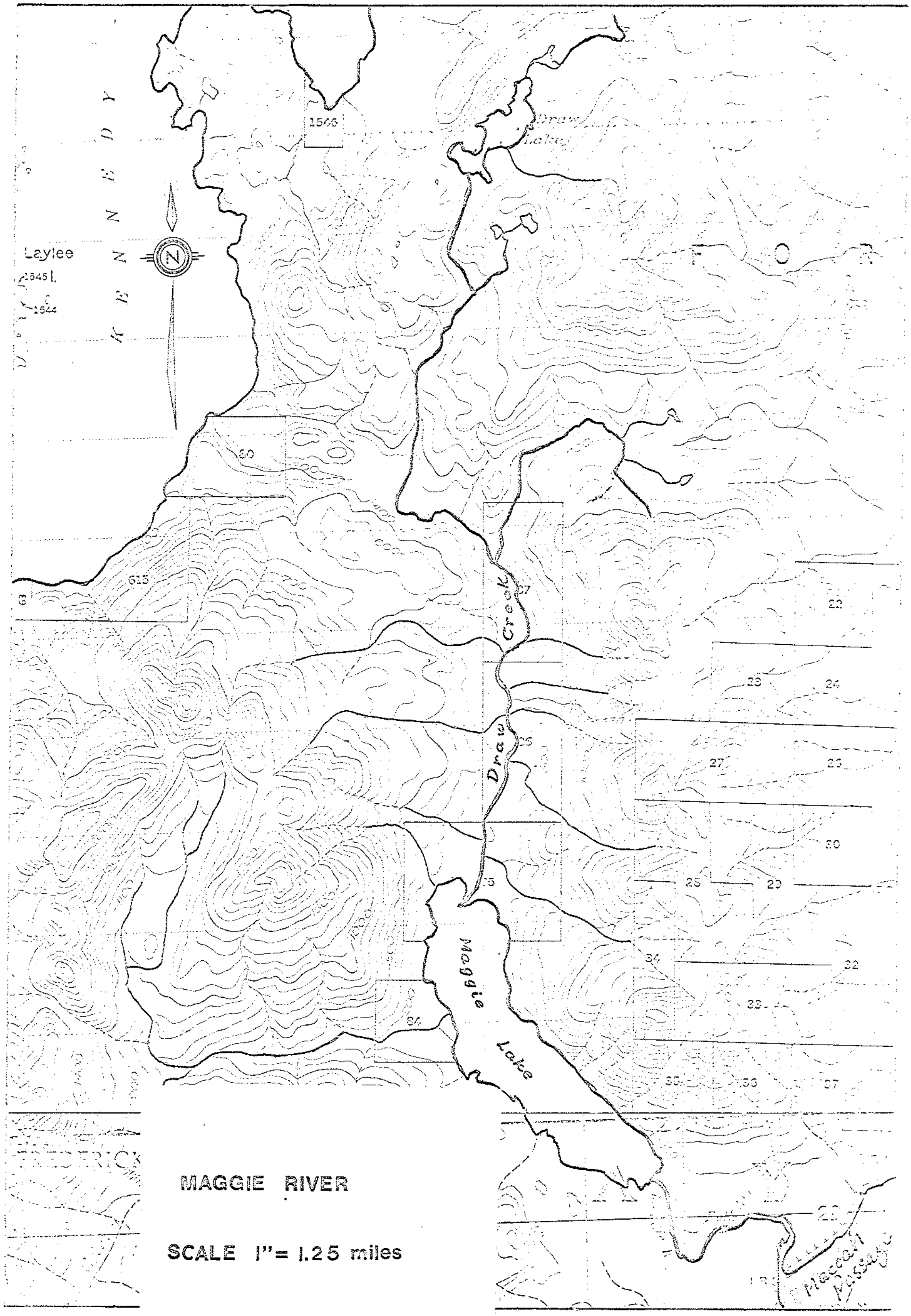
POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: Typical west coast stream. Logging access roads under construction in the watershed during 1973. Logging to commence in the fall of 1974.

ESCAPEMENT RECORD FOR MACKTOOSH (MACKTUSH) CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			400	200		
49			400	200		
50			400	150		
51			200	75		
52			200	75		
53			25			
54			25	200		
55			25	25		
56			25	25		
57			25	25		
58			25	25		
59			25	25		
60			25	25		
61			25	25		
62			25	25		
63			25	25		
64		25	25	25		
65			25	25		
66			25	25		
67			25	200		
68			75	25		
69			400	400		
70			200	N/O		JUNK
71			75	25		
72			25	N/O		
73		N/O		25		
74			200	N/O		

Mack Tush Creek
Sketch, 1969.
Scale: 1 inch = 1 mile



MAGGIE RIVER

SCALE 1" = 1.25 miles

NAME OF STREAM MAGGIE RIVER

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows SW into Maco Passage, S of Tocuart Bay - Barclay District. POSITION 48 125 XX

LENGTH 2 MI. WIDTH _____ FT. DRAINAGE 10 SQ. MI.

COMPOSITION: BEDROCK 30% BOULDER 20% COARSE 20% FINE 10%

SILT & SAND 10% UNCLASSIFIED 10%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.5
2.5 - 5.0	
5.0 - 7.5	0.5 - 1.5 lake to mile 0.75 Draw Creek
7.5 -10.0	
> 10.0	0.75 - 2.0 Draw Creek

WETTED AREA 50,000 SQ.YD. SPAWNING AREA 15 SQ.YD.

DISCHARGE 100 CFS MAX. _____ MIN. 20 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Fishway ½ mile from mouth.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	Draw Creek 2 miles
CHUM	0 - 0.5
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: Stream is subject to predation by bears. Fishway blocked by boulders - cleared and repaired by Aug. 23, 1973. (Fishway rebuilt in 1971) Logging in upper reaches of Draw Creek (1969) Mining operations by Noranda Mines ceased in 1969.

ESCAPEMENT RECORD FOR MAGGIE RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49			200	75		
50			200	400		
51			3500	750		
52			750	200		
53			3500	1500		
54			7500	400		
55			7500	200		
56			750	200		
57			3500	750		
58			3500	1500		75
59			3500	750		200
60			1500	750		—
61			3500	750		200
62			3500	400		200
63			3500	200		200
64			3500	200		200
65			1500	400		
66			1500	400		
67			3500	1500		
68			3500	750		
69			400	200		
70			1500	750		
71						
72			750	1500		
73	25		2000	200		
74						
75						
76						
77						
78						
79						
80						
81						
82						
83						
84						
85						

REMARKS

BIOLOGICAL SURVEY OF THE MAGGIE RIVER SYSTEM

TABLE OF CONTENTS

MAGGIE RIVER SURVEY

1. INTRODUCTION

A. Location

The Maggie River system is located on the west coast of Vancouver Island, approximately thirty miles southwest of Port Alberni (Fig. 1). The system is composed of Draw Lake, drained by Draw Creek which flows seven miles to enter Maggie Lake, and the two and a half mile long Maggie River which drains Maggie Lake and enters Macoah Passage.

B. History

During the middle 1920's, the Maggie River system was proposed as an area for sockeye transplantation. Despite the presence of an almost total obstruction a short distance upstream from tidal influence, a total of 8,500,000 sockeye eggs were planted in Draw Creek during the years 1929, 1930, 1931, 1933, 1937, 1938, 1939, and 1941, with no appreciable returns. The largest return observed occurred in 1936 when sixty sockeye were counted in a pool below the falls. In 1937, construction of the existing fishway began, and was completed in 1939. Intensive observations at the fishway and in general throughout the system failed to reveal any evidence that the sockeye plantings had been successful. However, a small run of coho indigenous to the system apparently maintained itself through the early 1940's.

By 1945 the fishway had deteriorated to such an extent that it was inoperative at low water levels. Due to the small number of fish involved up to 1951, only seasonal repairs were considered necessary. In 1951, a definite increase in the run was noted (Table 1) and heavy mortality due to blockage was reported, as observations indicated that the entire obstruction was passable only through a very narrow range of water levels.

TABLE 1 - Estimated Coho Escapements to Maggie River System 1945 - 1958

Year	Escapement	Year	Escapement
1945	50	1952	500-1,000
1946	50-100	1953	2,000-5,000
1947	50-100	1954	5,000-10,000
1948	100-300	1955	5,000-10,000
1949	100-300	1956	500-1,000
1950	100-300	1957	2,000-5,000
1951	2,000-5,000	1958	2,000-5,000

Since 1951, and despite the obstruction, the run of coho has increased to a significant level, and in 1958 engineering

surveys of the obstruction were undertaken. These initial studies, completed during the spring of 1959, indicated that reconstruction of the entire fishway was the only practical method of overcoming the obstruction. Due to the costs involved in such a project, it was decided that a biological study of the system should be carried out to examine its productivity and potential before further steps were taken. The following report deals with the study of Maggie Lake and its main tributaries which was undertaken during June, 1959.

II. METHOD

The survey was conducted with the view of obtaining the following information; general productivity of Maggie Lake, availability of tributary streams and amount of suitable spawning area in tributary streams.

A. Maggie Lake

1. Morphology - The entire circumference of the lakeshore was examined by rubber boat. The lake itself was sounded by handline, and depth contours recorded (Fig. 2).

2. Thermal Structure - Temperature series were taken by reversing thermometer at two stations on the lake.

3. Light Penetration - Depth of light penetration was recorded by secchi disc soundings at two stations.

4. Total Dissolved Solids - Quart sample of surface water was taken and will be analyzed for total dissolved solids content.

5. Aquatic Life - Gillnets were set for three successive nights in three different locations to sample the cutthroat trout population of the lake. Stretched-mesh sizes of 1/2", 1", 2", 3", and 4" were used. General observations of the abundance of coho fry rearing in various areas of the lake were also noted.

B. Tributaries

Tributary streams flowing into Maggie Lake were examined on foot in order to obtain estimates of amounts of available spawning area.

III. RESULTS

A. Maggie Lake

1. Morphology - Maggie Lake has a total length of 2.2 miles and an average width of .5 miles, or a rough surface area of 1.1 square miles. The eastern shore rises steeply to a maximum height of 2000 feet, and the hilly western shore rises much more gradually to approximately the same altitude. The entire area is heavily wooded

with the exception of a small recently logged-off area at the northeast corner of the lake. The overgrowth consisting typically of hemlock, cedar and spruce extends directly to the lake's edge. A heavy undergrowth of salal and huckleberries also exists.

The lake itself has a well-defined shoreline with the relatively few shelving areas consisting of less than 10 percent of the surface area. The existing shallow areas have a bottom composition consisting entirely of mud and weeded sections. The remainder of the shoreline drops off very steeply, particularly on the eastern shore, where a depth of 120 feet is found 150 feet off-shore (Fig. 2). The drop-off on the western shore was found to be more gradual, reaching a depth of 60 feet 200 feet off-shore. The maximum depth found during the sounding was 148 feet.

2. Thermal Structure - Two temperature series were taken - one near the outlet in a depth of 60 feet, and the other at a depth of 105 feet

approximately half a mile from the outlet. As is evident in Table 11 and Figure 3, very little thermal stratification was evident at the time of the survey. However, it is possible that due to unusually cool weather (the air temperature seldom exceeded 54°F during the survey period), the formation of thermocline was somewhat retarded this year.

TABLE 11 - Maggie Lake Temperature Series

Depth (Ft.)	Temperature (°C.)	
	June 8, 1959	June 12, 1959
0	13.0	12.5
5	12.5	12.0
10	12.0	12.0
15	11.5	11.5
20	11.5	11.5
25	10.5	11.3
30	10.2	11.0
35	10.0	9.5
40	9.0	9.0
50	8.0	9.0
60	8.0	7.5
70	-	7.0

Depth (Ft.)	Temperature (°C.)	
	June 8, 1959	June 12, 1959
80	-	6.5
90	-	6.0
100	-	6.0

3. Light Penetration - Secchi disc readings were taken at both inlet and outlet areas of Maggie Lake under uniformly heavily-clouded days. In each case the average depth of light penetration was 11.5 feet. The relatively low reading could possibly be due to a slightly turbid condition caused by recent heavy rainfall as well as to the low light intensity. Some of the turbidity may be residual as it was noted that major tributaries flowing into the lake had the typical "tea-water" color found in streams which pass through cedar-hemlock swamp areas.

4. Total Dissolved Solids - A quart sample of the surface water was taken near the outlet of Maggie

Lake, and will be analyzed at a later date.

As a general rule, it is considered that a reading of 40 parts per million is typical of lakes of the coast and insular mountains. For lakes of the southern interior plateau of B. C. readings of 200 parts per million are common (Northcote and Larkin, 1956). There is no reason to suspect that Maggie Lake should have an atypically low reading. Rather, considering that all shallow areas (i.e., within the range of light penetration) consist of mud and weed bottom, it is more likely that the total dissolved solids will prove to be slightly higher than the average of 40 ppm.

5. Aquatic life - Gillnets of stretched-mesh sizes 1/2", 1", 2", 3", and 4" were set in three different locales on the lake for three successive nights. On June 8 a floating set was made on the western shore approximately three-quarters of a mile from the outlet; on June 9 a floating set was made at the outlet and on June 10 a sunken set was made

encircling the entrance of Draw Creek. In each case no fish of any type were caught.

Intensive angling resulted in a total catch of four cutthroat trout, their size ranging from 10" to 17.5", and weight approximately .25 pounds to 1.75 pounds. The catch-effort expended was approximately .3 fish per rod hour. Stomachs of the fish caught were examined, and contents were found to be composed of 20 percent coho fry, 40 percent sticklebacks, and 40 percent Stonefly, caddis fly, and mayfly larvae.

In view of the total failure of gillnetting, combined with local reports of periodic excellent cutthroat fishing in the lake, gillnetting will be repeated in the fall if possible.

Coho fry were observed throughout the lake in extremely good numbers. Heaviest concentrations appeared in the several shallow bays along the western shore. In one bay near the outlet, the one-half inch gillnet (twenty-five yard length) was used as a beach seine, and for three sets the average catch was eleven coho fry. A sample of twelve fry taken (Table III) averaged 51.0 mm. in length, and ranged from 45-56 mm.

TABLE III - Coho Fry Taken by Beach Seine

No.	Length (In millimetres)	No.	Length (In millimetres)
1	49	7	51
2	53	8	45
3	55	9	50
4	47	10	49
5	52	11	51
6	53	12	56

Salamanders and freshwater mussels were observed in profusion in all shallow weedy areas of the lake. Stonefly and mayfly larvae were also present in large numbers, as many live specimens were found clinging to the gillnets after each overnight set. They also contributed greatly to the total stomach content of the trout examined.

6. Available Spawning Areas - The entire shoreline of Maggie Lake consists of bedrock in areas of precipitous drop-off, and mud and weed bottom in visible shallow areas. Small areas of suitable gravel were found at the exit of the lake

and at points where Side and Draw Creek enter the lake. Thus, there is no area large enough to support a significant population of spawning salmon in the lake.

B. Tributaries

The majority of the inflow to Maggie Lake comes from two tributary streams; Side Creek, approximately three-quarters of a mile from the north end on the western shore, and Draw Creek which enters at the north end of the lake.

1. Side Creek - Side Creek enters Maggie Lake at two points approximately one-quarter mile apart. The split in channels was caused by a large log jam which has formed an impassable obstruction on the south fork, but which is apparently passable via the north fork, as coho fry were observed in large numbers upstream from the jam. Both forks to the log jam consist of gravel ranging in size mainly from one inch to three inches in diameter, with velocities of one to three feet per second.

The stream above the log jam was examined for approximately one-half mile, and the bed

again consisted mainly of small to medium gravel. The total estimated area available and suitable for spawning was 5000 square yards.

2. Draw Creek - Draw Creek, the major tributary to Maggie Lake, had a flow of approximately 300 cubic feet per second at the time of survey. Due to weather conditions only the lower two and a half miles of stream were surveyed. According to Fishery Officers' reports, during previous years, almost the entire coho spawning occurred upstream of the furthermost point reached on the survey.

However, the area surveyed indicated that the stream contains a very large potential. The entire area consists of a series of long riffles interconnected by long, deep pools. The stream bed shows little sign of erosion caused by extreme flows, which is to be expected as relatively little logging has taken place on the headwaters. Coho fry were observed in fair numbers in all pools and backwaters.

Two log jams were found in the lower mile of stream, both caused by recent logging along along the east bank, and both apparently under

consideration for removal by the logging company involved. Neither presents a serious obstruction problem.

Table IV outlines the estimated available spawning ground found in the area surveyed. While the stream was divided into sections to facilitate survey, no individual description is necessary as the entire distance is typically long riffles with interconnecting deep pools. If practical, it is intended to inspect the area during the coho spawning period of 1959 in order to gain some information on the distribution and numbers of fish utilizing the accessible portion of the stream.

TABLE IV - Draw Creek Gravel Composition

Sec.	Bank to Bank Area (sq. yds.)	Available Area	Gravel Composition				
			Fine (1"Dia.)		Med. (1"-3"Dia.)		Coarse (3" Dia.)
1	54,000	27,000	5,400	(20%)	16,200	(60%)	5,400 (20%)
2	20,000	16,000	1,600	(10%)	8,000	(50%)	6,400 (40%)
3	20,000	12,000	1,200	(10%)	7,200	(60%)	3,600 (30%)
4	18,000	10,000	500	(5%)	5,500	(55%)	4,000 (40%)
TOTALS	112,000	65,000	8,700	(11.25%)	36,900	(56.25%)	19,400 (32.5%)

C. Rearing Area

In Table IV, it may be noted that of a total of 112,000 square yards of stream surveyed, 57,000 square yards was not considered as suitable spawning ground. The greater proportion of this area consists of long, relatively deep pools with low velocities mostly suitable for rearing of coho fry. Further rearing area is, of course, to be found in the 1.1 square miles of the lake surface, and a smaller amount in Side Creek.

Some rearing and spawning may take place in Maggie River below the lake, but it certainly would not appear to be extensive, as the stream is turbulent and rocky throughout its entire length.

IV. SUMMARY

1. Maggie Lake was found to be a fairly turbid lake with productivity similar to that of most coast and insular mountain lakes.
2. Gillnetting failed to show evidence of a large cutthroat population reported by local Fishery Officers. However, further nettings at a more favorable time of year may show greater trout populations.

3. Coho fry rear in good numbers in all areas of the lake. Of a sample taken by beach seine (possibly selective because of mesh size of one-half inch) 75% were fifty millimeters in length or greater. All fry taken appeared exceptionally healthy and larger than normal for the time of year.

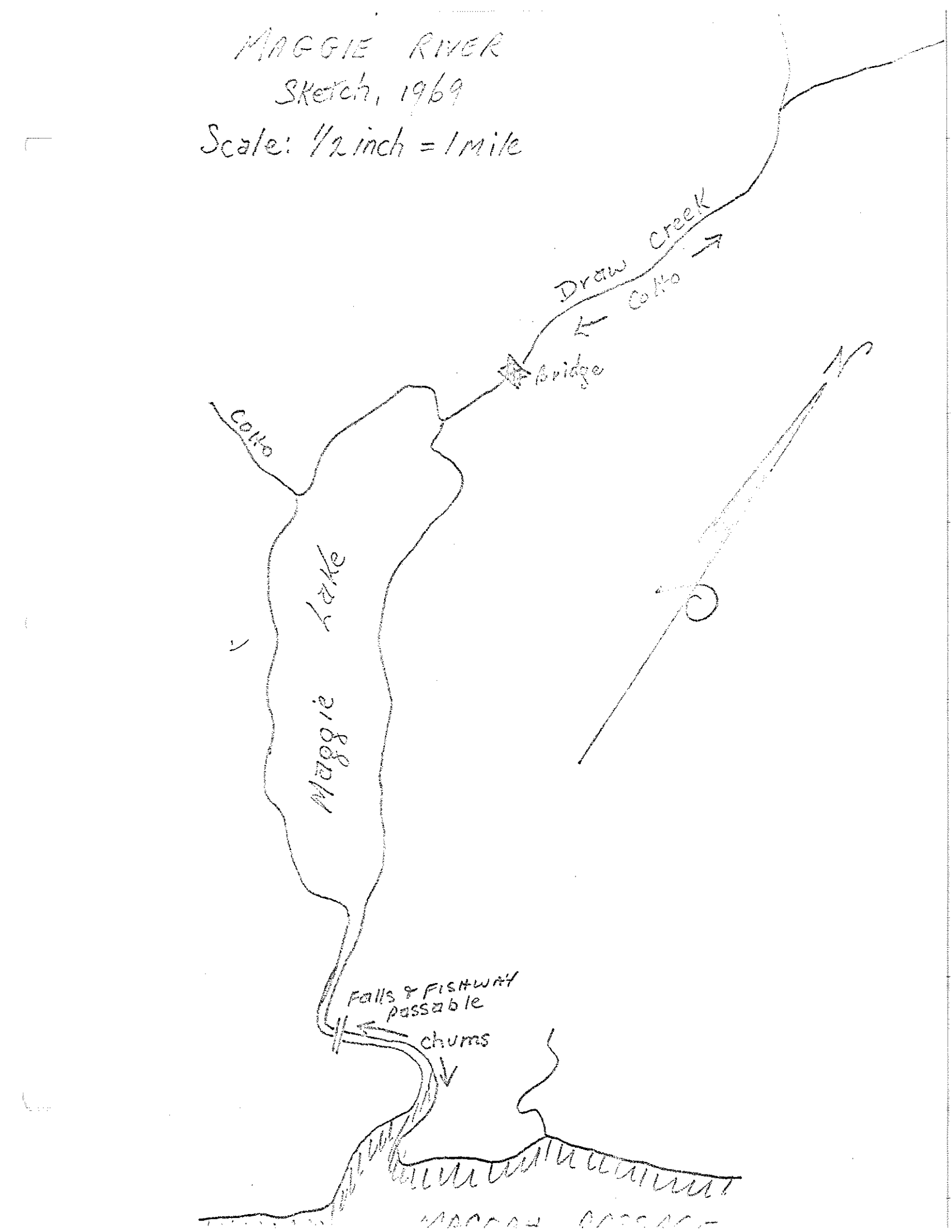
4. While no extensive areas of suitable spawning ground were found on the beaches of the lake itself, both tributaries accessible to fish were found to have great potential. For the relatively small areas surveyed, a total of 70,000 square yards of suitable spawning ground was found in the two streams. It must again be stressed that Draw Creek was found to have 65,000 square yards of gravel in the lower two and one-half miles, and that this stream is apparently accessible for another three miles. It must also be noted that according to reports, the majority of coho spawning occurs in the upper three miles.

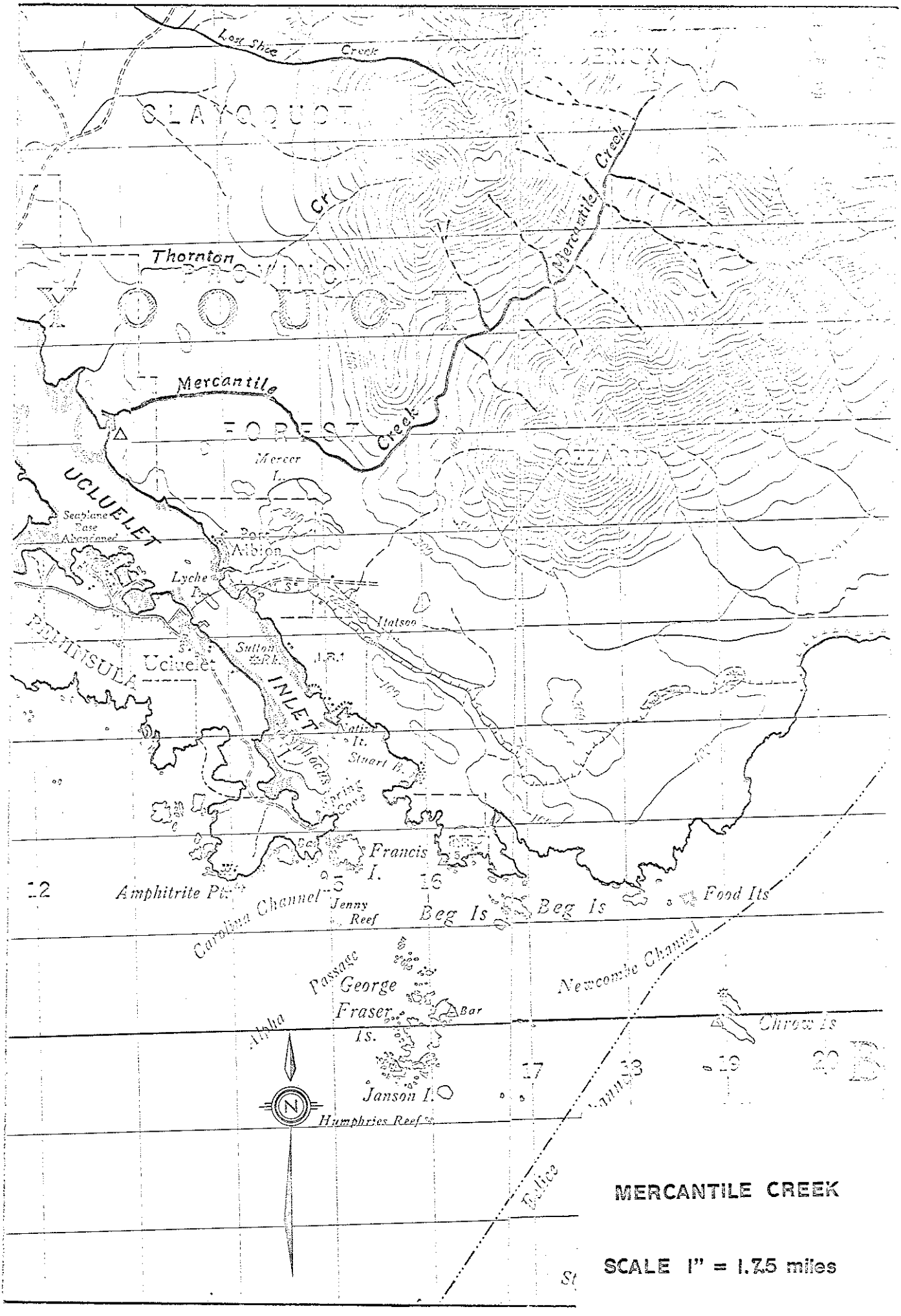
5. In the areas surveyed, it was found that in both streams a great number of pools existed which appeared to be suitable rearing areas. An estimated 50,000 square yards (surface area) was found in Draw Creek alone. Maggie Lake itself (1.1 square miles) is also considered to be a suitable rearing area.

6. While coho fry were numerous in most places surveyed, there was no indication that all available rearing area was being utilized to the fullest of its potential.

V. RECOMMENDATIONS

Further study is necessary to ascertain the extent of coho migration and utilization of available spawning grounds in upper Draw Creek. However, from the survey conducted to date, it is concluded that re-construction of the fishway at Maggie Falls would most certainly benefit the system by permitting a larger number of fish to enter the lake and utilize more fully the spawning and rearing areas in the watershed.


MAGGIE RIVER
Sketch, 1969
Scale: 1/2 inch = 1 mile
Draw Creek
Coho
Bridge
Coho
Maggie Lake
Falls & Fishway passable
Chums


Lost Shoe Creek
SLAYOQUOT
Cr
Mercantile Creek
Thornton
PROVINCIAL
FOREST
Mercantile Creek
Mercer L.
UCLUELET
Seaplane Base Abandoned
Port Albion
Lyche Pt.
Utatsoo
PENINSULA
Uclulet
Sutton Rk.
INLET
Kelsey Is.
Stuart I.
Francis I.
Amphitrite Pt.
Carolina Channel
Jenny Reef
Beg Is
Beg Is
Food Its
Passage
George
Fraser
Is.
Bar
Newcombe Channel
Chirow Is
Janson I.
Humphries Reef
Alpha
Police
MERCANTILE CREEK
SCALE 1" = 1.75 miles

NAME OF STREAM MERCANTILE CREEK (MILL)

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH East side of Ucluelet Inlet, 1.5 miles from head.

POSITION 48 125 NW

LENGTH 7 3/4 MI. WIDTH 30 FT. DRAINAGE 8 SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER 10% COARSE 50% FINE 30%

SILT & SAND 10% UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 -10.0	
> 10.0	

WETTED AREA 2,000 SQ.YD. SPAWNING AREA 1,500 SQ.YD.

DISCHARGE 50 CFS MAX. _____ MIN. 10 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Falls and cascades 100' vertical in 200' length. Impassable.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	
CHUM	mouth to falls
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil, due to the village of Ucluelet's water supply.

GENERAL REMARKS: Village of Ucluelet's water supply and a heavily logged watershed.

ESCAPEMENT RECORD FOR MERCANTILE (MILL) CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50				400		
51				200		
52				25		
53				75		
54				200		
55				75		
56				75		
57				200		
58				750		
59				1500		
60				75		
61				75		
62				25		
63				400		
64				75		
65				75		
66				750		
67				75		
68				200		
69				400		
70				400		
71				200		
72				200		
73				200		
74						
75						
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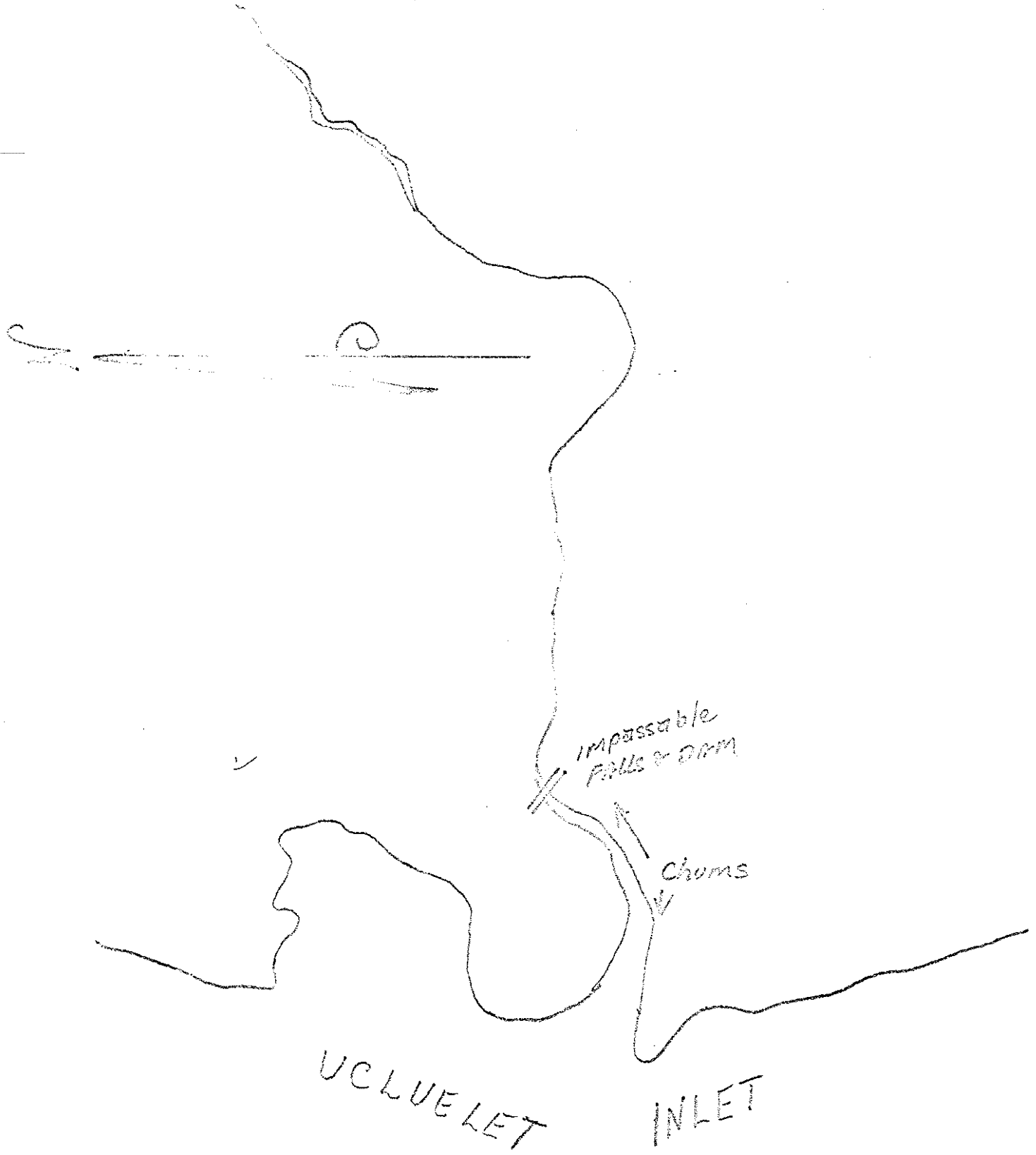
83						
84						
85						

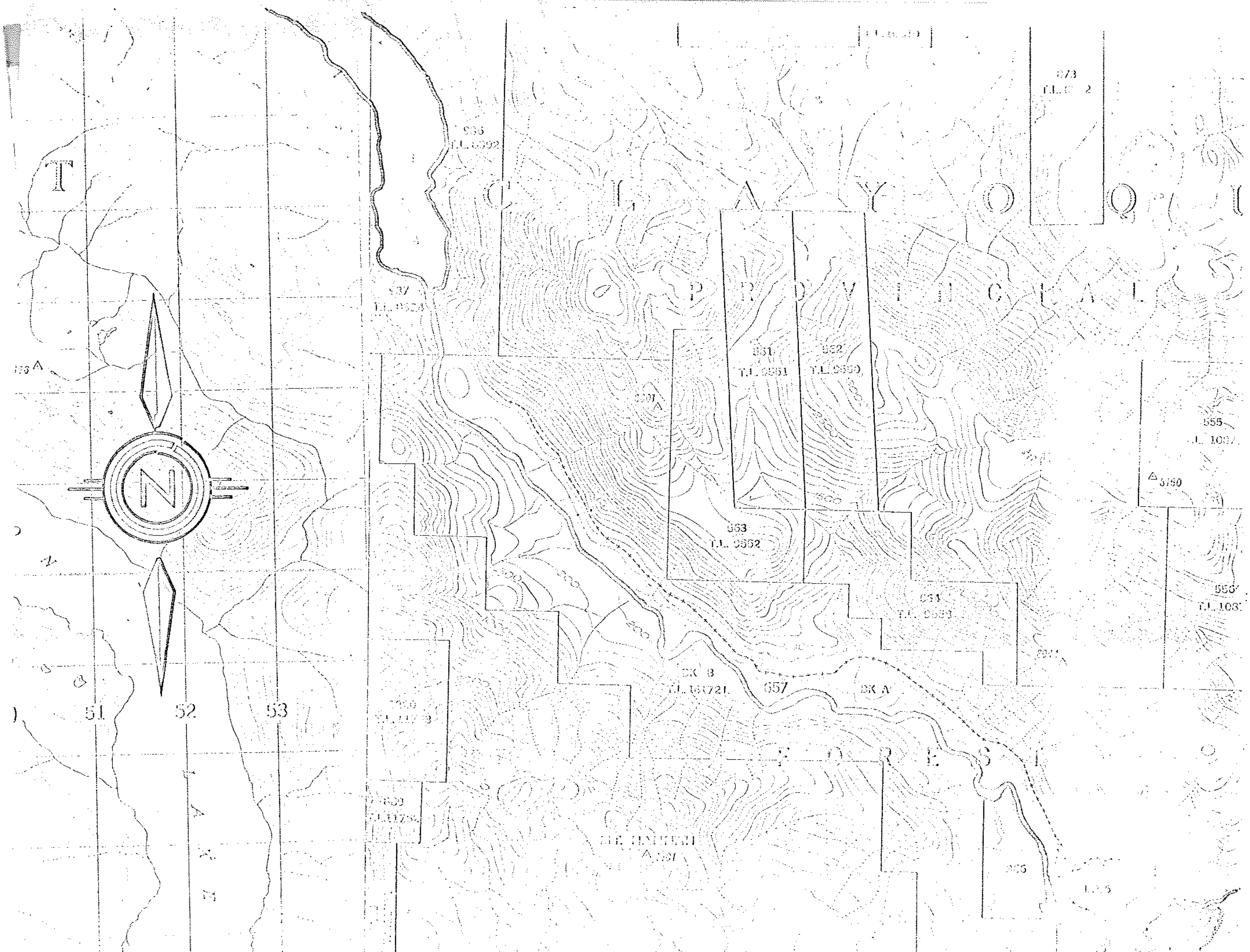
REMARKS



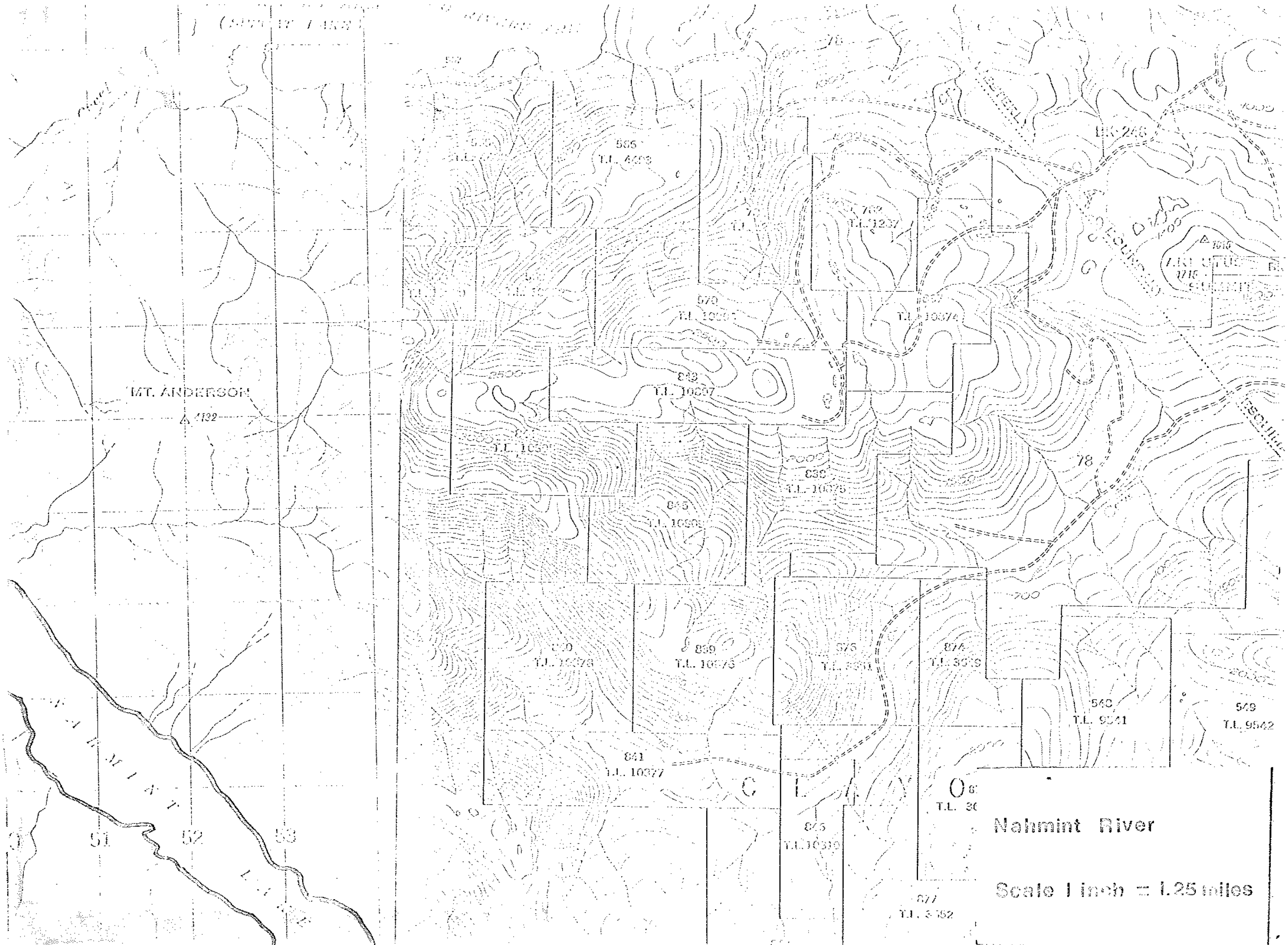
Mercantile Creek

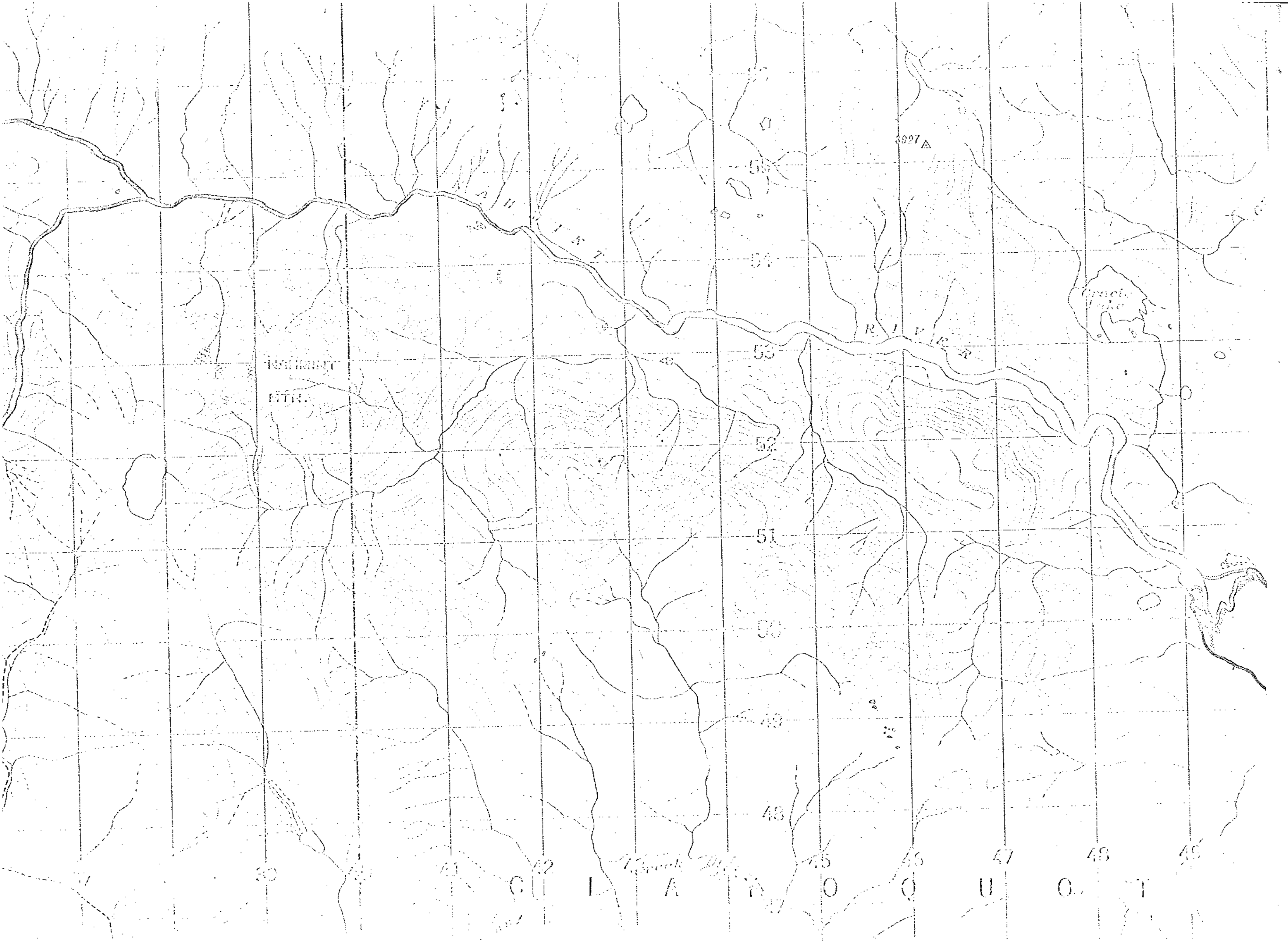
Sketch, 1969.

Scale: 7 inches = 1 mile



C L A Y O Q
P R O V I N C I A L
F O R E S
N
51
52
53
657
T.L. 8551
T.L. 8562
BK B
BK A


MT. ANDERSON
4132
565
T.L. 4693
762
T.L. 1237
843
T.L. 10897
839
T.L. 10975
841
T.L. 10377
548
T.L. 9541
549
T.L. 9542
78
51
52
53
Nahmint River
Scale 1 inch = 1.25 miles


3897
55
54
R I V E R
53
MTN.
52
51
50
49
48
41
42
47
48
49
C L A Y O Q U O T

NAME OF STREAM NAHMINT RIVER

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows SE through Nahmint Lake into Alberni Inlet - Alberni District. Lower 8 mi. upper 14. POSITION _____

LENGTH Lake 7 x 1 mi. MI. WIDTH 100 FT. DRAINAGE 100 SQ. MI.

COMPOSITION: BEDROCK 3% BOULDER 5% COARSE 70% FINE 10%

SILT & SAND 10% UNCLASSIFIED 2%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.6
2.5 - 5.0	
5.0 - 7.5	0.6 - 2.8
7.5 -10.0	
> 10.0	2.8 - 7.0

WETTED AREA 165,000 July /70 SQ.YD. SPAWNING AREA 14,000 SQ.YD.
DISCHARGE 4 - 500 CFS MAX. Very Heavy MIN. 100 CFS
TEMPERATURE 62 Dgr. F July 22, 1970
BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable rock falls 3 miles from mouth of river.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	lower 2.8 miles from tidewater
COHO	side channels and tributaries
CHUM	intertidal zone to first falls
PINK (Odd Yr.)	
PINK (Even Yr.)	occasionally only
STEELHEAD	mile 2 to lake and in River above lake to mile 3.0

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS: River is subject to slight predation by bears and birds. Some Somass River springs are cought in Nahmint Bay. Nahmint Bay Lodge under new management (1973) so increased angler activity expected in this area in the future. Suggestion made by officer McCulloch, that Robertson Creek development program be used to increase spring salmon populations in this system - heavy sport fishery in Nahmint Bay for large spring salmon. The Nahmint watershed will be developed for logging in approximately three to four years. (1973) The Nahmint River is one of the major salmon producing streams in Area 23. Steelhead have been observed in all portions of river and in river above lake.

ESCAPEMENT RECORD FOR NAHMINT RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48		7500	3500	35000		400
49		7500	750	50 000		400
50		7500	7500	75000		400
51		3500	1500	35000		400
52		3500	750	15000	750	400
53		3500	1500	100,000+	N/O	400
54		3500	75	75000	200	400
55		3500	75	3500	1500	400
56		750	200	7500	200	400
57		400	200	15000	—	400
58		400	200	35000	75	WINTER & SUMMER
59		1500	400	15000	25	400
60		750	75	7500	75	400
61		1500	200	7500	200	750
62		400	200	15000	25	750
63		1500	200	15000	N/O	400
64		400	200	10,000		400
65		400	200	35,000	N/O	
66		750	400	15000	N/O	
67		400	200	35000	N/O	
68		1500	400	75000		
69		750	200	35000		
70		750	200	35000		750
71		3200	400	12 000		
72		900	200	35 000		
73		750	650	35 000		
74						
75						
76						
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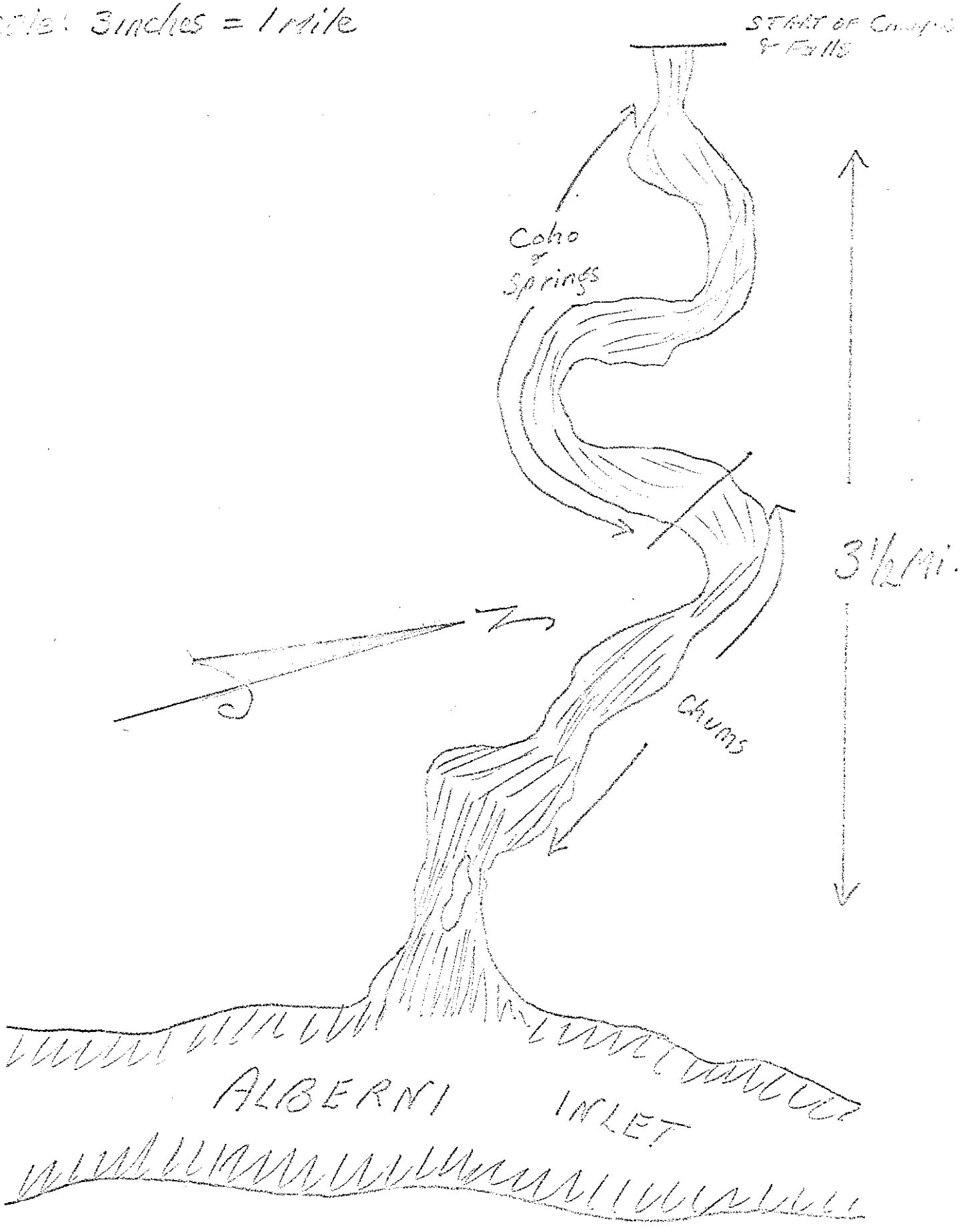
85						

REMARKS

Nahmint River Sketch 1969

Scale: 3 inches = 1 mile



Nitinat River

Scale 1 inch = 1.25 miles

NAME OF STREAM NITINAT RIVER

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows S into N end of Nitinat Lake - Renfrew and Barclay Districts. POSITION 48 124 NW

LENGTH _____ MI. WIDTH _____ FT. DRAINAGE _____ SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____

SILT & SAND _____ UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000	
2.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	

WETTED AREA _____ SQ.YD. SPAWNING AREA _____ SQ.YD.

DISCHARGE _____ CFS MAX. _____ MIN. _____

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Cascades at 10 miles, falls at 18 miles, both passable to steelhead.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	in lower reaches
COHO	
CHUM	throughout system to falls
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS: Nitinat River is subject to predation by birds and seals. Inversion of anaerobic water in Nitinat Lake on Oct. 14 and Nov. 22 (1970) caused mortality of many chum, some spring and coho. Watershed heavily logged off. River subject to flash flooding.

ESCAPEMENT RECORD FOR NITINAT RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48		750	750	7500		
49		750	750	1500		
50		3500	1500	75000		
51		3500	1500	7500		
52		750	7500	35000		400
53		750	1500	7500		400
54		750	1500	75000		400
55		750	3500	3500		400
56		400	750	35000		750
57		3500	750	15000		750
58		1500	1500	15000	200	750
59		400	750	15000	N/O	750
60		750	750	35000	25	750
61		1500	1500	35000		750
62		1500	1500	15000	75	750
63		1500	750	5000	N/O	750
64	25	3500	3500	35000	25	750
65	N/O	3500	3500	75000	N/O	
66	N/O	3500	3500	7500	N/O	
67	N/O	1500	3500	15000		
68		3500	3500	110,000		
69		1500	1500	11,000		
70	25	750	1500	40000		1000
71	25	1200	1500	50000		400
72		800	400	230,000		400
73		750	3500	160,000		
74						
75						
76						
77						
78						
79						
80						
81						
82						
83						
84						
85						

REMARKS

E.T. KASMER

NITINAT LAKE SALMON STOCKS

HISTORY AND CURRENT STATUS

The Nitinat Lake Salmon fishery developed shortly after the Great War. By 1925, when first records are available, a saltery at Brown's Bay, and a cannery at Wyach in Nitinat Lake were established. The saltery was abandoned shortly thereafter, and the cannery was abandoned in 1930 or 1931.

Information on the early fishery is somewhat sketchy. Very brief annual reports in some cases omitted escapement figures. For a period of ten years (1931-1940) Chum catches were included with Barkley Sound figures. During this period, escapement figures for Chums were sent directly to the District Supervisor by the Nitinat Warden, and are unavailable.

By reading and studying Annual Reports and Spawning summaries, clues to catches and escapements were picked up. Comparisons and references to other years were followed up, until the period was covered with reasonably accurate information.

Pink salmon were apparently non-existant in this area. The fishery was developed to exploit the large run of Chum into Nitinat Lake, and the Nobiton (Nobarton) River sockeye run was a small but attractive fishery for local fishermen during the early summer.

Good numbers of Coho and Spring Salmon were taken incidental to the Chum fishery in early years, although these species would not support a new fishery on their own. This narrative will be limited to the two main species exploited: Chum & Sockeye.

CHUM.

The large Chum stocks afforded an exciting fishery until the 1930's when the depressed world economic conditions affected the price of salmon, and the effort was reduced. Catch statistics for this period show a high catch of 410,000 chum in 1926; with a normal expected catch annually in the order of 200,000. In 1928 two seiners, the "Westview" and the "Florrie W", delivered 120,000 Chum each!

Escapements during this period were correspondingly good, affording such exclamations in annual reports as: "River filled with fish for seven miles." " You couldn't get another salmon into the river." " Best escapement ever seen.".

The price paid for chum in 1932 dropped to three cents each, and in 1933 ranged from eight to thirteen cents each. Effort in those years was reduced, and recorded catches ranging from 80,000 in 1933 to 130,000 in 1935 are not indicative of total stock. An exceptionally heavy late run in 1935 prompted a late opening on November 27th to exploit the overabundance of chum returning to the river. One seiner only fished during that period, returning with a deck load of fish iced down with fresh snow that fell during that week.

Records are especially scarce from 1936 to 1941. During

which period catches appear to have ranged from 200,000 in 1925 to 25,000 in 1940. Smaller escapements are referred to in annual reports. An optimum escapement for the Nitinat River ranges from 100,000 to 250,000 chum. This had been achieved in most years to 1936 when escapement appears to have dropped annually until a low figure of 4,000 in 1945 was recorded.

During this period logging in the Nitinat River watershed increased at an accelerated pace, and continued to increase until the present day. By 1960 large areas of the valley were denuded of forest cover, especially in the upper Nitinat area. There is little doubt that the logging-off of large areas of forest cover has influenced an adverse run-off pattern that silted and eroded chum spawning grounds. An inspection of the stream shows a very unstable pattern of shifting bars and riffles; and fresh evidence of some erosion is visible after every heavy rain.

Fairly accurate records for chum salmon are available after 1942, and these show a trend of very low escapements, and catches quite out of proportion to total stock. Attempts at conservation by boundary movements and early closures failed to ensure adequate escapements, and would indicate extremely difficult assessment and management conditions.

Very high rates of return (as high as 32 to 1) during the 1940's and early 1950's appear to be the salvation of this run during this period. When the rate of return declined sharply in the late 1950's a complete closure to commercial fishing had to be implemented. Due to this high and erratic rate of return, no single dominant year class is evident.

Nitinat chums were classed as predominantly four-year fish, and this is used in the accompanying graph and analysis. A change in ratio of three-year and four-year fish may also have some effect on the erratic pattern in Nitinat chum stocks.

The chum producing streams flowing into Nitinat Lake are the Cayoosh, Deobah, Campus, Hobiton(Holberton) and the Nitinat River. The smaller streams have had recorded escapements of chum as high as 15,000 each. However the Nitinat River with its capacity to accomodate over 250,000 chum is recognized as the stream that a fishery must depend on.

For the following assessment, and on the graph, total escapement to Nitinat Lake streams is used since management of this fishery cannot be tied to any one stream except the Nitinat River, though all must contribute to the assessment.

<u>ASSESSMENT BY CYCLE.</u>

<u>1942</u> This cycle shown in red on the accompanying graph returned fairly strong in 1946 but were severely over fished leaving only 11,000 escapement. These returned at over 30 to 1 in 1950. A good escapement that year (75,000) returned an excellent stock in 1954, and another good escapement. The heavy total stock of 220,000 in 1958 was again overfished leaving only 15,000 escapement which returned only 20,000 in 1962 when there was no commercial fishery. The 1966 total return from this spawning was only 9,000.

<u>1943</u> This cycle shown in green produced a stock of 70,500 from the recorded escapement of 7500. This stock was split between the fishery and escapement in 1947. Return in 1951 was 40,000 with only 15,000 left for spawning after the fishery. 1955 showed no improvement with 7,000 catch and 14,000 escapement which produced

only 26,000 in 1959 when the area was closed to fishing for conservation purposes. This cycle, not fished since 1955, returned only 7,500 in 1963, with better indications in 1967 when 20,000 were recorded.

1944 Shown in blue, the 1944 escapement of 6,000 returned at 20 to 1 in 1948 with 100,000 catch and only 16,000 escapement. The area was closed to fishing in 1952 due to low returns and poor water conditions, and the spawning stock of 51,000 produced a catch of 116,500 in 1956 and left 50,000 escapement. This cycle was the last one fished commercially in Nitinat Lake in 1960 when 49,000 were taken leaving 45,000 escapement. The 1964 return of 44,000 was the same as the 1960 escapement.

1945 This cycle shown in yellow, has recovered slowly from the low escapement of 4,000 in 1945. No commercial fishing was permitted in 1949 when only 5,000 chums returned. 75,000 returned in 1953, with 59,000 taken by the fishery leaving only 16,000 for spawning. The total stock in 1957 of 115,500 was again overfished leaving 30,000 escapement which returned only 44,000 in 1961. The return of a very conservative 85,000 in 1965 [illegible] is near the optimum escapement level.

CURRENT STATUS

1. Careful assessment and exploitation of the 1969 cycle returning from an 85,000-plus escapement in 1965.

2. Complete protection in 1970 and 1974 for the 1970 cycle returning from 9,000 escapement in 1966.

3. Complete protection for the 1971 cycle in that year, returning from a 20,000 escapement in 1967.

4. Careful assessment of the 1968 return from a spawning stock of 44,000 in 1964 with a view towards a fishery in 1972.

SOCKEYE

The first recorded commercial catch of sockeye from the Nitinat area was in 1927 when 6,570 sockeye averaging 1½ to 2 pounds were taken. The catch increased annually until 1932 when a total of 56,000 were taken. The average weight of the fish also increased to four pounds by that date. Seines were prohibited from the fishery after 1935. 56,000 sockeye were again taken in 1936 leaving a good escapement. Price paid in 1935 was 35 cents per fish.

A moderate fishery continued for twenty years until 1955 when only 400 sockeye were taken. The runs declined and fishing effort was reduced until complete closure to fishing was put into effect in 1959.

The Nobiton (Nobarton) River is the only sockeye producer flowing into Nitinat Lake. The optimum escapement seems to be in the order of 7,000 to 10,000 sockeye, with a fishery dependent entirely on survival conditions. There has been no logging in the Nobiton watershed to date, and spawning grounds are in relatively stable, virgin country.

The Indian Food Fishery has been under fairly close supervision, and has taken only a token portion of the runs. No single definite factor for the decline of this run, nor for the

1927 . This cycle shown in green on the accompanying graph, reached the optimum level of escapement in 1927, 1947 and again in 1967. However, the leaner escapement years produced total stocks ranging from 16,000 to 19,000. The 1947 escapement of 7,500 returned only 5,500 in 1951, with the fishery taking 3,500. In 1955 only 2400 returned with 400 of these taken by the fishery. 1959 stock increased to 3,000 returned at the same level in 1963 and increased to an optimum level of 8,000 in 1967.

1928 Shown in blue, this cycle was over-fished in 1940 leaving only 1,000 for escapement, but recovered in 1944 when 13,000 were caught with 7,000 escapement. A return of only 7,300 in 1948 left 2,000 spawners after the fishery, and these again returned at a high ratio producing a catch of 20,400 in 1952 and an escapement of 8,000. A downward trend in rate of return became evident in all cycles at this time, and in 1956 only 4500 returned with 1500 of these taken by the fishery which closed in the first week of June. The 1960 return of 4,500 was not fished and returned 7,500 fish in 1964. The 1968 return from this spawning was disappointing indeed, when only 2,000 sockeye were enumerated.

1929 This cycle, shown in yellow, produced a high total stock of 43,500 in 1933 and again in 1953. Optimum escapements were achieved in each cycle year until 1945 when 9,000 sockeye were taken and only 4,000 escaped to the spawning grounds. In 1949 a moderate catch of 11,400 was taken with an escapement of 7,500. This produced the large total stock of 43,500 in 1953. The return from the 7,500 escapement that year was very light in 1957. Fishing effort was negative after the first week when only one sockeye was taken. Only 2,500 spawners were recorded. The run doubled to 5,000 in 1961 and increased to 8,000 in 1965.

1930 Red on the graph, this cycle supported a fishery ranging from 31,000 in 1934 to 6,300 in 1950. Escapements for this cycle were at optimum levels up to and including 1954 when 7,000 reached the spawning grounds after a catch of 16,500. In 1958 no fishing effort was made due to poor showings, and only 5,000 spawners were recorded. These returned in the same numbers in 1962, and decreased to 4,000 in 1966.

CURRENT STATUS

1. The 1969 cycle returning from an optimum spawning escapement of 7,500 sockeye in 1965 should be kept under close surveillance from April 15th, to assess the strength of the run; with a view towards a short commercial opening possibly after May 15th when some escapement is assured.

2. The 1970 cycle returning from an escapement of 4,000 in 1966 should be protected in that year to ensure optimum escapement.

3. The 1971 cycle, returning from a 1967 escapement of 8,000, should receive similar action to that for the 1969 cycle.

4. The 1972 cycle may require complete protection during that year and possibly in 1976 depending on rate of return.

E. T. Kasmer,
Fishery Officer

Barkley-Kitsinat Area.

W. R. Hourston, Esq.,
Regional Director,
Department of Fisheries,
1155 Robson Street,
Vancouver 5, B.C.

September 18, 1968.

KLAMAT AREA

SUMMARY

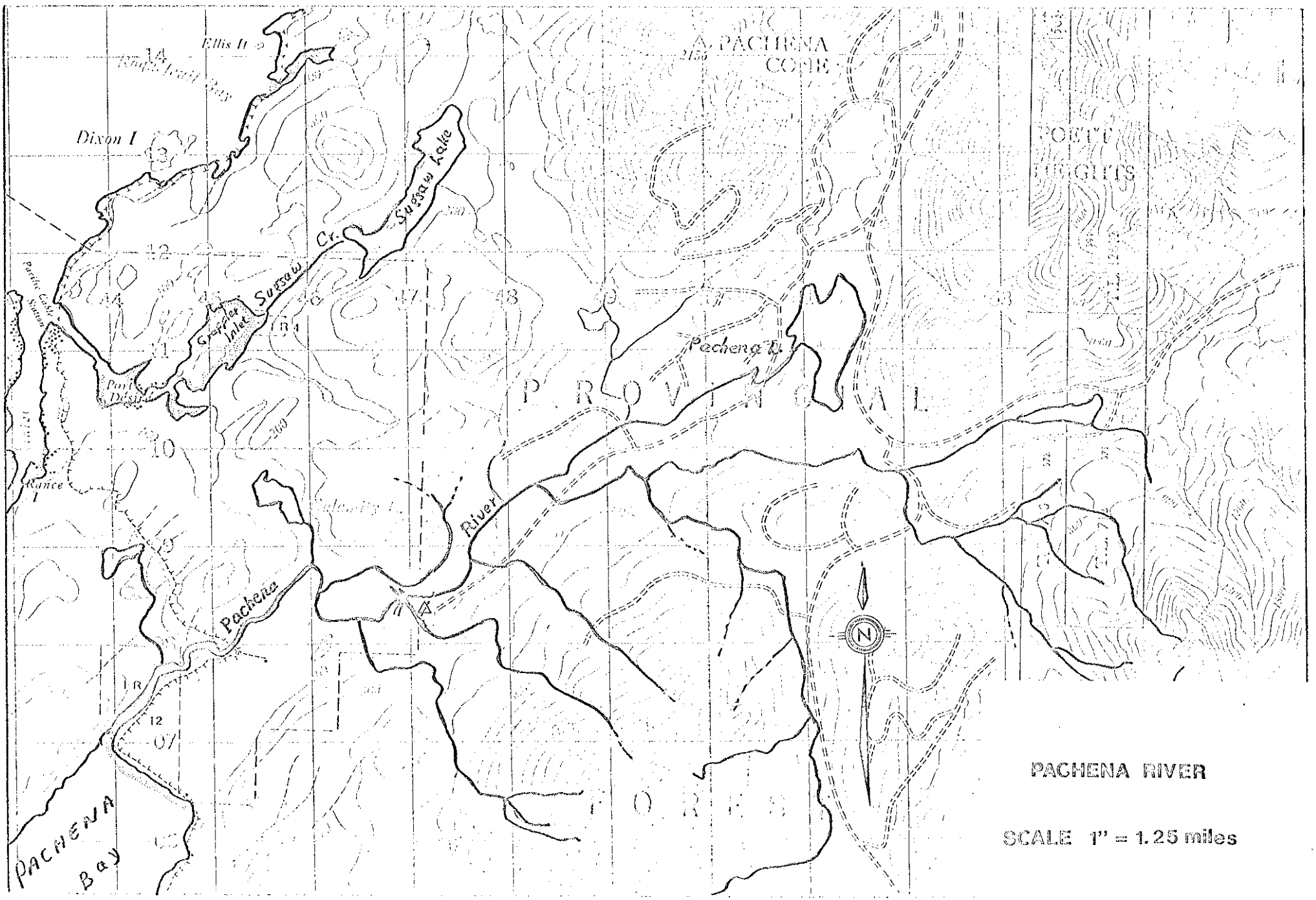
HONESON SOCKEYE

YEAR	STOCK	CATCH	ESCAPEMENT	RATE OF RETURN
1926			3,500	
1928	14,070	6,570	7,500	
28	17,200	12,200	5,000	
29	9,500	4,500	5,000	
30	27,700	20,200	7,500	8.0
31	29,500	24,500	5,000	4.0
32	63,500	56,000	7,500	12.5
33	43,500	36,000	7,500	8.5
34	36,170	31,170	5,000	5.0
35	20,600	17,100	3,500	4.0
36	63,500	55,000	7,500	9.0
37	22,500	15,000	7,500	3.0
38	28,500	26,000	2,500	5.5
39	17,000	13,500	3,500	5.0
40	14,300	13,300	1,000	2.0
41	26,500	19,000	7,500	3.5
42	30,500	23,000	7,500	12.0
43	18,500	15,000	3,500	5.5
44	20,000	13,000	7,000	20.0
45	13,000	9,000	4,000	2.0
46	22,500	15,000	7,500	3.0
47	16,400	8,900	7,500	5.0
48	7,200	5,200	2,000	1.0
49	18,900	11,400	7,500	4.0
50	13,800	6,300	7,500	2.0
51	5,500	2,500	3,000	0.7
52	28,400	20,400	8,000	14.0
53	43,500	36,000	7,500	6.0
54	23,500	16,500	7,000	3.0
55	2,400	400	2,000	1.0
56	4,500	1,500	3,000	0.6
57	2,500	5	2,500	0.3
58	5,000	no effort	5,000	0.6
59	3,000	closed	3,000	1.5
60	4,500		4,500	1.5
61	5,000		5,000	2.0
		Food Fishing		
1962	6,000	1,000	5,000	1.2
63	3,750	750	3,000	1.2
64	7,500	500	7,000	1.8
65	8,000	500	7,500	1.6
66	5,000	1,000	4,000	1.0
67	9,500	1,500	8,000	1.2
68	2,300	200	2,000	0.3

SUMMARY

NITINAT CHUM

YEAR	TOTAL STOCK	CATCH	ESCAPEMENT NITINAT	ESCAPEMENT HOBITON	ESCAPEMENT OTHER	ESCAPEMENT TOTAL	RATE OF EXPLOIT
1925	320,000	220,000	80,000	15,000	5,000	100,000	
1926	375,000	225,000	135,000	10,000	5,000	150,000	
27	195,000	120,000	75,000	1,500	1,000	76,500	
28	560,000	410,000	135,000	10,000	5,000	150,000	
1929	350,000	250,000	90,000	7,500	2,500	100,000	3.5
30	210,000	160,000	45,000	2,500	2,500	50,000	1.5
31	200,000	100,000	85,000	10,000	5,000	100,000	2.5
32	175,000	75,000	90,000	7,500	2,500	100,000	1.2
33	120,000	20,000	90,000	7,500	2,500	100,000	1.2
34	100,000	40,000	50,000	7,500	2,500	60,000	2
35	250,000	150,000	90,000	7,500	2,500	100,000	2.5
36	155,000	80,000	70,000	4,000	1,000	75,000	1.5
37	125,000	75,000	45,000	3,000	2,000	50,000	1.5
38	150,000	100,000	40,000	7,500	2,500	30,000	2.5
39	125,000	50,000	70,000	3,000	2,000	75,000	1.5
40	60,000	25,000	30,000	4,000	1,000	35,000	0.8
1941	75,000	20,000	15,000	7,500	2,500	25,000	1
42	95,000	60,000	30,000	3,500	1,500	35,000	1.7
43	17,500	10,000	5,500	2,000	2,000	7,500	0.4
44	19,500	15,500	1,500	2,000	2,500	6,000	0.8
45	10,000	6,000	1,500	1,500	1,000	4,000	0.4
46	143,000	132,000	7,500	1,500	3,000	11,000	3.8
47	20,500	10,000	4,000	3,500	3,000	10,500	2.8
48	116,000	100,000	7,500	3,500	5,000	16,000	20. ?
49	5,000	closed	1,500	1,500	2,000	5,000	1.2
50	352,000	285,000	75,000	3,500	8,000	87,000	32 ?
51	40,000	27,000	7,500	3,500	2,000	13,000	3.0
52	51,000	closed	35,000	7,500	8,000	51,000	3.4
1953	75,000	29,000	7,500	7,500	1,000	16,000	15
54	305,000	217,000	75,000	8,000	5,000	88,000	3.6
55	21,000	7,000	5,000	7,500	1,500	14,000	1.5
56	100,500	110,500	35,000	7,500	7,500	50,000	3.2
57	115,500	85,500	15,000	7,500	7,500	30,000	?
58	228,000	205,000	15,000	8,000	4,000	23,000	3.7
59	26,000	closed	16,000	7,000	3,000	26,000	1.8
60	94,000	49,000	35,000	8,000	2,000	45,000	1.7
61	44,000	closed	35,000	7,500	500	44,000	1.9
62	20,000		15,000	3,500	1,500	20,000	.9
63	7,500		5,000	1,500	1,000	7,500	.3
64	44,000		35,000	7,500	1,500	44,000	1.
1965	65,000		75,000	3,500	7,000	85,000	2.0
66	9,000		8,000	400	600	9,000	0.4
67	20,000		15,000	3,500	1,500	20,000	2.3
68							



PACHENA RIVER

SCALE 1" = 1.25 miles

NAME OF STREAM PACHENA RIVER

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows SW into Pachena Bay, SE of Barclay Sound - Barclay District. POSITION 48 125 NE

LENGTH 10 1/3 MI. WIDTH 30 FT. DRAINAGE 12 SQ. MI.

COMPOSITION: BEDROCK 5% BOULDER 5% COARSE 30% FINE 30%

SILT & SAND 15% UNCLASSIFIED 15%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 1.5
2.5 - 5.0	1.5 - 4.0
5.0 - 7.5	
7.5 - 10.0	
& 10.0	4.0 - 5.5

WETTED AREA 100,000 SQ.YD. SPAWNING AREA 40,000 SQ.YD.

DISCHARGE 50 CFS MAX. MIN. 10 CFS

TEMPERATURE

BARRIERS OR POINTS OF DIFFICULT ASCENT Falls 10' high. 3.5 miles from mouth of stream and passable to steelhead.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	tributaries and scattered to upper reaches
CHUM	intertidal up to 1.5 miles
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	to upper reaches mile 5.5

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: Heavily logged watershed. Many small tributaries and swamps with little access in lower water. Pachena River is subject to predation by bears.

ESCAPEMENT RECORD FOR PACHENA RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			1500	200		200
49			3500	400		200
50			400	1500		
51			1500	1500		
52			3500	200		
53			400	750		200
54			1500	1500		200
55			1500	400		200
56			200	400		200
57			1500	1500		200
58			750	750		
59			400	400		200
60			200	75		200
61			750	400		200
62			200	200		200
63			75	200		200
64			750	200		200
65			200	200		
66			200	750		
67			200	1500		
68			750	750		
69			400	75		
70			750	75		200
71			400	N/O		75
72			400	200		
73			400	200		
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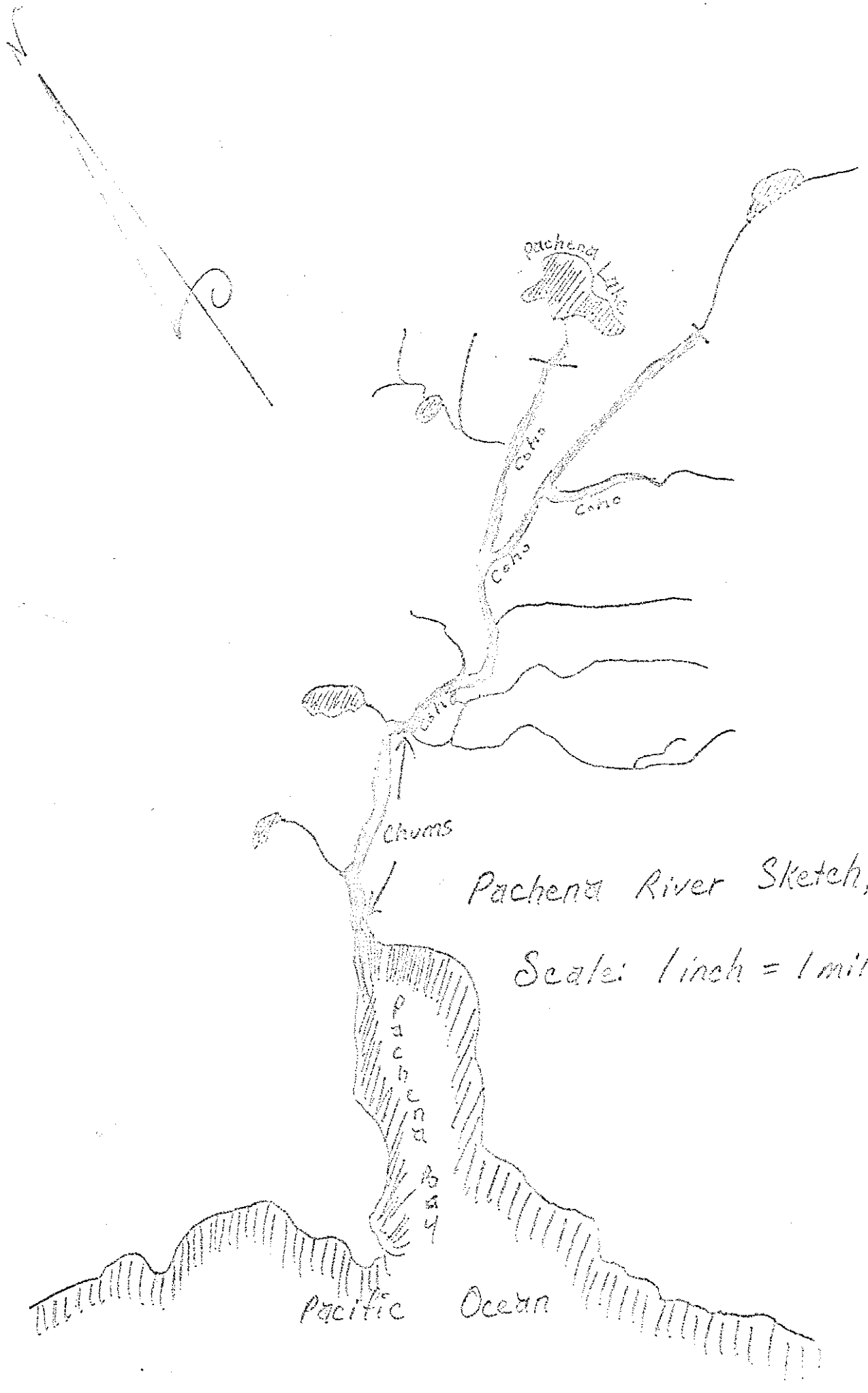
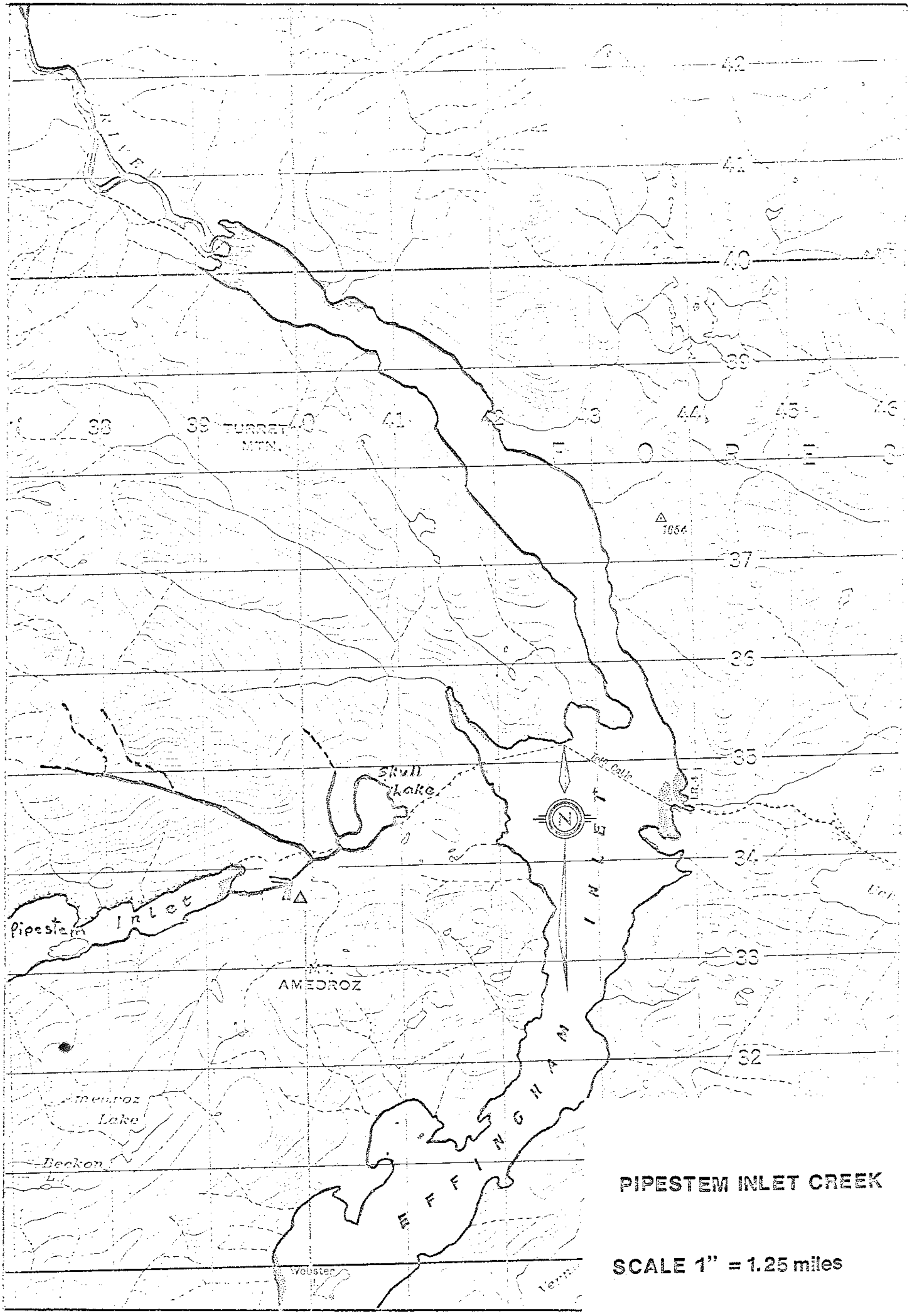
REMARKS



Pachena River Sketch, 1969.

Scale: 1 inch = 1 mile



PIPESTEM INLET CREEK

SCALE 1" = 1.25 miles

NAME OF STREAM PIPESTEM CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows W into Pipestem Inlet, E of Toquart Bay, W Effingham Inlet - Clayoquot District. POSITION 49 125 SE

LENGTH 2½ MI. WIDTH 15 FT. DRAINAGE 3 SQ. MI.

COMPOSITION: BEDROCK 10% BOULDER 15% COARSE 30% FINE 10%

SILT & SAND 15% UNCLASSIFIED 20%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.2
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	0.2 - 0.75

WETTED AREA 7,000 SQ.YD. SPAWNING AREA 2,500 SQ.YD.

DISCHARGE 30 CFS MAX. _____ MIN. 5 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable cascades and rock at 0.75 miles from mouth of stream.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	to mile 0.75
CHUM	to mile 0.75
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Very light.

GENERAL REMARKS: Typical west coast stream. Stream is subject to predation by bears.

ESCAPEMENT RECORD FOR Pipestem River

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			400	250		
49			25	700		
50			400	1500		
51			200	7500		
52			200	750		
53			75	1500		
54			25	1500		
55			25	400		
56			25	3500		
57			25	1500		
58			25	1500		
59			25	1500		
60			25	400		
61			25	750		
62			25	200		
63			25	200		
64			25	400		
65			25	200		
66			25	750		
67			75	400		
68			200	750		
69			200	750		
70			400	200		
71			25	200		
72			25	750		
73			400	750		
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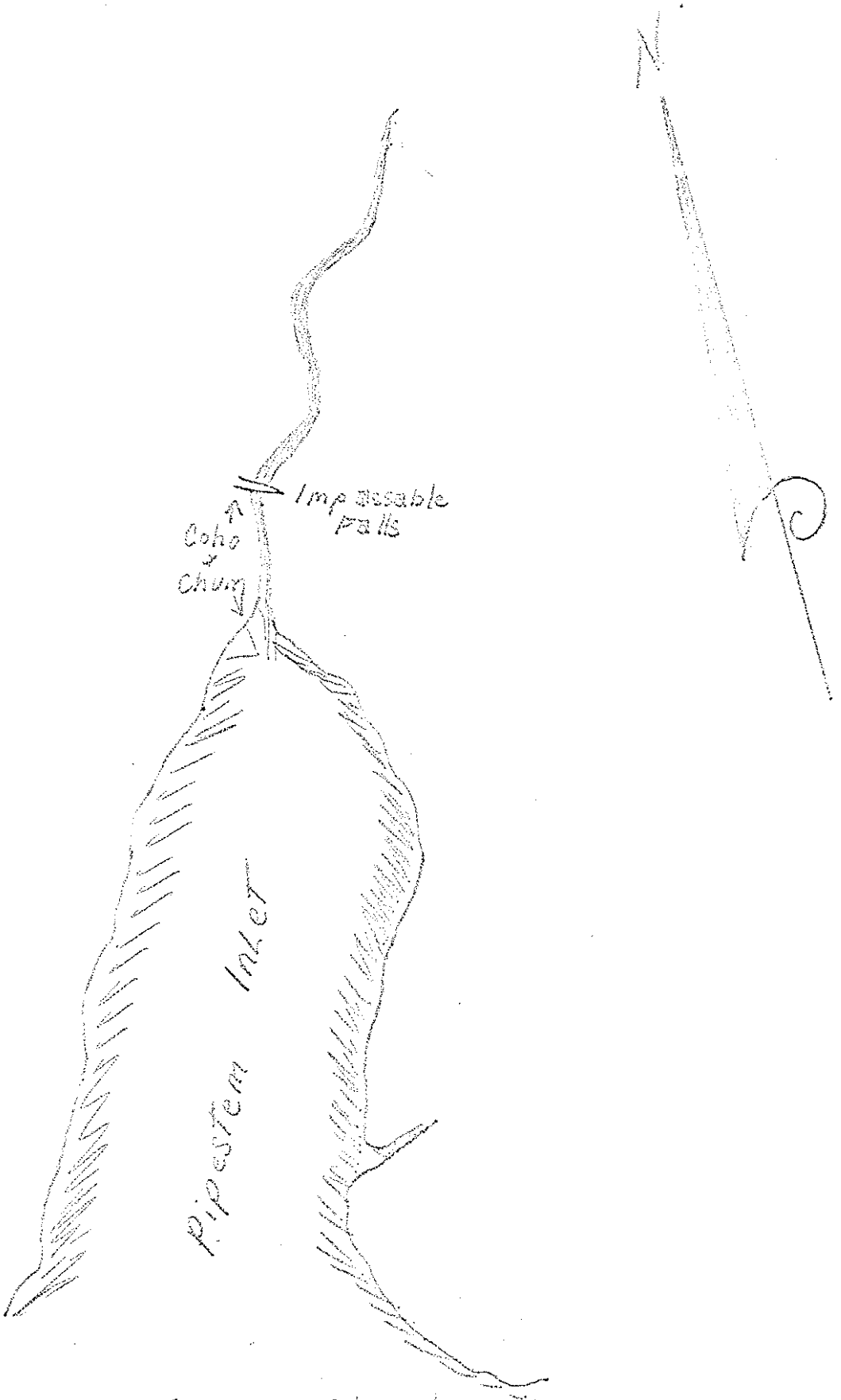
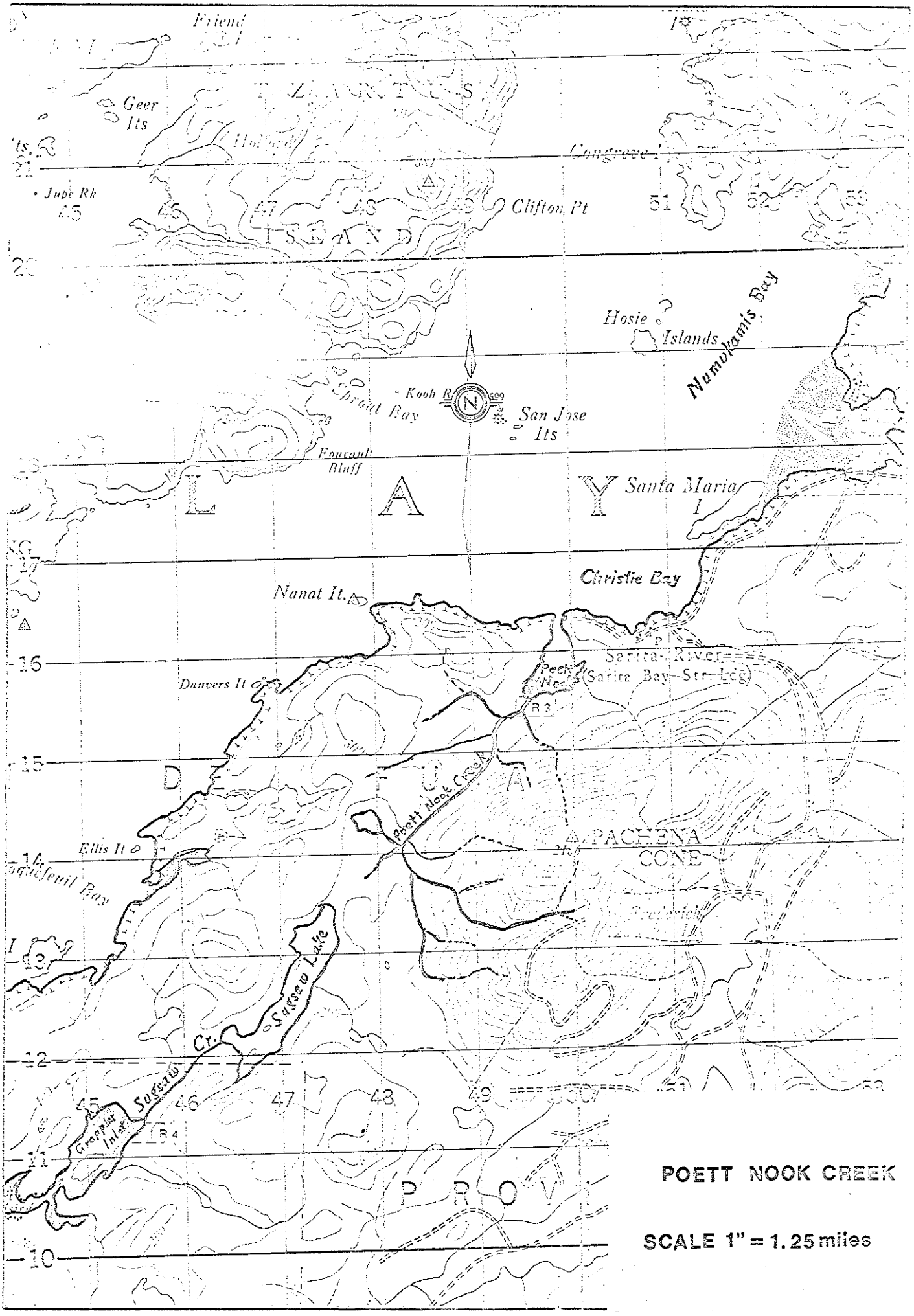
REMARKS



Pipestem Creek Sketch, 1969

Scale: 1 inch = 1 mile



POETT NOOK CREEK

SCALE 1" = 1.25 miles

NAME OF STREAM POETT NOOK CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows NE into Poett Nook, E of Imperial Eagle Channel, S of Christie Bay - Barclay District. POSITION 48 225 AE

LENGTH 5 MI. WIDTH 15 FT. DRAINAGE 2.5 SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER 10% COARSE 40% FINE 20%

SILT & SAND 20% UNCLASSIFIED 10%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.5
2.5 - 5.0	
5.0 - 7.5	0.5 - 1.5
7.5 - 10.0	
> 10.0	1.5 - 2.0

WETTED AREA 17,000 SQ.YD. SPAWNING AREA 7,000 SQ.YD.

DISCHARGE 20 CFS MAX. _____ MIN. 2.5 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Nil.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	0 - 2.0
CHUM	0 - 0.5
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: Typical small west coast stream. Stream is subject to predation by bears. Watershed logged heavily.

ESCAPEMENT RECORD FOR Poett Nook Creek

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			750	212		
49			750	1500		
50			400	1500		
51			400	400		
52			400	400		
53			200	200		
54			75	400		
55			25	200		
56			25	750		
57			25	400		
58			75	750		
59			25	400		
60			25	200		
61			25	75		
62			25	400		
63			25	25		
64			75	200		
65			25	75		
66			25	400		
67			200	200		
68			200	750		
69			75	400		
70			200	750		
71			75	750		
72			25	750		
73			200	400		
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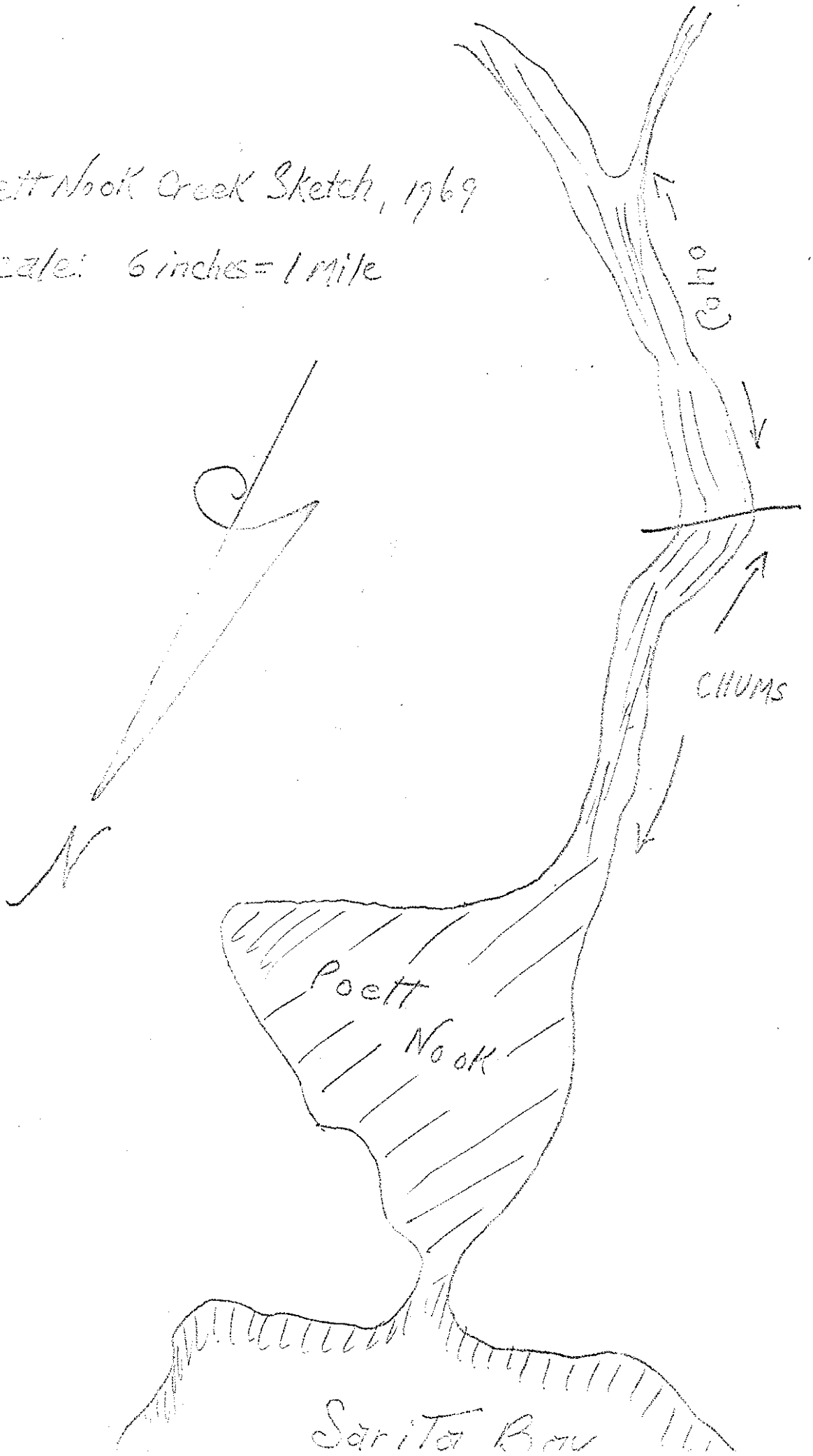
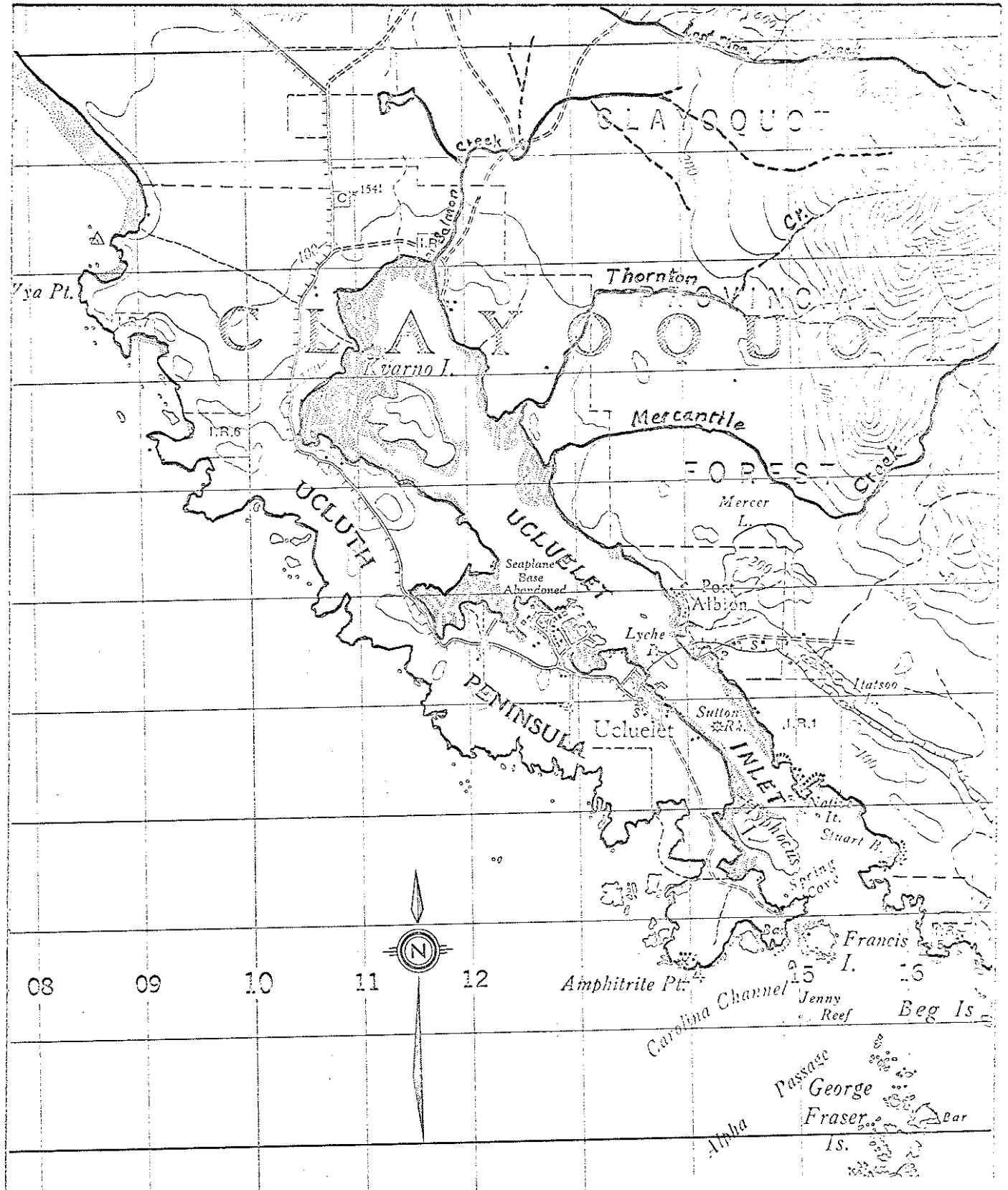
REMARKS

Poett Nook Creek Sketch, 1969

Scale: 6 inches = 1 mile





SALMON CREEK

SCALE 1" = 1.25 miles

NAME OF STREAM: [illegible] CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Head flows SW into head of Ucluelet Inlet - Clayoquot District. POSITION 48 125 NW

LENGTH 3 3/4 MI. WIDTH 12 FT. DRAINAGE 5 SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER 20% COARSE 30% FINE 30%

SILT & SAND 15% UNCLASSIFIED 5%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
10.0	

WETTED AREA 15,000 SQ.YD. SPAWNING AREA 7,000 SQ.YD.

DISCHARGE 30 CFS MAX. MIN. 10 CFS

TEMPERATURE

BARRIERS OR POINTS OF DIFFICULT ASCENT Nil.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	0.5 - 2.0
CHUM	0 - 1.5
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: Stream is subject to predation by bears and birds.

ESCAPEMENT RECORD FOR SALMON CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48				90		
49				750	25	
50				1500		
51				3500		
52				1500		
53				3500		
54				7500		
55				1500	25	
56				1500	N/O	
57				3500	N/O	
58				7500		
59			25	7500		
60			N/O	1500		
61			25	400		
62			25	750		
63			25	750		
64			25	750		25
65			25	200		
66			25	3500		
67			25	1500		
68			200	3500		
69			75	1500		
70			400	7500	25	
71			75	1500		
72			75	15000		
73			200	3500		
74						
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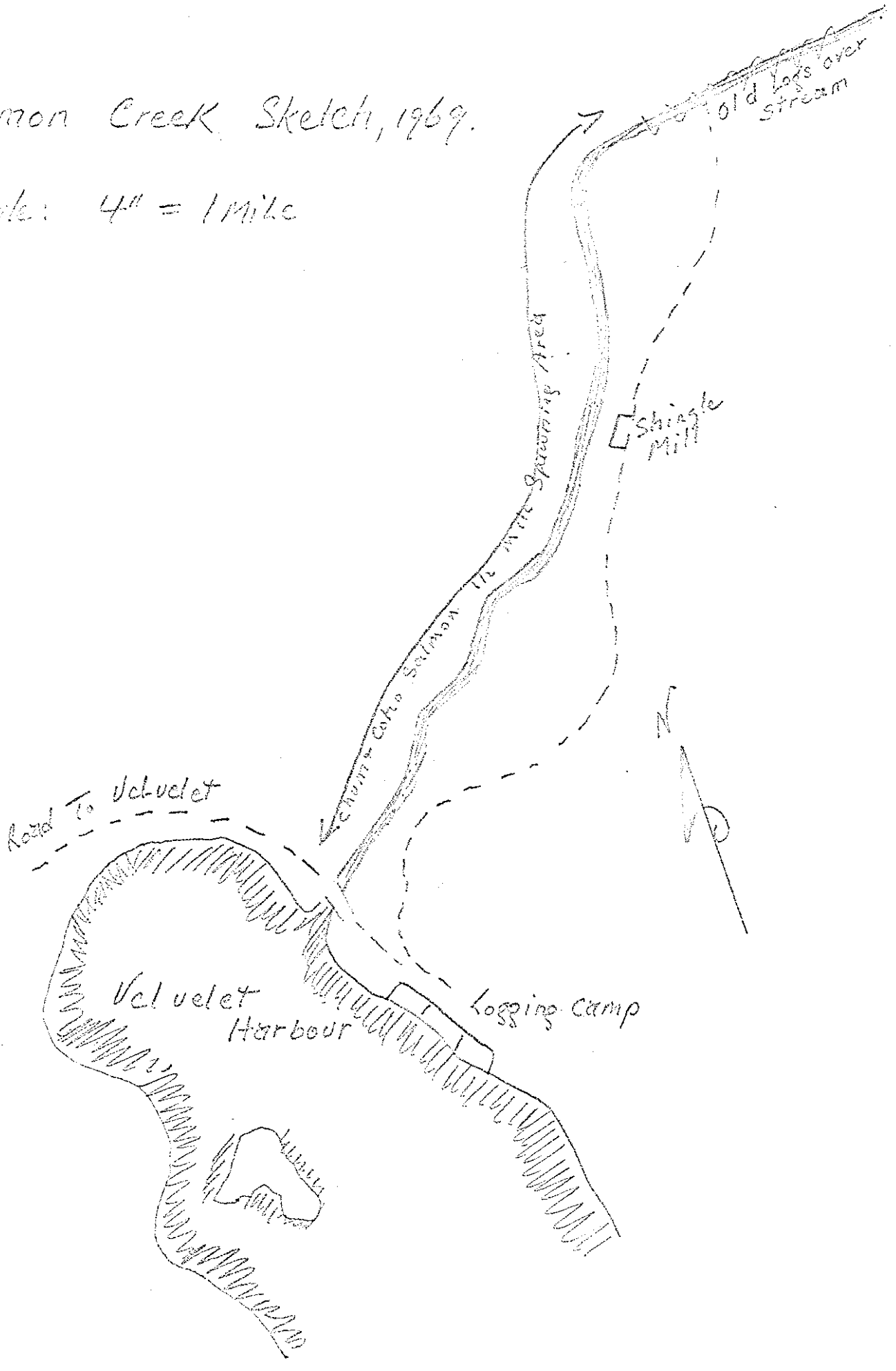
REMARKS

Salmon Creek Sketch, 1969.

Scale: 4" = 1 mile



SANDY CREEK

SCALE 1" = 1.25 miles

NAME OF STREAM SANDY CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows S into Trevor Channel near entrance to Ucluelet Inlet. POSITION 48 125 NW

LENGTH 5½ MI. WIDTH 15 FT. DRAINAGE 0.8 SQ. MI.

COMPOSITION: BEDROCK 10% BOULDER 20% COARSE 30% FINE 20%

SILT & SAND 10% UNCLASSIFIED 10%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.2
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	0.2 - 0.6

WETTED AREA 5,280 SQ.YD. SPAWNING AREA 2,600 SQ.YD.

DISCHARGE 15 CFS MAX. _____ MIN. _____

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable 12' falls 0.6 miles from mouth of stream.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	
CHUM	mouth to falls 0.6 miles
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: Typical west coast stream. Water supply for Indian Reserve. Stream is subject to light predation by bears and birds.

ESCAPEMENT RECORD FOR SANDY CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48				200		
49				75		
50				400		
51				750		
52				75		
53				75		
54				200		
55				200		
56				200		
57				400		
58				400		
59				400		
60				200		
61				200		
62				25		
63				25		
64				75		
65				200		
66				200		
67				200		
68				400		
69				75		
70				400		
71				200		
72				400		
73				200		
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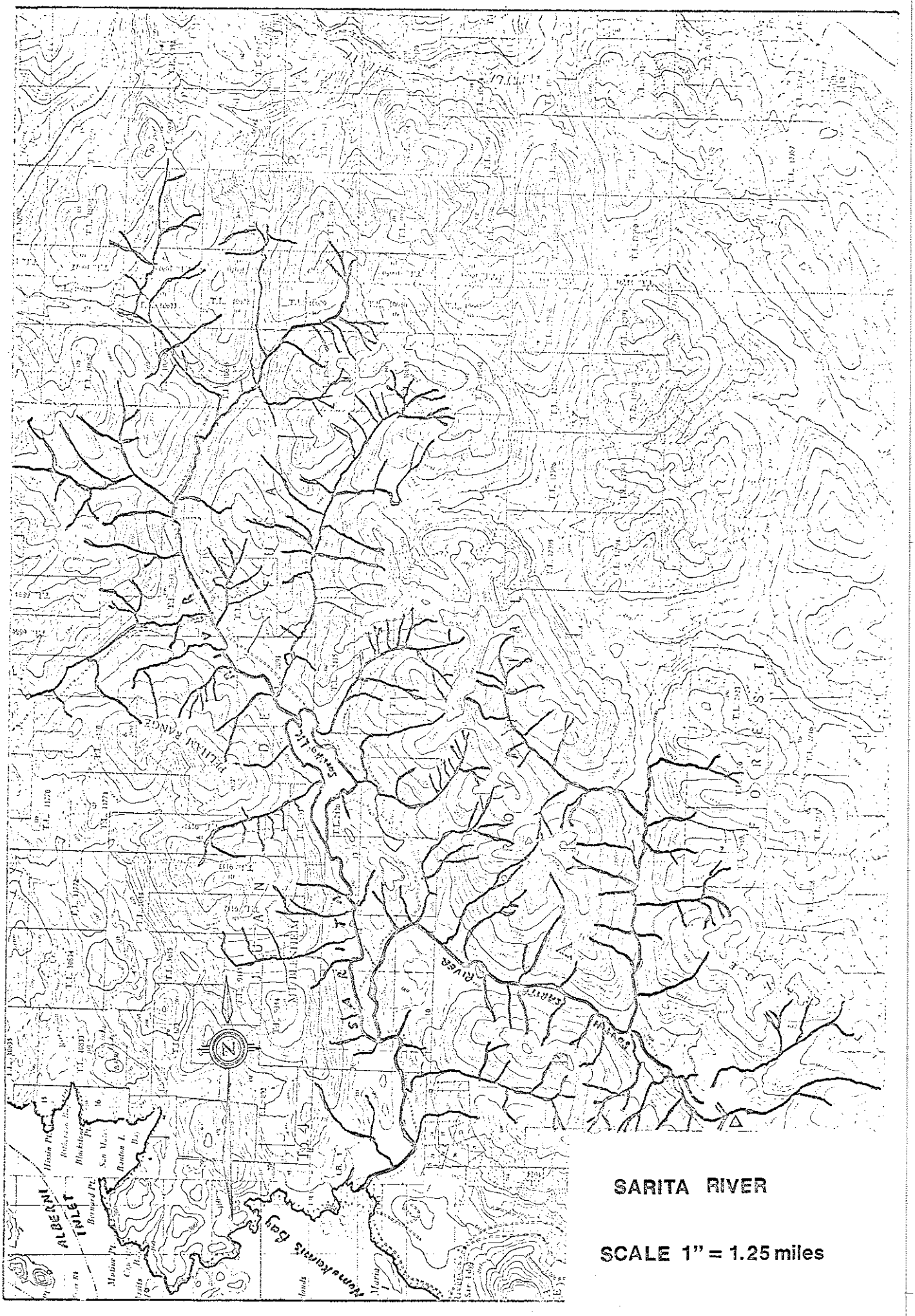
REMARKS

Sandy Creek Sketch, 1969.

Scale: 1 inch = 1 mile


SARITA RIVER
SCALE 1" = 1.25 miles

NAME OF STREAM SARITA RIVER

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows SW and NW into Numukamis Bay, E of Tzartus Island - Barclay District. POSITION 48 125 NE

LENGTHS fork 7½ MI. N fork above lake 7 mi. WIDTH 90 FT. DRAINAGE 65 SQ. MI. below lake

COMPOSITION: BEDROCK 10% BOULDER 10% COARSE 35% FINE 20%

SILT & SAND 20% UNCLASSIFIED 5%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 1.5
2.5 - 5.0	1.5 - 2.5
5.0 - 7.5	2.5 - 3.5
7.5 -10.0	
> 10.0	3.5 - 5 + 4 miles of the South Sarita

WETTED AREA _____ SQ.YD. SPAWNING AREA _____ SQ.YD.

DISCHARGE 100 CFS MAX. much MIN. 40 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable falls six miles from main stem on South fork.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	N Sarita to falls, mile 5, S Sarita to mile 1.5 from forks
COHO	N Sarita - mile 5 - S Sarita mile 2 from forks
CHUM	N Sarita to mile 5 - S Sarita, mile 1.5 from forks
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	N Sarita to mile 5 - S Sarita to mile 5 from forks

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Though the South Sarita is accessible to coho for five miles from the forks. The light coho population in this system may indicate excessive completion for rearing area and predation by steelhead smolts.

GENERAL REMARKS: Heavily logged watershed has changed water flows. Heavy exploitation of spring salmon near estuary. During late summer on Sarita and Somass River stocks changes in protection methods for this species contemplated.

ESCAPEMENT RECORD FOR SARITA RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48		200	750	35000		
49		400	1500	35000		
50		1500	400	35000		
51		75	15000	7500		
52		400	1500	15000	1500	
53		750	400	15000	N/O	
54		750	400	75000	25	400
55		200	400	15000		
56		200	400	35000	400	400
57		200	200	35000	N/O	400
58		200	750	35000	750	400
59		200	400	15000	25	400
60		200	200	15000	200	400
61		400	750	7500		400
62		200	400	15000	25	400
63		750	200	7500		400
64		400	750	35000	N/O	750
65		750	400	15000		
66		750	400	35000		
67		400	1500	40000		
68		750	1500	75000		
69		400	750	65000		
70		400	1500	35000		750
71		200	1500	50000		400
72		400	400	70000		
73		75	1500	50000		
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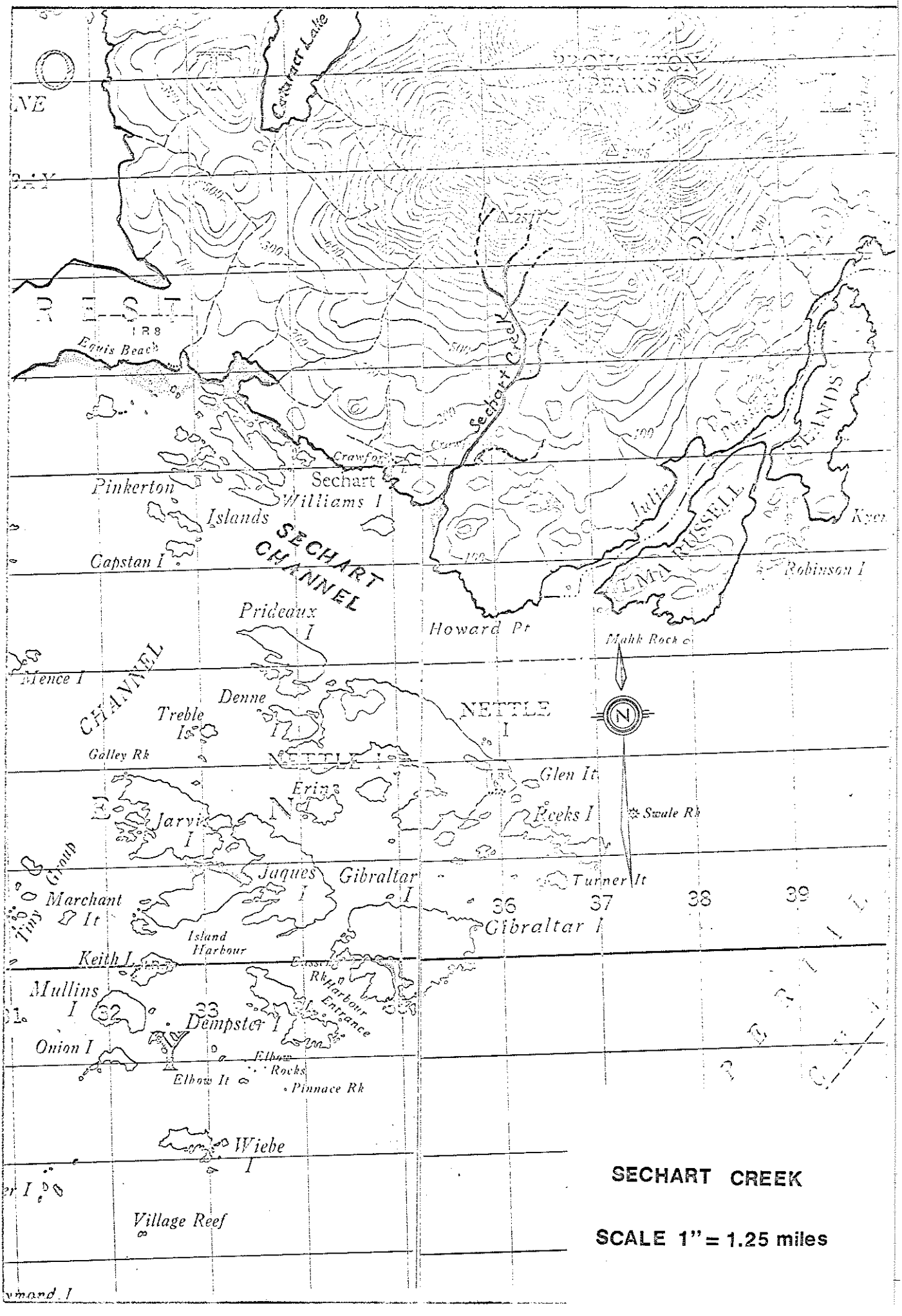
REMARKS

Sarita River Sketch, 1969.

Scale: 1 inch = 1 mile


Cataract Lake
Equis Beach
Sechart Creek
Crawford
Pinkerton Islands
Sechart Williams I
SECHART CHANNEL
Capstan I
Prideaux I
Howard Pt
Mahk Rock
Hence I
CHANNEL
Denne I
Treble Is
NETTLE I
Galley Rk
Glen It
Erins I
Jarvis I
Reeks I
Swale Rk
Jaques I
Gibraltar I
Turner It
Marchant It
Tiny Group
Island Harbour
Keith I
Mullins I
Dempster I
Harbour Entrance
Onion I
Elbow Rocks
Elbow It
Pinnace Rk
Wiebe I
Village Reef
36
37
38
39
SECHART CREEK
SCALE 1" = 1.25 miles

NAME OF STREAM SECHART CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows SW into Sechart Channel, 0.7 miles NW of Howard Point. POSITION 48 125 NE

LENGTH _____ MI. WIDTH 10 FT. DRAINAGE 1 SQ. MI.

COMPOSITION: BEDROCK 15% BOULDER 10% COARSE 30% FINE 30%

SILT & SAND 10% UNCLASSIFIED 5%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.1
2.5 - 5.0	
5.0 - 7.5	0.2 - 1.0
7.5 - 10.0	
> 10.0	0.1 - 0.2

WETTED AREA 5,000 SQ.YD. SPAWNING AREA 1,500 SQ.YD.

DISCHARGE 20 CFS MAX. _____ MIN. 2.5 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Cascades 8' x 15', 200 yards from mouth of stream. Passable to coho.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	to 1 mile
CHUM	intertidal to 200 yards
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: Typical small west coast chum stream, some predation by bears.

ESCAPEMENT RECORD FOR SECHART CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48				200		
49				75		
50				750		
51				750		
52				25		
53				400		
54			25	400		
55			N/O	200		
56				25		
57				400		
58				200		
59				200		
60				25		
61				75		
62				25		
63				200		
64				75		
65			25	25		
66			25	400		
67				75		
68			75	200		
69			75	400		
70			25	200		
71				25		
72				200		
73			75	200		
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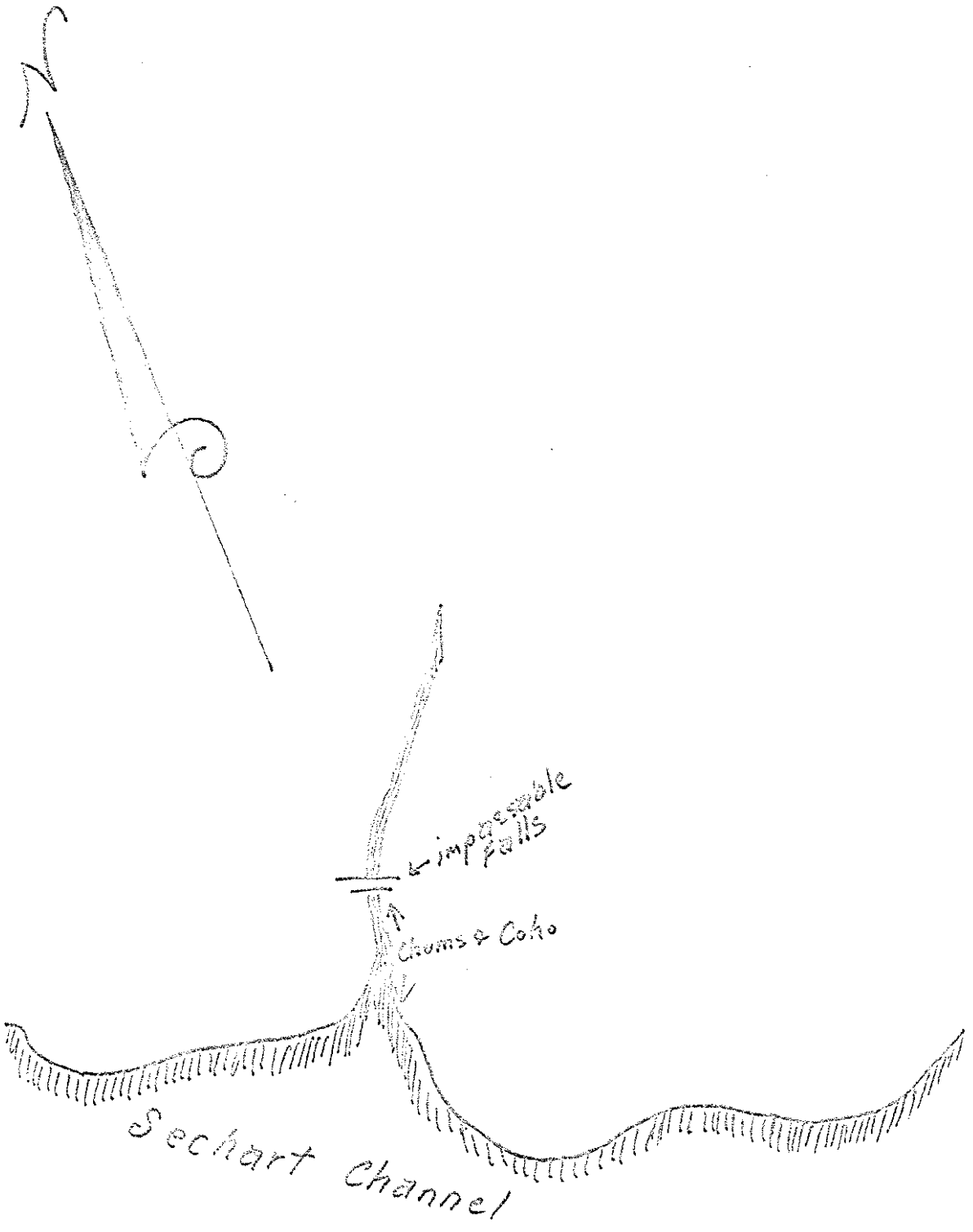
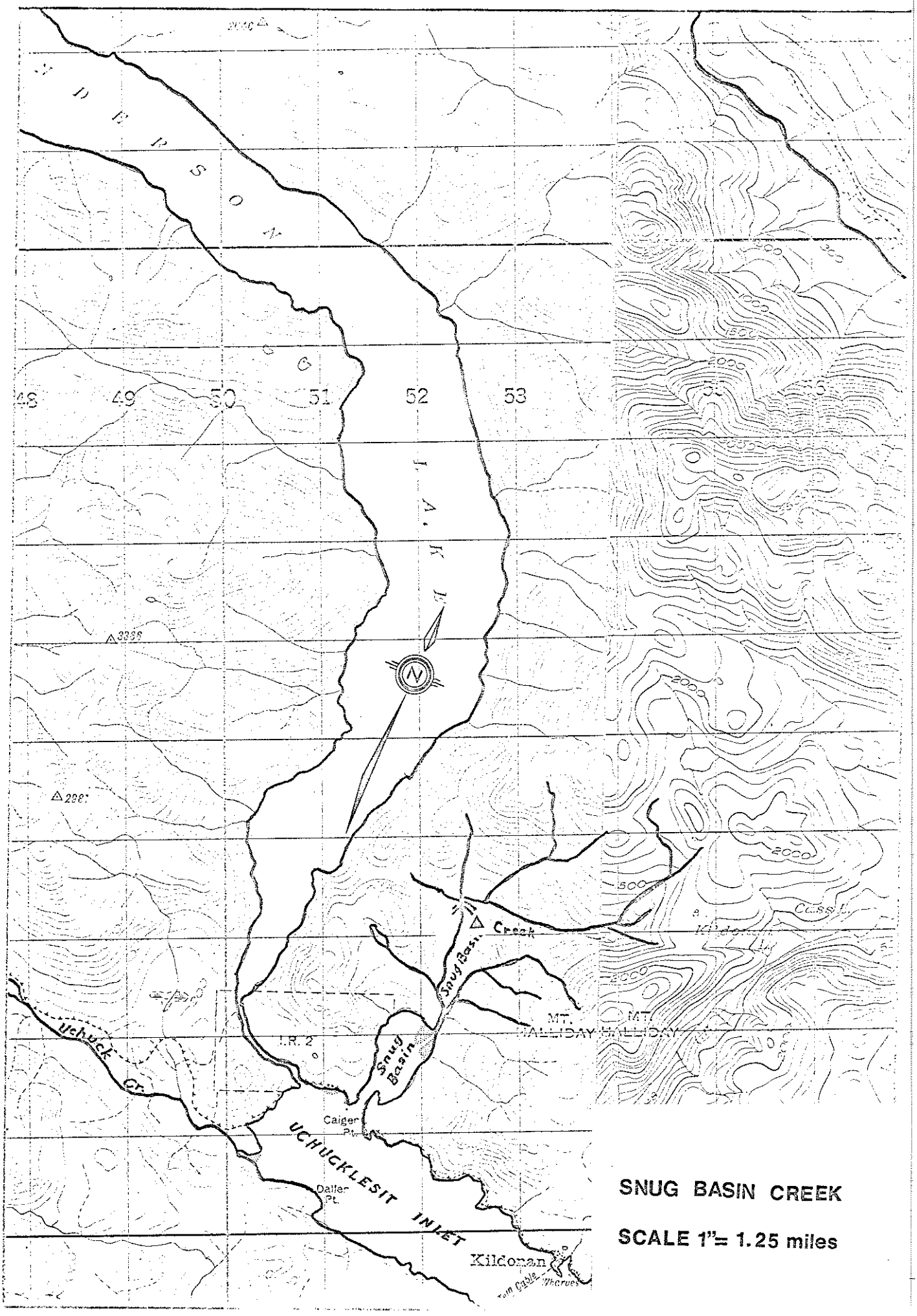
REMARKS



Sechart Creek Sketch, 1969.

Scale: 3 inches = 1 mile



SNUG BASIN CREEK

SCALE 1"= 1.25 miles

NAME OF STREAM SNUG BASIN CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows S into Snug Basin - Uchucklesit Inlet.

POSITION 49 125 SE

LENGTH 4 1/3 MI. WIDTH 12 FT. DRAINAGE 2 SQ. MI.

COMPOSITION: BEDROCK 10% BOULDER 10% COARSE 35% FINE 35%

SILT & SAND 10% UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.1
2.5 - 5.0	0.1 - 0.5
5.0 - 7.5	
7.5 -10.0	
> 10.0	0.5 - 0.75

WETTED AREA 6,000 SQ.YD. SPAWNING AREA 2,500 SQ.YD.

DISCHARGE 30 CFS MAX. MIN. 1 - 5 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable falls 0.75 miles from mouth of stream.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	0.2 - 0.75
CHUM	0 - 0.75
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS: Typical small west coast chum stream. Stream is subject to predation by bears and birds.

ESCAPEMENT RECORD FOR SNUG BASIN CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			400	3500		
49			400	1500		
50			400	1500		
51			400	3500		
52			400	750		
53			25	1500		
54			25	3500		25
55			75	750		25
56			25	400		25
57			25	1500		
58			75	1500		25
59			25	200		25
60			25	200		25
61			25	75		25
62			25	75		
63			25	25		25
64			25	75		25
65			25	25		
66			25	400		
67			25	200		
68			75	1500		
69			25	750		
70			75	750		
71			25	200		
72			25	1500		
73			200	1500		
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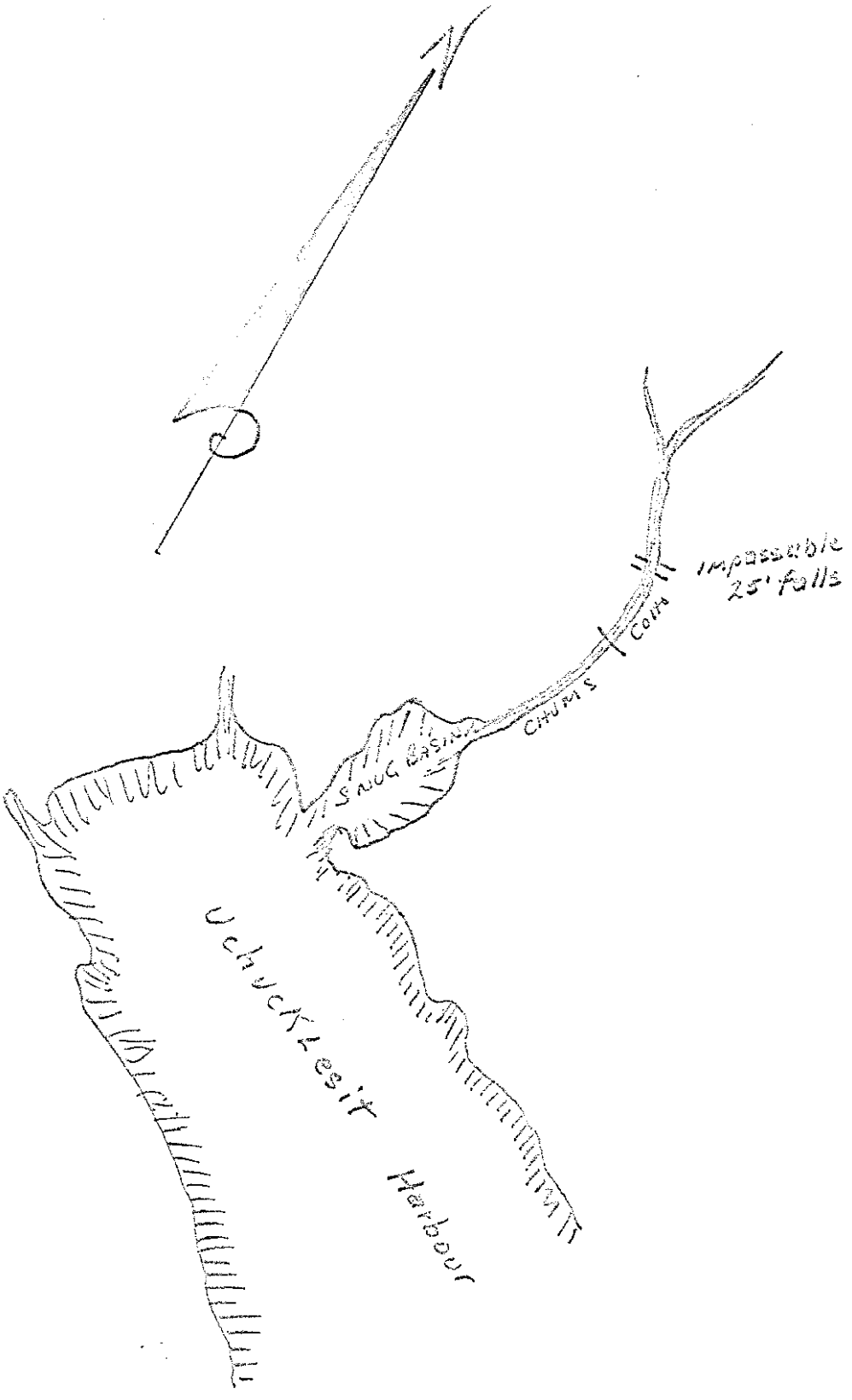
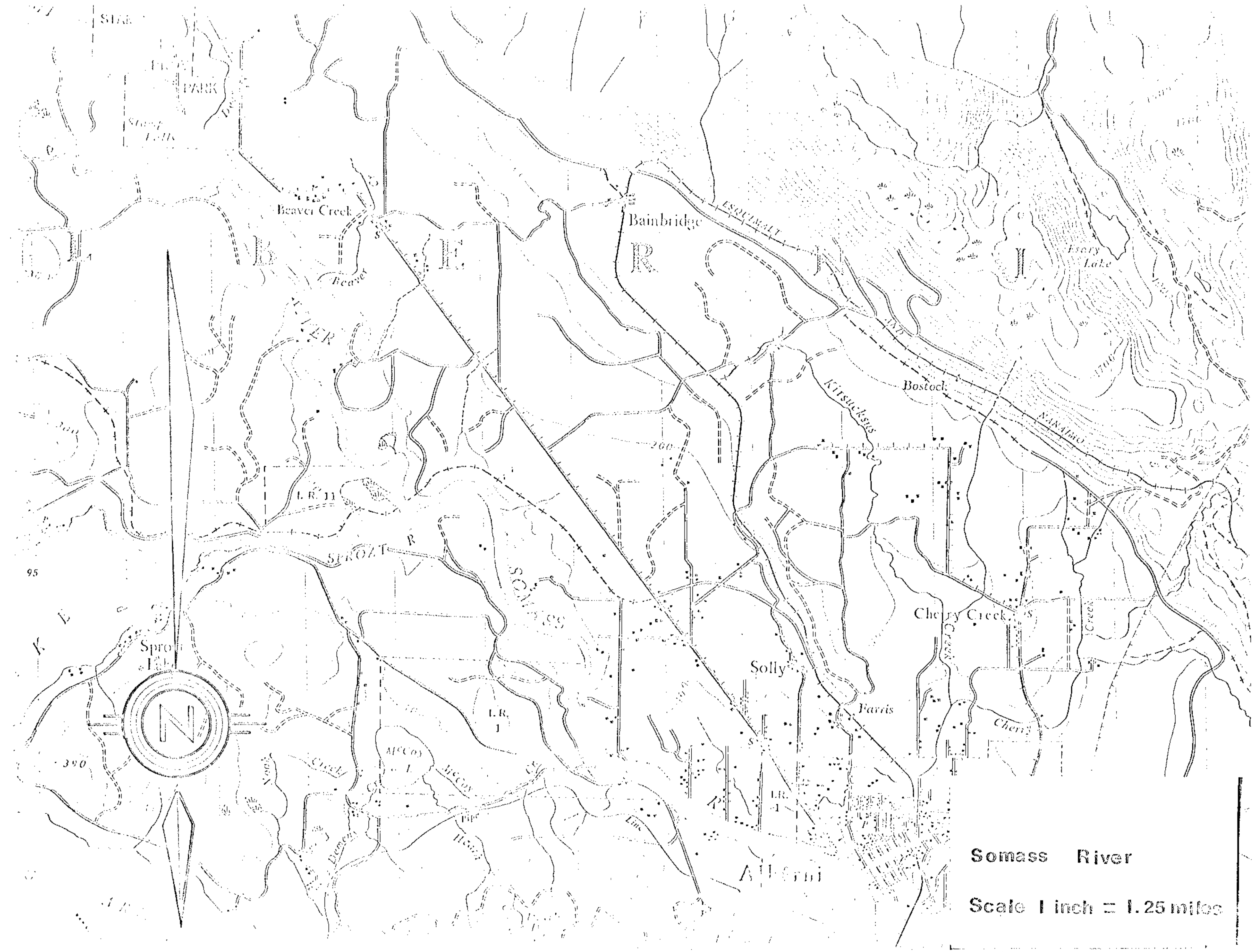
REMARKS



Snug Basin Creek Sketch, 1969

Scale: 2 inches = 1 mile



Somass River

Scale 1 inch = 1.25 miles

NAME OF STREAM SOMASS RIVER SYSTEM

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows SE and S through Alberni into Alberni Inlet - Alberni District. POSITION 49 124 SW

LENGTH _____ MI. WIDTH _____ FT. DRAINAGE 506.0 sq. mi.

COMPOSITION: BEDROCK _____ BOULDER _____ COARSE _____ FINE _____

SILT & SAND _____ UNCLASSIFIED _____

GRADIENT: FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 - 10.0	
> 10.0	

WETTED AREA _____ SQ.YD. SPAWNING AREA _____ SQ.YD.

DISCHARGE 4430 CFS MAX. 58,000 CFS MIN. 757.0 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT _____

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	Sproat Lake beaches, Taylor River, Great Central Lake
SPRINGS	Ash, Stamp, Sproat, Drinkwater and Somass Rivers
COHO	All tributary streams
CHUM	majority to Paper Mill Dam, few as far as Stamp Falls
PINK (Odd Yr.)	Stamp & Somass Rivers, Drinkwater River, Robertson Creek
PINK (Even Yr.)	Stamp & Somass Rivers, Drinkwater River, Robertson Creek
STEELHEAD	Stamp, Ash, Sproat, Taylor, Drinkwater, Kitsuckus, Rogers

POTENTIAL OF INACCESSIBLE PORTION OF STREAM See - "Ash River Survey - 1954" Dept. of Fisheries. The situation has changed considerably since damming of Elsie Lake and diversion of water by B.C. Hydro into Great Lake, in 1957 - 58.

GENERAL REMARKS: Somass River is one of the major salmon producers of the B.C. coast. Most of the information on water flows, spawning areas, obstructions, resource development programs are recorded in the many publications on this system. Small tributaries of from ½ mile to 5 miles in length add approximately 150 miles of coho spawning and rearing area to this system. Many of these are threatened by land clearing, farming, swamp drainage and civilization in general. A large woods products industrial complex is established at the mouth of the Somass River with all its attendent pollution problems. A large food fishery is carried on in the lower river. This system supports a good steady

GENERAL REMARKS Contd. gill net fishery for sockeye and a large sport fishery for the desireable, " Tyee" spring salmon. It is a major contribution to the off - shore troll fishery. Publications: "Salmon Spawning Ground Survey on the Somass River system 1956" - Dept. of Fisheries, Canada, Vancouver B.C. June 1957. In 1970, the Fisheries Research Board initiated a program of Lake fertilization in Great Central Lake in an attempt to increase sockeye production. This is to be a five year program. Dr. Parsons in charge.

ESCAPEMENT RECORD FOR Somass River

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48	50,000	7 500	40 000	750		400
49	200 000	7 500	15 000	1500		750
50	35 000	7500	35 000	7500		1500
51	100 000 +	7 500	35 000	15 000		750
52	15 000	7500	100 000 +	750		1500
53	35 000	7500	35 000	7500		15 00
54	35 000	7500	35 000	7500		35 00
55	35 000	7500	35000	3500		35 00
56	7500	15000	35 000	1500		35 00
57	100,000 +	7500	15 000	7500		35 00
58	35 000	15000	35 000	7500		35 00
59	35 000	7500	35 000	3500	N/O	35 00
60	35 000	7500	15000	3500	400	35 00
61	35 000	7500	35 000	3500	75	35 00
62	35 000	7500	35 000	3500	750	35 00
63	35 000	7500	35 000	1500	3500	35 00
64	35 000	15000	35000	750	75	35 00
65	35 000	7500	35 000	1500	3500	3500
66	75 000	7500	75 000	1500	1500	
67	75 000	15 000	75 000	1500	200	
68	99 000	17 500	60 000	3500	400	
69	115 000	13 000	35 000	2500	25	
70	36000	8500	130 000	3000	100	1500
71	67 000	13500	85000	1500	200	1500
72	137 000	9000	30 000	4000	400	
73	261 000	11 000	130 000	7000		
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82						
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REMARKS

SOMASS RIVER SYSTEM

General Remarks Cont'd

The Somass system, draining an area of 450 to 500 square miles, is comprised of the main stem 4½ miles long, and is formed by the joining of the Stamp and Sproat rivers draining Great Central Lake (20 sq. miles) and Sproat Lake (17 Sq. miles) respectively. The major tributary to Sproat Lake is the Taylor River over 15 miles long. Great Central Lake is fed by two large streams the Drinkwater and McBride rivers at the upper end, and the Stamp River has one major tributary, the Ash River. In addition to the above streams and lakes, the system has approximately 200 plus miles of smaller tributary streams which support an average population of 75,000 coho spawners.

Fishways and other facilities:

Fishways are located at Stamp Falls, Sproat Falls, Great Central Dam, and Macleans Mill Dam on Kitsuckeis Creek.

Great Central Lake Dam affords storage for a controlled minimum flow for dillution of pulp mill effluent in the estuary and Port Alberni Harbour.

B.C. Hydro Ash River project has minimum flow requirements in the Ash River.

McMillan Bloedel Pulp Mill water diversion from Sproat Lake is screened with a travelling screen.

Kitsuckeis Creek flood control project in the tidal area presents minor problems with access to tributary streams through flap gates.

Resource Development Spawning Channels and facilities at Robertson Creek were originally installed for a Pink Salmon transplant. Now used for research purposes.

Great Central Lake enrichment program was begun in 1970 by Fisheries Research Board of Canada in an attempt to increase sockeye production in that lake.

Industrial:

A very busy harbour and the City of Port Alberni lie directly at the mouth of the Somass River. Agriculture and residential development is on the increase in the valley, and water use for irrigation and domestic purposes is on the increase. Land clearing and draining is threatening many small coho streams. Port Alberni sewage will all receive primary treatment by spring of 1971. The lagoon drains into the Somass estuary. Most of the pulp mill effluent is now partially treated and aerated with the discharge from that lagoon entering Port Alberni Harbour. Industrial waste from other woods product mills discharges directly into Alberni Harbour.

Large volumes of wood fibre bark and chips still escape into the waters of Port Alberni harbour from sawmills, plywood plant and barkers, as well as log ponds and log dumps.

The watershed is logged off to approximately 50%, with 25% now regenerated to 25 year old stands of second growth.

Biological:

This system is characterized by an early sockeye run beginning in June, and peaking during the first week in July. Approximately 65% of total sockeye escapement enters Great Central Lake, with Sproat Lake taking the balance. These fish spawn during the latter part of October and early November. Four year old fish predominate.

The spring run is red fleshed, and supports an intense sport fishery in Alberni Inlet during August, September and October.

Coho enter the Sproat system early in August, and continue in the rest of the system until January. Peak of the spawning is in December.

A small (3000) chum run is maintaining itself in the Lower Somass River. The chum population was reported in the hundred thousands in the 1920's and early 30's. hopefully this specie may be rehabilitated in the future.

Pink salmon were introduced into the system in the late 50's, but have not developed into a major run.

Good winter and summer run steelhead populations are indigenous to the system.

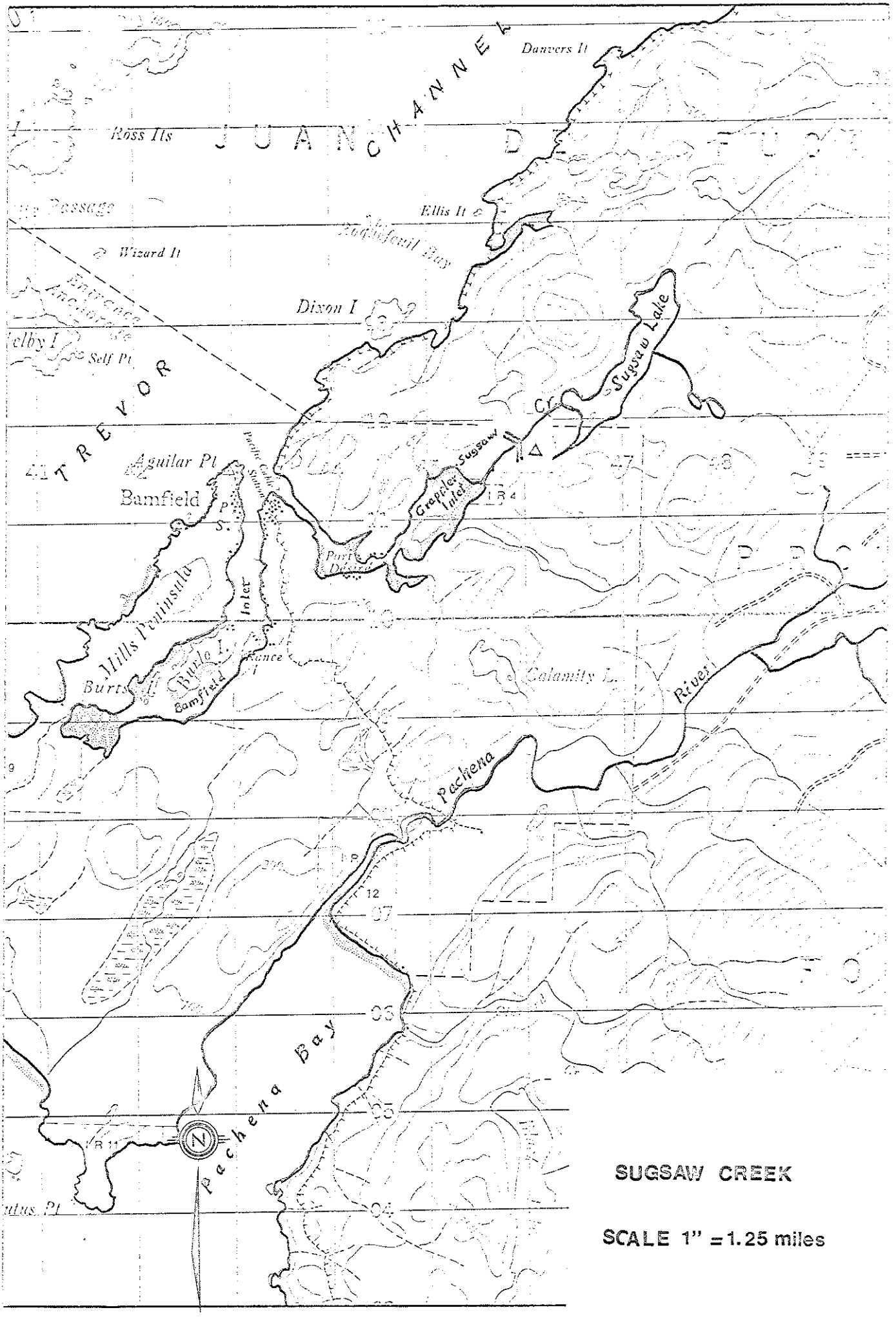
A large Indian population along the Somass River participates in a food fishery that takes an average of 3,000 sockeye annually.

Publications:

Numerous publications exist on the various projects and studies conducted on this system, including pollution problems from the pulp mill. These are not all on file at this office. I am sure that these can be found and enumerated from Resource Development Files.

Somas River System
Sketch, 1969

Scale: 1 inch = 4 miles


JUAN DE FUCA STRAIT
Danvers It
Ross Its
Ellis It
Wizard It
Dixon I
Entrance Anchorage
Self Pt
TREVOR
Aguilar Pt
Bamfield
Pacific Cable Station
Sugsaw
Sugsaw Lake
Cr
Grappler Inlet
Port Desire
Mills Peninsula
Burt
Burle L.
Bamfield Inlet
Calamity L.
River
Pachena
Pachena Bay
N
SUGSAW CREEK
SCALE 1" =1.25 miles

NAME OF STREAM SUGSAW CREEK (GRAPPLER)

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows SW into Grappler Inlet, E of Bamfield Inlet - Barclay District. POSITION 48 125 NE

LENGTH 1½ MI. WIDTH 8 FT. DRAINAGE 2.5 SQ. MI.

COMPOSITION: BEDROCK 10% BOULDER 10% COARSE 30% FINE 30%

SILT & SAND 10% UNCLASSIFIED 10%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 -10.0	
> 10.0	

WETTED AREA _____ SQ.YD. SPAWNING AREA 1,000 SQ.YD.

DISCHARGE 20 CFS MAX. _____ MIN. _____

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT 30' falls at mile 0.4, impassable.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	0.1 - 0.4
CHUM	0 - 0.4
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: Small lake 1 mile from mouth. Typical small west coast stream.

ESCAPEMENT RECORD FOR SUGSAW (GRAPPLER) CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			750	750		
49				1500		
50				3500		
51				3500		
52				3500		
53				3500		
54			25	3500		25
55			25	7500		25
56			25	3500		25
57			25	3500		25
58			25	3500		25
59			25	3500		25
60			25	1500		25
61			25	1500		25
62			25	1500		
63			25	1500		25
64			25	1500		25
65			25	750		
66			25	1500		
67			75	750		
68			200	1500		
69			75	3500		
70			75	400		
71			75	1500		
72			25	750		
73			200	1500		
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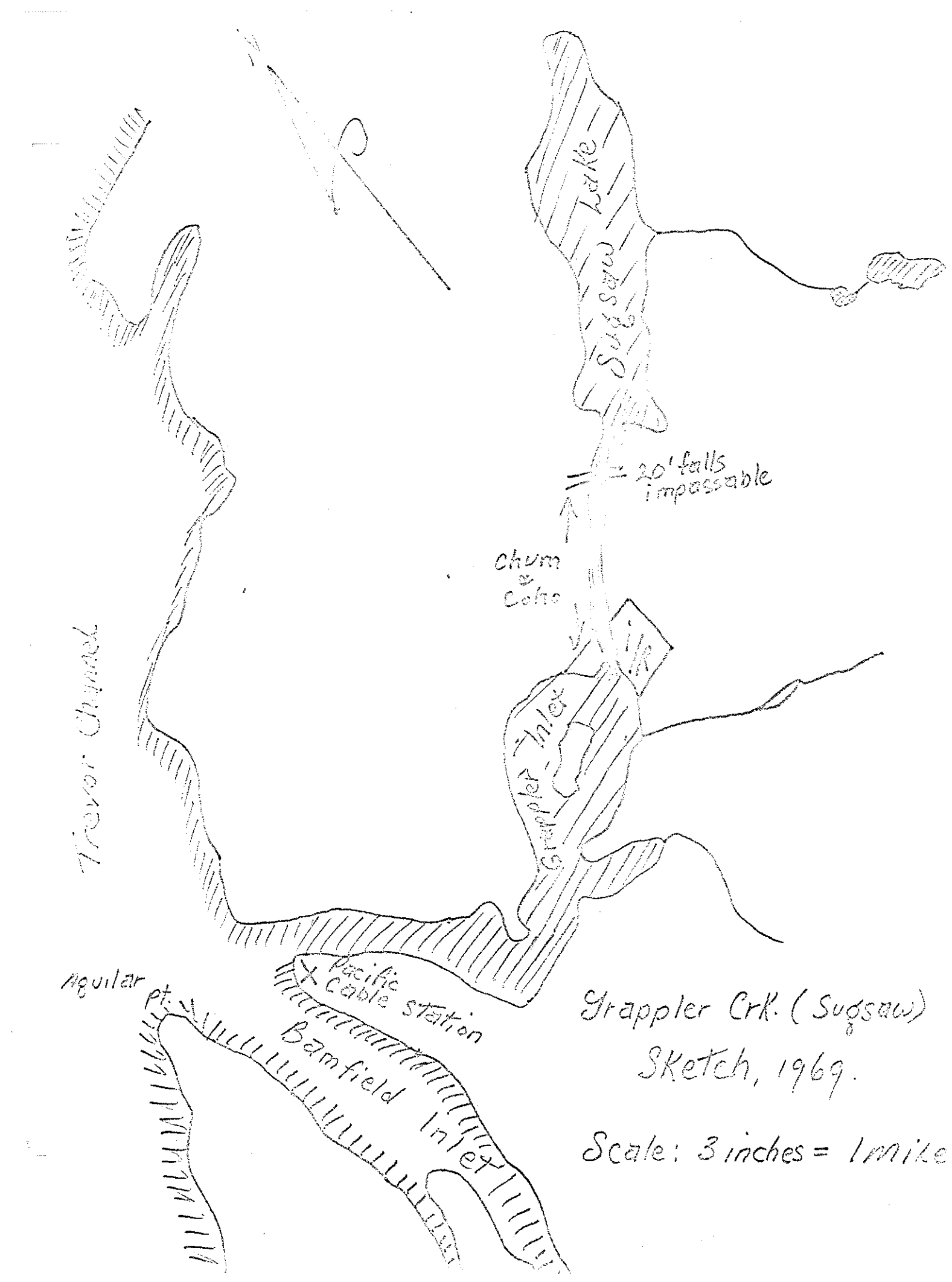
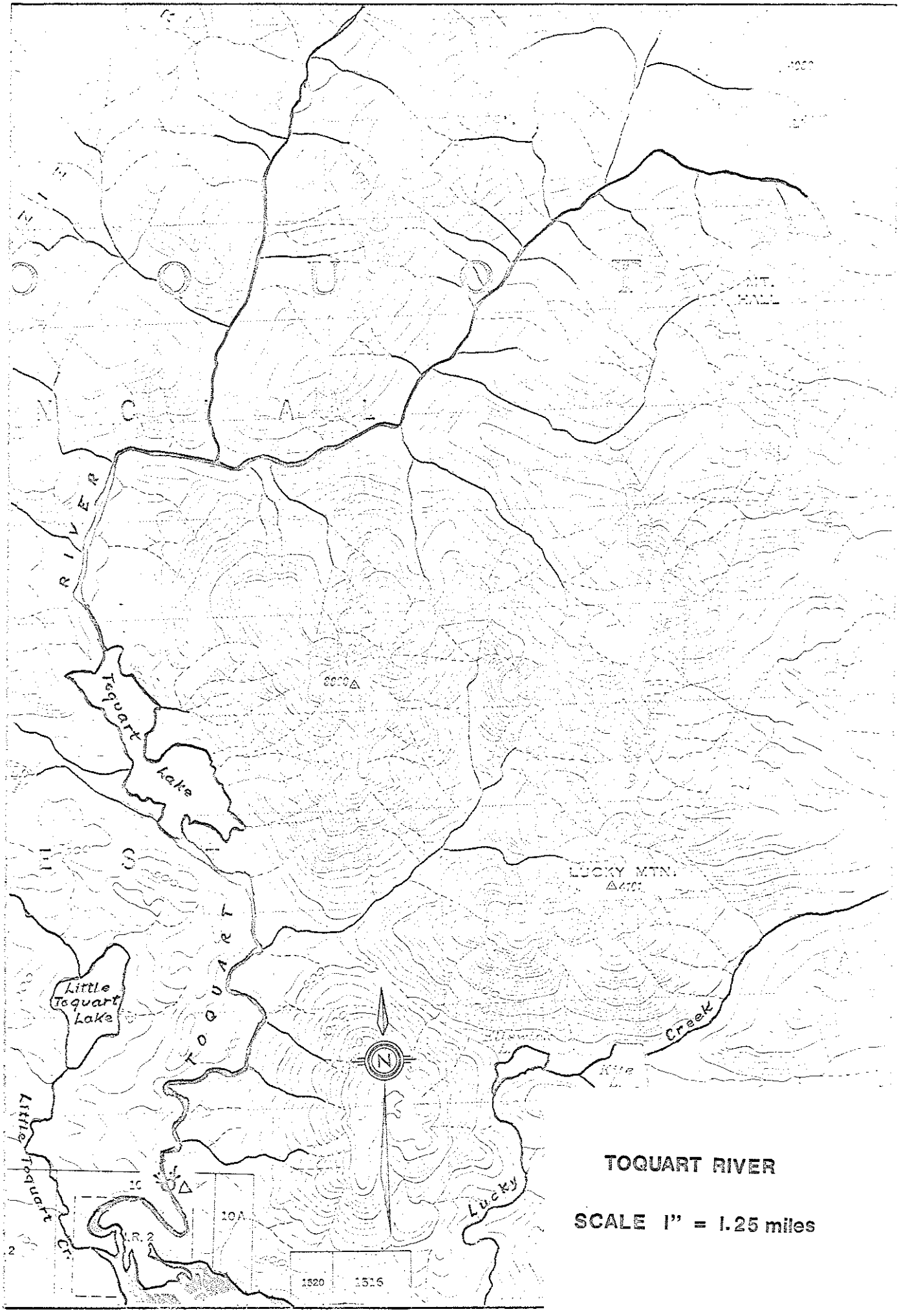
84						
85						

REMARKS



Grappler Crk. (Sugsaw)
Sketch, 1969.

Scale: 3 inches = 1 mile



TOQUART RIVER

SCALE 1" = 1.25 miles

NAME OF STREAM TOQUART RIVER

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows S into Toquart Bay - Clayoquot District.

POSITION 49 125 SE

LENGTH 7 3/4 mi. below lake above 10½ MI. WIDTH 30 - 60 FT. DRAINAGE 20 SQ. MI.

COMPOSITION: BEDROCK 15% BOULDER 15% COARSE 20% FINE 30%

SILT & SAND 10% UNCLASSIFIED 10%

GRADIENT:

FALL IN FT/000		
0.0 - 2.5	0 - 1.5	4.0 - 5.3 (lake)
2.5 - 5.0	1.5 - 2.5	3.0 - 4.0
5.0 - 7.5		
7.5 -10.0		
> 10.0	2.5 - 3.0	5.3 - 7.2

WETTED AREA 14,000 Exc. lake SQ.YD. SPAWNING AREA 50,000 SQ.YD.

DISCHARGE 100 CFS MAX. _____ MIN. 30 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Passable rock slide, 2.7 miles from mouth of river.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	2.0 - 4.0
COHO	2.0 - 7.2 to upper reaches
CHUM	0 - 0.2 lower 2 miles
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	2.0 - 7.2

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: 4 miles to lake, 1.2 miles of lake, then 2 miles above lake. There is an early run, coho in this system (July and August). There is a good winter run of steelhead. River is subject to predation by bears and eagles. There has been no commercial chum fishery in this river since 1962.

ESCAPEMENT RECORD FOR Toquart River

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48		25	1500	15000		400
49		75	1500	15000		200
50		750	1500	35000		400
51		400	3500	35000		400
52		200	3500	15000	1500	400
53		400	7500	35000	N/A	400
54		750	35000	75000	N/A	400
55		400	7500	3500		400
56		200	3500	7500	200	400
57		200	3500	15000		400
58		200	7500	35000	200	400
59		75	3500	15000	N/A	400
60		200	3500	7500	200	400
61		200	3500	7500	N/A	400
62		75	3500	7500	25	400
63		25	3500	1500	25	400
64		25	3500	7500	N/A	400
65		25	3500	3500	N/A	
66		200	3500	15000	N/A	
67		25	3500	25000	N/A	
68		N/A	3500	7500		
69		N/A	750	5000		
70		25	3500	11000		750
71		25	1500	5000		400
72		25	1500	18000		
73		75	3500	10000		
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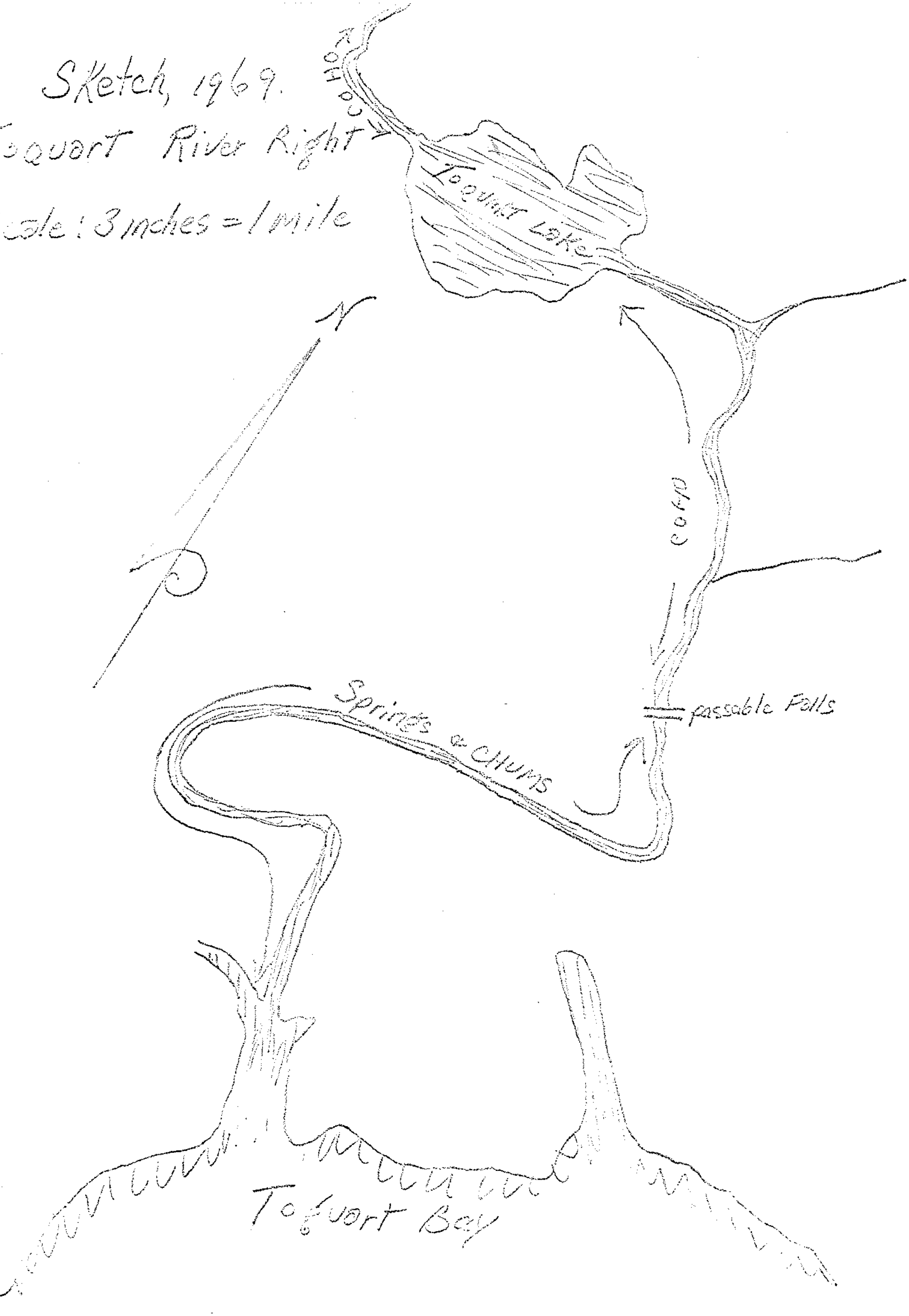
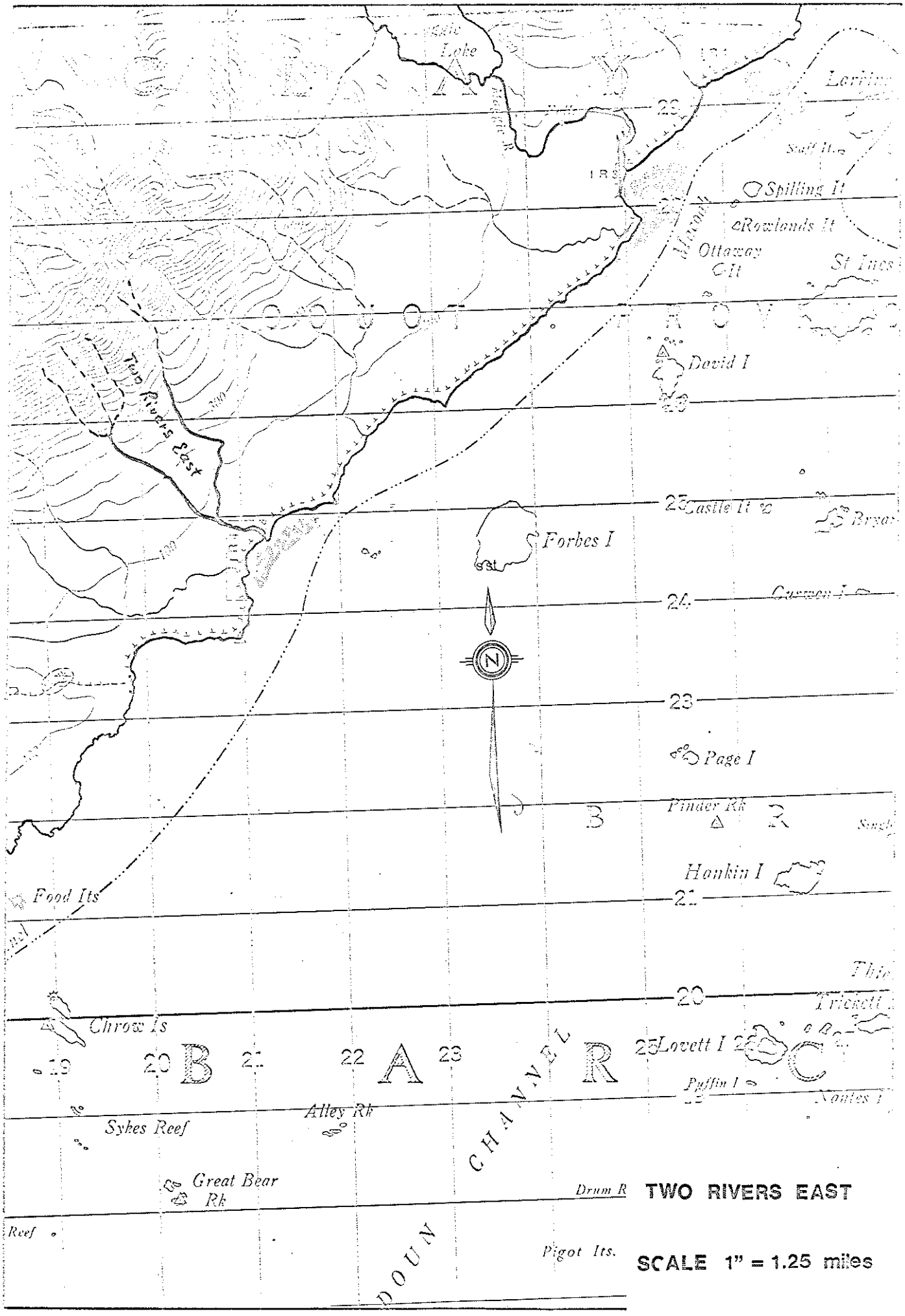
REMARKS

Sketch, 1969.
Toquart River Right
Scale: 3 inches = 1 mile




Lake
Spilling It
Rowlands It
Ottaway
C It
St Ines
David I
Two Rivers East
Castle It
Forbes I
Carmen I
Page I
Pinder Rk
Honkin I
Food Its
Chrow Is
Lovett I
Puffin I
Sykes Reef
Alley Rk
Great Bear
Rk
Drum R
TWO RIVERS EAST
Pigot Its.
SCALE 1" = 1.25 miles
CHANNEL
DOUN
A
B
C
R

NAME OF STREAM: TWO RIVERS EAST

CONSERVATION DISTRICT: _____ STATISTICAL AREA: 23

LOCATION OF MOUTH: Macoah Passage, 1 mile west of Forbes Island.

POSITION: 48 125 NE

N fork 2 mi. from main stem

LENGTH: W fork 2 MI. WIDTH: 10 FT. DRAINAGE: 3 SQ. MI.

COMPOSITION: BEDROCK _____ BOULDER 15% COARSE 30% FINE 30%

SILT & SAND 20% UNCLASSIFIED _____

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.2
2.5 - 5.0	
5.0 - 7.5	0.2 - 0.5
7.5 -10.0	
> 10.0	0.5 - 1.5

WETTED AREA _____ SQ.YD. SPAWNING AREA 4,000 SQ.YD.

DISCHARGE 25 CFS MAX. _____ MIN. 5 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT: Mile 1.5 cascades and insufficient water. (Headwater area)

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	0.2 - 1.5
CHUM	0 - 1.0
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM: Nil.

GENERAL REMARKS: Typical small west coast chum stream. Stream is subject to predation by bears.

ESCAPEMENT RECORD FOR Two Rivers (East)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54			25	7500		
55			25	200		
56			25	3500		
57			25	3500		
58			25	1500		
59			25	3500		
60			25	400		
61			25	400		
62			25	400		
63			25	750		
64			25	400		
65			25	400		
66			75	3500		
67			75	200		
68			75	750		
69			400	3500		
70			200	3500		
71			75	150		
72			75	3500		
73			200	1500		
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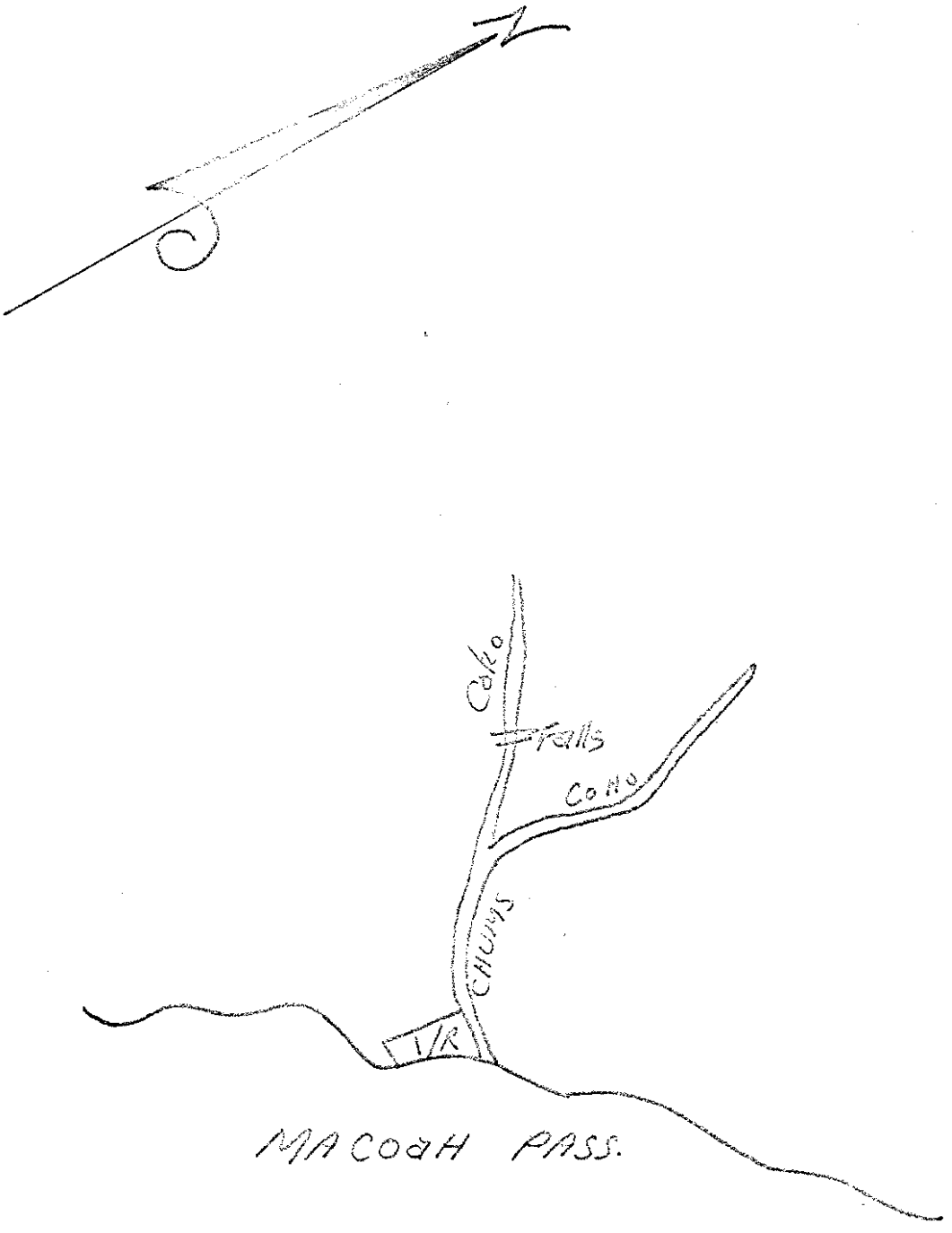
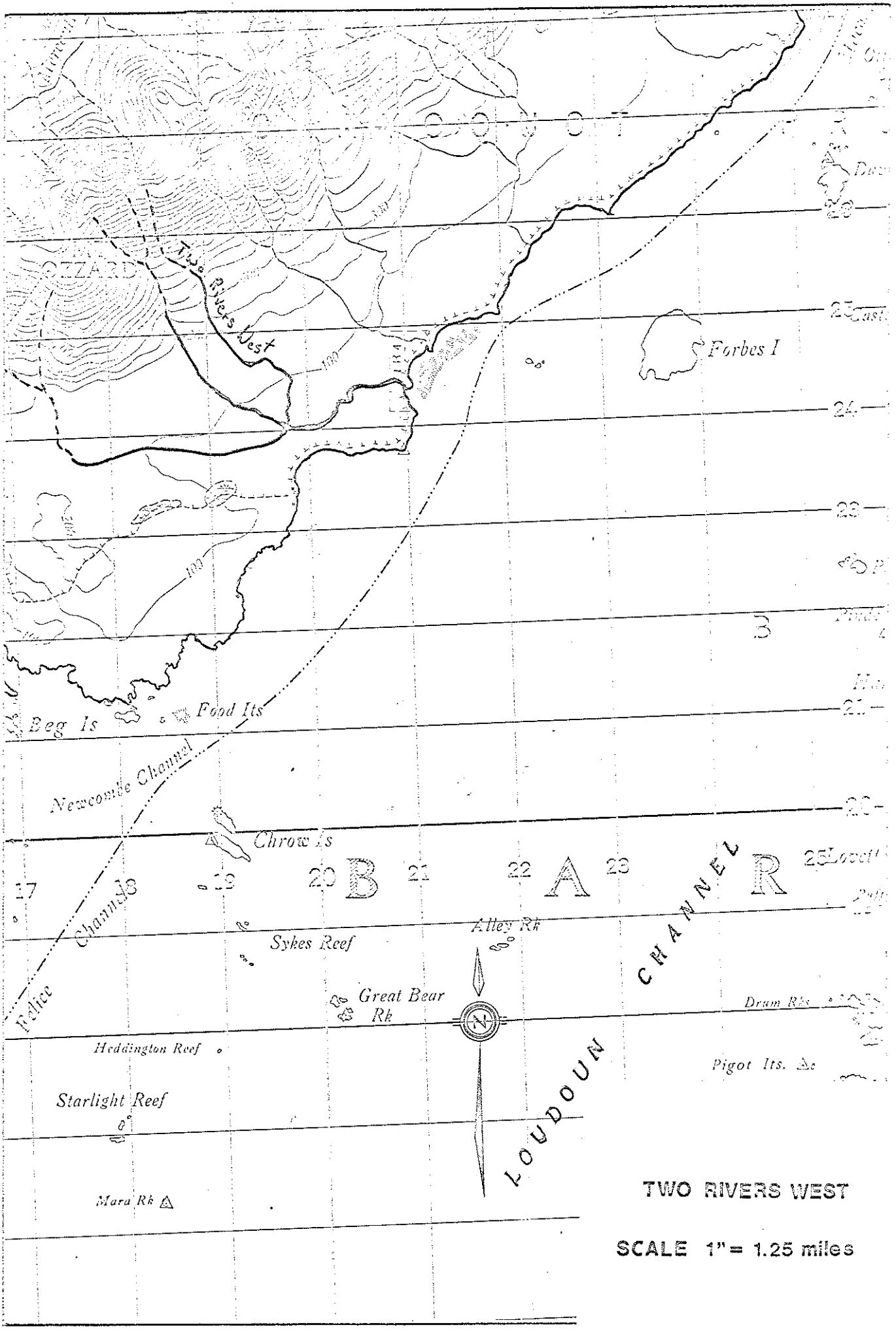
REMARKS



Two Rivers East

Sketch, 1969.

Scale: 2 inches = 1 mile


Forbes I
Beg Is
Food Its
Newcombe Channel
Chrow Is
Channel
Sykes Reef
Alley Rk
Great Bear Rk
Police
Heddington Reef
Starlight Reef
Mara Rk
Drum Rks
Pigot Its.
LOUDOUN CHANNEL
17
18
19
20
B
21
22
A
23
R
25
N
TWO RIVERS WEST
SCALE 1" = 1.25 miles

NAME OF STREAM TWO RIVERS WEST

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Macoah Passage, 1.2 miles west of Forbes Island.

POSITION 48 125 NE

LENGTH W fork 3 mi. E fork 2 MI. WIDTH 12 FT. DRAINAGE 5.0 SQ. MI.
from main stem

COMPOSITION: BEDROCK 5% BOULDER 10% COARSE 30% FINE 30%

SILT & SAND 15% UNCLASSIFIED 10%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0.0 - 0.3 miles
2.5 - 5.0	
5.0 - 7.5	0.3 - 1.2 miles
7.5 -10.0	
> 10.0	1.2 - 2.0 miles

WETTED AREA 15,000 SQ.YD. SPAWNING AREA 7,000 SQ.YD.

DISCHARGE Est. 30 CFS MAX. _____ MIN. _____

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Mile 2.0 cascades furthest point of access.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	0.3 - 2.0
CHUM	0 - 1.2
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS: Typical small west coast chum stream with a logged off watershed. Stream is subject to predation by bears and eagles.

ESCAPEMENT RECORD FOR Two Rivers (West)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48				400		
49				750		
50				7500		
51				3500		
52			75	1500		
53			75	3500		
54			25	400		
55			25	200		
56			25	75		
57			25	200		
58			25	400		
59			25	750		
60			25	75		
61			25	25		
62			25	75		
63			25	400		
64			25	200		
65			25	25		
66			75	750		
67			75	200		
68			25	400		
69			200	3500		
70			200	3500		
71		25		200		
72			200	3500		
73			400	750		
74						
75						
76						
77						
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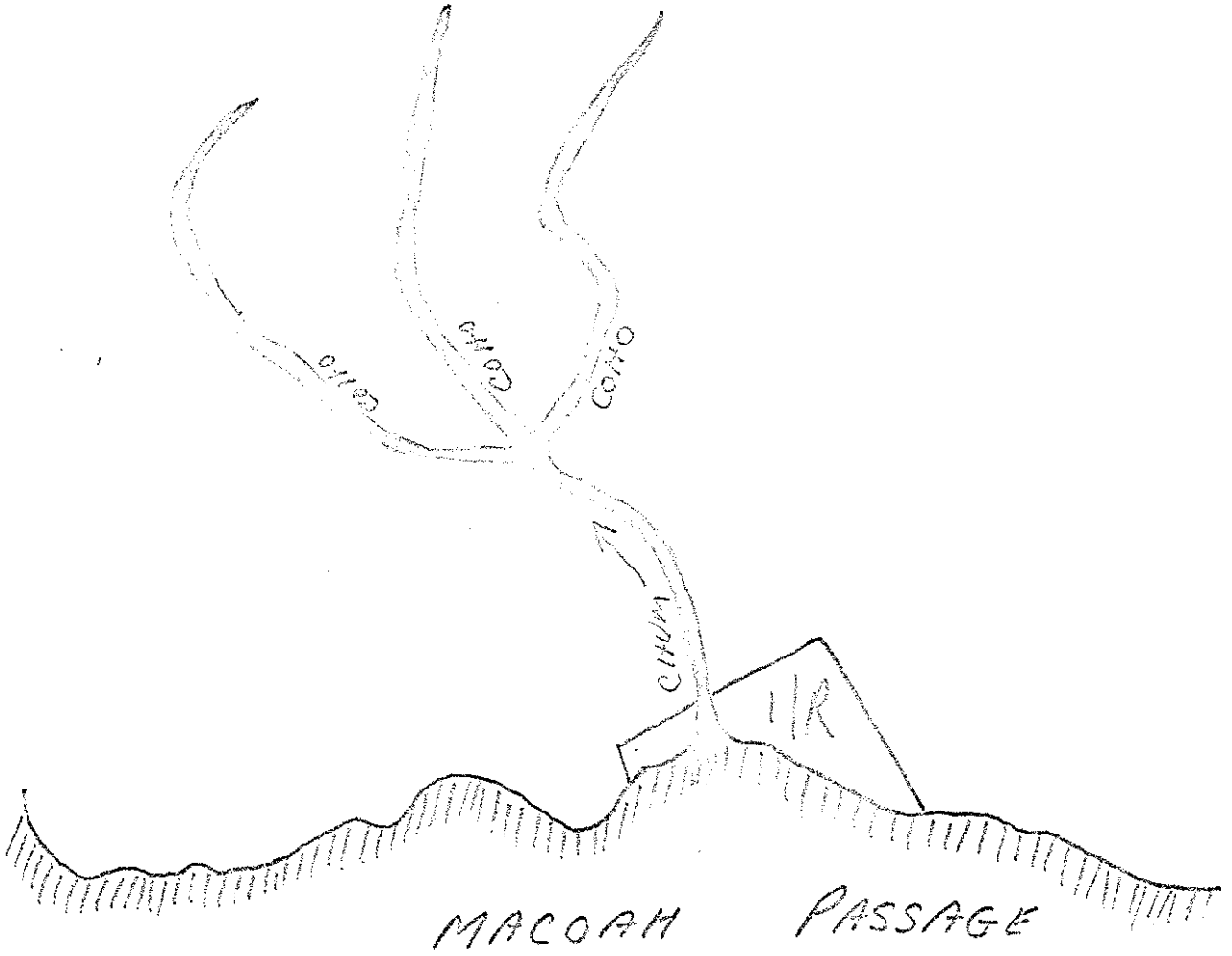
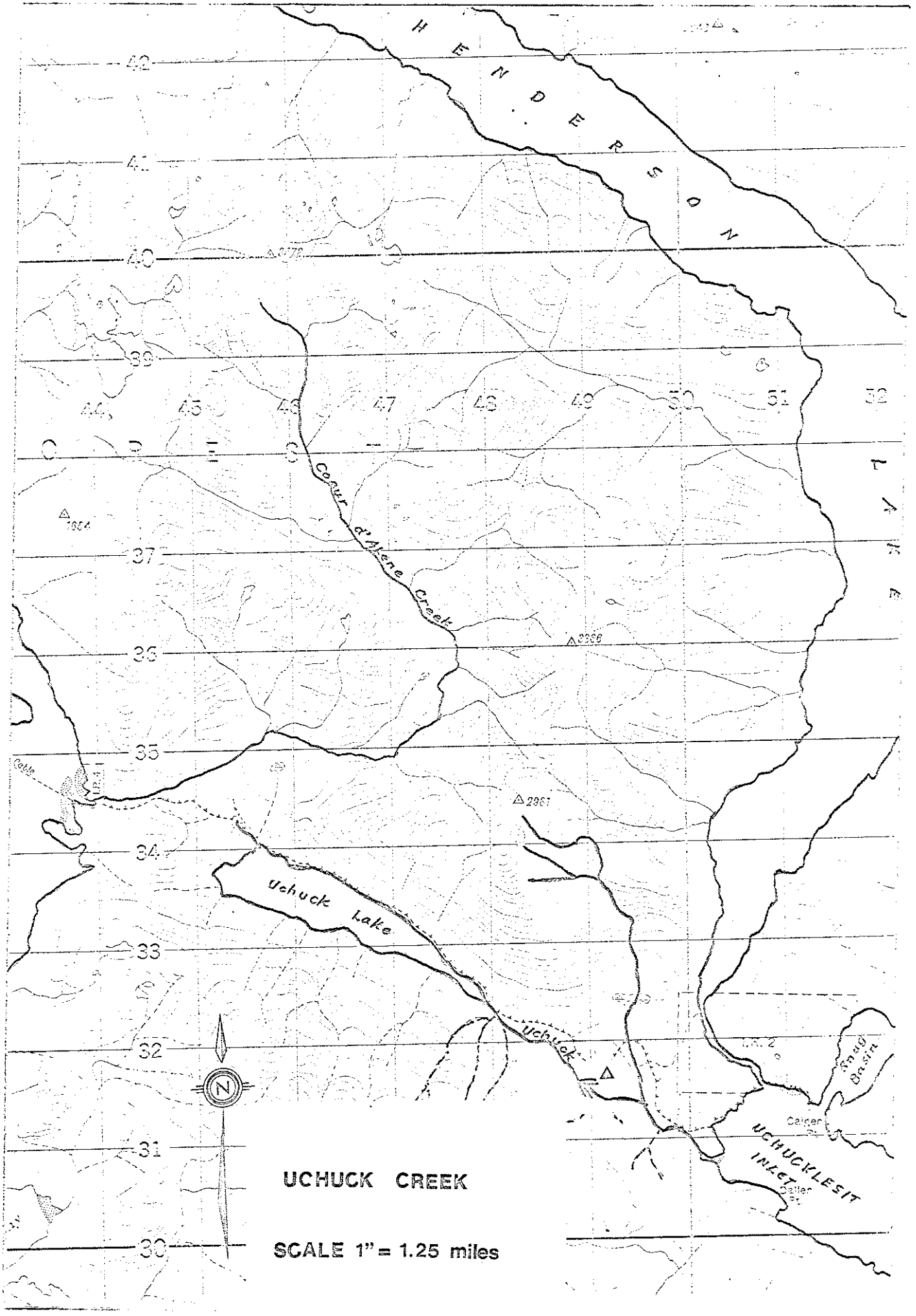
81						
82						
83						
84						
85						

REMARKS



Two Rivers West
Sketch, 1969.

Scale: 4 inches = 1 mile



UCHUCK CREEK

SCALE 1" = 1.25 miles

NAME OF STREAM UCHUCK CREEK (SILVER)

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows SE from Uchuck Lake into Uchuck Leist Inlet - Clayoquot District. POSITION 49 125 SE

LENGTH 3 MI. WIDTH 20 FT. DRAINAGE 6 SQ. MI.

COMPOSITION: BEDROCK 15% BOULDER 15% COARSE 40% FINE 15%

SILT & SAND 10% UNCLASSIFIED 5%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.1
2.5 - 5.0	
5.0 - 7.5	0.3 - 1.2
7.5 -10.0	
& 10.0	0.1 - 0.3

WETTED AREA 15,000 SQ.YD. SPAWNING AREA 7,500 SQ.YD.
DISCHARGE 70 CFS MAX. MIN. 20 CFS
TEMPERATURE
BARRIERS OR POINTS OF DIFFICULT ASCENT Rapids at mile 0.1 - 0.3. 20' falls at mile 1.2, 12' falls at mile 1.3 and 35' falls at mile 1.8.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	0.3 - 1.2
CHUM	0 - 1.2
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	0.3 - 1.2

POTENTIAL OF INACCESSIBLE PORTION OF STREAM 1 mile of good spawning and rearing stream plus Lake 2 x .25 miles.

GENERAL REMARKS: Lake on system 1.8 x 0.3 miles above obstruction. Active logging in watershed. Subject to predation by bears. Silver Lake 2.0 miles long by 0.25 miles wide.

ESCAPEMENT RECORD FOR UCHUCK (SILVER) CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			750	3500		400
49			1500	3500		400
50			1500	15000		200
51			400	3500		400
52		25	400	1500		25
53		25	3500	3500		75
54			750	7500		25
55			400	3500		25
56			75	3500		25
57		25	25	7500		25
58			200	7500		25
59			75	3500		75
60			25	1500		75
61			200	1500		75
62			200	3500		75
63			25	750		200
64			25	1500		75
65			75	1500		75
66			25	3500		
67			25	1500		
68			200	3500		
69			400	7500		
70			400	7500		75
71			400	7500		
72			200	3500		
73			400	5500		
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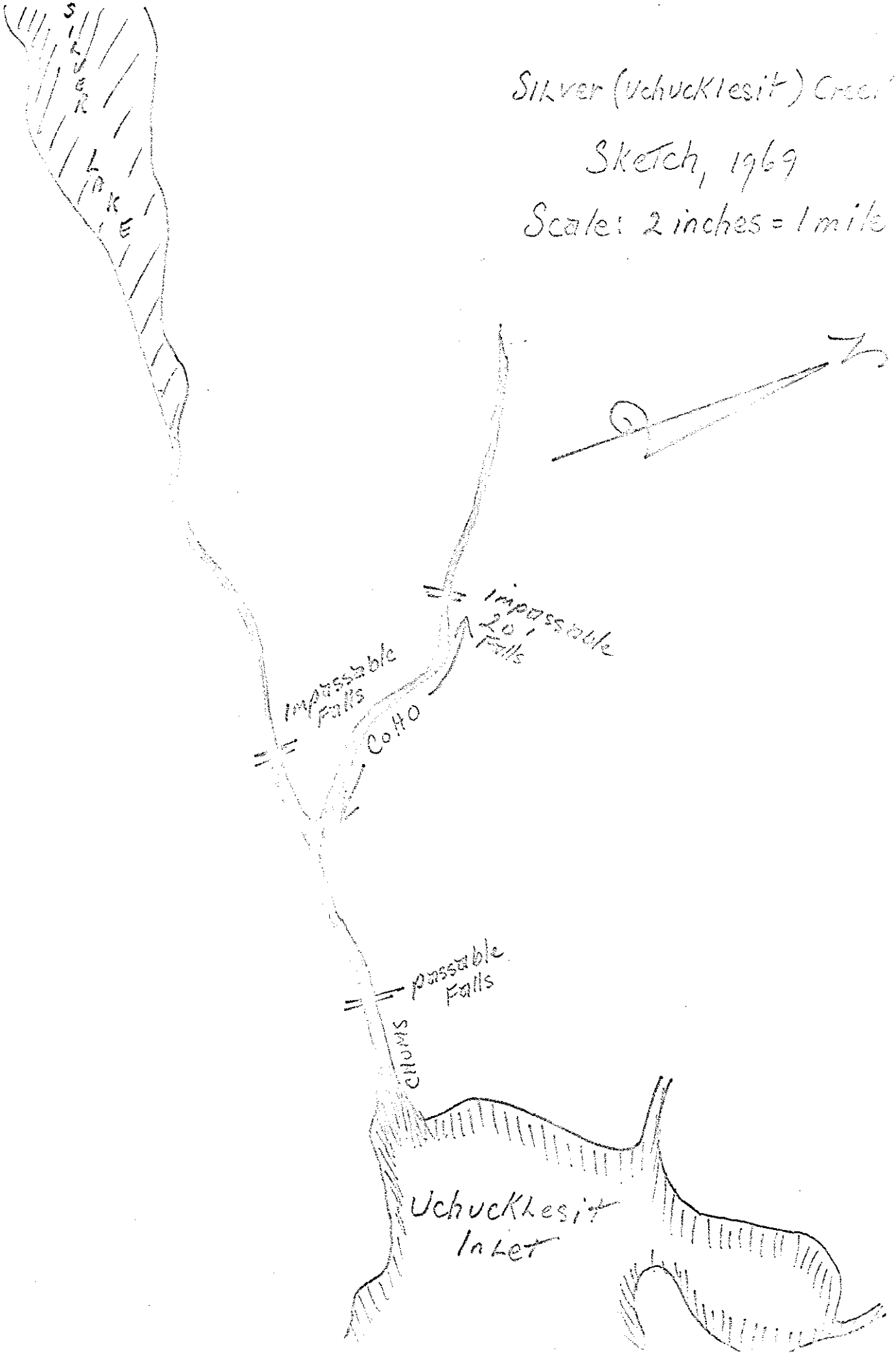
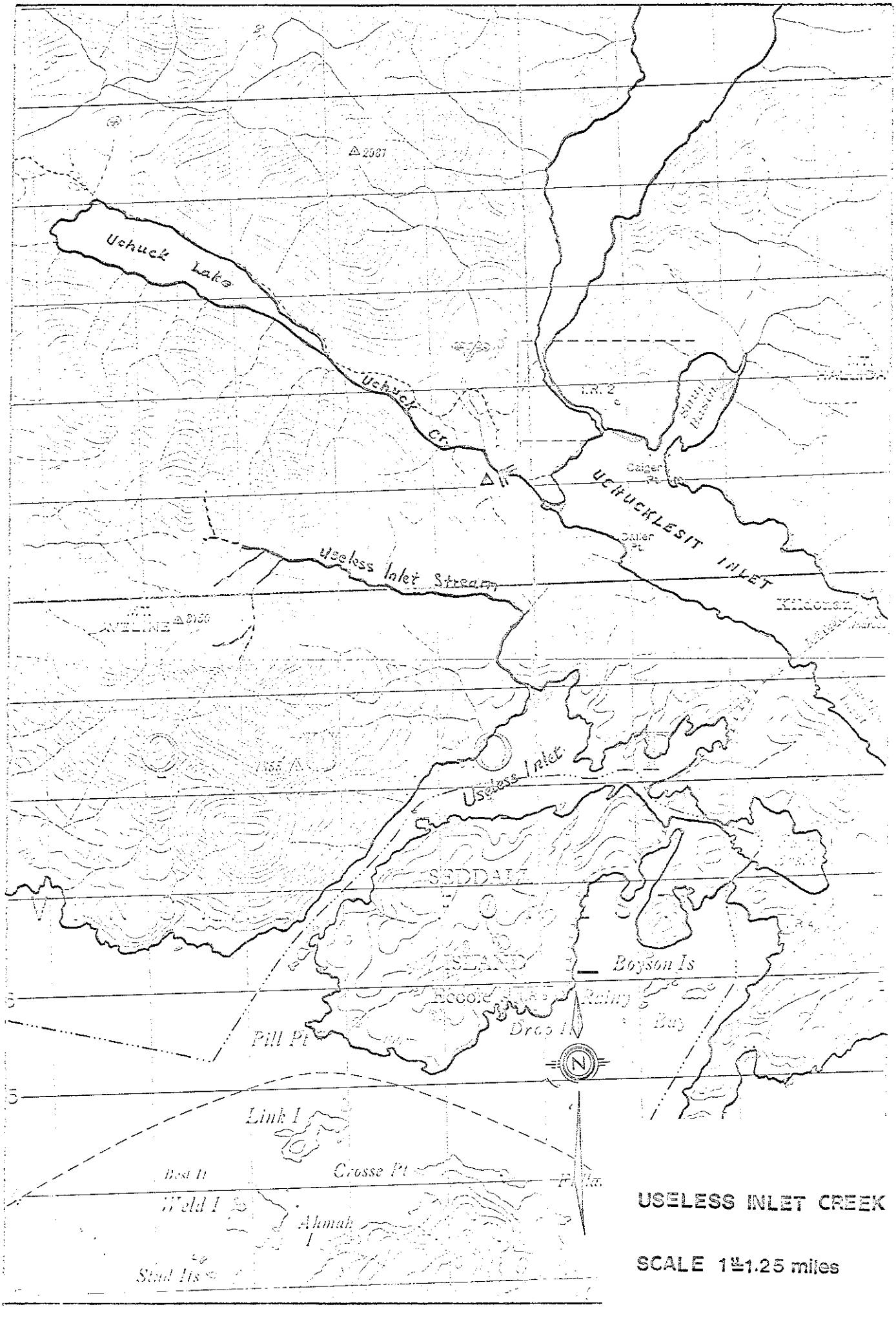
85						

REMARKS


Silver (Uchuckleset) Creek
Sketch, 1969
Scale: 2 inches = 1 mile
Silver Lake
Impassable 20' Falls
Impassable Falls
Coho
Impassable Falls
Chums
Uchuckleset Inlet



USELESS INLET CREEK

SCALE 1"=1.25 miles

NAME OF STREAM USELESS INLET CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows S into Useless Inlet, NE side of Barclay Sound.

POSITION 48 125 NE

LENGTH 4 MI. WIDTH 10 FT. DRAINAGE 2 SQ. MI.

COMPOSITION: BEDROCK 10% BOULDER 10% COARSE 35% FINE 30%

SILT & SAND 10% UNCLASSIFIED 5%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 -10.0	
> 10.0	

WETTED AREA _____ SQ.YD. SPAWNING AREA _____ SQ.YD.

DISCHARGE _____ CFS MAX. _____ MIN. _____

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Falls at mile 0.5, 12' in height. Impassable.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
STEELHEAD	
COHO	0.1 - 0.5
CHUM	0 - 0.5
PINK (Odd Yr.)	
PINK (Even Yr.)	
SPRINGER	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM _____

GENERAL REMARKS: Typical west coast chum stream. Subject to light predation by bears and birds.

ESCAPEMENT RECORD FOR USELESS INLET CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48				750		
49				75		
50				400		
51				400		
52			25	200		
53			25	150		
54			25	150		
55			25	75		
56			25	200		
57			25	400		
58			25	200		
59				400		
60			N/O	75		
61			25	75		
62			25	25		
63			25	25		
64			N/O	75		
65			25	75		
66			25	75		
67			25	75		
68			75	200		
69			75	750		
70			75	750		
71			25	25		
72			25	400		
73			75	750		
74						
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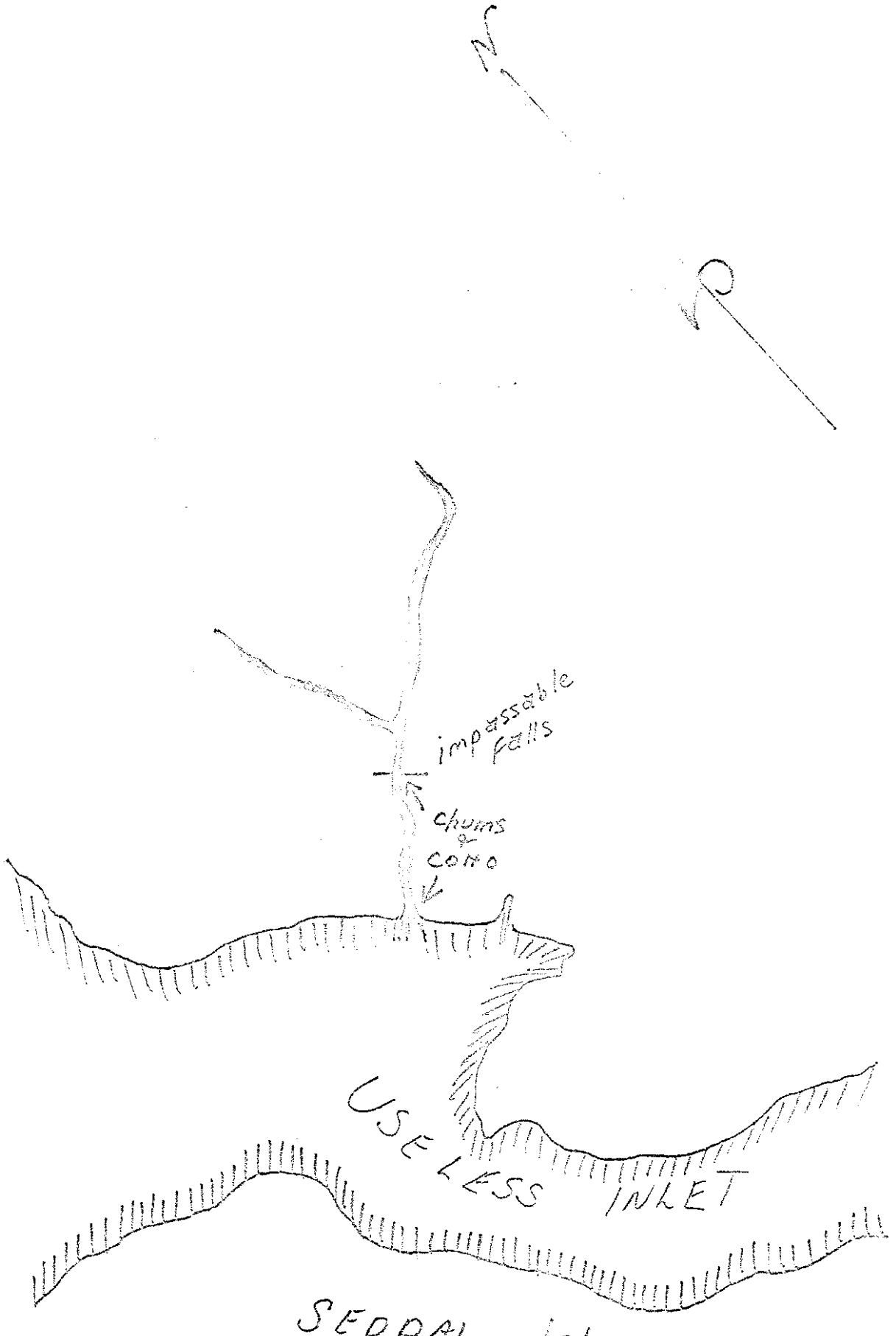
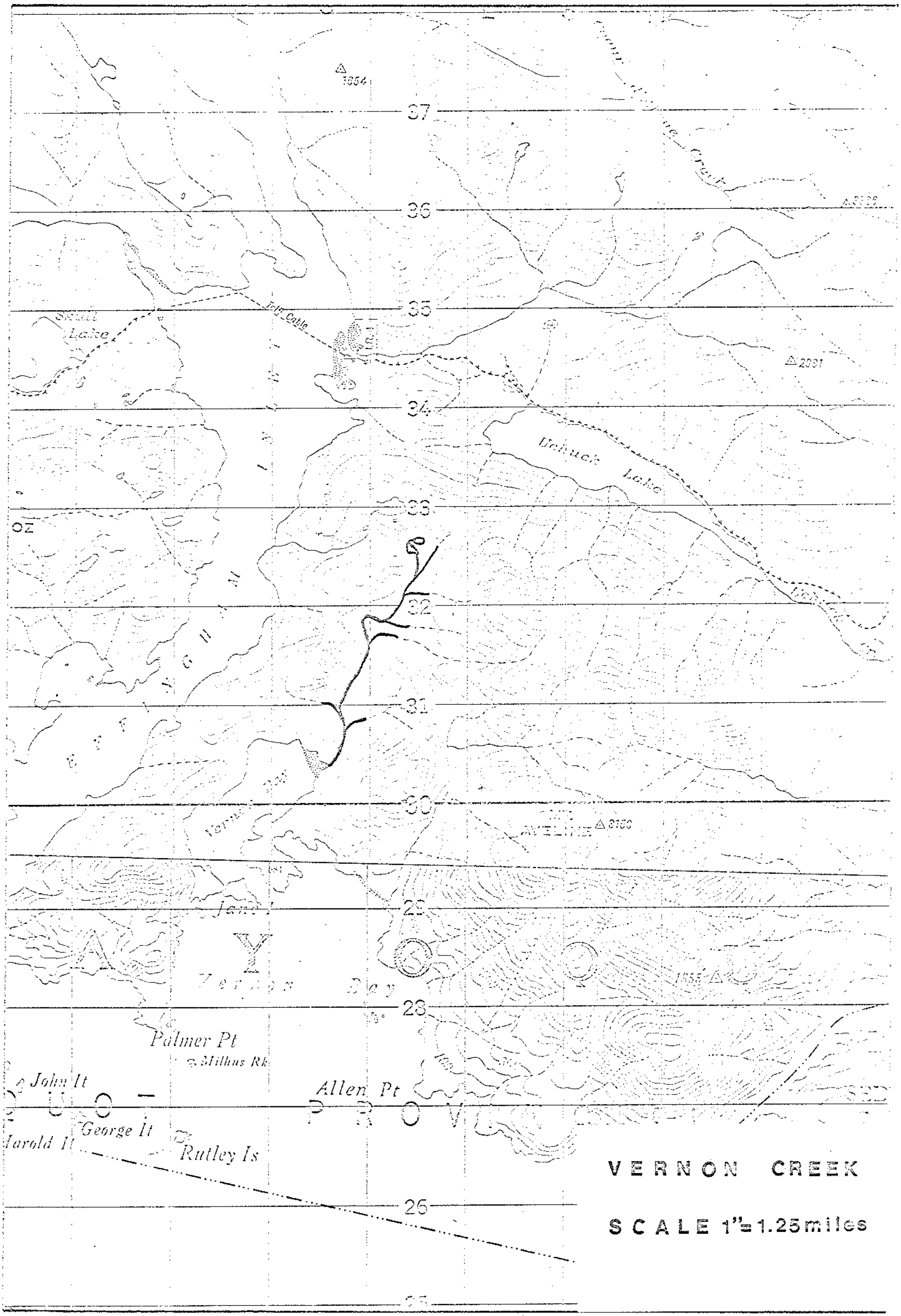
85						

REMARKS



Useless Creek Sketch, 1969

Scale: 2 inches = 1 mile



VERNON CREEK

SCALE 1"=1.25miles

NAME OF STREAM VERNON BAY CREEK

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Flows SW into Vernon Bay, E of mouth of Effingham Inlet - Barclay Sound. POSITION 49 125 SE

LENGTH _____ MI. WIDTH 12 FT. DRAINAGE 3.0 SQ. MI.

COMPOSITION: BEDROCK 25% BOULDER 10% COARSE 30% FINE 20%

SILT & SAND 10% UNCLASSIFIED 5%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	
2.5 - 5.0	
5.0 - 7.5	
7.5 -10.0	
10.0	

WETTED AREA _____ SQ.YD. SPAWNING AREA 1,500 SQ.YD.

DISCHARGE 30 CFS MAX. _____ MIN. 5 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Falls 6' and 8' consecutive at mile 0.5, impassable.

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	0.1 - 0.5
CHUM	0 - 0.5
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Nil.

GENERAL REMARKS: Typical small west coast chum stream. Subject to predation by bears.

ESCAPEMENT RECORD FOR VERNON CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48				400		
49				75		
50				400		
51				200		
52				300		
53				200		
54			25	200		
55			25	75		
56			25	25		
57			25	75		
58			25	200		
59			25	75		
60			N/O	75		
61			N/O	100		
62			N/O	25		
63			25	25		
64			N/O	75		
65			N/O	200		
66			N/O	200		
67			75			
68			200	400		
69			75	150		
70			75	200		
71			25	25		
72			25	400		
73			75	150		
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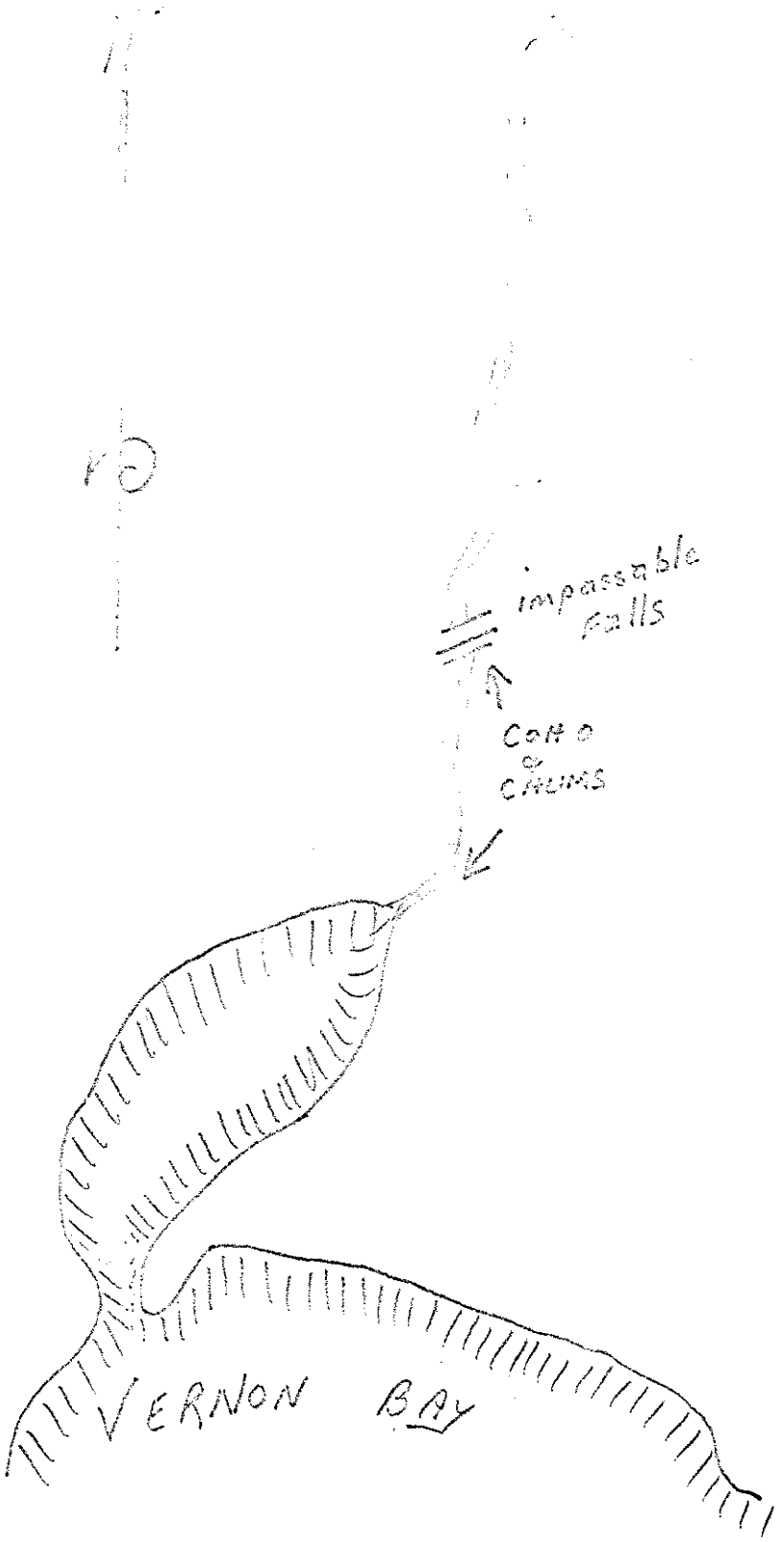
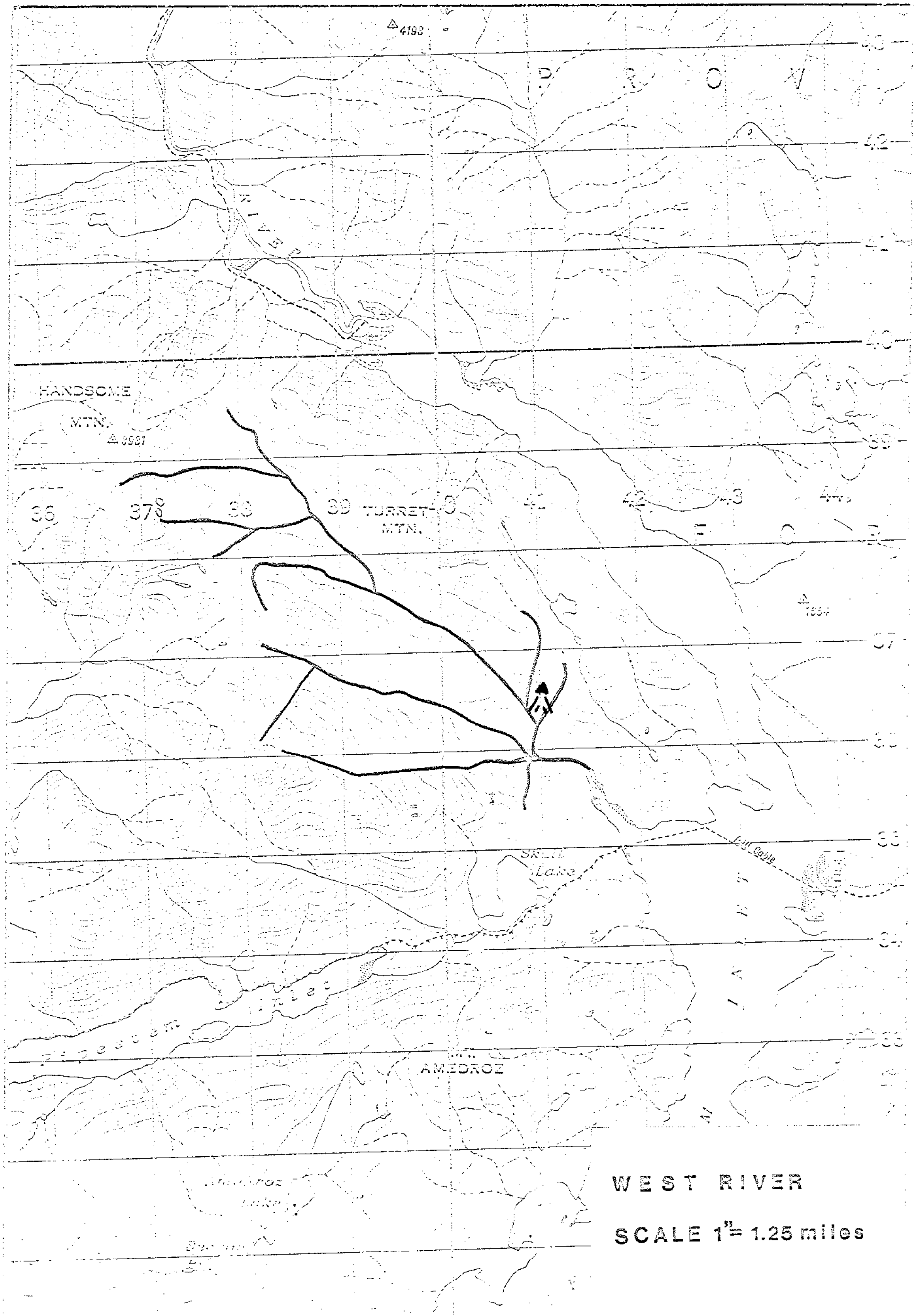
85						

REMARKS



VERNON BAY CREEK SKETCH, 1969.

Scale: 3 inches = 1 mile



WEST RIVER

SCALE 1" = 1.25 miles

NAME OF STREAM WEST RIVER

CONSERVATION DISTRICT _____ STATISTICAL AREA 23

LOCATION OF MOUTH Midway on west side of Effingham Inlet.

POSITION 49 125 SE

LENGTH _____ MI. WIDTH 30 FT. DRAINAGE 4 SQ. MI.

COMPOSITION: BEDROCK 5% BOULDER 20% COARSE 40% FINE _____

SILT & SAND 10% UNCLASSIFIED 5%

GRADIENT:

FALL IN FT/000	
0.0 - 2.5	0 - 0.3
2.5 - 5.0	
5.0 - 7.5	
7.5 -10.0	
> 10.0	0.3 - 0.75

WETTED AREA 13,000 SQ.YD. SPAWNING AREA 7,000 SQ.YD.

DISCHARGE 30 CFS MAX. _____ MIN. 10 CFS

TEMPERATURE _____

BARRIERS OR POINTS OF DIFFICULT ASCENT Impassable falls 1 mile from mouth of stream. (20' vertical in 150')

SPAWNING DISTRIBUTION:

SPECIES	SECTION OF STREAM USED
SOCKEYE	
CHINOOK	
COHO	
CHUM	
PINK (Odd Yr.)	
PINK (Even Yr.)	
STEELHEAD	

POTENTIAL OF INACCESSIBLE PORTION OF STREAM Minimal (1 mile)

GENERAL REMARKS: Subject to predation by bears and eagles. Typical saml1 west coast chum stream. Logged off watershed. (1970)

ESCAPEMENT RECORD FOR West River

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48				400		
49				400		
50				750		
51				1500		
52			75	400		
53			75	750		
54			75	7500		
55			25	1500		
56			25	7500		
57		25	25	1500		
58		25	25	7500		
59			25	400		
60			25	1500		
61		N/O	25	3500		
62		N/O	25	750		
63		25	25	400		
64		N/O	25	3500		
65			25	1500		
66			25	1500		
67			75	750		
68			300	7500		
69			75	3500		
70			75	1500		
71		25	25	3500		
72			25	3500		
73			200	3500		
74						
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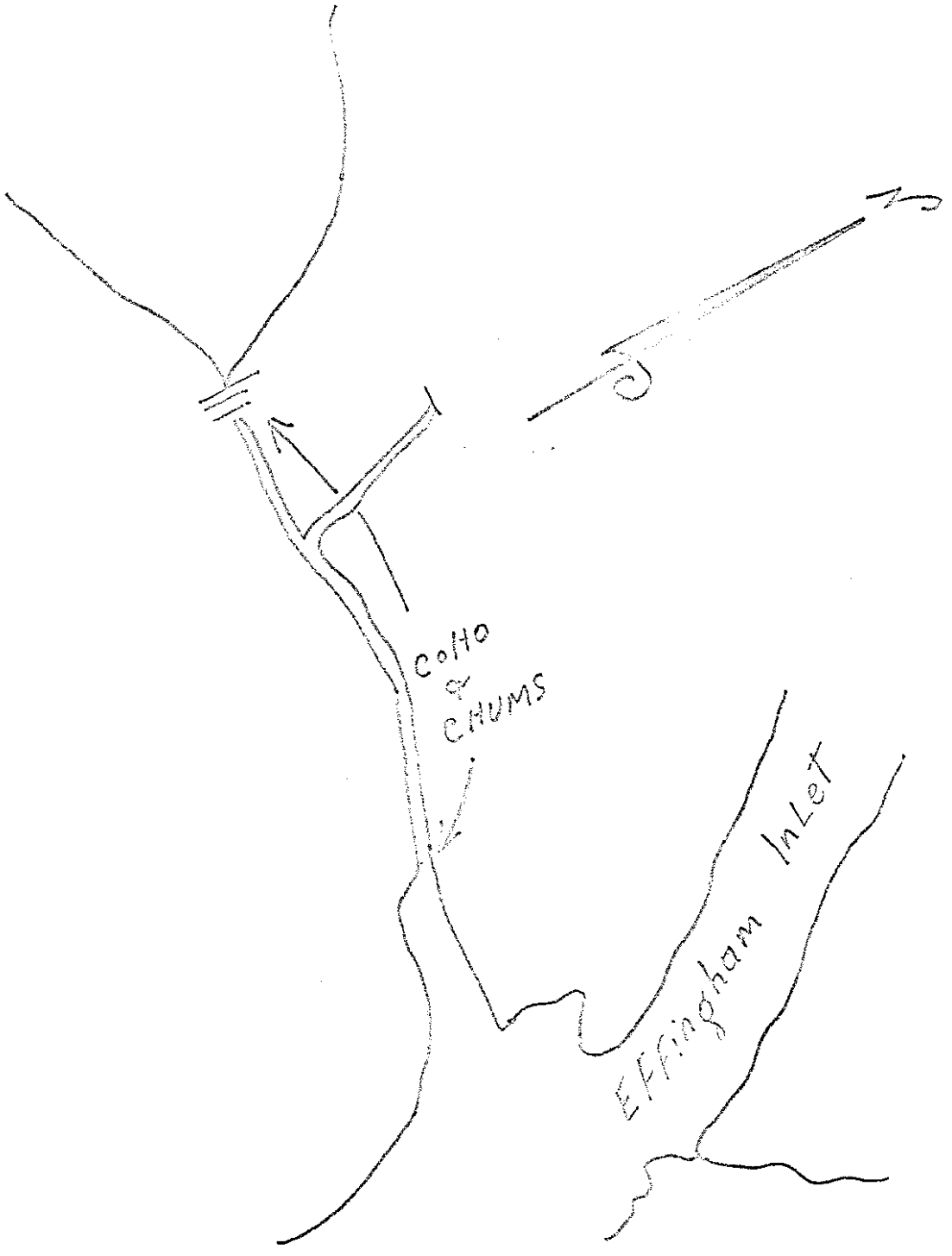
85						

REMARKS



West River Sketch, 1969

Scale: 3 inches = 1 mile

METRIC EQUIVALENTS

Length

Cm.	=	0.3937	In.		
Meter	=	3.28	Ft.		
Meter	=	1.094	Yd.		
Kilom.	=	0.621	Mile		
In.	=	2.54	Cm.		
Ft.	=	0.3048	Meter		
Yd.	=	0.9144	Meter		
Mile	=	1.61	Kilom.		

Area

Sq. Cm.	=	0.1550	Sq. In.		
Sq. M.	=	10.76	Sq. Ft.		
Sq. M.	=	1.196	Sq. Yd.		
Sq. Kilom.	=	.386	Sq. Mi.		
Sq. In.	=	6.45	Sq. Cm.		
Sq. Ft.	=	.0929	Sq. M.		
Sq. Yd.	=	.836	Sq. M.		
Sq. Mi.	=	2.59	Sq. Kilom.		
Acre	=	0.405	Hectare		
Hectare	=	2.47	Acres		
Acre	=	43560	Sq. Ft.		

Volume

Cu. Cm.	=	.061	Cu. In.		
Cu. M.	=	35.315	Cu. Ft.		
Cu. M.	=	1.308	Cu. Yd.		
Cu. In.	=	16.38	Cu. Cm.		
Cu. Ft.	=	.028	Cu. M.		
Cu. Yd.	=	.7645	Cu. M.		

Capacity

Liter	=	.0353	Cu. Ft.		
Liter	=	.21998	Gal. (Br.)		
Liter	=	61.023	Cu. In.		
Cu. In.	=	.0164	Liter		
Cu. Ft.	=	28.32	Liter		
Gal.	=	4.5459	Liter (Br.)		

Weight

Gram	=	15.432	Grains		
Gram	=	.0353	Ounce		
Kilogram	=	2.2046	Lbs.		
Kilogram	=	.0011	Ton (Sht)		
Met. Ton	=	1.1025	Ton (Sht)		
Grain	=	.0648	Gram		
Ounce	=	28.35	Gram		
Lb.	=	.454	Kilgm.		
Ton (Sht)	=	907.18	Kilgm.		
Ton (Sht)	=	.907	Met. Ton		
Ton (Sht)	=	2,000	Lbs.		

Degrees Centigrade = 5/9 (Degrees Fahr. - 32)
Degrees Fahrenheit = 9/5 (Degrees Cent.) + 32.

WATER QUANTITIES AND FLOW MEASUREMENTS

1 cubic foot per second (cfs) or second foot	= 373.2 gallons per min. (gpm)
1 cubic foot per second (cfs) or second foot	= .537408 million gallons
1 second foot	= approximately 2 acre-feet per day
1 second foot	= 86,400 cubic feet per day
1 million gallons per day	= 1.86 cfs.
1 acre-foot	= 43,560 cubic feet or 271,379 ga.
1 cubic foot of water	= 6.23 ga. and weighs 62.4 pounds.
1 cubic meter per second	= 35.31 cubic feet per sec. (cfs)
1 meter per second	= 3.28 feet per second
1233.5 cubic meters	= 1 acre-foot