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REPORT

relating to the use of

(1) TRAP-NETS AT SOOKE AREA

and

(2) PURSE-SEINES IN A PORTION
OF THE GULF OF GEORGIA

(Area No. 17)

IN SALMON FISHING IN BRITISH COLUMBIA

to

THE HONOURABLE J. E. MICHAU
Minister of Fisheries

by

THE HONOURABLE GORDON McG. SLOAN,
Commissioner

1940



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OTTAWA
J. O. PATENAUDE, I.S.O.
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
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REPORT ON SALMON FISHING IN BRITISH COLUMBIA

To the Minister of Fisheries:

SIR.—Pursuant to the terms of the Commission appointing me a Commissioner to determine after inquiry, certain questions respecting the operation of trap-nets for the capture of salmon in the Sooke area of British Columbia, and the use of purse-seines in the Gulf of Georgia, in that locality thereof known as Area 17, I beg to advise that such inquiry has been completed and I now respectfully submit this my report thereon.

The reasons actuating the appointment of a Commissioner and the terms of the Commission are to be found in a minute of a meeting of the Privy Council approved by His Excellency the Governor General on the 23rd of June, 1939, and reading as follows:

"The Committee of the Privy Council have had before them a report dated June 20th, 1939, from the Minister of Fisheries, submitting that fishing for salmon by means of trap-nets has been conducted along the southwest coast of Vancouver Island, in the Sooke area since 1904, which area is in the route of migration of sockeye salmon going to the Fraser River spawning grounds. In this migration the sockeye runs passed through waters of the State of Washington and as the proportion of catch taken by United States fishermen there was substantially more than was being secured by Canadian fishermen in British Columbia waters salmon trap-net fishing was authorized in the Sooke area to bring about an increase in the Canadian share and so reduced the disparity prevailing in the catches being obtained by fishermen of the two countries.

"Commencing 1935, salmon trap-net fishing, which up to then had been employed in large measure in the State of Washington was prohibited. Reduction in the catch of the United States operators ensued and immediately representations came from British Columbia fishermen generally that the trap-nets at Sooke should also be discontinued on the grounds that the original purpose of permitting them there had now disappeared.

"In 1937 the question of whether the salmon trap-net fishing should be allowed in British Columbia waters was considered by the Standing Committee of the House of Commons on Marine and Fisheries. It recommended against the licensing of salmon trap-nets, excepting in the Sooke area, i.e., along the southwest coast of Vancouver Island and Beachy Head and concerning which area it reported it had not sufficient information to come to a final conclusion.

"In 1939 the matter again was considered by that Committee and as opinions differed a good deal, it recommended that the question of salmon trap-net fishing in the Sooke area be referred to a Royal Commission forthwith for investigation and report. The report embracing such recommendation was concurred in by the House of Commons on May 25th, 1939.

"Also, in 1933, salmon purse-seine fishing was authorized in a portion of the Gulf of Georgia adjacent to the mouth of the Fraser River for a limited time in those years pink salmon and "late" sockeye salmon are running. The object was to enable the capture of these varieties of salmon when they were in better condition than otherwise would be the case and so increase the economic return from these runs and improve the quality standard of the finished product. Previously fishing for salmon en route to the Fraser River after they passed the International Boundary from waters of the State of Washington had been restricted entirely to

gill-netting which was carried on in the river proper and the estuary where, when captured, pink salmon and "late" sockeye were regarded as being generally inferior in quality.

"The Minister observes that there has been almost continuous complaint by, and on behalf of salmon gill-net fishermen of the Fraser that conservation measures are being jeopardized by seining operations and that their livelihood is being imperilled. On three occasions, the last one during the session just closed, private bills have been introduced in the House of Commons seeking to amend the Fisheries Act to prohibit salmon purse-seining in the portion of the Gulf of Georgia inside of a line drawn to the south end of Valdes Island and a line drawn from the latter point connecting with and extending along the International Boundary on the 49th parallel to the mainland at Point Roberts.

"In order that the facts surrounding the two methods of capture referred to may be publicly established, the Minister is of the opinion that investigation, under the Inquiries Act, is desirable and he regards it as being in the public interests that such an investigation should be effected.

"The Committee, therefore, on the recommendation of the Minister of Fisheries, advise that the Honourable Gordon McG. Sloan, Puisne Judge in the Court of Appeal of British Columbia, be appointed, pursuant to Part 1 of the Inquiries Act, Chapter 99 R.S.C. 1927, a Commissioner to fully investigate and hear evidence under oath and to determine:

"1. Whether or not it is in the public interest that trap-nets for the capture of salmon should continue to be authorized in the Sooke area, British Columbia, i.e., between Beachy Head and Sombrio Point along the southwest coast of Vancouver Island, such investigation to have regard to all such points as in the judgment of the Commission require consideration, and without restricting the generality of the foregoing to include the following:

- (a) Destructiveness of trap-nets from the standpoint of conservation, as compared with the use of other varieties of fishing gear;
- (b) Feasibility of successful operation of other types of fishing gear in Juan de Fuca Strait and waters of and adjacent to the Sooke area, keeping in view, among other things:
 - (1) Nature of waters, whether specially exposed or otherwise;
 - (2) Tidal and current conditions;
 - (3) Unusual phosphorescence, if any, in water;
 - (4) Proximity of International Boundary;
 - (5) Fog, prevalence of sharks, etc.
- (c) The significance of continued operation of trap-net fishing in the Sooke area in relation to the possible reintroduction of trap-nets in the State of Washington;
- (d) Whether or not unemployment is accentuated by the operation of trap-nets in the Sooke area.

"2. Whether or not it is in the public interest that purse-seines, for the capture of pink salmon and "late" sockeye salmon should continue to be authorized in that portion of the Gulf of Georgia lying within a straight line drawn from Point Grey to the south end of Valdes Island and a straight line drawn from the latter point connecting with and continuing along the International Boundary on the 49th parallel of north latitude to the mainland, such investigation to have regard to all such points as in the judgment of the Commission require consideration, and without restricting the generality of the foregoing to include the following:—

- (a) Whether or not the purse-seining permitted is unduly destructive to immature salmon or other fish;
- (b) Whether or not the extent of varieties of salmon, other than pinks, and "late" sockeye, caught by purse-seines there, is of significance in relation to the livelihood and earnings of gill-netters;
- (c) Whether or not purse-seining there has the effect of breaking up schools of salmon in such a way as to be detrimental to the interests of the gill-netters;
- (d) The feasibility of the successful operation of gill-nets in the waters where seining is being allowed;
- (e) Whether or not a superior pack and consequently a greater economic return is being secured from the catch taken by purse-seining there, than would otherwise be obtained."

It should be noted that the description in paragraph "2" (supra) was found to be in error and it was subsequently amended by an Order of the Governor General in Council (P.C. 2045) bearing date the 27th day of July, 1939, by substituting for the said erroneous description the following:—

"The Committee of the Privy Council have had before them a report dated the 25th of July, 1939, from the Acting Minister of Fisheries, submitting that by Order in Council of June 23rd, 1939, P.C. 1594, the Honourable Gordon McG. Sloan, Puisne Judge in the Court of Appeal of British Columbia was appointed, pursuant to Part 1 of the Inquiries Act, Chapter 99, Revised Statutes of Canada 1927, a Commissioner to fully investigate and hear evidence under oath on fisheries questions in British Columbia pertaining to salmon trap-net fishing and salmon purse-seine fishing.

"The Minister states that in the circumstances explained hereunder, it is found desirable that the wording of such Order in Council be modified as follows:—

"1. In the sixth paragraph the words 'from Point Grey' should be added after the phrase 'in that portion of the Gulf of Georgia inside of a line drawn', to complete the description of the particular area in question.

"2. In paragraph numbered '2' the terms of reference in connection with salmon purse-seine fishing confined the investigation to whether or not it is in the public interest that such fishing should continue to be authorized 'in that portion of the Gulf of Georgia lying within a straight line drawn from Point Grey to the south end of Valdes Island and a straight line drawn from the latter point connecting with and continuing along the International Boundary on the 49th parallel of north latitude to the mainland.' Inasmuch as such area embraces only a portion of the waters where such fishing may be permitted in this locality, notwithstanding virtually all operations there are conducted within its bounds, it is desirable that it be clarified that the inquiry should have regard to and embrace the particular portion of the Gulf of Georgia, wherein such purse-seining under the present regulations is permissible, i.e., that portion of Area No. 17 as defined in Section 5 of the Special Fishery Regulations for British Columbia lying easterly and northerly of Galiano and Valdes Islands bounded as follows: From a straight line drawn from the western side of the entrance to Active Pass to the most westerly point of the International Boundary on the 49th parallel of north latitude, thence following the International Boundary easterly to the outer range light on the said boundary, thence in a westerly direction magnetic to a red conical buoy moored in about twenty fathoms (36m6) off the entrance to Canoe Pass on the south side of Roberts Bank, thence in a straight line drawn due west to the 49th parallel of north latitude to Valdes Island.

"The Committee, therefore, on the recommendation of the Acting Minister of Fisheries, advise that the said Order in Council, P.C. 1594, 23rd June, 1939, be modified accordingly."

The sittings of the Commission were held at the following times and places:—

At Victoria, B.C.....	July 17, 1939, to July 21, 1939 (inclusive). Feb. 5, 1940, to Feb. 10, 1940 (inclusive).
At Vancouver, B.C.....	Aug. 28, 1939. Jan. 3, 1940, to Jan. 5, 1940 (inclusive). Feb. 29, 1940, to Mar. 2, 1940 (inclusive).
At New Westminster, B.C....	Oct. 10, 1939, to Oct. 20, 1939 (inclusive). Oct. 25, 1939, to Oct. 28, 1939 (inclusive).

The following interests were represented either by Counsel or by various duly authorized officials, as indicated:—

Counsel to Commission	JAMES M. COADY.
J. H. Todd & Sons Ltd.....	A. D. McFARLANE, K.C.
Sooke Harbour Fishing & Pack- ing Co. Ltd.....	A. D. McFARLANE, K.C., and ROY MANZER.

Pacific Coast Fishermen's Union	} A. V. HILL. As to Sooke trap issue only.
Salmon Purse-Seiners' Union	
United Fishermen	
Northern Trollers' Co-operative Asso- ciation	
Prince Rupert Co-Operative Associa- tion	

Salmon Purse-Seiners' Union ..	GEORGE MILLER (Secretary). As to purse-seining issue only.
United Fishermen's Union.....	WILLIAM BURGESS (Secretary). As to purse-seining issue only.

B.C. Fishermen's Protective Association	F. PROBERT (President). F. ROLLEY (Secretary).
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The following witnesses, classified as to interest, were called and examined:—

Departmental Officials or Employees:

Major Motherwell	Chief Supervisor of Fisheries.
John Franklin Tait	District Supervisor of Fisheries.
Llewellyn Sheppard.....	Master, Canadian Government ship <i>Kitimat</i> .
Frank Charnley	Chief of Inspection Board.
Thomas Edward Scott	Fisheries Officer.
William John Barker.....	Fisheries Officer.
Dean Lockwood	Fisheries Officer.
Laurence George Swann.....	Statistician.
Thomas Knight Lightly.....	Fisheries Officer.
Dr. W. A. Clemens.....	Director, Pacific Biological Sta- tion.

Expert Witnesses:

Dr. Wm. F. Thompson.....Director, Scientific Investigation for International Sockeye Commission.

Henry Delpe Parizeau.....District Hydrographer.

Gill-Netters:

Siguard Malvik
Tony Fial
John Bakken
Albin Berg
Marco Vidulich
Roy Anderson
Mike Vidulich
George Gunderson

Harold Remmen
Frank Wilson
T. Tamemoto
Unsuke Sakamoto
Teru Nakatsu
Antonio Peter Cosulich
Fred Probert

Trollers:

George Townsend Whitla
Manuel Albert Wilde
Einar Larum
Henry Lind

Theodore Sorenson
Herbert Doyle
John Ferneyhough
John Martins

Purse-Seine Operators:

Capt. Frank Citanovich
Capt. Sam Jasich

Capt. Matthew Martinolich
Capt. John Guiricich

Purse-Seine Employees:

William Pitre
Elgin Neish

John Penny

Fish Buyers and Collectors:

Alfred John Monk
Charles Lisson Smith

Nicholas Stevens
Clement Edwards

Canners:

Dugald Bartlett

Sidney Humphreys

As to Spawning Grounds and Escapement:

Alfred Hamilton Peppar
Alexander Campbell Hope
Robert Joseph Nichol

Victor Hedley Ferguson
Howard Horace Howell
Edward Lawrence Lehman

Employees of Sooke Harbour Fishing & Packing

Co., or J. H. Todd & Sons Ltd:

Richard Seymour
Victor Sjogren
John Collins
Robert Acremen
Joseph Collins
J. Forrest

Frank G. Gray
Charles F. Goodrich
Christian A. Helgesen
Leslie Bernard Bing
Horace W. Goodrich

Residents of Sooke, not Employees:

Arthur Fred Brownsey

John Alexander Lawbeattie

From the State of Washington: (On Trap Issue).

John F. Evich.....	Secretary, Purse-Seiners' Union.
Kenneth McLeod.....	Secretary, Salmon Conservation League
Archie W. Shiels.....	Former Trap Owner
Daniel Campbell.....	Former Trap Owner
John A. Olsson.....	Troller
Sevrin Leite.....	Troller
Ole Grasdahl.....	Troller
Henry T. Cayou.....	Troller
John R. Hurley.....	Member of the House of Representatives, Washington State.
George E. Haecker.....	Manager, Booth Fisheries.
Charles R. Rasmussen.....	Former Trap Owner
Rowland Davis.....	Former Trap Owner
B. F. Reno.....	Member of State Legislature
Tim Healey.....	Former Member of State Legislature.

I also had a view of the Sooke traps, accompanied by Mr. Coady, and representatives of the opposing interests.

After hearing the sworn evidence adduced and having had the benefit of full submissions thereon, I have reached certain firm conclusions.

First, with respect to the question of the Sooke Traps, I find upon the evidence it is in the public interest that trap-nets for the capture of salmon should continue to be authorized in the Sooke Area, British Columbia, i.e., between Beachy Head and Sombrio Point, along the Southwest Coast of Vancouver Island.

My principal reasons for this conclusion may be summed up under the various specific headings of the Commission which I reproduce for convenience.

Dealing with "1 (a)."

"Destructiveness of trap-nets from the standpoint of conservation, as compared with the use of other varieties of fishing gear."

I understand "conservation" to mean a proper and sufficient escapement of the salmon run to perpetuate the species by an effective seeding of the spawning grounds. "Destructiveness" I understand to mean the taking of too great a number of salmon so that the spawning grounds are insufficiently seeded, resulting in a progressive depletion of each cycle. On comparing the different varieties of gear to determine their relative potential capacity for destructiveness of the run, I find the trap is not more destructive than either the gill-net or purse-seine. *Conservation of the run does not depend upon the type of gear used, but primarily upon the effective regulation of its use.* Gill-nets and purse-seines may be subject to regulation of size of net, in length, depth and mesh; trollers to regulation of spoons used, but the trap may be regulated by complete closure, if conditions warrant such a step. It is a large fixed structure, thus infringement of a closed season could be easily and quickly detected. Major Motherwell is of the opinion (P. 178) which I share, that it is the most easily regulated of all gear.

If all types of gear could be so quickly and completely regulated as a trap, conservation problems, so far as gear is concerned, would not present any great difficulty. An official of the Fisheries Department is present at each lift, and should know whether or not too great a proportion of the run is being intercepted; whereas in the case of other types of gear, its regulation by a closed season is a matter of days depending upon the reports of observers at the spawning grounds, and the time that must elapse before an order can be effectively transmitted to the fishing fleet. To illustrate:

In 1938, 110 purse-seine boats operated in Area 17, and it is theoretically possible that in one day those purse-seines could have caught 7,700,000 salmon. It would be impossible to have a fisheries official on each seine boat, and the result of that catch would not be noticed on the spawning grounds, and a closed period ordered, until many days had elapsed.

To sum up, it is my opinion, from the evidence adduced, that as the traps are subject to a more quickly effective regulation than other types of gear, and as conservation depends, so far as gear is concerned, upon quick effective regulation of all types thereof, the traps are not more destructive from the standpoint of conservation than other types of fishing gear.

There is, however, one aspect of the matter upon which considerable stress was laid. It must be understood that the traps only fish in the day time and on the flood tide. That is to say for approximately six hours a day, the traps are fishing, and for the remaining hours, the entrance into that part of the trap called the spiller, is closed. In addition, by regulation, traps are closed by closing the fishing gap, each week from 6 P.M. Friday to 6 P.M. Sunday. When the entrance into a trap—the fishing gap—is closed, an escape gate is opened in the trap lead. (See Exhibits 5 and 6 attached hereto).

The purpose of the escape gate is as its name implies; to permit any fish that strike the lead during the weekly closed periods, to go through the lead. It is clear beyond dispute, that these escape gates in their present position and size, are inadequate, and while it would appear that the fish which pass the escape gates go out around the jiggers, and escape to the east of the traps, yet to provide a greater certainty of escapement during the closed period, in my opinion escape gates both wider and deeper than those now in use, should be constructed in the leads, under the supervision and to the satisfaction of the Supervisor of Fisheries of the Province.

Dealing with "1 (b)".

"Feasibility of successful operation of other types of fishing gear in Juan de Fuca Strait and waters of and adjacent to the Sooke area, keeping in view, among other things:

- (1) Nature of waters, whether specially exposed or otherwise;
- (2) Tidal and current conditions;
- (3) Unusual phosphorescence, if any, in water;
- (4) Proximity of International Boundary;
- (5) Fog, prevalence of sharks, etc."

I understand "feasibility of successful operation" to include as an essential, an operation successful from a financial point of view.

It would perhaps be permissible at this juncture to say that as this report is being made to a Department of the Government which is thoroughly familiar with the nature of the various types of gear, I consider it unnecessary for me to describe in detail each type of gear and its operation. Should any information be required in that regard, it will be found detailed in the evidence of Major Motherwell. I consider it sufficient for me to outline briefly under this heading what are the general conditions in the Sooke Area. There are five traps operating. (See Exhibit 3 attached hereto.) They are placed, generally speaking, at localities just eastward of jutting points along the shore line, and extend from shore line to sea, for distances ranging from 600 to 2,000 feet. The distance from the most westerly trap to the most easterly is 10·15 miles, and the distances between each trap are as follows:—

- | | |
|---------------|--------------|
| 1.—2·45 miles | 3.—4·6 miles |
| 2.—0·6 mile | 4.—2·5 miles |

At this point, the Straits of Juan de Fuca are approximately 14 miles wide, and the International Boundary is approximately 7 miles from the Canadian shore. In the Straits proper, the tide is steady and runs from 2 to 4 knots.

With reference to fog, tide, phosphorescence, sharks and proximity to the International Boundary, the evidence satisfied me, while conditions are somewhat hazardous and difficult, it is possible for gill-net and purse-seining operations to be carried on. Inshore, however, conditions are further complicated by the jutting points along the shore which cause current and tidal conditions described by Mr. Parizeau, as of extraordinary velocity at Beachy Head and Otter Point, two trap locations, and by a diver who had considerable undersea experience in the vicinity of the traps, as generally "crazy". From the evidence, I am not satisfied conditions are such that inshore fishing is feasible for gill-net and purse-seine operators.

So far, I have dealt only with the characteristics of the waters in the area in question. Whether purse-seine and gill-net operations could be reasonably successful financially is another matter. It is a trite saying that fishermen follow the fish, and it is not without significance to note that for over thirty years gill-net and purse-seine operators made no serious attempt to fish this area. In 1938 and 1939, fishing operations were carried on by gill-netters in the trap area and west thereof. The results are of interest. Details are fully given in Exhibits 16, 50 and 114 as follows:—

EXHIBIT 16

CATCH BY GILL-NETS—JUAN DE FUCA STRAIT, 1939

Sold to:	Sockeye	Springs	Cohoe	Pinks	Chums	Total
Sooke Harbour Fishing & Packing Co.	1,686	18	228	46	18	1,996
Nelson Bros.	1,320	12	63	31	12	1,438
Totals.....	3,006	30	291	77	30	3,434
Total number salmon gill-net boats operating.....						17
Greatest number delivering one day.....						12

NOTE.—It is not quite clear how many days were fished by the gill-netters to obtain the above catch. From the evidence of the fishermen themselves, I estimate the period to be from seven to ten days.
Commissioner.

EXHIBIT 50

SALMON CATCHES TAKEN BY ALL GILL-NETS FISHING IN THAT PORTION OF JUAN DE FUCA STRAITS LYING BETWEEN BEACHY HEAD AND JORDAN RIVER, FOR SEASON 1939

Name of Fisherman	Dates fished		Total Deliveries					Total
	From	To	Sockeye	Pinks	Coho	Chum	Springs	
D. Reid	Aug. 7	Aug. 31	80	227	27	1	.....	335
H. Dahl	Aug. 7	Aug. 25	2	.....	.....	.....	.....	2
R. Mond	Aug. 8	Aug. 11	3	11	.....	.....	.....	14
E. Mackie	Aug. 13	Aug. 16	21	19	3	.....	.....	43
T. Fial	Aug. 7	Aug. 18	21	24	4	.....	.....	49
S. Malvick	Aug. 8	Aug. 16	12	18	1	.....	.....	31
H. Iverson	Aug. 8	Aug. 11	5	14	2	.....	1	22
L. Iverson	Aug. 8	Aug. 11	.....	17	3	.....	.....	20
H. Hansen	Aug. 8	Aug. 11	1	8	.....	.....	.....	9
R. Swanson	Aug. 8	Aug. 16	8	24	2	.....	.....	34
E. Wardroper	Aug. 13	Aug. 21	151	176	7	1	.....	335
M. Silek .....	.....	.....	.....	.....	.....	.....	.....	.....
E. Lumley	Aug. 14	Aug. 18	15	14	.....	.....	.....	29
J. McPherson	Aug. 17	Sept. 13	51	163	69	.....	1	289
G. Horton .....	.....	.....	.....	.....	.....	.....	.....	.....
C. Cain	Aug. 24	Aug. 31	2	12	.....	.....	.....	14
J. Jacobson	Aug. 14	Aug. 16	.....	.....	.....	.....	.....	.....
			372	732	118	2	2	1,226

As one fisherman would sometimes deliver the catch of several boats, the figures opposite each name represents the fish delivered by him to the buyer and not his individual catch.

Where names are bracketed, two men fished in one boat with one net.

EXHIBIT 114

STATEMENT SHOWING FINANCIAL RESULT OF GILL-NET OPERATION IN 1939
AT SOOKE

Basis of Statement as follows:—

1. PRICE—

Sockeye at 65c.; Cohoes at 50c.; Springs at \$1.50; Pinks at 7c.; Chums at 10c.

2. Catch and Persons and time engaged as per Exhibit 50.

3. Expenses per day at least \$1.50. (See Evidence of Fial P. 544 without allowance for depreciation of net.)

Name	No. of Days	Total Value	Gross per Day	Expenses per Day	Loss or Gain, Net per Day
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
1. D. Reid.....	25	81 49	3 26	1 50	1 75 gain
2. H. Dahl.....	10	1 30	0 07	1 50	1 43 loss
3. R. Mond.....	4	2 72	0 68	1 50	0 62 loss
4. R. Mackie.....	4	10 48	4 12	1 50	2 62 gain
5. T. Fial.....	12	17 33	1 45	1 50	0 05 loss
6. S. Malviak.....	9	9 56	1 06	1 50	0 54 loss
7. H. Iverson.....	4	6 73	1 66	1 50	0 16 gain
8. L. Iverson.....	4	2 69	0 67	1 50	0 83 loss
9. H. Hansen.....	4	1 21	0 30	1 50	1 20 loss
10. K. Swansen.....	9	7 88	0 88	1 50	0 62 loss
11. E. Wardroper.....	9	114 07	6 35	1 50	4 85 gain
12. M. Silek.....	5	each			
13. E. Lumley.....		10 73	2 15	1 50	0 65 gain
14. J. McPherson.....	27	80 91	1 50	1 50	Nil
15. G. Horton.....		each			
16. C. Cain.....	9	2 14	0 24	1 50	1 26 loss
17. J. Jacobson.....	3	Nil	Nil	1 50	1 50 loss
Totals.....	147	355 24			

SUMMARY

2 men (Nos. 14 and 15) neither lost nor gained.

6 men (Nos. 1, 4, 7, 11, 12 and 13) made a net total of.....\$ 145 42

9 men (all others) lost a total of.....64 65

17 men in a total of 147 days made a net total of.....\$ 80 77

The results to my mind are far from proving that a reasonably successful operation from a financial point of view can be carried on in the Sooke area by gill-netters, especially when it is understood that a proportion of the gill-net catch shown on said Exhibits 16 and 50 was caught 35 miles west of the traps.

The evidence as to purse-seine operations in that area together with what appears on Exhibits 12 and 12A, leads to the same conclusion with respect to this type of gear.

It might perhaps be proper to point out here that the gill-net men do not take the position that the traps catch too many fish, but object to their continuance because it is said, among other things, that the trap operators enjoy a "privilege". (Hill, p. 1797.) I would mention that the gill-net men enjoy the privilege of the sole right of net fishing not only in those areas in which it is not feasible for other gear to fish, but in areas where other gear can fish, e.g., Skeena River, Smiths Inlet, and the area above New Westminster Bridge on the Fraser River, and are to be further favoured off the mouth of the Fraser if my recommendations hereinafter appearing are accepted by the Department.

Trollers, too, in a sense are "privileged" in that they are not subject to a closed season apart from the general fishing prohibition in December.

A fact which must not be overlooked is that all types of floating gear can move about from place to place and remain only where fishing conditions are favourable. The traps do not enjoy the advantages of mobility. They are fixed, and the fish come to the traps—not the traps to the fish. They are thus

continually subject to the vagaries of wind and tide which affect their catch, and suffer disadvantages in that regard more so than movable gear, which by moving about can to some extent offset such unfavourable conditions.

Turning Now to "1 (c)"

"The significance of continued operation of trap-net fishing in the Sooke area in relation to the possible reintroduction of trap-nets in the State of Washington";

From the evidence adduced, it seems established with reasonable certainty that, without closely defining the southern extremity of the run, the general course taken by the Fraser River salmon is to pass the Sooke area in the Straits of Juan de Fuca, between the International Boundary and the Canadian shore. From there the general body of the run continues a fairly straight course which brings it into American waters and close to American shores. Following the American shoreline it rounds Point Roberts and then, when conditions are right, enters the Fraser River on its way to the spawning grounds. (See Exhibit 26.)

The Sooke traps do not intercept much more than the fringe of this run and are, in my view of the evidence, the only type of gear that can operate on a commercially feasible basis in the Sooke area, thus permitting Canadian fishermen to get some portion of the run of what is in reality a Canadian fish, before it gets into American waters.

In 1934, 203 trap licences were issued in the State of Washington, and 92 traps were in operation. (For locations, see Exhibits 32 and 76.)

In 1935, due to an organized agitation by opposing interests, traps were abolished.

On various occasions since, efforts have been made to re-introduce traps into Washington waters, but it is my opinion that the continuation of the Sooke traps is not a significant factor in such agitation. The primary factors would appear to be—

- (a) Loss of revenue to the State from licence fees and taxation based on catch and decrease in employment.
- (b) The lower percentage of the total catch of the Fraser River run now made by American gear in Washington waters.
- (c) Operation of a large number of traps on the Oregon side of the Columbia River. (See Exhibit 76A.)

Heading (b) just above needs amplifying:

Prior to the abolition of American traps in 1935, the average American catch of sockeye salmon by all types of gear in Puget Sound waters for the four preceding years was 65.95 per cent of the total Canadian and American catch.

The average Canadian sockeye catch with all types of gear for the same years amounted to 34.05 per cent of the total catch. Since the abolition of the American traps, the percentages have changed in favour of Canada. The average Canadian sockeye catch for the four-year period since 1935 is 59.35 per cent of the total catch, and the Washington catch—40.65 per cent of the total catch. I have taken the four-year period, as we have only the catch for four years since the abolition of the traps in Washington State waters, with which to make a comparison.

Prior to the abolition of Washington traps, the average catch in the Sooke traps for four years was 2.54 per cent of the total sockeye catch. After the abolition of Washington traps, for the succeeding four-year period the Sooke trap average was 3.05 per cent. That is to say, the Sooke trap catch remained substantially constant, because of course, the Washington traps only intercepted the fish after they had passed the Sooke area. (See Exhibits 13, 22, 23, 83, 84, and 85 annexed.)

The picture becomes clear when a comparison is made of the percentage of the total sockeye catch caught by Canadian gear in the Fraser River area (excluding the Sooke trap catch), before and after the abolition of American traps. These figures follow:—

Average catch by gear other than traps, for 4 years, 1931 to 1934 inclusive:	31.3%	of total of American and Canadian catch.
Average catch by gear other than traps, for 4 years, 1935 to 1938 inclusive:	56.3%	of total of American and Canadian catch.

The foregoing figures indicate that the increase in the Canadian catch is not due to the existence of the Sooke traps. It is accounted for by the greater escapement of salmon from American waters, due to abolition of their large number of traps, which salmon generally speaking, now make their way to the Fraser River; some to be caught by Canadian gear in the river area; some to make their way to the spawning grounds.

It is clear from the evidence that the agitation for re-introduction of Washington traps will continue regardless of whether the Sooke traps are abolished or continue to operate, because the real factors underlying that agitation are as I have mentioned, and the continued operation of the Sooke traps is not of real significance in that issue.

I would point out too, that an analysis of the figures shown on Exhibit 13 and calculating the percentages thereon shown for a period of 12 years ending with 1938, indicates that so far as sockeye salmon are concerned, the Sooke traps caught on an average 2.66 per cent of the total Canadian and American catch of that fish. Assuming the Sooke traps abolished, and assuming that all the sockeye formerly caught in the traps were intercepted in American waters (which is a violent assumption indeed), it will be seen that the abolition of the Sooke traps would not even then in any appreciable degree tend to equalize the present percentages of the catch between the two countries.

On this aspect of the matter under inquiry by me, it should be remembered that when the International Sockeye Treaty is in full force and effect and the catch of sockeye equally divided between the two nations, it would make no difference, from an international point of view, providing sufficient escapement is assured, what gear is used by Canadian and American fishermen to get their share of the sockeye run.

I am frank to confess that I found this heading of the Commission troublesome in that I have been directed in reality to prophesy what propaganda those interests seeking re-introduction of traps in Washington would use in future in an endeavour to influence public opinion on their behalf in that State. As I have said above, I conclude upon the evidence adduced that continuation of the Sooke traps was and is not a real and vital factor in that issue, and if the existence of the Sooke traps is in the future used for propaganda purposes, then it can only be effective to the extent to which the facts may be distorted and a misinformed public opinion thereby created.

The argument that the Sooke traps must be abolished because of the possibility of the facts and circumstances surrounding their operation and the effect of their catch upon the American catch, being misrepresented to the American people, either by those who seek or are opposed to the re-introduction of Washington traps, is one to which I must turn a deaf ear.

Kenneth McLeod, of Seattle, Secretary of the Salmon Conservation League, which organization was the spearhead of the attack on American traps which led to their abolition, frankly admitted that the position he took in Washington was that the continuation of the Sooke traps should not be regarded as a factor in the determination of the Washington trap issue. He further stated (p. 1004) that the suggestion that the Sooke traps should be abolished because of a misinformed public opinion in Washington, was one concerning which he felt apologetic.

For those who will make an impartial study of the situation and become acquainted with the facts, I am satisfied that this one conclusion would be reached. The continuation of the Sooke traps is not and ought not to be of any real importance to the State of Washington.

Dealing with "1 (d)"

"Whether or not unemployment is accentuated by the operation of trap-nets in the Sooke area;"

With respect, the phraseology of this heading is not quite as clear as I would wish. I take it that I am directed to find whether the abolition of the Sooke traps would tend to increase employment of fishermen in the use of other types of fishing gear, and if so, would that off-set the loss of employment of those engaged in trap operations which would naturally follow from the abolition of traps. It is to be noted that the abolition of American traps did not lead to an increase in employment in other branches of the industry in that State.

Whether or not there is "unemployment" in the fishing industry in this Province as a whole appears to be somewhat a debatable point. A consideration of the statistical material would indicate that there has been since 1923, a steady increase in the number of gill-net licences issued. I take 1923 as a starting point because prior to that time, no licences were required for boat pullers, and the number of persons engaged as such is not available.

In 1923 (according to Exhibit 61) the following licences were issued:

Gill-net Licences	3,957	
Boat Pullers' Licences.....	992	
Making a total of.....	4,949	individuals licensed.

In 1938

Gill-net Licences issued.....	7,125	
Boat Pullers' Licences.....	518	
Making a total of.....	7,673	individuals licensed.

An increase in 15 years of 55 per cent.

In district No. 1, the figures are as follows: (Exhibit 60).

In 1923

Gill-net Licences.....	964	
Boat Pullers' Licences.....	174	
Total	1,138	Licences.

In 1938

Gill-net Licences.....	2,319	
Boat Pullers' Licences.....	283	
Total	2,602	Licences.

An increase in 15 years of 128 per cent.

It is also of importance to note that the gill-net fishing is increasing in efficiency. The witness, Probert (P. 1027) says that gill-net fishing is now ten times as efficient as it was thirty years ago due to finer nets, coloured nets, better boats and other factors.

Purse-seine licences have also increased (Exhibit 61), and while trolling licences in controlled areas on the West Coast have decreased from 716 in 1922 to 503 in 1938, trolling licences in District No. 1 have increased from 17 in 1922 to 190 in 1938.

The number of licences issued to gill-net fishermen on the Fraser River above the New Westminster Bridge have likewise increased. (See Exhibit 64.)

In 1923	
Gill-net licences issued	89
In 1938	
Gill-net licences issued	409
An increase of 360 per cent.	

The only conclusion I can reach from these figures is that in areas east of the traps, which ought to feel the effect of the trap catch, there has been an increase in the number of men employed in each year, together with a greater efficiency in the methods adopted.

There must come a time, if it has not already arrived, when, because of increased gear in the Fraser area and more intensified fishing, the individual return of each fisherman will diminish to that point where the number of licences will require adjustment, either by the Department or the industry itself.

Distribution of the trap catch would, in my opinion, be of little effect in increasing the individual catch off the Fraser River, if the traps were abolished.

I reproduce here Exhibits 33, 34, 35 and 36, which are self-explanatory.

EXHIBIT 33

STATEMENT SHOWING ADDITIONAL CATCH OF SOCKEYE WHICH MIGHT HAVE BEEN TAKEN BY EACH PURSE-SEINE AND GILL-NET FISHERMAN IN FRASER RIVER AREA IF TRAP-NET CATCH HAD BEEN DIVIDED PRO RATA AMONGST THESE FISHERMEN, HAVING IN MIND CANADIAN CATCH OF 54.69 PER CENT OF TOTAL.

(SEASON 1937)

Trap-net catch	99,503 fish
Canadian portion of catch, by purse-seine and gill-nets, District No. 1, 54.69%	54,418 "
Gill-net portion; 99.09% of 54,418	53,923 "
Purse-seine portion; 0.91% of 54,418	495 "
Above percentages based on total catches by gill-nets and purse-seines separately.	
Number of gill-net fishermen (individuals employed on gill-net boats)	2,501
Number of purse-seine fishermen (individuals employed on purse-seine boats at an average of 7 to a boat)	406
Number of fish per gill-net fisherman (53,923 divided by 2,501) ..	21.56 fish per man
Number of fish per purse-seine fisherman (495 divided by 406) ..	1.22 fish per man

The above, of course, is on the assumption that the Fraser River fishermen would catch every one of the salmon represented by the 4.6 per cent caught in the traps, but actually a number of these would pass safely through the commercial fishing area to the spawning grounds, so therefore, the catch per man as mentioned above, would be smaller.

EXHIBIT 34

STATEMENT SHOWING ADDITIONAL CATCH OF SOCKEYE WHICH MIGHT HAVE BEEN TAKEN BY EACH PURSE-SEINE AND GILL-NET FISHERMAN IN FRASER RIVER AREA IF TRAP-NET CATCH HAD BEEN DIVIDED PRO RATA AMONGST THESE FISHERMEN, HAVING IN MIND CANADIAN CATCH OF 54.56 PER CENT OF TOTAL.

(SEASON 1938)

Trap-net catch	41,372 fish
Canadian portion of catch, by purse-seines and gill-nets, District No. 1, 54.56% or.....	22,573 "
Gill-net portion—88% of 22,573.....	19,864 "
Purse-seine portion—12% of 22,573.....	2,709 "
Above percentages based on total catches by purse-seines and gill-nets separately.	
Number of gill-net fishermen (individuals employed on gill-net boats)	2,602
Number of purse-seine fishermen (individuals employed on purse-seine boats at an average of 7 to a boat).....	770
No. of fish per gill-net fisherman (19,864 divided by 2,602).....	7.6339 fish per man
Number of fish per purse-seine fisherman (2,709 divided by 770) ..	3.518 fish per man

The above, of course, is on the assumption that the Fraser River fishermen would catch every one of the salmon represented by the 1.2 per cent caught in the traps, but actually a number of these would pass safely through the commercial fishing area to the spawning grounds, so therefore, the catch per man as mentioned above, would be smaller.

EXHIBIT 35

STATEMENT SHOWING ADDITIONAL CATCH OF PINKS WHICH MIGHT HAVE BEEN TAKEN BY GILL-NET AND PURSE-SEINE FISHERMEN IN FRASER RIVER AREA IF TRAP NET CATCH HAD BEEN DIVIDED AMONGST THESE FISHERMEN PRO RATA, BASED ON CATCHES BY THESE TWO TYPES OF GEAR, OF PINKS PACKED BY CANADIAN CANNERIES IN DISTRICT NUMBER ONE ONLY.

(SEASON 1937)

Trap-net catch	164,268 fish
Canadian gill-net portion, 75.86 per cent.....	124,614 "
Canadian purse-seine portion, 24.14 per cent.....	39,654 "
Above percentages based on total Canadian catches by gill-nets and purse-seines separately.	
No. of gill-net fishermen (individuals employed on gill-net boats).	2,501
No. of purse-seine fishermen (individuals employed on purse-seine boats at an average of 7 to a boat).....	406
No. of fish per gill-net fisherman (124,614 divided by 2,501)	49.82 fish per man
No. of fish per purse-seine fisherman (39,654 divided by 406)	97.67 fish per man

The above statement is based on the assumption that the entire catch from trap-nets would, if the trap-nets had been closed, have been caught by Fraser River gill-net and purse-seine fishermen. Actually, of course, a considerable proportion of these pinks would have headed for Pink salmon streams in United States waters, and would either have been caught by American fishermen or would have escaped to the spawning grounds of Puget Sound.

EXHIBIT 36

STATEMENT SHOWING ADDITIONAL CATCH OF PINKS WHICH MIGHT HAVE BEEN TAKEN BY GILL-NET AND PURSE-SEINE FISHERMEN IN FRASER RIVER AREA IF TRAP-NET CATCH HAD BEEN DIVIDED AMONGST THESE FISHERMEN PRO RATA, BASED ON CATCHES BY THESE TWO TYPES OF GEAR, OF PINKS PACKED BY CANADIAN CANNERIES IN DISTRICT NUMBER ONE ONLY.

(SEASON 1938) ...

Catch of Pinks from trap-nets.....	1,472 fish
Canadian gill-net portion at 67.55 per cent.....	994 "
Canadian purse-seine portion at 32.45 per cent.....	478 "
Above percentages based on total Canadian catches by gill-nets and purse-seines separately.	
No. of gill-net fishermen (individuals employed on gill-net boats).	2,602
No. of purse-seine fishermen (individuals employed on purse-seine boats at an average of 7 to a boat).....	770
No. of fish per gill-net fisherman (994 divided by 2,602)	0.382 fish per man
No. of fish per purse-seine fisherman (478 divided by 770)	0.620 fish per man

The above statement is based on the assumption that the entire catch from trap-nets would, if the trap-nets had been closed, have been caught by Fraser River gill-net and purse-seine fishermen. Actually, of course, a considerable proportion of these pinks would have headed for Pink salmon streams in United States waters, and would either have been caught by American fishermen or would have escaped to the spawning grounds of Puget Sound.

Taking the average value of sockeye salmon at 50 cents per fish, and pink salmon at 20 cents per fish, which are the figures adopted by the Department as shown in Exhibit 43, this would mean (subject to the explanatory foot notes on the said Exhibits):

For 1937—A gain to each individual *Gill-net* fisherman on:

Sockeye	\$ 10 78
On Pinks	9 96
	<hr/>
	\$ 20 74

And for each *Purse-Seine* Fisherman:

For Sockeye.....	\$ 0 61
For Pinks.	19 53
	<hr/>
	\$ 20 14

For 1938—(Which is not a Pink run year). A gain to the individual *Gill-Net* fisherman,

For Sockeye.	\$ 3 81
And for each <i>Purse-Seine</i> Fisherman	
For Sockeye.	\$ 1 75

As to what the increased catch in other varieties would be, if traps were abolished, it is impossible to estimate for the reason, as disclosed by the evidence, that an undetermined portion of the runs of other varieties taken in the Sooke traps are bound for spawning grounds other than the Fraser River, and it is impossible to say what percentage of those taken at the traps were bound for the Fraser River.

Turning then to the examination of the other side of the picture, I find that the operations at Sooke provide employment for approximately ten months of the year to approximately 48 employees, with an average annual pay-roll as shown on Exhibit 130 of \$55,543.88 over the past 12 years. Exhibit 129 likewise shows the length of time that these employees have been in the employ of the Sooke Harbour Fishing & Packing Company, which is indicative of the satisfactory and settled relationship which has existed between the employer and the employees over a period of a great many years.

In passing, mention is made of Exhibit 131 as indicating the interest of the employer in its employees in maintaining a form of group insurance for their benefit.

A circumstance meriting consideration and disclosed in the evidence, is that the Village of Sooke, with a population of some six hundred (600), depends largely for its existence upon the operations of the Sooke traps.

The annual detailed cost of the construction and operation of the traps for the year 1938, is set out in Exhibit 132, which reads as follows:

EXHIBIT 132

DETAILED TRAP COSTS, 1938

Item	Beechey	Gordons	Muir Cr.	Otter Pt.	Sooke	Total
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Web.....	2,701 48	4,058 02	3,635 88	2,442 28	3,303 10	16,140 76
Piles.....	326 32	875 62	845 50	478 42	410 64	2,915 50
Store Room.....	422 66	604 76	590 36	408 76	557 86	2,644 40
Scow Account.....	78 92	78 92	78 90	78 90	78 90	304 54
Pile Driver.....	1,655 80	2,069 86	3,228 82	1,407 42	1,904 18	10,266 08
Pile Puller.....	219 18	821 98	767 18	383 56	602 78	2,794 68
Boat Service.....	1,355 76	2,742 24	3,300 30	1,475 54	1,606 92	10,480 76
Trap Expense.....	1,888 96	5,743 22	5,404 18	1,696 76	5,342 20	20,075 32
Licences.....	626 38	681 90	641 96	632 36	729 26	3,311 86
F. S. Leases.....	232 00	400 00	400 00	112 00	100 00	1,244 00
Labour and Mess.....	1,683 62	2,051 94	1,784 94	2,074 04	1,245 90	8,840 44
Total.....	11,191 08	20,188 46	20,768 02	11,190 04	15,890 74	79,138 34

NOTE.—"Labour and Mess" shown above only includes labour charged directly to trap operation, such as watchman's wages. In addition to this labour enters into many of the other items, notably Pile Driver, Pile Puller, Boat Service, Scow Account and Trap Expense. Total payroll for year—\$56,241.94.

It is my conclusion that the slight benefit to be conferred on each gill-net and purse-seine fisherman by the abolition of the traps, would be outweighed by the irretreivable loss suffered by the fishermen and the general community at Sooke.

It follows in my opinion that upon the evidence before me, and for the main reasons hereinbefore stated, it is not in the public interest to abolish trap fishing in the Sooke area.

RE: PURSE-SEINE ISSUE

The question involved under this heading of the Inquiry falls within a narrow compass and turns upon the complaint of the gill-net fisherman to the effect that the purse-seines are seriously affecting their catch of late sockeye and pinks by fishing in an area close to Roberts Bank off the mouth of the Fraser River. I find this complaint to be justified and consider that in the public interest, the present boundaries of salmon purse-seining Area 17, should be changed.

In order to understand the main reasons which lead me to this conclusion, and my consequential recommendation, it is necessary to recite shortly certain basic facts.

Gill-net fishing is, generally speaking, a night operation, and while it is true that the use of coloured nets to some extent aid in daylight fishing, it appears that gill-net operations cannot be as successfully and continually conducted in very clear water as in discoloured water, for the obvious reason that the net is visible to the fish and they avoid it. At night, in clear salt water, by reason of phosphorescence, the net often becomes a "wall of fire." Two conditions make for favourable and successful gill-net operations by day or night; the one—discoloured water; the other—a dilution of the salt water by fresh water which

lessens or destroys the phosphorescence. These two conditions are present off the mouth of the Fraser River. The discoloured water of the Fraser River spreads out to a considerable distance into the Gulf of Georgia.

Prior to 1933, purse-seining was not permitted in the Gulf of Georgia in District No. 1, i.e., in that area lying east of a line drawn from Howe Sound to where the International Boundary leaves the 49th parallel.

In 1933, purse-seining was permitted for late sockeye and pinks in Area 17, of District No. 1, the original northern boundary of which Area appears on Exhibit 3, as a dotted green line running from Gabriola Pass, eastward to Canoe Pass; thence east and south to join the 49th parallel.

In 1935, this area was reduced by eliminating that portion shown shaded in green on Exhibit 3, i.e., Roberts Bank. The northerly boundary remained the same.

In 1938, the area was again reduced by bringing the northern boundary south to its present location now marked on Exhibit 3, in a solid green line—which solid green line on Exhibit 3 now indicates all the present boundaries of Area 17.

On Exhibit 56 (attached hereto) the present Area 17, is shown in a greater scale and for the sake of convenience the letters "X" "Y" and "Z" were used thereon to represent certain areas bounded in red. "X" represents the area over which the present trouble has developed. "Y" represents, generally speaking, the clear water portion of Area 17, and "Z" represents the area between the first northerly boundary of Area 17, and the present northerly boundary of Area 17.

Purse-seiners were allowed in the original Area 17 in 1933, because of their contention that as gill-netters could not successfully fish in clear water, they should be permitted to do so.

It was also successfully suggested that the fish do not immediately go up the River on arrival from American waters, but remain for a time "playing about" in the waters of Area 17, and north thereof. In consequence of this delay, it was contended that when they did start for the spawning grounds and came within the discoloured water of those areas near the mouth of the River ("X" on Exhibit 56), they had deteriorated in quality. Thus, reasoned the purse-seiners, they could catch a better grade of fish in clear water ("Z" and "Y" on Exhibit 56) than could the gill-netters in discoloured water (Area "X"), and could catch them in a locality where the gill-netters could not successfully operate. This view was given effect to and Area 17 opened for purse-seining for late sockeye and pink salmon. I do not propose to amplify the reasons why the area was twice reduced in size. It is sufficient for me to say that I am satisfied from the evidence that purse-seining operations are not now being carried on to any great extent in the clear water portion of Area 17 (Area "Y"), but approximately 98 per cent of their fishing is being carried on in the discoloured waters and off the ledge of Roberts Bank, on the easterly boundary of Area 17 (Area "X" on Exhibit 56), and the gill-netters have been driven to fish to a greater degree in the clear water (Area "Y").

That this situation calls for a remedy is manifest, and my recommendations will hereinafter appear.

I now propose to deal with the specific headings upon which I have been directed to report:

"(a) Whether or not the purse-seining permitted is unduly destructive to immature salmon or other fish:"

The evidence does not disclose that purse-seining is unduly destructive to immature salmon or other fish. The catch of immature fish by traps, gill-nets or purse-seines is negligible, although the trollers catch a considerable quantity of "bluebacks" which are immature cohoes.

"(b) Whether or not the extent of varieties of salmon, other than pinks, and "late" sockeye, caught by purse-seines there, is of significance in relation to the livelihood and earnings of gill-netters:"

It is established to my satisfaction that the purse-seiners do not catch any varieties of salmon other than late-run sockeye and pinks to an extent that such catches are of significance in relation to the livelihood and earnings of gill-netters. (See Exhibit 43). Nor for that matter do I think that such contention was advanced by the gill-netters. What they chiefly complained about was the effect of purse-seining in that portion of Area 17 shown on Exhibit 56 as Area "X" upon their catches of late-run sockeye and pinks, both during the purse-seine operations and after the purse-seine boats had gone. While this aspect of the matter does not fall within this specific heading of the Inquiry, it is in my view included under the general direction to investigate relevant matters which in my judgment required consideration.

The position taken by the gill-netters may be summarized under three main headings:

1. Loss of catch while purse-seines are operating.
2. Loss of catch due to closed period following purse-seine fishing.
3. Depletion in run caused by purse-seining.

Dealing then with 1

It is clear that purse-seining affects the gill-net catch to a degree for three reasons:

- (a) There is only so many fish to catch and if the purse-seines get them, the gill-netters do not.
- (b) The purse-seine boats and attendant packers congregated and travelling in Area "X" (on Exhibit 56) prevent the gill-netters from making proper drifts in that Area and especially along the easterly boundary of Area 17.
- (c) The gill-netters, because of the presence of the purse-seiners and packers, are forced to leave said Area "X" and fish in said Area "Y" with less chance of a good catch.

Dealing with 2

It has been the policy of the Department to order a closure at the end of the purse-seine fishing season. Particulars of which are contained in Exhibit 59 as follows. (Note: Comparison of special closures ordered prior to and after 1933. And see Note (A) below.)

SUMMARY SPECIAL CLOSURES FISHING, DISTRICT NO. 1

1927: By increasing the usual weekly closed season by additional periods varying from six hours some weeks to two days and six hours other weeks, a total of approximately 8½ days special closures.....	8½ days
1928: No special closure	Nil
1929: No special closure	Nil
1930: Special closure September 22 to October 31.....	30 days
1931: Special closure September 29 to October 12.....	14 days
1932: No special closure.....	Nil
1933: Additional weekly closed season, (September 22 to October 7).	3 days
(Purse-seine fishing and sockeye fishing closed September 30).	
1934: Closed September 15 to October 1 (For gill-nets).....	16 days
Purse-seines operated only September 1-8.	

SUMMARY SPECIAL CLOSURES FISHING, DISTRICT NO. 1—*Conc.*

1935: Special closure September 21 to October 3.....	13 days
(No purse-seining after September 21).	
1936: Special closure August 12 to August 13 (No purse-seining in Area 17).....	1 day
1937: Special closure September 25 to October 7.....	13 days
1938: Special closure September 10 to October 3.....	24 days
(No purse-seines allowed after September 10).	

(A) From the evidence it would appear that the closures in 1930 and 1931 were to some extent due to market conditions rather than for conservation purposes.

(B) It should be noted too as indicated, that there was no purse-seining in 1936.

Gill-netters complain, with some reason, that they are penalized because of the closed periods for which the purse-seines, and not they, are responsible.

3. *Depletion of the run:*

I propose to deal with this subject under another heading.

With reference to the general effect of purse-seining upon gill-net operations, the following Exhibits are self-explanatory, and illuminating:

EXHIBIT 93A

SALMON CATCH BY GILL-NETS AND PURSE-SEINES IN DISTRICT NO. 1, 1933 TO 1939 INCLUSIVE.

Year	Sockeye	Pinks	Chums	Coho	Springs	Steelhead
1933 Gill-nets	449,785 Fish	964,618 Fish	6,029 Fish	50,574 Fish	52,259 Fish	.....
% of total	95-097	51-335	61-461	.....	.....	.....
Purse-seines	23,186 Fish	914,414 Fish	1,372 Fish	26,408 lbs.	107,866 lbs.	390 lbs.
% of total	4-902	49-667	18-538	.....	.....	.....
1934 Gill-nets	1,230,956 Fish	70 Fish	784,013 Fish	1,042,969 lbs.	3,289,644 lbs.	33,065 lbs.
% of total	78-957	59-322	97-362	94-407	88-288	99-608
Purse-seines	328,058 Fish	48 Fish	21,235 Fish	61,784 lbs.	436,370 lbs.	130 lbs.
% of total	21-042	40-677	2-637	5-592	11-711	-391
1935 Gill-nets	595,559 Fish	925,394 Fish	313,652 Fish	2,460,517 lbs.	3,915,869 lbs.	115,026 lbs.
% of total	79-158	43-956	98-927	94-599	93-776	99-667
Purse-seines	156,816 Fish	1,178,440 Fish	3,411 Fish	140,456 lbs.	259,734 lbs.	153 lbs.
% of total	20-841	56-013	1-074	5-400	6-223	-132
1936 No purse-seining and no record made.						
1937 Gill-nets	967,580 Fish	1,200,309 Fish	540,399 Fish	919,246 lbs.	3,171,303 lbs.	46,558 lbs.
% of total	99-087	75-563	99-777	97-871	97-702	98-965
Purse-seines	8,903 Fish	281,879 Fish	1,205 Fish	19,990 lbs.	74,573 lbs.	490 lbs.
% of total	-911	24-136	-222	2-128	2-297	1-041
1938 Gill-nets	1,526,117 Fish	816 Fish	548,700 Fish	2,778,412 lbs.	3,654,733 lbs.	48,164 lbs.
% of total	87-658	67-549	99-962	99-012	99-470	98-017
Purse-seines	214,264 Fish	392 Fish	205 Fish	27-716 lbs.	19,463 lbs.	974 lbs.
% of total	12-311	32-450	-037	-937	-502	1-952
1939 Gill-nets	514,476 Fish	1,360,684 Fish	312,691 Fish	1,460,667 lbs.	3,605,298 lbs.	87,434 lbs.
% of total	85-244	73-631	99-952	97-108	99-065	98-556
Purse-seines	69,033 Fish	481,033 Fish	180 Fish	43,497 lbs.	34,018 lbs.	1,281 lbs.
% of total	14-755	26-118	-047	2-891	-934	1-443

When considering the purse-seine catch in comparison with the gill-net catch, it must be borne in mind that the gill-net catch represents the seasons fishing, and that of the purse-seiners, a limited period. Particulars are as follows:

Exhibit 60 shows the number of salmon gill-net licences and boat pullers licences issued for District No. 1, as follows:

For 1933 a total of.. .. .	2,033
1934 a total of.. .. .	2,172
1935 a total of.. .. .	1,986
1936 a total of.. .. .	2,172
1937 a total of.. .. .	2,501
1938 a total of.. .. .	2,602

Gill-net fishing is carried on practically throughout the entire year, except during the closed seasons.

Exhibits 18 and 19 show the number of purse-seine boats and days operated, as follows:

For 1933..	63 for 20 days
1934..	102 for 7 days
1935..	108 for 20 days
1936..	(No purse-seining)
1937..	58 for 23 days
1938..	110 for 7 days

The following figures give some indication of the increased revenue which might be received by the gill-netters if purse-seining was abolished in Area 17.

EXHIBIT 43

STATEMENT SHOWING THE ADDITIONAL NUMBER OF SALMON OF EACH VARIETY THAT WOULD HAVE BEEN TAKEN BY GILL-NET OPERATORS IN THE FRASER RIVER, IF SALMON PURSE-SEINERS HAD NOT BEEN PERMITTED IN AREA NO. 17 AND IF EVERY FISH TAKEN BY PURSE-SEINERS HAD BEEN CAUGHT BY GILL-NET OPERATORS IN ADDITION TO THE NUMBERS THEY ACTUALLY CAUGHT, FOR THE YEARS 1933-38 INCLUSIVE. ALSO SHOWING THE VALUE IN DOLLARS AND CENTS TO EACH GILL-NET FISHERMAN.

Year	—	Sockeye	Pinks	Chums	Coho	Springs	Steelhead
		Fish	Fish	Fish	lbs.	lbs.	lbs.
1933	Catch by purse-seines.....	23,186	914,414	1,372	26,408	107,866	390
	Number of gill-net fishermen: 2,033.						
	Additional fish that would have been caught by each man.....	11,404	449,785	0.674	12,989	53,037	0.191
	Approximate value of additional catch by each fisherman.....	\$5.70	\$22.49	\$0.08	\$0.52	\$2.65	\$0.01
1934	Catch by purse-seines.....	328,058	48	21,235	61,784	436,370	130
	Number of gill-net fishermen: 2,172.						
	Additional fish that would have been caught by each man.....	151,039	0.022	9,776	28,445	200,907	0.059
	Approximate value of additional catch by each fisherman.....	\$75.52	\$0.00	\$0.88	\$1.59	\$9.24	\$0.00
1935	Catch by purse-seines.....	156,816	1,178,440	3,411	140,456	259,734	153
	Number of gill-net fishermen: 1,986.						
	Additional fish that would have been caught by each man.....	78,060	593,377	1,717	70,723	130,782	0.077
	Approximate value of additional catch by each fisherman.....	\$39.48	\$17.80	\$0.17	\$3.18	\$6.02	\$0.00
1936	No seining District No. 1.....						
1937	Catch by purse-seines.....	8,903	381,879	1,205	19,990	74,573	490
	Number of gill-net fishermen: 2,501.						
	Additional fish that would have been caught by each man.....	3,559	152,690	0.481	7,992	29,817	0.193
	Approximate value of additional catch by each fisherman.....	\$1.78	\$7.63	\$0.04	\$0.48	\$1.52	\$0.01
1938	Catch by purse-seines.....	214,264	392	205	27,716	19,463	.....
	Number of gill-net fishermen: 2,602.						
	Additional fish that would have been caught by each man.....	82,345	0.150	0.078	10,651	7,480	.....
	Approximate value of additional catch by each fisherman.....	\$41.17	\$0.00	\$0.01	\$0.70	\$0.60	\$0.00

NOTE.—See also Exhibits 22 and 85.—Commissioner.

NOTE.—Not all of these salmon, however, would have been caught by the gill-net fishermen, as some would escape the nets and pass up to the spawning grounds.

"(c) Whether or not purse-seining there has the effect of breaking up schools of salmon in such a way as to be detrimental to the interests of the gill-netters":

It is difficult to define with any precision what effect purse-seining has upon schooling fish. It is really not so much a question of breaking up the schools, concerning which complaint is made, but the "scooping up" the schools by the purse-seiner who is fortunate enough to make a set surrounding a school. In my view, the matter which calls for adjustment is the operation of the purse-seiners in Area "X", where approximately 98 per cent of the purse-seining is carried on, and where the fish have the greater tendency to congregate, than in other portions of Area 17.

"(d) The feasibility of the successful operation of gill-nets in the waters where seining is being allowed":

In my view, as stated above, gill-netting can be more successfully carried on in discoloured water than in water that is clear, although it appears that reasonably successful gill-net operations can be conducted in almost every portion of Area 17.

"(e) Whether or not a superior pack and consequently a greater economic return is being secured from the catch taken by purse-seining there, than would otherwise be obtained."

There is no appreciable difference for canning purposes between the quality of fish caught by either types of gear in Area 17.

RECOMMENDATION

Bearing in mind the economic and other factors to be considered and in the light of the circumstances surrounding the entry of purse-seiners into Area 17, and the evidence adduced, I would recommend that purse-seining be prohibited in Area "X" and a small section of Area "Y" on Exhibit 56; and to compensate the purse-seiners for the loss of said Area "X" and that small section of Area "Y", would extend the purse-seining area to include a portion of Area "Z" on Exhibit 56. I recommend that the boundaries of Area 17 be adjusted accordingly, and upon Exhibit 56, I have drawn a heavy black line in a northwesterly direction from the point at which the international boundary line meets the 49th parallel to an island lying to the north of Gabriola Pass. It is my opinion that such heavy black line should represent the easterly boundary of Area 17, and that purse-seining be prohibited to the east thereof. If there is any practical difficulty in defining that line by buoys, lights or beacons, then I would suggest that the easterly boundary be that which the Supervisor of Fisheries deems practicable, without departing from the basic essentials of my recommendation. The area I suggest be left open to purse-seiners comprises the greater part of those clear water areas into which they were desirous of being admitted in 1933.

I also recommend that an effort be made by the Department to arrange night anchorage for the purse-seine fleet so that such place of anchorage will not interfere with the gill-net drifts, and which will in addition, obviate so far as possible, the present danger of gill-net destruction by travelling purse-seiners and packers.

GENERAL OBSERVATIONS

1. *Depletion of Run:*

Considerable evidence was heard on this subject. One group of witnesses claimed an alarming depletion of the runs; others, including the Departmental Officers, denied that such was the fact, and maintained that the runs were being fully preserved, and in some streams were in fact increasing. The sockeye pack has remained fairly constant since the re-adjustment following the Hells Gate disaster, but the fact is not regarded as significant by the "depletionists" (if I may so describe them) who allege that whereas in former years the pack represented only a small percentage of the run, in later years due to increased fishing gear and improved methods, the pack is every year representing a greater percentage of the run. In other words, while the pack remains constant the escapement is progressively getting smaller each year.

Without coming to any definite conclusion on this problem of escapement and depletion, I would think that the truth lies somewhere between the two contentions. My reason for not forming a definite opinion on this question is that a scientific and thorough long range investigation of the matter is being conducted by officials of the International Salmon Fisheries Commission. Their conclusions will be of much more value than anything I could possibly find upon the evidence before me; and in addition, I do not find it incumbent upon me to make a decision on the subject as a condition precedent to the determination of those specific issues upon which I am directed to report.

I might say however, that in my opinion, no one type of gear operating in controlled areas can be held solely responsible for any depletion that may in fact be established. I say "controlled areas" advisedly in contra-distinction to those waters which lie beyond our jurisdiction, such as Swiftsure Banks.

With respect to the suggestion by certain trollers and others fishing to the east of the Sooke traps that the traps were responsible for a depletion in the Spring and Coho runs, and assuming without deciding that such runs have lessened, I think the following figures are of interest and refute that contention:—

EXHIBIT 115

STATEMENT SHOWING CATCHES OF SPRING SALMON, WEST COAST OF VANCOUVER ISLAND

	1929	1930	1931	1932	1933	1934	1935	1936
	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
Quatsino.....	No record	270	1,851	1,483	2,481	2,451	2,269	2,137
Kyuquot.....	4,808	5,627	4,487	5,372	4,221	5,898	4,322	4,674
Nootka.....	2,213	1,128	1,931	1,503	330	277	712	1,875
Clayoquot.....	4,864	3,024	5,443	5,167	4,454	4,550	5,515	4,230
Barclay Sound.....	15,247	20,638	12,014	12,064	16,886	21,412	20,758	17,756
Total.....	28,162	30,666	25,756	25,594	28,372	34,588	33,476	30,672
Sooke.....	4,488	6,536	3,860	5,684	3,618	5,469	4,221	3,393
Grand Totals—West Coast.....						237,416	86½%	
Sooke.....						37,275	13½%	

NOTE.—It will be seen from these figures that from 1929 to 1936, 3,037,200 lbs. of Spring salmon were taken West of the traps—largely by trollers.—*Commissioner.*

EXHIBIT 116

COMPARATIVE CATCHES OF SPRING SALMON TAKEN ON WEST COAST OF VANCOUVER ISLAND (furnished by Dominion Fisheries Department), SWIFTSURE BANKS and PUGET SOUND (taken from Biological Reports Nos. 35-A and 36-A, Department of Fisheries, State of Washington) and SOOKE TRAPS.

NOTE.—Dominion Statistics show weights only, State of Washington figures show numbers only, Sooke Traps records show both weights and numbers. In all cases the figures have been reduced to both weights and numbers, using the Sooke Trap records as a basis for the averages.

Year	Puget Sound & Swiftsure		West Coast		Sooke Traps	
	Number	Weight	Number	Weight	Number	Weight
		cwts.		cwts.		cwts.
1935.....	232,199	49,230	160,200	33,576	10,810	4,221
1936.....	314,378	65,310	147,401	30,672	10,297	3,393
Total.....	546,577	114,620	307,601	64,248	36,107	7,014

PERCENTAGES OF TOTAL CATCH

Year	Puget Sound and West Coast		Sooke Traps
	Per cent	Per cent	Per cent
1935.....	56.2	39.0	4.8
1936.....	65.8	30.8	3.4

Above figures are exclusive of Fraser River for which no official figures are available.

EXPLANATORY NOTES

1. Puget Sound and Swiftsure figures for 1935 appear in Bulletin 35-A (Page 4) of Department of Fisheries for Washington State.

2. Puget Sound and Swiftsure figures for 1936 appear in Bulletin 30-A (Page 2) of said Department and State.

EXHIBIT 119

STATEMENT FOR YEAR 1937 OF CATCHES OF SPRING SALMON IN PUGET SOUND, FRASER RIVER AND WEST COAST AREAS AND COMPARISON BY PERCENTAGES

1937	SPRINGS		Number of Fish
1. Total catch on Puget Sound as per Bulletin No. 38 of State of Washington Fisheries Department page 18.			281,859
2. <i>Fraser River Area (District No. 1)</i>	Pounds	Fish	
Catch by purse-seines as per Exhibit No. 10. . .	74,873		
Catch by gill-nets as per same exhibit.....	3,171,303		
Total	3,246,176	or	135,257
3. <i>West Coast of Vancouver Island</i>			
Catch as per Dominion Department of Fisheries..	1,747,500	or	82,780
Total of 2 and 3 above.....			218,037
4. Catch of Sooke trap nets.....	446,987		19,412
Grand Total			519,308
<i>Percentages—</i>		Per Cent	
Puget Sound		54.1	
Fraser River and West Coast of Vancouver Island.....		42.2	
Sooke Trap nets.....		3.7	
Total		100	

EXPLANATORY NOTES

1. Fraser River area taken at round weight and converted into pieces at 24 pounds each.

2. West Coast area taken at dress weight head on, which is 88 per cent of round weight, and converted into pieces at 88 per cent of 24 pounds or 21.12 pounds each.

3. Sooke fish by actual count.

EXHIBIT 120

STATEMENT FOR YEAR 1938 OF CATCHES OF SPRING SALMON IN PUGET SOUND,
FRASER RIVER AND WEST COAST AREAS AND COMPARISON BY
PERCENTAGES

1938	SPRINGS		Number of Fish
1. Total catch on Puget Sound as per Bulletin No. 38 of State of Washington Fishery Department, page 18.			170,528
2. <i>Fraser River Area (District No. 1)</i>	Pounds	Fish	
Catch by purse-seines as per exhibit No. 10....	19,463		
Catch by gill-nets as per same Exhibit.....	3,054,733		
Total	3,074,196	or	153,092
3. <i>West Coast of Vancouver Island</i>			
Catch as per Dominion Department of Fisheries....	2,461,700	or	116,558
Total of 2 and 3 above.....			269,650
4. Catch of Sooke trap nets.....	305,845		12,047
Grand Total			452,825
<i>Percentages—</i>		Per Cent	
Puget Sound		37.7	
Fraser River and West Coast of Vancouver Island.....		59.5	
Sooke Trap nets.....		2.8	
Total		100	

EXPLANATORY NOTES

1. Fraser River area taken at round weight and converted into pieces at 24 pounds each.
2. West Coast area taken at dress weight head on, which is 88 per cent of round weight, and converted into pieces at 88 per cent of 24 pounds or 21.12 pounds each.
3. Sooke fish by actual count.

EXHIBIT 122

STATEMENT FOR YEAR 1937 OF CATCHES OF COHO SALMON IN PUGET SOUND,
FRASER RIVER AND WEST COAST AREAS AND COMPARISON BY
PERCENTAGES

1937	COHOES		Number of Fish
1. Total catch on Puget Sound as per Bulletin No. 38 of State of Washington Fisheries Department, Page 19.			800,869
2. <i>Fraser River Area (District No. 1)</i>	Pounds	Fish	
Catch by purse-seines as per Exhibit No. 10....	10,990		
Catch by gill-nets, as per same Exhibit.....	919,246		
Total	939,236	or	117,404
3. Catch of West Coast as per Dominion Department of Fisheries	924,400	or	175,550
Total of 2 and 3 above.....			292,954
4. Catch of Sooke Traps.....			20,555
Grand Total			1,126,378
<i>Percentages—</i>		Per Cent	
Puget Sound		71.6	
Fraser River area and West Coast of Vancouver Island....		26.0	
Sooke Traps		2.4	
Total		100	

EXPLANATORY NOTES

1. Fraser River area taken as dressed head-on at 8 pounds each.
2. West Coast taken on same basis.
3. Sooke fish by actual count.

EXHIBIT 123

STATEMENT FOR YEAR 1938 OF CATCHES OF COHO SALMON IN PUGET SOUND,
FRASER RIVER AND WEST COAST AREAS AND COMPARISON
BY PERCENTAGES

1938	COHOES	Number of Fish
1. Total catch on Puget Sound as per Bulletin No. 33 of the State of Washington Fisheries Department, Page 19		498,068
2. <i>Fraser River Area (District No. 1)</i>	Pounds	Fish
Catch by purse-seines as per Exhibit No. 10....	27,716	
Catch by gill-nets as per same Exhibit.....	2,778,412	or 350,766
Total	2,806,128	
3. Catch of West Coast as per Dominion Department of Fisheries	2,681,300	or 335,162
Total of 2 and 3 above.....		685,928
4. Catch of Sooke traps.....		24,703
Grand Total		1,208,699
<i>Percentages—</i>		Per Cent
Puget Sound		41.2
Fraser River Area and West Coast Vancouver Island.....		56.7
Sooke Traps		2.1
Total		100

EXPLANATORY NOTES

1. Fraser River area taken as dressed head-on at 8 pounds each.
2. West Coast taken on same basis.
3. Sooke fish by actual count.

In addition, Spring and Cohoes are, of course, the fish which the sports fishermen catch, and while there are no figures on the Canadian catch by sports fishermen, the American figures disclose that their catch is by no means inconsiderable.

Exhibits 128 and 7 supply the following information:—

1938: Catch of Chinook (Spring) salmon by American sports fishermen. (Estimated)	55,600
1938: Catch of Spring salmon by Sooke traps.....	12,077
1938: Catch of Coho salmon by American sports fishermen. (Estimated)	137,900
1938: Catch of Coho salmon by Sooke trap	25,223

It will therefore be seen that the catch of the American sports fishermen of Spring salmon in this year was almost five times the Sooke trap catch, and their catch of Coho, almost five and one-half times the trap catch. It should be noted that the American catch was all made after the fish passed the Sooke traps.

Attention is also drawn to Exhibit 93A from which it appears that the following catch (in pounds) of Spring salmon and Cohoes was taken by gill-netters and purse-seiners in Area 17 for the five-year period, 1934-1939:—

Year	Gear	Cohoes	Springs
1934	Gill-nets.....	1,042,069	3,289,614
	Purse-seines.....	61,784	436,370
1935	Gill-nets.....	2,460,517	3,913,869
	Purse-seines.....	140,456	259,731
1937	Gill-nets.....	919,246	3,171,303
	Purse-seines.....	19,960	74,573
1938	Gill-nets.....	2,778,412	3,654,733
	Purse-seines.....	27,716	19,463
1939	Gill-nets.....	1,460,667	3,605,298
	Purse-seines.....	43,497	31,018
	Totals.....	8,955,234	18,459,003

In my opinion, there is no basis in fact for holding the Sooke traps responsible for the depletion, if any, in the Spring and Coho runs.

Re: Sand Head Range Beacons

These are not only no longer necessary, but are the source of irritation to fishermen. I recommend their removal.

Re: Section 13 of the "Fisheries Act"

Section 13 of the "Fisheries Act" provides that all stationary nets or other stationary appliances for the capture of salmon shall be placed at distances of not less than 250 yards apart, without intermediate fishing nets or appliances of any kind.

This is in conflict with the regulations.

Major Motherwell, in his evidence at pages 68, 69, 70 and 410, points out that this provision was inserted in the Act for the specific purpose of meeting conditions on the Atlantic Coast, and was never intended to apply to British Columbia waters, and has never been enforced here. It would be advisable to clarify this matter by appropriate amendment.

A perusal of this report will, of course, show that, instead of making an analysis of the evidence, I have limited myself largely to conclusions, except in those instances in which I have reproduced Exhibits which speak for themselves. To reach my conclusions upon many disputed points, it was necessary for me to believe certain witnesses and disbelieve others; to accept certain submissions and to reject others as unsound. In my opinion, to attempt to make a close and critical analysis of all the evidence and to outline in detail all the various factors from which I reached the conclusions herein expressed, would be of no practical value to anyone. The evidence is submitted herewith to you, together with the Exhibits.

In conclusion, may I express my very great appreciation for the untiring and intelligent service rendered by Major Motherwell and his officers and staff in aiding Mr. Coady and myself. Mr. Coady, too, deserves praise for the fair, conscientious, and diligent manner in which he presented the evidence. To counsel and those other gentlemen who appeared for the various interested parties, I am also indebted for their assistance and aid.

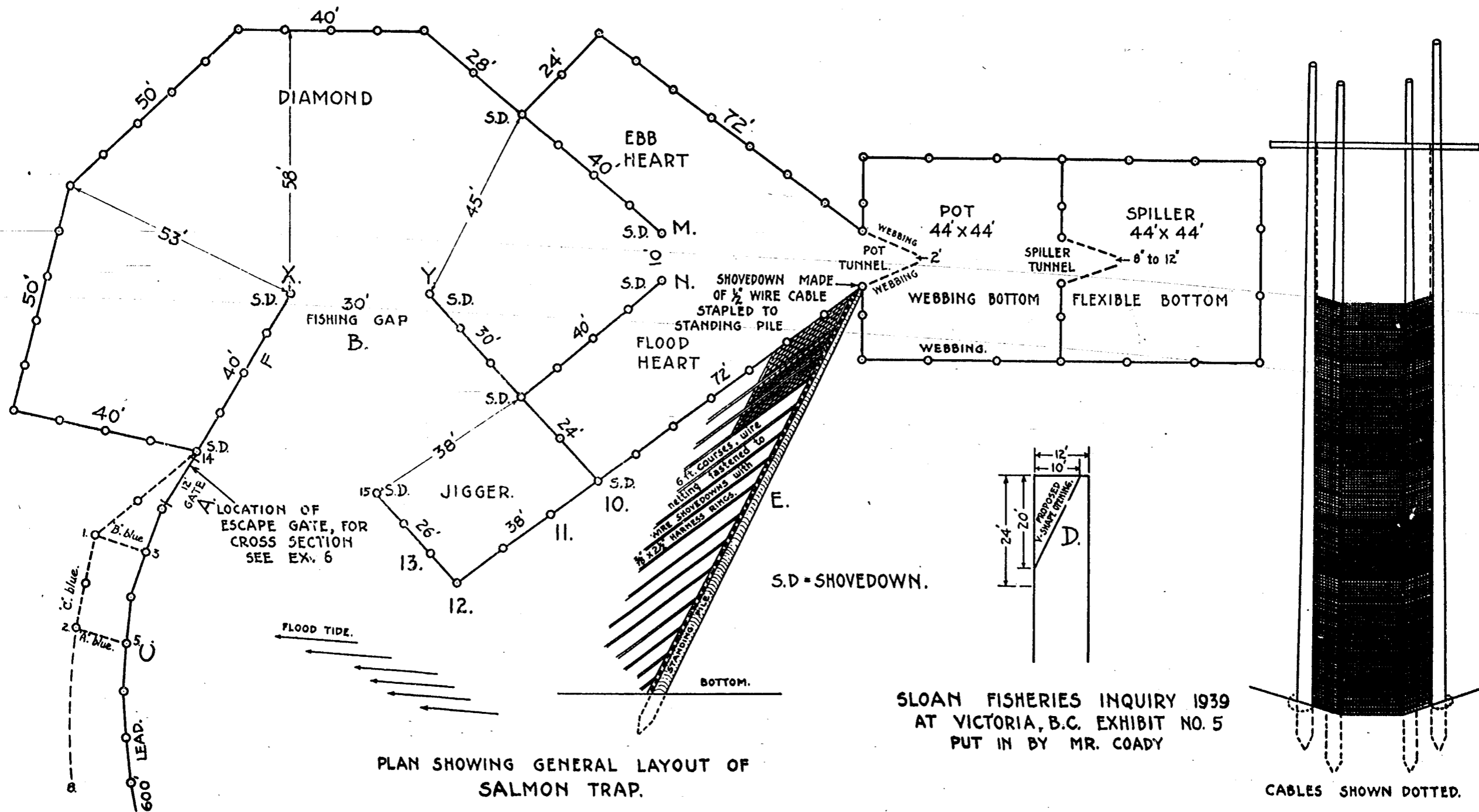
I have the honour to be, Sir,

Your obedient servant,

GORDON McG. SLOAN,
Commissioner.

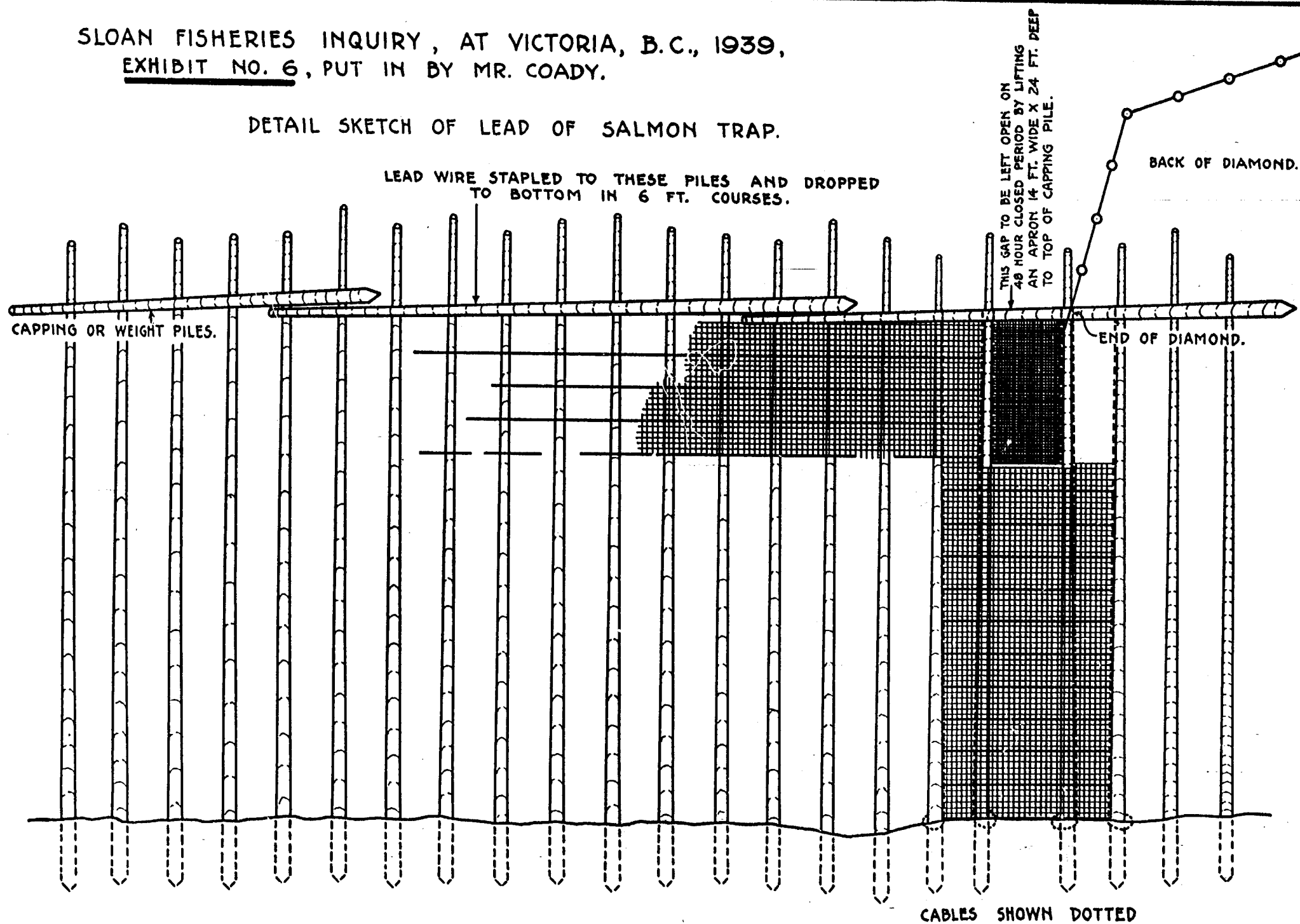
VICTORIA, B.C.
April 16, 1940.

EXHIBIT No. 5



SLOAN FISHERIES INQUIRY, AT VICTORIA, B.C., 1939,
EXHIBIT NO. 6, PUT IN BY MR. COADY.

DETAIL SKETCH OF LEAD OF SALMON TRAP.



GRAPH FROM EXHIBIT NO. 13 - SOCKEYE SALMON PACK FROM RUNS TO FRASER RIVER 1909 TO 1938.

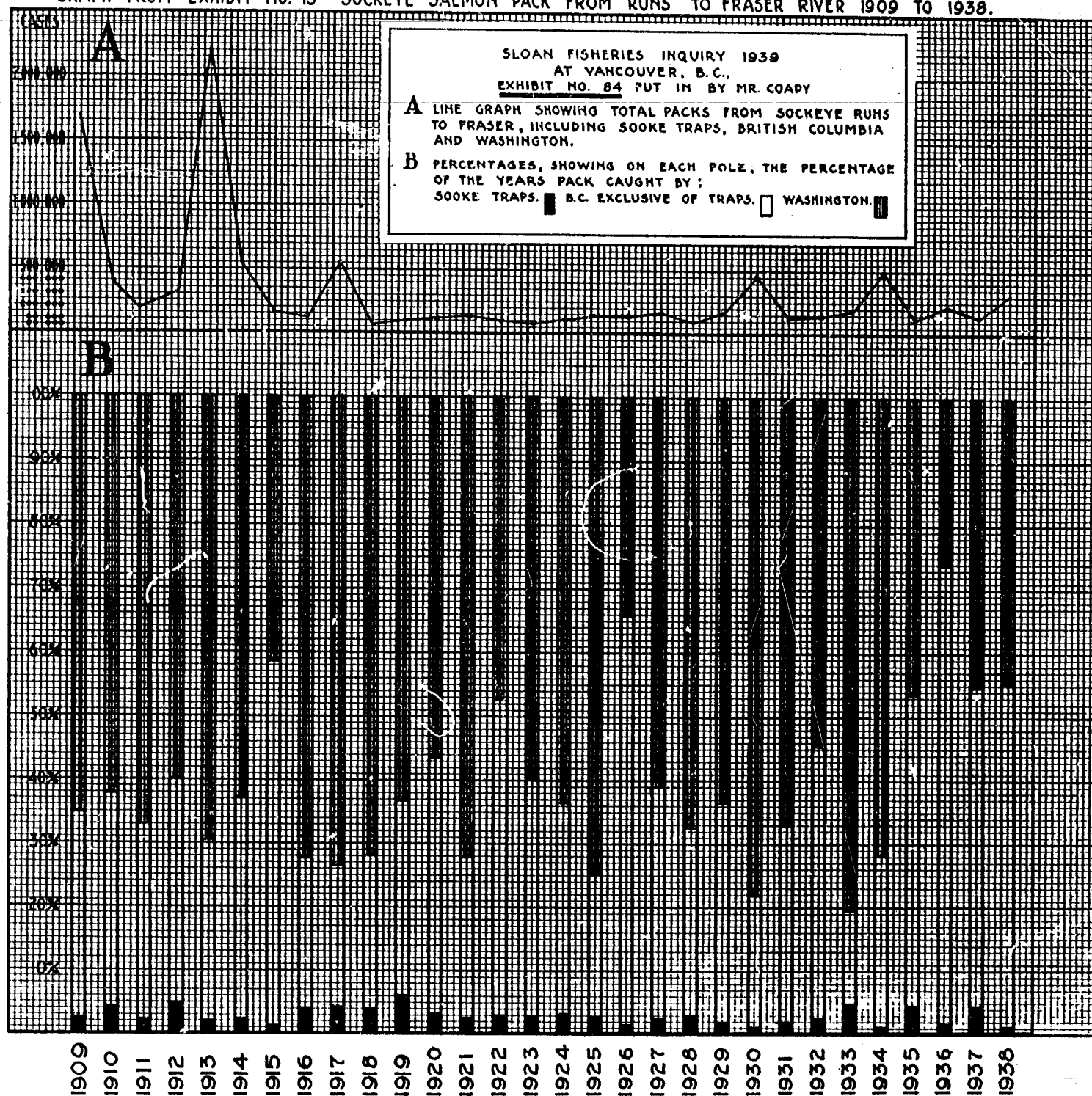


EXHIBIT NO. 13—FISHERIES INQUIRY.

PACK OF SOCKEYE SALMON FROM RUNS TO FRASER RIVER—1909 TO 1938

Figures represent cases of 48 one-pound tins or equivalent

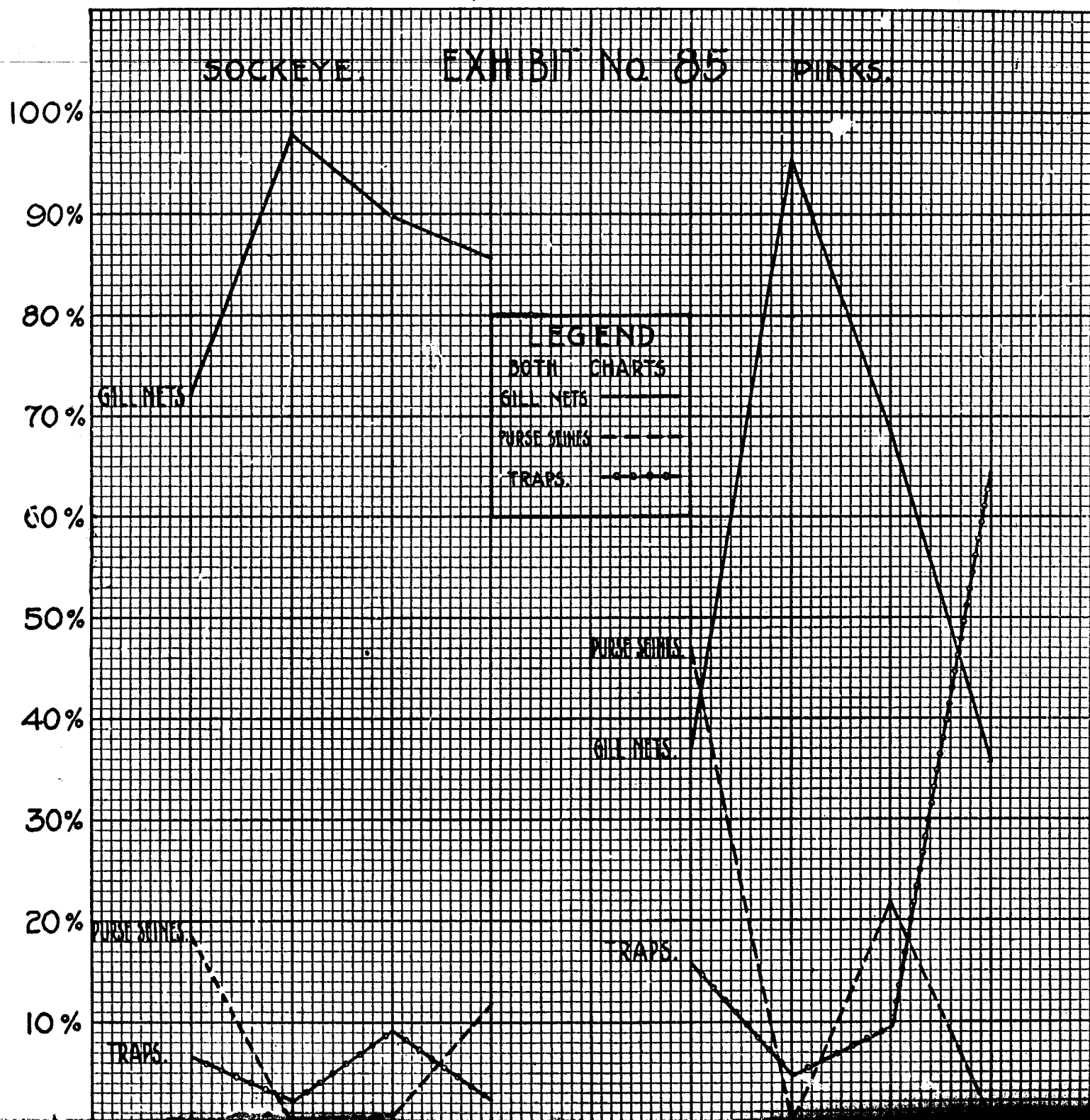
	From Sooke Traps		British Columbia (Fraser) exclusive of Sooke Traps		State of Washington, U.S.A.		Total Cases
		per cent		per cent		per cent	
1909.....	43,187	2.6	542,248	32.2	1,097,904	65.2	1,683,339
1910.....	17,387	4.4	133,045	33.4	248,014	62.2	398,446
1911.....	4,330	2.3	58,487	30.7	127,761	67.0	190,578
1912.....	15,095	4.9	108,784	35.3	184,680	59.8	308,559
1913.....	52,065	2.1	684,596	28.4	1,673,099	69.5	2,409,760
1914.....	12,700	2.4	185,483	34.8	335,230	62.8	533,413
1915.....	2,090	1.4	89,040	57.2	64,548	41.4	155,678
1916.....	4,752	4.1	27,394	23.5	84,637	72.4	116,783
1917.....	24,550	4.4	123,614	22.1	411,358	73.5	559,702
1918.....	2,348	4.1	16,849	33.9	50,723	72.0	70,410
1919.....	6,194	6.2	29,628	29.6	63,346	63.2	100,163
1920.....	3,801	3.4	44,598	40.2	62,654	56.4	111,053
1921.....	3,731	2.6	35,900	25.2	102,967	72.2	142,598
1922.....	3,088	3.1	48,744	48.6	48,566	48.3	100,398
1923.....	2,232	2.9	29,423	37.2	47,402	59.9	79,057
1924.....	3,543	3.3	36,200	33.2	69,369	63.5	109,112
1925.....	3,862	2.8	31,523	22.3	106,064	74.0	141,449
1926.....	2,091	1.6	83,589	64.2	44,569	34.2	130,249
1927.....	4,337	2.7	57,085	32.2	96,343	61.0	157,765
1928.....	2,769	3.1	26,530	29.4	61,044	67.6	90,343
1929.....	3,480	2.0	60,407	34.4	111,856	63.6	175,743
1930.....	5,334	1.2	93,416	20.7	352,194	78.1	450,944
1931.....	2,440	2.0	38,507	30.9	83,728	67.1	124,675
1932.....	4,000	2.7	61,769	42.8	78,319	54.5	144,088
1933.....	8,721	4.9	43,745	24.6	125,738	70.5	178,204
1934.....	6,117	1.2	133,159	27.1	352,579	71.7	491,855
1935.....	5,610	4.7	57,212	48.8	54,677	46.5	117,499
1936.....	3,837	1.7	164,408	72.2	59,505	26.1	227,750
1937.....	6,152	4.6	68,583	50.1	60,259	45.3	132,994
1938*	3,652	1.2	168,574	64.1	138,986	44.7	311,212

*Unrevised figures.

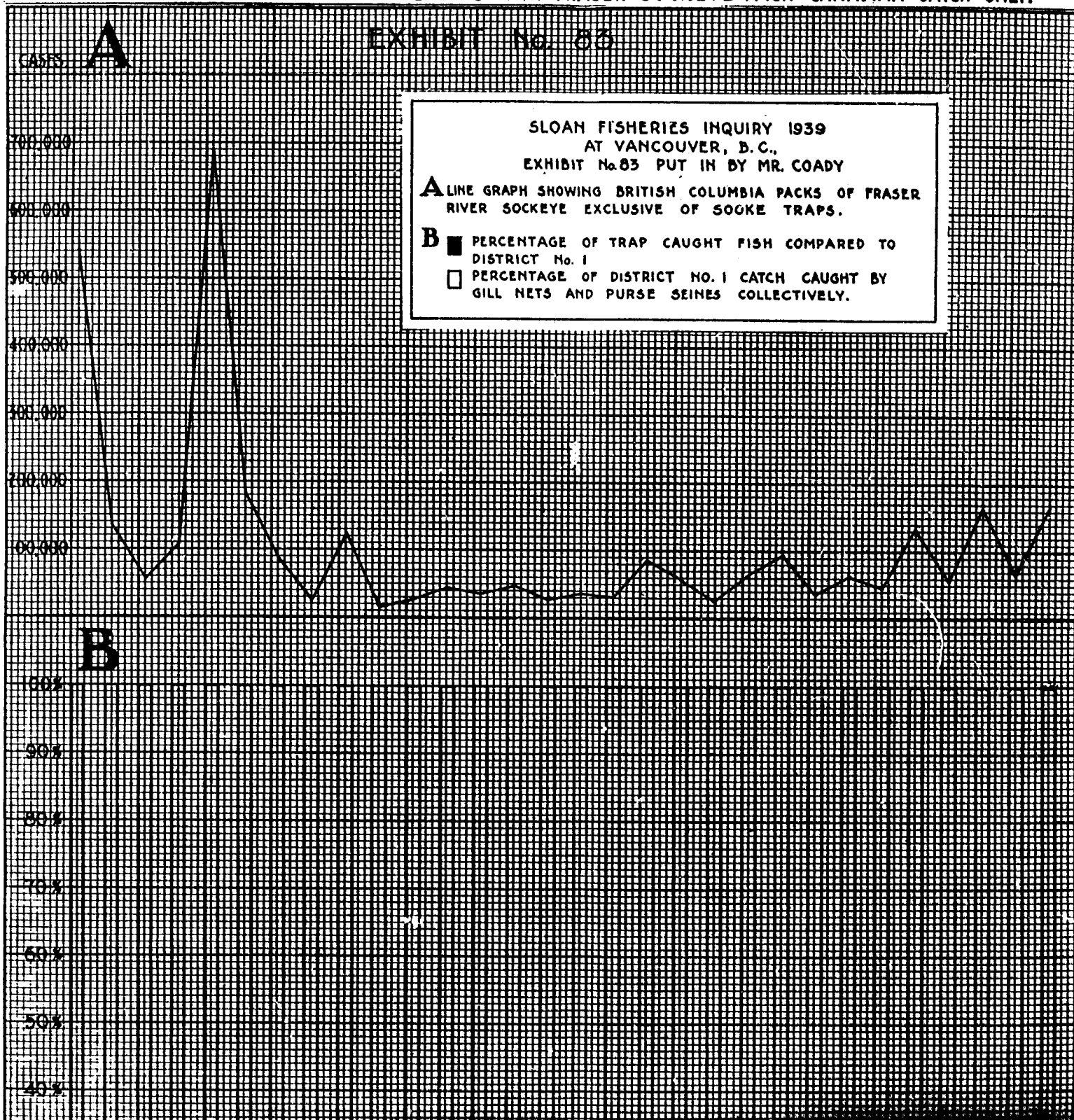
†In addition equivalent of approximately 16,000 cs. (approx. 7 per cent) exported to Washington for canning.

‡Includes approximately 16,000 cs. (approximately 7 per cent) packed from imported Fraser caught fish.

GRAPH FROM EXHIBIT NO. 22—PERCENTAGE OF SOCKEYE AND PINKS
TAKEN BY GILL NET, PURSE SEINE AND TRAPS 1935-1938.



GRAPH FROM EXHIBIT NO. 23 DEALING WITH FRASER SOCKEYE PACK CANADIAN CATCH ONLY.



PACK OF SOCKEYE SALMON FROM RUNS TO FRASER RIVER—1909 TO 1938

Figures represent cases of 48 one-pound tins or equivalent

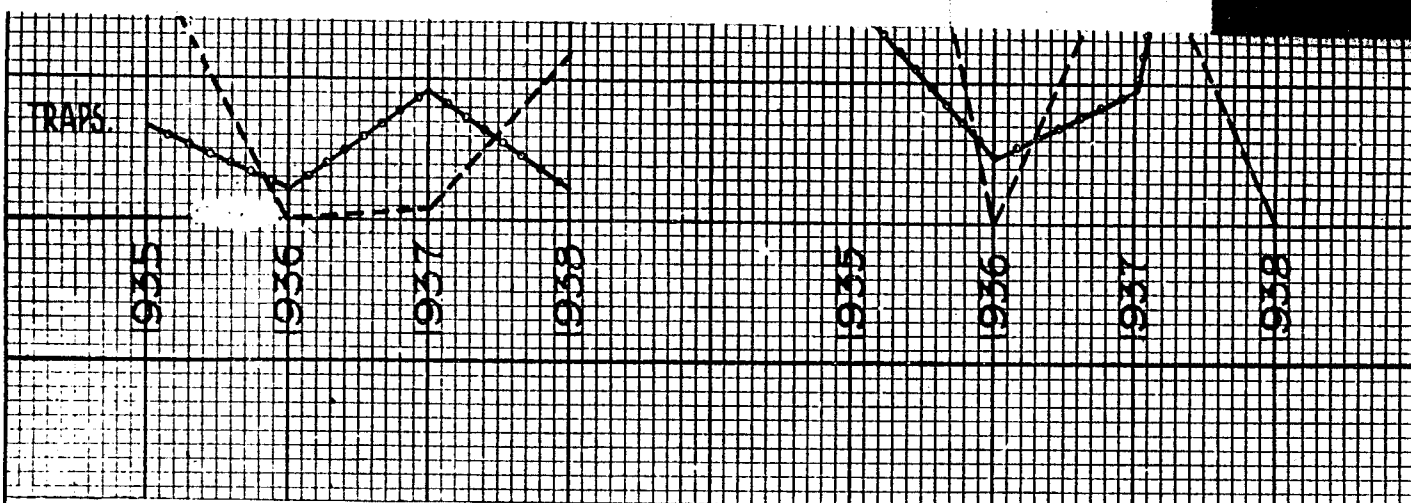
Year	From Sooke Traps	Per cent total catch	Per cent of Trap caught fish compared to total catch, District 1, (Purse Seines and Gill Nets)	British Columbia (Fraser) exclusive of Sooke Traps	Per cent	State of Washing- ton, U.S.A.	Per cent	Total Cases
1909.....	43,187	2.6	7.98	542,248	32.2	1,097,904	65.2	1,683,339
1910.....	17,387	4.4	13.7	133,045	33.4	248,014	62.2	398,446
1911.....	4,330	2.3	7.4	58,487	30.7	127,761	67.0	190,578
1912.....	15,095	4.9	13.8	108,784	35.3	184,680	59.8	308,559
1913.....	52,065	2.1	7.6	684,596	28.4	1,673,099	69.5	2,409,760
1914.....	12,700	2.4	6.8	185,483	34.8	335,230	62.8	533,413
1915.....	2,090	1.4	2.2	89,040	57.2	64,548	41.4	155,678
1916.....	4,752	4.1	17.4	27,394	23.5	84,637	72.4	116,783
1917.....	24,550	4.4	19.0	123,614	22.1	411,358	73.5	559,702
1918.....	2,348	4.1	13.9	16,849	23.9	50,723	72.0	70,410
1919.....	6,194	6.2	20.9	29,628	29.6	63,346	63.2	100,168
1920.....	3,801	3.4	8.5	44,598	40.2	62,654	56.4	111,053
1921.....	3,731	2.6	10.4	35,900	25.2	102,967	72.2	142,598
1922.....	3,088	3.1	6.3	48,744	48.6	48,566	48.3	100,398
1923.....	2,232	2.9	7.5	29,423	37.2	47,402	59.9	79,057
1924.....	3,543	3.3	9.7	36,200	33.2	69,369	63.5	109,112
1925.....	3,862	2.8	12.2	31,523	22.3	106,064	74.9	141,449
1926.....	2,091	1.6	2.5	83,589	64.2	44,569	34.2	130,249
1927.....	4,337	2.7	7.5	57,085	32.2	96,343	61.0	157,765
1928.....	2,769	3.1	10.4	26,530	29.4	61,044	67.5	90,343
1929.....	3,480	2.0	5.7	60,407	34.4	111,856	63.6	175,743
1930.....	5,334	1.2	5.7	93,416	20.7	352,194	78.1	450,944
1931.....	2,440	2.0	6.3	38,507	30.9	83,728	67.1	124,675
1932.....	4,000	2.7	6.4	61,769	42.8	78,319	54.5	144,088
1933.....	8,721	4.9	19.9	43,745	24.6	125,738	70.5	178,204
1934.....	6,117	1.2	4.5	133,159	27.1	352,579	71.7	491,855
1935.....	5,610	4.7	9.8	57,212	48.8	54,677	46.5	117,499
1936.....	3,837	1.7	2.3	164,408†	72.2	59,505†	26.1	227,750
1937.....	6,152	4.6	9.2	66,583	50.1	60,259	45.3	132,994
1938*.....	3,652	1.2	2.1	168,574	54.1	138,986	44.7	311,212

*Unrevised figures.

†In addition equivalent of approximately 16,000 cs. (approx. 7 per cent) exported to Washington for canning.

‡Includes approximately 16,000 cs. (approximately 7 per cent) packed from imported Fraser caught fish.

10 %



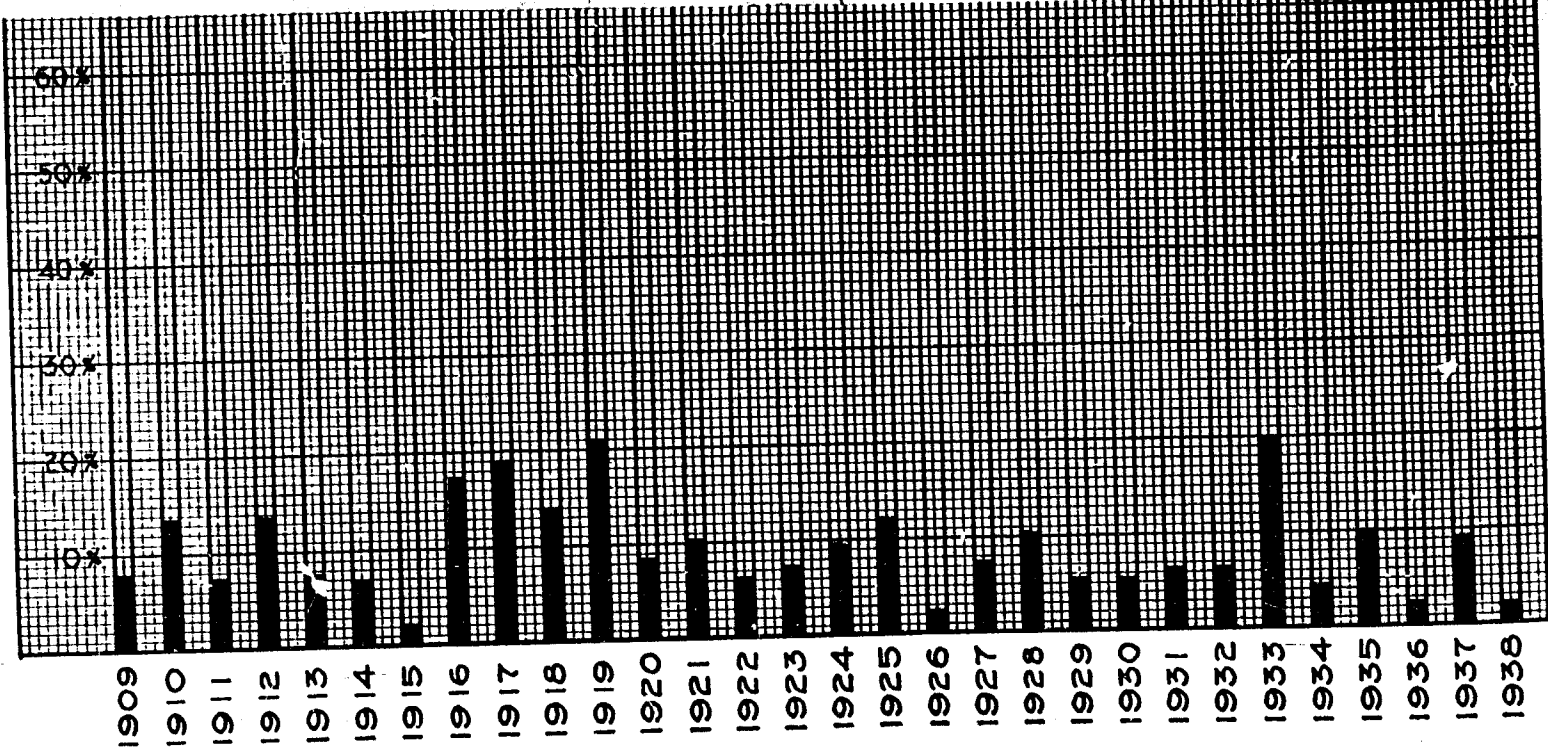
SLOAN FISHERIES INQUIRY 1939 AT VANCOUVER, B.C.

EXHIBIT NO. 85 PUT IN BY MR. COADY

GRAPH FROM EXHIBIT NO. 22 IS A STRAIGHT LINE GRAPH FOR BOTH SOCKEYE AND PINKS AND NEEDS LITTLE EXPLANATION. IT MAY BE OBSERVED, HOWEVER, THAT THE GRAPH ITSELF, DEALING WITH PERCENTAGES, MIGHT BE MISLEADING, WITHOUT REFERENCE TO THE TABLE BENEATH.

STATEMENT SHOWING IN A COMPARATIVE WAY THE NUMBER OF SOCKEYE AND PINKS TAKEN EACH YEAR AT THE TRAPS AND ALSO IN DISTRICT NO. 1 INCLUDING PURSE SEINE AREA NO. 17 FOR THE YEARS 1935 TO 1938 INCLUSIVE.

SOCKEYE.					PINKS.			
YEAR	TRAPS	PURSE SEINES	GILL NETS	TOTAL	TRAPS	PURSE SEINES	GILL NETS	TOTAL
	(fish)	(fish)	(fish)	(fish)	(fish)	(fish)	(fish)	(fish)
1935	73,103	156,816	595,589	825,508	397,595	1,178,440	925,394	2,501,429
%	8.854	18.996	72.148	99.998	15.894	47.110	36.994	99.998
1936	44,356	NIL	2,081,718	2,126,074	2	NIL	40	42
%	2.086	NIL	97.913	99.999	4.761	NIL	95.238	99.999
1937	99,503	8,903	967,580	1,075,986	164,268	381,879	1,002,309	1,746,456
%	9.247	0.827	89.925	99.999	9.405	21.865	68.728	99.998
1938	41,372	214,264	1,536,653	1,792,289	1,472	2	816	2,290
%	2.308	11.954	85.736	99.998	64.279	0.087	35.633	99.999



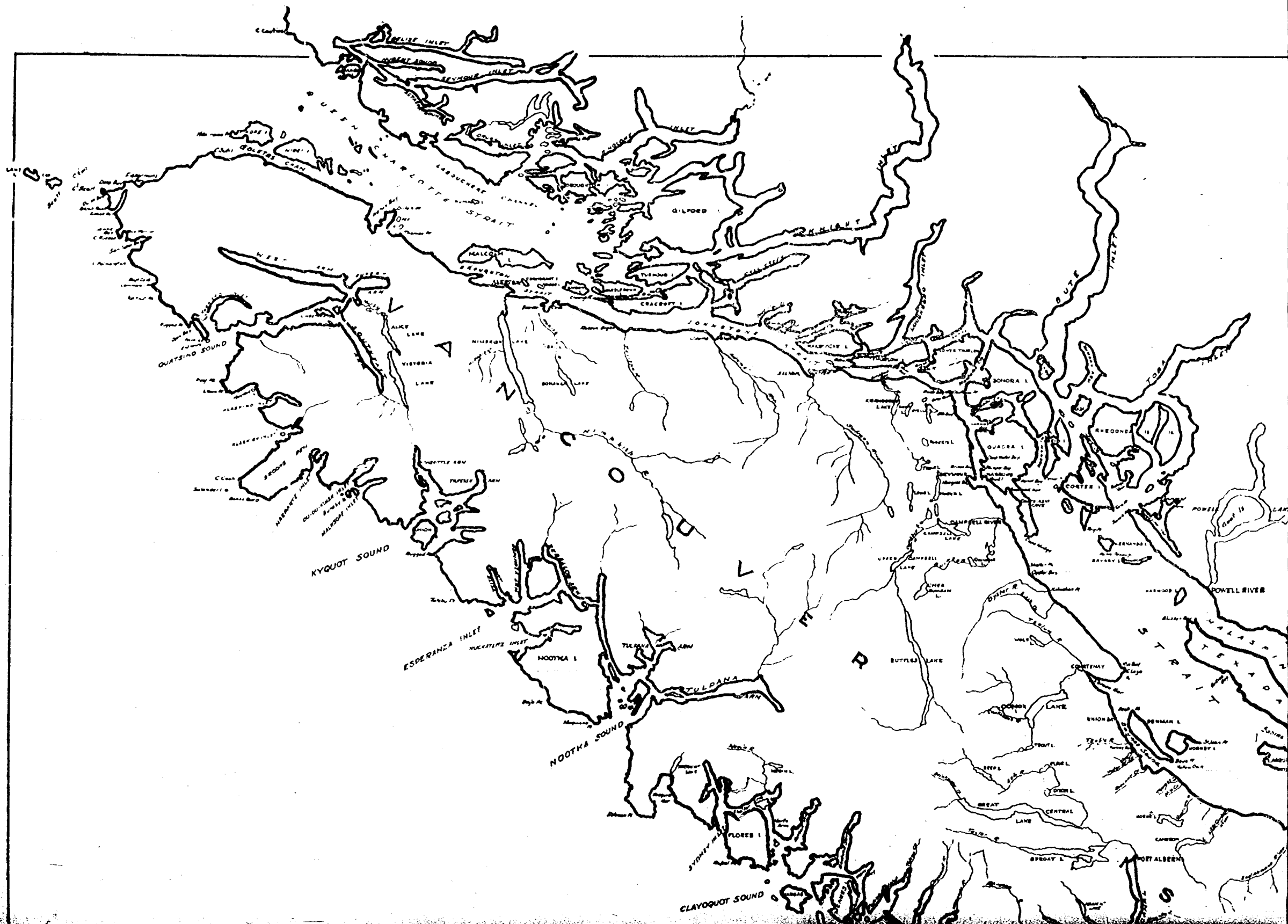


EXHIBIT No. 3

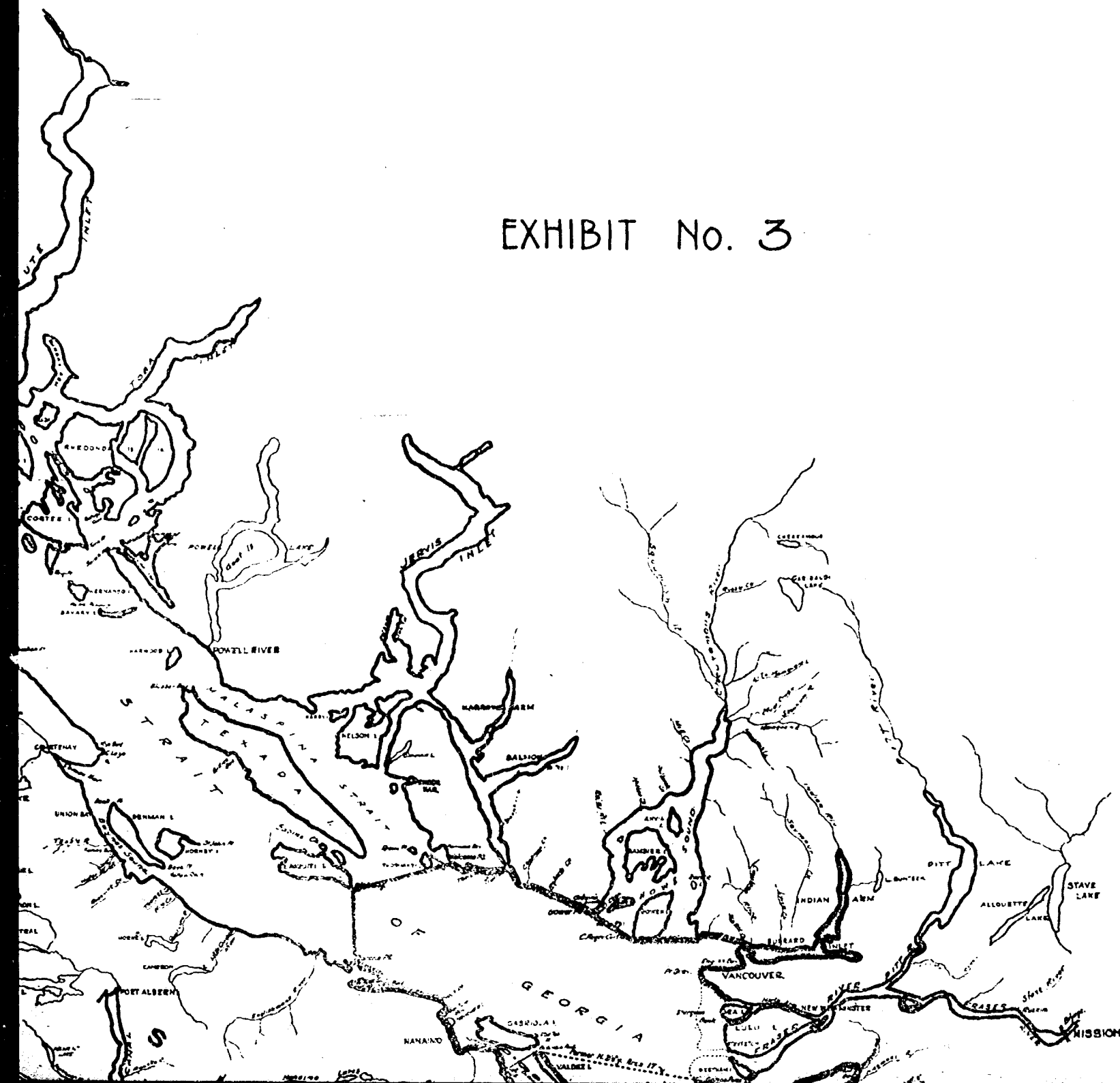
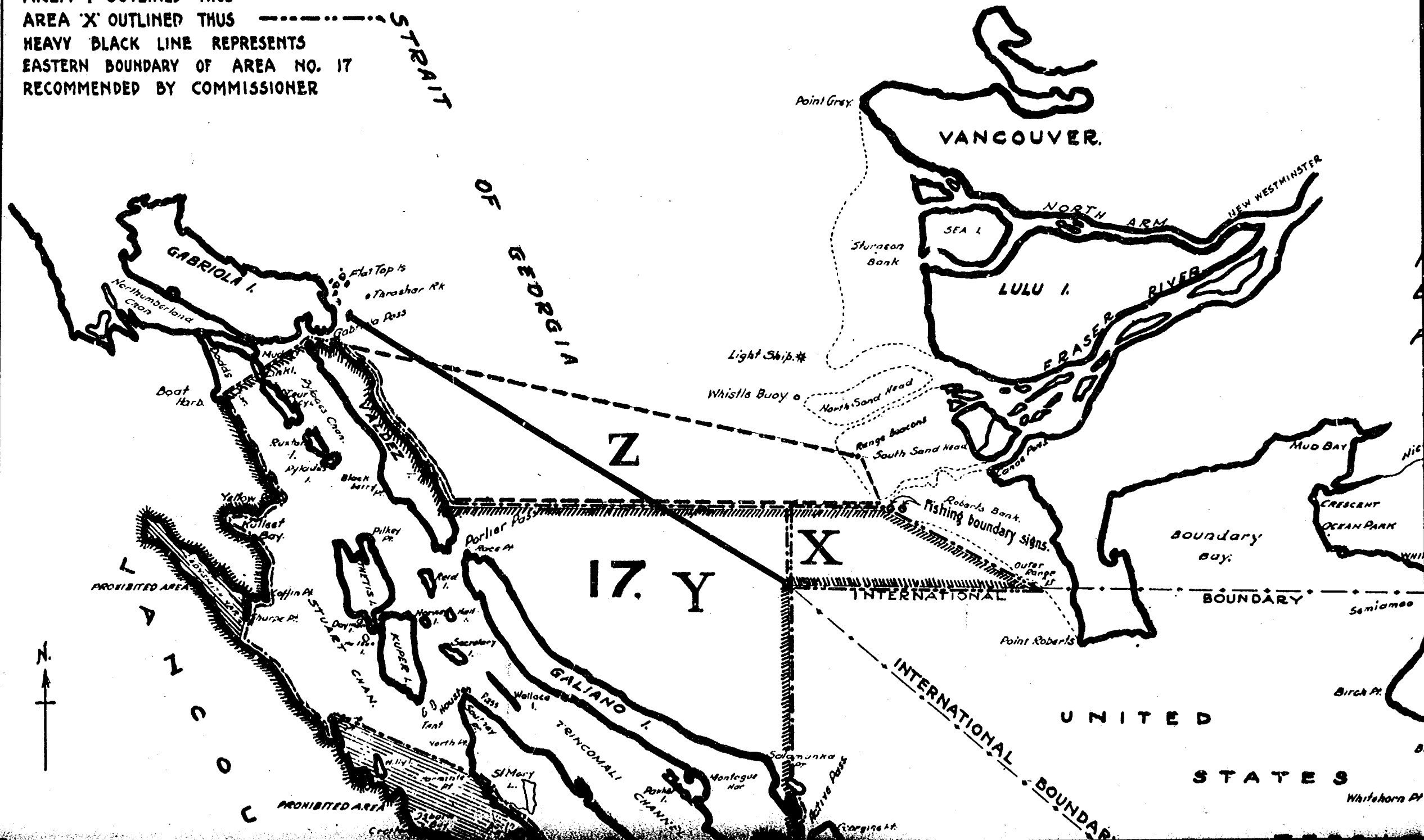


EXHIBIT No. 56

AREA 'Z' OUTLINED THUS -----
 AREA 'Y' OUTLINED THUS
 AREA 'X' OUTLINED THUS
 HEAVY BLACK LINE REPRESENTS
 EASTERN BOUNDARY OF AREA NO. 17
 RECOMMENDED BY COMMISSIONER



No. 56

VANCOUVER.

DEPARTMENT OF FISHERIES

PLAN

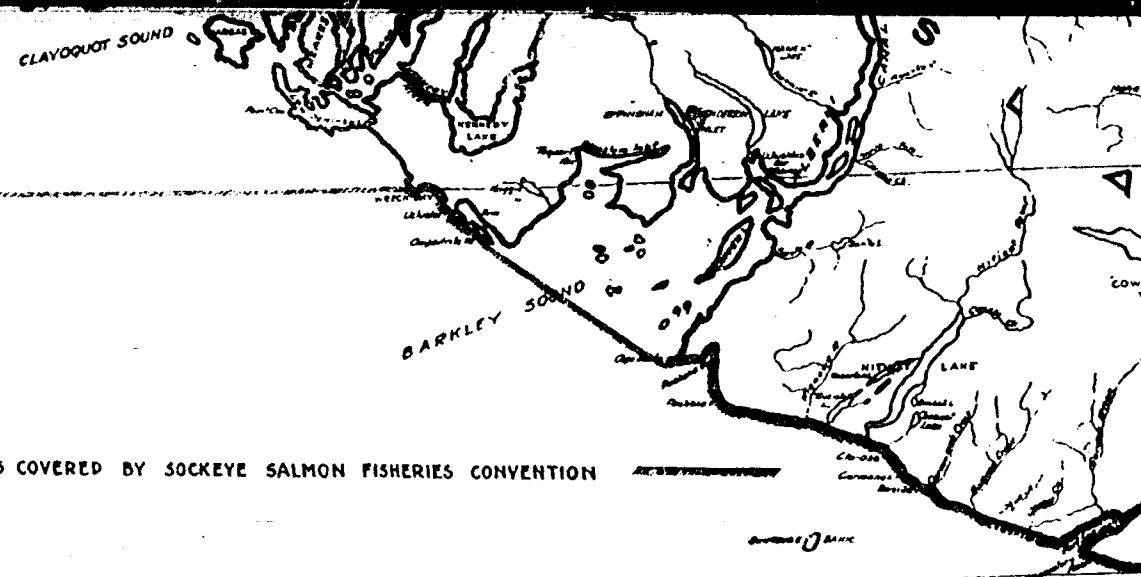
showing location and boundaries of
FISHING AREA '17.

Note.

Boundary of Area shown thus 

Prohibited portions shaded in.





WATERS COVERED BY SOCKEYE SALMON FISHERIES CONVENTION

SLOAN FISHERIES INQUIRY 1939
AT VICTORIA, B.C.
EXHIBIT NO. 3, PUT IN BY MR. COADY

—DEPARTMENT OF FISHERIES—
VANCOUVER ISLAND
AND
ADJACENT WATERS

SLOAN FISHERIES INQUIRY 1939
 AT NEW WESTMINSTER, B.C.
 EXHIBIT NO. 56 PUT IN BY MR. COADY

