7869

Diag. Cht. No. 8102-3

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. PA-05151 *Office No.* H-7869

LOCALITY

State SOUTHEAST ALASKA

General locality TONGASS NARROWS

Locality WARD COVE AND REFUGE COVE

19~~4~~51

CHIEF OF PARTY

R. J. Sipe

LIBRARY & ARCHIVES

DATE NOVEMBER 21, 1951

8-1870-1 (1)

7869

Form 537
(Ed. June 1946)

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. H 7869

Field No. Pa 05151

State S.E.Alaska

General locality Tongass Narrows

Locality Ward Cove and Refuge Cove

Scale 1/5,000 & 1/600 Date of survey 5 - 28 June 1951

Instructions dated 27 March 1951

Vessel PATTON - U.S.F.S. Launch and Dory.

Chief of party Riley J. Sipe

Surveyed by Riley J. Sipe, Charles A. Schoene and Julian W. Flint.

Soundings taken by fathometer, graphic recorder, hand lead, wire 808 Fathometer & hand lead

Fathograms scaled by H.W.Hildahl

Fathograms checked by Wm. M. Martin

Protracted by Wm. M. Martin

Soundings penciled by Wm. M. Martin

Soundings in fathoms ~~XXfeetXX~~ at ~~MLWX~~ MLLW

REMARKS:

U. S. GOVERNMENT PRINTING OFFICE 693019

7869

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SURVEY NO. (PA-05151)

WARD COVE, S. E. ALASKA

SCALE 1:5000 - 1951

USC&GSS PATTON, R. J. SIPE, COMMANDING

A. PROJECT.

There is no project number. The instructions for this survey are contained in a letter titled "SPECIAL SURVEY OF WARD COVE AND VICINITY, ALASKA", dated 27 March 1951.

B. SURVEY LIMITS AND DATES.

The survey limits include Ward Cove, Refuge Cove, and the area surrounding and between East Island and Danger Island, from the high-water line to a junction with Wire Drag Surveys No. 3688 and 3688a surveyed in 1914 and 1926 on a scale of 1:15000. The field work was accomplished from 5 - 28 June 1951. These limits include a tagline survey on the northwest shore of Ward Cove.

C. VESSELS AND EQUIPMENT.

The hydrography was accomplished from a vessel loaned by the U. S. Forest Service at Ketchikan. It was about 35 feet in length, 10 feet beam, with a draft of 4½ feet, It was powered by a gasoline engine and capable of making about 8 knots. The turning radius of the launch was not determined, but it was quite maneuverable. The launch was satisfactory except that its excessive draft was a handicap in trying to sound in the low-water line. The launch was operated from the Ship PATTON as a base.

All of the sounding was done with portable 808 fathometer No. 51 except for soundings around docks, pilings, and the tagline survey.

D. TIDE AND CURRENT STATIONS.

A portable tide gage was maintained at the dock of "Wards Cove Cannery" during the period of this survey. No time or range corrections were applied.

The current stations occupied are covered in a special report submitted in June 1951.

E. SMOOTH SHEET.

The smooth sheet ~~is to be~~ WQS constructed and plotted by the Seattle Processing Office.

F. CONTROL STATIONS.

Triangulation was extended from the line "BABE 1909 - SIM 1909" southeast along Tongass Narrows to a junction with the line "VINA 1909 - LEE 1909", and also into Ward Cove. The original triangulation was executed in 1909 by R.B.D. Triangulation executed in 1951 was of third-order accuracy as per instructions. A special report of the triangulation and the original records were forwarded to the Washington Office in July 1951.

All of the hydrographic signals were located by theodolite cuts except for a few in Refuge Cove which were located by sextant cuts plotted directly on the boat sheet. All the control stations are considered to be located with sufficient accuracy for the purpose of this survey.
Theodolite computed & signals plotted by dms & dps.

G. SHORELINE AND TOPOGRAPHY.

The shoreline is to be compiled from field inspection data forwarded to the Washington Office on 2 July 1951, reference letter from Acting Director "No. 711-aal" dated 2 August 1951, a copy of which was sent to Seattle Processing Office. Shoreline applied to smooth sheet in Washington from RS 422.

See TRI of Review

H. SOUNDINGS, BAR CHECKS, AND FATHOMETER CORRECTIONS.

The soundings were taken by 808 Fathometer No. 51 operated entirely on the fathom scale, supplemented by the hand lead on shoals and alongside docks and floats.

Barchecks were taken three times a day at depths of 2, 5, and 10 fathoms, and usually good returns were received at these depths. The fathometer was operated at a speed of 820 fms/sec. throughout the survey.

The barchecks were tabulated by days for the entire survey. The corrections were then summed and a mean correction obtained for each bar depth. The mean corrections were plotted and a curve drawn which gave a correction of +0.2 fm. for all soundings from 0 - 10 fathoms. Temperature and salinity observations were made on 28 June in 30 to 40 fathoms in the area to the southeast of East Island. A velocity correction curve was made up from these observations to cover the range from 10 - 45 fathoms. This curve was then shifted until it intersected the Bar Check correction curve at its 10 fm. point. A table of corrections was made up from this combined curve to cover the entire range of sounding from 0 - 45 fms. The largest correction obtained by this method is (-)0.6 fm. applied to all soundings over 40 fathoms.

No corrections were applied to the hand lead soundings except for tide.

I. CONTROL OF HYDROGRAPHY.

The sounding lines were located by three-point fixes on hydrographic signals except for a few positions which were spotted on the boat sheet by an estimated distance from a close signal.

J. ADEQUACY OF SURVEY.

This survey is considered complete within its limits and should supersede all prior surveys for charting pruposes. A satisfactory junction was made with WIRE DRAG SURVEYS NO. 3688 & 3688a (Paragraph B this report) as per instructions. There were no other junctions with prior surveys.

K. CROSS LINES.

Crosslines run on this survey were about 10% of the regular system of lines exclusive of development lines.

The only noteworthy discrepancies noted are as follows: Pos. 7k, a sounding of 11 fms. obtained at the inshore end of a line crossing a line of 6 fm. soundings. The discrepancy might be due to a poor fix on Pos. 7k. It is recommended that the soundings on crossline be rejected if they do not fit after the smooth sheet is plotted.

11 fm sounding rejected. steep slope

Pos. 8k to 9k. There are two 6 fm. soundings shown on the fathogram between these two positions. After a careful examination of the fathogram and a thorough investigation of the area with a lead line, it is believed that these soundings are not off the true bottom, probably kelp or something similar, and should be rejected. 5½ fm sdg. next to pos. 9k not in marked disagreement with adjacent depths. First 5½ fm. sdg on line 8-9k disproved by adjacent lines of hydrography and is not plotted.

5½ fm (φ 55°24.21', λ 131°43.26')

L. COMPARISON WITH PRIOR SURVEYS.

There are two prior hydrographic surveys in this area: H-3046, surveyed in 1909 at a scale 1:10,000; H-3220, surveyed in 1910 at a scale 1:10,000.

(1909)

See RP-5 of Review

There is good general agreement between the new survey and the prior surveys and no important discrepancies were noted. Some shoals were found in 1951 which were missed on the original surveys, see Paragraph "N". The only junction is with the wire drag surveys 3688 & ~~3688a.~~

See RS of Review

(1914)

M. COMPARISON WITH CHART.

The new survey has been compared with Chart No. 8094 (Tongass Narrows), latest print date 48 - 10/25 and found to be in good general agreement. All dangers, shoals, and rocks shown on the chart were verified by the new survey.

See RP-6 of Review

1 3/4 fm. transferred to pres survey from H-1627a(1882)

N. DANGERS AND SHOALS.

A shoal with least depth of 2.3 fms. by leadline was found on Pos. 62-j in latitude 55° - 24'.10, Longitude 131° - 45'.40. This shoal was not found on hydrographic survey H-3220, but is shown on Chart 8094 in this position with a sounding of 1-3/4 fms. on it. Since the source of the 1-3/4 fm. sounding is not known, no recommendation can be made in this report as to which sounding should be charted. A new shoal with a least depth of 2.9 fms. by fathometer was found on Pos. 34-j in latitude 55° - 24'.12, Longitude 131° - 45'.29. This shoal is not shown on Chart 8094. The shoalest depth found with the leadline was 3.3 fms. on Pos. 66-j. It is recommended that the least depth by fathometer be charted.

2 2 fm (fathometer) pos. 7-8 l plotted on smooth sheet. 2 9 fm plotted

A new shoal with a least depth of 2.7 fms. by fathometer was found at Pos. 69-e + 40 seconds, and Pos. 96-k, Latitude 55° - 24'.15, Longitude 131° - 44'.88. The least depth on this shoal found by leadline was 3.2 fms. at Pos. 96-k. It is recommended that the least depth by fathometer be charted.

2 1 fm plotted.

A new shoal with a least depth of 6.9 fms. by fathometer at Pos. 30-g plus 40 seconds, and a least depth by leadline of 7.0 fms. at Pos. 44-g was found in Ward Cove in Latitude 55° - 24'.354 Longitude 131° - 43'.~~384~~40 This shoal is believed to be a sunken barge reported in Notice to Mariners No. 19, 12 May 1951. This position is approximately 100 yards from the position given in the Notice to Mariners, but it is recommended that it be charted as the sunken barge.

Charted on chartlet of chart 8094 (4-10-54)

(1 6 fm pos. 133-134 e by fathometer)

On the charted 1 fm. sounding on Bolles Ledge in Ward Cove, the shoalest sounding obtained in 1951 was 1.7 fms. by leadline on Pos. 4-g, Latitude 55° - 24'.23, Longitude 131° 45'.30. 8 feet is the shoalest sounding obtained on this shoal on Survey H-3220,(1910) and ~~it was apparently cleared by wire drag to 9 feet on~~ Survey No. 3688(1914). It is recommended that a sounding of 1-1/2 fms. be charted on this shoal instead of 1 fm. as shown now. The rock could be seen clearly during this investigation and it is believed that the least depth was obtained. Recommend charting 1 1/2 fm. on shoal.

9 ft. sdg. on H-3688 WD. Area not dragged - split.

It is recommended that the charted 1/4 fm. sounding, Latitude 55° - 23'.93, Longitude 131° - 44'.62 be shown as a rock awash. This rock was located by sextant angles on Pos. 1-a, was bare 2 feet at that time, and bares ~~1/2~~ 0 foot at MLLW.

No new shoals found were considered to be of sufficient importance to notify the Coast Guard.

All charted dangers, shoals and bare rocks were found as charted or shoaler depths were found, except as listed in Paragraphs L, M, and N.

O. COAST PILOT INFORMATION.

Coast Pilot notes for this area were forwarded to the Director in a separate report on 6 July 1951.

P. AIDS TO NAVIGATION.

The positions of fixed aids to navigation located by this

survey will be forwarded to the Washington Office on Form 567.

The black can buoy on Bolles Ledge was located by Pos. 1-g, on 20 June 1951, Latitude 55° - 24'.23, Longitude 131° - 43'.30, located in 2.6 fms. of water. This is the only floating aid in the area covered by this survey.

Q. LANDMARKS FOR CHARTS.

There are no landmarks in the area of this survey worth charting except the two docks in Ward Cove which are on the present chart.

R. GEOGRAPHIC NAMES.

A Geographic Name Report will be submitted at a later date.

S. SILTED AREAS.

Since the fathograms have not been scanned by the hydrographic party, this paragraph will be left to the Processing Office.
Fathograms rescanned by Processing Office.

U. TAGLINE SURVEY.

Triangulation station "CABLE 1951" was used to establish a base for a tagline survey on the northwest shore of Ward Cove. The azimuth of the baseline was established by measuring the angle (274° 09' 45") at "CABLE" from triangulation station "BABEL" to a target called "Tagline Signal". The true azimuth of the line CABLE - Tagline Signal is 228° 37' 55". The zero point of the tagline base was established by setting a point 5 feet from "CABLE" on the direction "BABEL" plus 180°. A distance of 1140 feet was taped from "CABLE" on the line to "Tagline Signal" and a distance of 5 feet offset from this point at right angles. This established Station "38" on the base, 1140 feet from the zero point on a true azimuth of 228° 37' 55".

Stations were then set along the base by taping from the zero point 30 feet between stations, except Station 3 to 4 is 25 feet, and 4 to 5 is 35 feet.

Soundings were taken from a dory with a leadline marked in fathoms and tenths. The dory was kept on line with a theodolite set up at the base stations. All sounding lines were run at an angle of 90° to the baseline. The distances from the baseline to each sounding were measured by the tagline (a bronze core tiller rope marked every 10 feet) with its zero end at the base station. Soundings were reduced to feet for plotting on the tagline boatsheet.

The dory was powered with a reversing outboard motor and was backed out on the sounding lines with the tagline secured in the center of the dory and leading over the bow. It is difficult to keep the dory on line if there is much wind. It is believed that a skiff or some other flat-bottom boat would be more satisfactory for this work.

Z. TABULATION OF APPLICABLE DATA.

1. Photogrammetric Field Report - Forwarded W. O. 3 July 1951
2. Triangulation Report - Forwarded W. O. 13 July 1951
3. Coast Pilot Notes - Forwarded W. O. 6 July 1951
4. Geographic Name Report - To be forwarded later.
5. Temperature and Salinity Observations - To be forwarded later.
6. Positions of Fixed Aids to Navigation (Form 567) - To be forwarded later.
7. Tide Marigrams - Ward Cove, Alaska - Forwarded W. O. 25 May and 9 July 1951

Respectfully submitted,

Charles A. Schoene

Charles A. Schoene
LCDR USC&GS

Approved and Forwarded:

Riley J. Sipe
CDR USC&GS
Cmdg. Ship PATTON

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LIST OF HYDROGRAPHIC SIGNALS

SHEET PA-05151

WARD COVE - S. E. ALASKA

Hydrographic Name	Source
ABE	Theodolite Cuts - Computed
ABIDE	Triangulation Station "ABIDE 1951"
BABE	Triangulation Station "BABE 1909"
BABEL	Triangulation Station "BABEL 1951"
BAG	Theodolite Cuts - Computed
BEA	Triangulation Station "PENINSULA PT. DAYBEACON 1951"
CAB	Theodolite Cuts - Computed
CHALK ✓	Triangulation Station "CHALK 1951"
DAW	*
DECOY	Triangulation Station "DECOY 1951"
EAR	*
EGO	*
FAR	*
FLAG	Sextant cuts - Plotted on Boat Sheet
GAB	Triangulation Station "HOUSE, WEST GABLE 1951"
GAD	*
GEM	Sextant Cuts - Plotted on Boat Sheet
GRID	Sextant Cuts - Plotted on Boat sheet
GUS ✓	*
HAG	*
HIM	Sextant Cuts - Plotted on Boat Sheet
ICE	*
JAP	*
KEN ✓	*
LAD ✓	*
MID ✓	*
NAT ✓	*
NEL	Triangulation Station "CHANNEL I. LT. 1951"
NOR	Sextant Cuts - Plotted on Boat Sheet
OAK ✓	*
PAL ✓	*
RAG ✓	Triangulation Station "STACK, FERTILIZER PLANT 1951"
SET ✓	*
SIM	Triangulation Station "SIM 1909"
TOM ✓	Triangulation Station "FLAGSTAFF, WARDS COVE CANNERY, 1951"
WRONG	Triangulation Station "WRONG 1951"

*Theodolite Cuts Computed

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VELOCITY CORRECTIONS

HYDROGRAPHIC SURVEY PA-05151

From	To	Correction in Fathoms
0.0	12.3	+ 0.2
12.4	16.8	+ 0.1
16.9	21.4	0.0
21.5	25.9	- 0.1
26.0	30.4	- 0.2
30.5	39.5	- 0.4
39.6	47.5	- 0.6

H 7869
Pa 05151
Ward Cove, SE Alaska.

Processing Office Notes.

Smooth sheet.

The projection was made by hand on Whatman paper. Across the west end of the sheet a projection, scale 1/600 or 50 feet to the inch, was prepared for the tagline survey. No shore line was placed on the sheet. A request was made for shoreline. We were informed that the photogrammetric plot would not be completed until late in the Fall. It is recommended that the shoreline be placed on the sheet before inking the soundings. Shoreline plotted on smooth sheet in Washington. | See P1 of Review.

Questioned soundings.

4.4 Fath. Pos.34 - 35 h. ϕ 55°23'43.5" λ 131°44'47.2" The fathogram indication is uncertain. This could be a side echo or a "stray". Stray - not plotted.

5.9 Fath. Pos 8 - 9 k. ϕ 55°24'10".5 λ 131°43'13." The field party notes that this "feels" like a cable. The fathogram looks like a side echo. There are two indications. | Plotted 5.9 fms

Scanning.

Fathograms were rescanned by plotter.

Tagline survey.

A sounding on line 31 P 12 Vol.7 was changed from 5.4 to 4.4 fms. with permission of the C O P. It was apparent that on such a smooth slope, with soft bottom, a depression would be filled with mud.

On line No.6 P 38 Vol. 7 a sounding of 2.9 fms. could be a rock, log or stump projecting a fathom above bottom. It is out of line with the slope of the bottom.

Note that tagline depths are in fathoms and tenths the same as the soundings on the principal part of the sheet.

Prints of the smooth plot of the tagline survey were sent to the Regional Forester at Juneau and to the Ketchikan Pulp and Paper Company at Bellingham Wash.

Edgar E. Smith
Cart.Engr. 11/8/51

AUG 6 1951

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO NO. 22-sro
D-1-NW

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON 25

31 July 1951

To: Supervisor, Northwestern District
U. S. Coast and Geodetic Survey
705 Federal Office Building
Seattle 4, Washington

Subject: Field Records -- Ward Cove, Tongass Narrows, Alaska.

Reference: Copy of letter to Ship PATTON -- S-1-PA -- dated 19 July 1951.

1. It is requested that when the boat sheets of the Ward Cove survey are received at the Seattle Processing Office from the Commanding Officer, Ship PATTON, they be forwarded to the Washington Office.

2. Photostats will be made immediately for forwarding to organizations which are interested in the findings of the survey. After photostating, the boat sheets will be returned to the Seattle Processing Office.

Robert W Knox

Acting Director.

CC: The C.O., Ship PATTON
Seattle Processing Office
Division of Charts

This was done

AUG 13 1951

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO NO. 2 2-RS
PO-Seattle

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON 25

7 August 1951

To: Mr. Edgar E. Smith
Seattle Processing Office
U. S. Coast and Geodetic Survey
Seattle, Washington

Via: Supervisor, Northwestern District

Subject: Shore line, Ward Cove, Southeast Alaska

Reference: Your letter dated 2 August 1951

1. During the recent survey of Ward Cove, Southeast Alaska, the field party identified sufficient control points on aerial photographs to make a photo compilation possible. Topography will be furnished to you late this fall for transfer to the smooth hydrographic sheet.

2. In a letter to the Supervisor, Northwestern District, dated 31 July, it was requested that the Ward Cove boat sheet be forwarded to the Washington Office in order that photostats may be made for the use of other organizations. It is noted that photostats have already been mailed from Seattle to Commander Sipe and to the Supervisor of the Midwestern District. The boat sheet is still required in Washington for the purpose of making a film positive for the Division of Photogrammetry, as well as for making additional photostats.

Robert W. Knox
Acting Director

cc Division of Photogrammetry
Division of Charts
Supervisor, Northwestern District

711-aal

2 August 1951

AIR MAIL

To: Commanding Officer
U.S.C. & G.S. Ship PATTON
P. O. Box 158
Sitka, Alaska

Subject: Field inspection data, Ward Cove, Alaska

This is to acknowledge receipt of field inspection material for compilation of shoreline at Ward Cove. I wish to take this opportunity to express my thanks for your initiative in securing the photographs.

The photographs that you obtained locally are very clear and these together with your field notes will enable us to map the shoreline satisfactorily.

(Signed) Robert W. Knox

Acting Director

cc: Seattle Processing Office

H 7869
Su 05151

Ward Cove
SE Alaska

List of geographic names
penciled on smooth sheet.

Ward Cove

Revillagigedo Island

Tongass Narrows

Refuge Cove

Bolles Ledge

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HYDROGRAPHIC SURVEY PA-05151

TIDE NOTE

The tide station at Ward Cove located on the Wards Cove Cannery Dock, Latitude 55° 23'.86, Longitude 131° 43'.61, was used for the reduction of all soundings on this survey with no correction for time and range.

The plane of MLLW on the tide staff corresponds to a reading of 5.9 feet on the tide staff, as per Director's letter of 31 May 1951, Reference 36-mkl.

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STATISTICS FOR HYDROGRAPHIC SURVEY PA-05151

Date June 1951	Day Letter	Vol. No.	Handlead Soundings	Positions	Statute Miles of Soundings
			U.S.F.S. LAUNCH		
5	a	1	—	1	—
14	b	1	--	139	14.9
15	c	1 & 2	--	326	23.5
16	d	2	—	115	5.1
18	e	2 & 3	--	210	13.7
19	f	3	—	293	17.0
20	g	4	10	158	7.1
21	h	4	4	214	10.8
22	j	5	9	178	8.6
23	k	5	2	97	6.3
25	l	5 & 6	15	143	6.1
26	m	6	69	35	- -
27	n	6	84	61	- -
		Total	193	1970	113.1
			DORY AND TAGLINE SURVEY		
20	a	7	11	11	- -
26	b	7	407	407	0.7
27	c	7	468	468	0.8
28	d	7	45	45	- -
		Total	931	931	1.5
		Grand Total	1124	2901	114.6

Area of sounding = 1.2 Square Statute Miles

R.S. 422
C.S.

B.P.

To: Nautical Chart Section

From: Photogrammetric Section

Subject: Chart Corrections Compiled from Aerial Photographs

General Locality Southeast Alaska

Locality Ward Cove, Tongass Narrows

Chart Affected _____ Scale _____

Photographs

Number	Scale	Date	Type	Stage of Tide
SAE 138	1:10,000	7/18/48	S1L.	Unknown
SAE 139	1:10,000	"	"	Unknown

Compilation Method Radial Plot Scale 1:10,000
Detailed by M. P. Stephens Date 11/15/51
Verified by G. B. Willey Date Nov. 1951
Approved by L. C. Lande Date Nov. 1951
Indexed by _____ Date _____
Filed _____
Reported to Nautical Charts by _____ Date _____
Applied by _____ Date _____

REMARKS: This shoreline manuscript was delineated at a scale of 1:10,000 to furnish shoreline for a hydrographic survey at a scale of 1:5,000, so the weight of lines was kept at a minimum, as the detail is to be enlarged and used at this latter scale.

The contact scale of these Navy prints was 1:40,000, giving very poor resolution of the four time enlargements made for us by the U.S.G.S. As a result, great difficulty was encountered in trying to interpret the location of the high water line on the photographs.

Comdr. Sipe established horizontal control in this area, which he identified on four locally obtained low oblique photos. The new road which he sketched on one of the oblique photos cannot be accurately located on the manuscript from the data furnished.

Detail transferred from the boat sheet to the manuscript is shown in red ink.

GEOGRAPHIC NAMES

Survey No. H-7869

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
Southeastern Alaska										1
Tongass Narrows									BGN	2
Revillagigedo Island									"	3
Ward Cove										4
Bolles Lodge										5
Refuge Cove										6
East Island	} see p. 1 (for placement ~~see chart 8094~~)									7
Danger Island										8
					Names underlined in red are approved 12-7-51 L. Heck					9
										10
										11
										12
										13
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										27

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7869

Records accompanying survey:

Boat sheets ..2..; sounding vols. 7....; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls .1 env.

special reports, etc. 1 Smooth Sheet; 1 Descriptive Report; 1 Title Sheet;

1 Env. Overlay Tracings (Boat Sheet).

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet		2901
Number of positions checked		241
Number of positions revised		5
Number of soundings revised (refers to depth only)		70
Number of soundings erroneously spaced		40
Number of signals erroneously plotted or transferred		0
Topographic details	Time	40
Junctions	Time	0
Verification of soundings from graphic record	Time	30

Verification by W. Werline / Zeskind ...... Total time 336 / 40 Date Nov. 25 1953 / Mar. 23, 1954

Reviewed by Zeskind ...... Time 35 Date April 19, 1954

M-2232-1

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7869 FIELD NO. PA-05151

S.E. Alaska, Tongass Narrows, Ward Cove & Refuge Cove

Project No. Special

Surveyed - June 1951 Scale 1:5000 & 1:6000

Soundings:

808 Fathometer
Leadline

Control:

Sextant fixes on shore signals
Tagline

Chief of Party - R. J. Sipe
Surveyed by - R. J. Sipe, C. A. Schoene, J. W. Flint
Protracted by - W. M. Martin
Soundings plotted by - W. M. Martin
Verified and inked by - W. Werline
Reviewed by - I. M. Zeskind 3/31/54
Inspected by - R. H. Carstens

1. Shoreline and Control

The shoreline originates with air-photographic survey RS-422 which was compiled from a 1:5000 enlargement of single lens photographs at a scale of 1:40,000. Shoreline changes which originate with the present survey are shown in red. The shoreline was applied in the Washington Office.

The source of the control is described in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves were adequately delineated.

The bottom is very irregular. Reefs, ledges, pinnacles and mounds contribute to the bottom irregularity.

4. Junctions with Contemporary Surveys

No contemporary surveys join the present survey. On the west and southwest, the present survey extends to the area covered by wire drag survey H-3688 (1914) in accordance with the instructions.

5. Comparison with Contemporary Surveys

A. H-1512a,c (1881), 1:291,200 & 1,200,000
H-1621a,b (1882), 1:20,000 & 1:5000
H-1622 (1883), 1:80,000

These reconnaissance surveys cover the area of the present survey. A comparison between the prior and present surveys reveals minor differences of ½-2 fms. in depths, attributable largely to the control and plotting on the small scale surveys.

The 10½-ft. sounding on H-1621a (1882) charted in 1-3/4 fms. in lat. 55°24.06', long. 131°45.37', has been transferred to the present survey 60 meters to the northwestward on a shoal with a least depth of 2.2 fms. The sounding on H-1621a apparently is located out of position, but is considered to be accurate in depth.

With the addition of the sounding noted above the present survey is adequate to supersede the prior surveys within the common area.

B. H-3046 (1909), 1:5,000 & 1:10,000
H-3220 (1910), 1:10,000

These prior surveys cover the area of the present survey. A comparison between the prior and present surveys reveals only minor differences of 1-2 fms. in depths. The present survey depths are generally deeper than the depths on the prior surveys. Several man made changes in the shoreline in Ward Cove are noted, as for example, in the vicinity of lat. 55°23.85', long. 131°43.65' where several piers have been constructed.

A number of soundings have been transferred from H-3220 to an undeveloped area in Ward Cove on the present survey. With the addition of these soundings the present survey is adequate to supersede the prior surveys within the common area

C. H-3688WD (1914), 1:15,000

This wire-drag survey covers Ward Cove and the southwest portion of the present survey which lies west of long. 131°45'.

There are no conflicts between the effective wire-drag depths and depths on the present survey. Several soundings from the wire drag survey have been transferred to the present survey.

6. Comparison with Chart 8094 (Latest print date 9/1/52)
Chartlet of Ward Cove (H.O.N to M 15, 4/10/54

A. Hydrography

Except for the area in Ward Cove which has been compiled on Chartlet NM 15. 1954, the charted hydrography originates principally with the previously discussed prior surveys, supplemented by critical data from the present survey prior to verification and review. In the area falling outside of that covered by the chartlet, the following discrepancy is noted:

The 4½-fm. sounding charted in lat. 55°23.73', long. 131° 44.78', from the present survey is in error and should be deleted from the chart. The charted sounding originated with a stray on a depth recorder profile.

The charted hydrography in Ward Cove originates principally with the present survey prior to review, with one sounding from H-3688WD (1914) and with a few critical soundings from H-8101WD (1953) which was surveyed subsequent to the present survey.

The present survey is adequate to supersede the charted hydrography within the common area.

B. Aids to Navigation

Aids to navigation located on the present survey are in substantial agreement with their charted locations and adequately mark the features intended.

7. Condition of Survey

a. The sounding records and Descriptive Report are complete and comprehensive.

b. The smooth plotting was accurately done.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work Recommended

Although the soundings transferred to the present survey from H-3220 (1910) are spaced further apart than the adjacent soundings on the present survey, the area is considered to be adequately covered. With the addition of these prior soundings to the holidays in Ward Cove, the present survey is considered to be basic and no additional field work is recommended.

Examined and approved

H. R. Edmonston
Chief, Nautical Chart Branch

H. Arnold Karo
Chief, Division of Charts

G. R. Fish
Chief, Section of Hydrography

Earl O. Heaton
Chief, Division of Coastal Surveys

RHC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~ 10 December 1951

Division of Charts: R. H. Carstens:

Plane of reference approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 7869

Locality Ward Cove, Tongass Narrows, Alaska

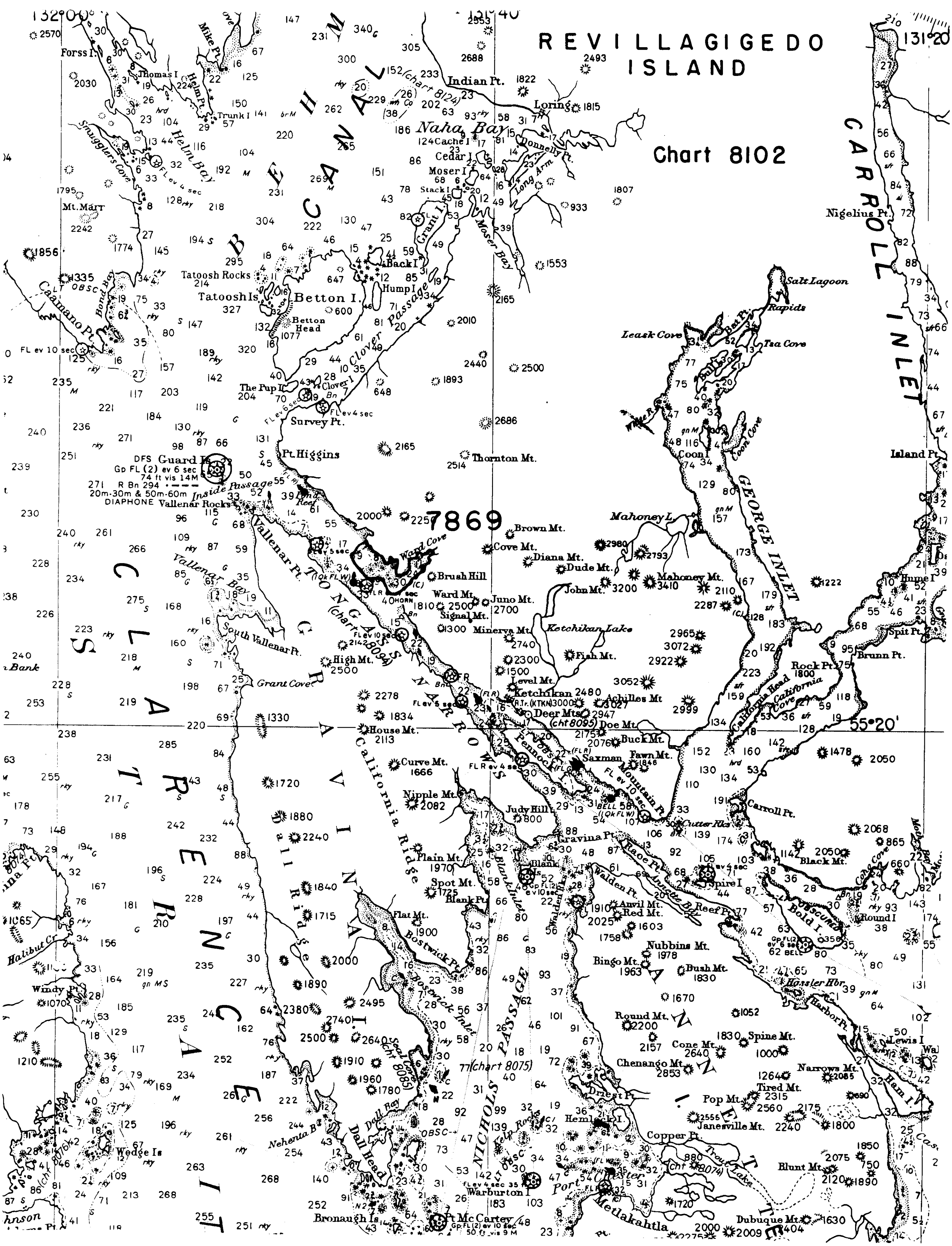
Chief of Party: R. J. Sipe in 1951
Plane of reference is mean lower low water, reading
5.9 ft. on tide staff at Ward Cove
12.6 ft. below B. M. 9 (1951)

Height of mean high water above plane of reference is 14.8 feet.

Condition of records satisfactory except as noted below:

E. C. McKay
Section
Chief, ~~Division~~ of Tides ~~and Currents.~~

U. S. GOVERNMENT PRINTING OFFICE 756675


REVILLAGIGEDO
ISLAND
Chart 8102
7869
CARROLL INLET
GEORGE INLET
Naha Bay
Indian Pt.
Loring
Donnelly Pt.
Long Arm
Cache I
Cedar I.
Moser I
Stack I
Grant I.
Moser Bay
Nigelius Pt.
Forss I.
Thomas I
Helm Pt.
Trunk I
Helm Bay
Smugglers Cove
Mt. Marr
Tatoosh Rocks
Tatoosh Is.
Betton I.
Betton Head
Back I
Hump I
Clover Passage
Bond Bay
Caamano Pt.
FL ev 10 sec
Salt Lagoon
Rapids
Leask Cove
Bat Pt.
Tsa Cove
Bull I
Coon Cove
Coon I
Island Pt.
The Pup I
Clover I
Survey Pt.
Pt. Higgins
Guard Is.
Gp FL (2) ev 6 sec
74 ft vis 14 M
R Bn 294
DIAPHONE
Vallenar Rocks
Inside Passage
Thornton Mt.
Mahoney L.
Brown Mt.
Cove Mt.
Diana Mt.
Dude Mt.
Mahoney Mt.
John Mt.
Ward Cove
Brush Hill
Ward Mt.
Juno Mt.
Signal Mt.
Minerva Mt.
Ketchikan Lake
Fish Mt.
Vallenar Pt.
Vallenar Bay
South Vallenar Pt.
Grant Cove
High Mt.
Level Mt.
Ketchikan
Achilles Mt
Deer Mts
Doe Mt.
Buck Mt.
Fawn Mt.
Saxman
Pennock I
Mountain Pt.
Hume I
Spit Pt.
Brunn Pt.
Rock Pt.
California Head
California Cove
55°20'
TONGASS NARROWS
GRAVINA I.
CLARENCE STRAIT
BEHM CANAL
House Mt.
Curve Mt.
Nipple Mt.
California Ridge
Dall Ridge
Judy Hill
Carroll Pt.
Cutter Rks
Gravina Pt.
Race Pt.
Spire I
Walden Pt.
Reef Pt.
Black Mt.
Plain Mt.
Spot Mt.
Blank Pt.
Blank Is.
Blank Inlet
Flat Mt.
Bostwick Pt.
Bostwick Inlet
Anvil Mt.
Red Mt.
Nubbins Mt.
Bingo Mt.
Bush Mt.
Round I
Bold I.
Hassler Hbr.
Harbor Pt.
Halibut Cr.
Windy Pt.
Wedge Is
Round Mt.
Cone Mt.
Spine Mt.
Chenango Mt.
Narrows Mt.
Tired Mt.
Pop Mt.
Janesville Mt.
Lewis I
Ham I
NICHOLS PASSAGE
ANNETTE I.
Dall Bay
Dall Head
Nehenta B.
Kelp Rocks
Driest Pt.
Hemlock I
Copper Pt.
Trout Lake
Blunt Mt.
Warburton I
Port Chester
Metlakahtla
Dubuque Mt.
Bronaugh Is.
Pt. McCartey
Gp FL (2) ev 10 sec
50 ft vis 9 M

NAUTICAL CHARTS BRANCH

SURVEY NO. H-7869

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
1/5/52	8079	J J Walker	Before ~~After~~ Verification and Review Examined - not applied
			Hyphs removed from Ward Cove on ch 8079 per G.H.S.
7-7-52	8094	R. K. De Lauder	Partially applied Before ~~After~~ Verification and Review
3-15-54	8094	R. K. De Lauder	~~Critical info. only appl. Charted must be worked at scale 1/10,000~~ ~~Before After~~ Verification and Review During Before
10-30-56	8079	R. K. DeLauder	~~Before~~ After Verification and Review H/O. correction.
2/11/57	8094	O.R. Williamson	~~Before~~ After Verification and Review Completely
5/67	8080	Clarence Mosfeldt	~~Before~~ After ~~Verification~~ and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

NOVEMBER
1951

ALASKA'S MAGAZINE

See Page 25

25¢

The Alaska Sportsman

In A Howling Wind - A Shipwreck Story - By Fred E. Brandes Jr.

F. J. Saari

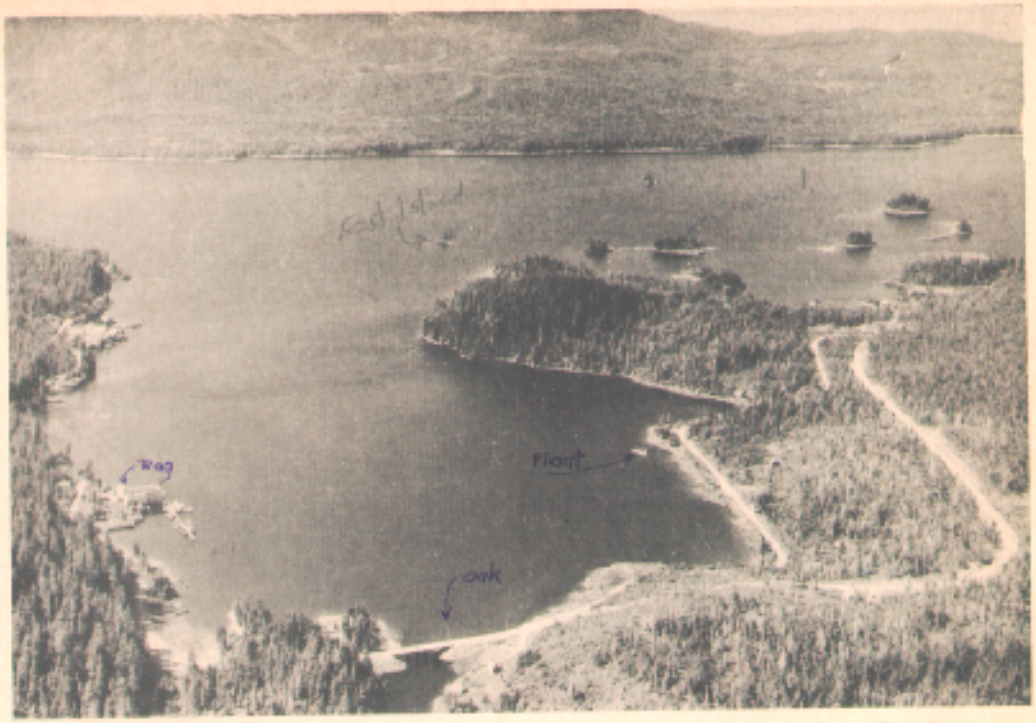
■ **"First relaxation I've had on this entire trip," said Governor Thomas E. Dewey when he and his party stopped in Ketchikan last August after a 42,000-mile tour of the Pacific, and accepted an invitation to go fishing on board Captain Eldon Coon's yacht Manana II. Though "not much of a fisherman," Dewey became high man in his party when he hooked three kings, the largest fourteen pounds. His former secretary, Paul Lockwood, who is "nuts about fishing," caught two kings and Newsman Ray Borst landed one. Left to right in the photo above are Ketchikan's Mayor George Beck, his back to the camera; Alaska's Governor Ernest Gruening, President Herb Hetherington of the Ketchikan chamber of commerce, Dewey, and Coast Guard Chief Darrell D. Edwards. A plane picked up the Dewey party at Knudsen Cove and whisked them off on another lap of their six-day Alaska tour, which included stops at Juneau, Anchorage, Palmer, McKinley Park, Kodiak, and Kotzebue above the Arctic Circle where he dedicated a new airport. "I am much impressed with Alaska's scenery and fishing," Dewey said, "and with the hospitality of the people. Someday, I hope, I'll come back for a real vacation." Dewey's largest king salmon, incidentally, was fresh-frozen and flown to the executive mansion in Albany.**

Marbetanz

• "I don't know whether I have the good fortune or the misfortune to see these things," said "Abalone" Bill Solinger of Carlos, Minnesota, Alaska salmon troller with an apparent affinity for whales, "but for my part they could happen to someone else!" Abalone Bill's most recent experience with whales occurred late last July. I was trolling along between Cape Bartolome and Cape Chirikof on the west coast of Prince of Wales Island. All of a sudden a whale jumped halfway out of the water eighty yards dead ahead, bellowing like a mad bull. He was a sulphur-bottom, a good ninety feet long, the largest whale I've ever seen, and I've seen plenty. Then I saw the spikes of a pack of killers. The big whale started to roll, and you should have seen him flail those killers with his long flukes! The water simply boiled, and every time his flukes hit they sent water twenty-five feet in the air. But every time he came up the killers smacked him viciously on the blowhole. I was in a spot. I didn't want that whale coming to my boat for protection, as a whale had once before, because if I'd got in the middle of that bout I'd have met up with Davy Jones in short order. I couldn't run and I couldn't turn inshore because I had thirty fathoms of gear out, so I turned out and got out my double-barrel shotgun and watched my chances. Every time a killer would come up I'd let him have a charge of buckshot. I don't know whether the shot really bothered them or they just didn't like the noise, but it broke up the fight in a hurry. I saw the whale surface twice about a quarter of a mile away, but I didn't see anything of the killers again until the next day, when they were patrolling the shore. It was ten days before I saw another whale around there. I wished afterward I'd had a movie camera, but I wouldn't have had time to use it. Aside from this," continued Abalone Bill, "my biggest trouble was with sea lions. They got an average of two leaders and spoons a day, and of course several salmon. They seem to like kings better than cohos, though they take both, and they usually take the whole fish, but one time a big red king came up with just his belly bitten out."

■ **Construction of the first pulp mill in Alaska will begin this winter, according to a recent announcement by the Ketchikan Pulp and Paper Company after being awarded a final sale agreement for one and one-half billion cubic feet of pulp timber in the Tongass National Forest. The mill will be completed within three years, the company expects, and the agreement requires it to be in operation by August 2, 1954. Company plans are for a forty-million-dollar plant at Ward Cove, shown at right above, seven and**

one-half miles north of Ketchikan, where they have acquired a site and made preliminary surveys. Last winter the bureau of public roads relocated the highway around Ward Cove, the new road going inland to bypass the mill site as the photo shows. Eleven hundred men will be employed in the completed plant and in logging operations, and the initial capacity of the mill will be three hundred tons daily. The forest service will supervise logging operations on a sustained yield basis, under which the Tongass National Forest is capable of supplying one-third of the nation's pulp-paper requirements in perpetuity.



Henry Rogers

● Volcanic activity on the Alaska Peninsula late last July, reducing visibility to zero within a seventy-five-mile radius of Mount Katmai, gave rise to a report that the mighty dormant volcano, whose 1912 eruption was one of the most devastating in modern times, had gone into action again. But pilots flying over the area after the smoke and ash had thinned reported that it was Katmai's upstart neighbor, Mount Mageik, kicking up a fuss. Mageik, twelve miles to the southwest, was born of Katmai's eruption. Clouds of smoke were still rising from the smaller volcano several weeks later.

● Alaskans paid $17,393,930 in Federal taxes during the fiscal year ending June 30, 1950.

● "Cowboy," a thirty-pound mongrel dog owned by Red Clarke of Naknek, doesn't like close confinement when he rides. He prefers, when traveling by jeep or car, to ride on the radiator or the roof. But when traveling by plane he'll climb in with the rest of the passengers. Cowboy learned about flying, and earned the reputation of being the best flier in the Bristol Bay area, last summer when his master and Bert Bryson took off with Pilot Julius Harri from Naknek for Egegik fifty miles away. They ran into turbulence and climbed several thousand feet, landed on choppy water and taxied to shore. Clarke's dog, tail awagging, hopped off the pontoon. Going home, Cowboy rode first class in the cabin.

● Mount McKinley, several times scaled by way of the Muldrow Glacier route, was climbed last summer by its west face for the first time. All eight members of the party reached the top of the 20,300-foot peak and descended safely. For the leader, Director Bradford Washburn of the Boston Museum of Science, it was his third time on McKinley's crest. The expedition, sponsored by the Boston Museum and the University of Denver, was for the three-fold purpose of gathering data to complete a map the museum is preparing, getting a photographic record of the west face, and conducting a thorough geological survey of the area. These objects were successfully accomplished, Washburn said. The other members of the party were Dr. Henry Buchtel, T. M. Griffiths, Dr. John Ambler and Jerry More of Denver; Captain W. D. Hackett of Denver and Fort Richardson, Alaska; Harry C. Bishop of Cincinnati, and James E. Gale of Anchorage. The Air Force Tenth Rescue Squadron provided air support for the climb, and Dr. Terris Moore, flying president of the University of Alaska, ferried the men one at a time from their base camp on Kahiltna Glacier, altitude 10,000 feet, after their descent.

■ **"I didn't know there were so many fish in the world!" exclaimed New York's Governor Thomas E. Dewey when he visited the Ketchikan Cold Storage where 1,200,000 pounds of frozen halibut and 600,000 pounds of salmon were stored. Showing him the cold storage were Fish Buyer Al Whitmarsh, at left below, City Attorney Lester Gore, at right, and Mayor George Beck, between Dewey and Gore. The visiting governor was to see yet more fish on his six-day tour of the Territory. He and his party had lunch at the Waterfall cannery on Prince of Wales Island while it was in full operation, saw salmon trollers fishing in Clover Pass, saw a seine-boat crew purse and brail a huge seine net, watched a trap being brailed, and caught several salmon on their own fishing trip.**

Schallerer's