8594

Diag. Cht. No. 8551-3.

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT

(HYDROGRAPHIC)

Type of Survey HYDROGRAPHIC

Field No. BO 10-2-61

Office No. H-8594

LOCALITY

State ALASKA

General Locality PRINCE WILLIAM SOUND

Locality PORT NELLIE JUAN

1961

CHIEF OF PARTY

F. X. Popper

LIBRARY & ARCHIVES

DATE 5/8/62

☆U.S. GOVERNMENT PRINTING OFFICE: 1974-763-098

8594

Form 537
(Ed. June 1948)

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-8594 ✓

Field No. BO-10-2-61

State Alaska

General locality Prince William Sound

Locality Port Nellie Juan

Scale 1:10,000 Date of survey 6/14/61 - 7/24/61

Instructions dated 18 November 1958

Vessel USC&GSS BOWIE

Chief of party F. X. Popper

Surveyed by J. M. Doherty

Soundings taken by fathometer, graphic recorder, hand lead, wire

Fathograms scaled by W. White

Fathograms checked by F. X. Popper, J. M. Doherty, P. D. Montjoy

Protracted by L. S. Brown, A. Tozap, H. A. Uzpurvis

Soundings penciled by H. A. Uzpurvis

Soundings in fathoms ~~XXX~~ at ~~XXXXX~~ MLLW

REMARKS:

[redacted]

U. S. GOVERNMENT PRINTING OFFICE 777082

BLL

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SURVEY H-8594 FIELD NO. BO 10-2-61

SCALE: 1:10,000 DATE: 1961

USC&GS SHIP BOWIE F. X. POPPER, COMMANDING

A. PROJECT:

This project was accomplished in accordance with revised instructions OPR-277 dated 18 November 1958, supplemental instructions dated 14 January 1960, 4 November 1960 and 27 June 1961.

B. AREA SURVEYED:

The area of Derickson Bay, Deep Water Bay, East Finger Inlet and shoreline of Port Nellie Juan between Longitude 148° 15' 30'' W. and 148° 24' 30'' W. and Latitude 60° 28' 00'' N. and 60° 34' 30'' N. are included in this survey.

This survey makes junctions with previous surveys H-7794, 1:40,000 1948; H-3973, 1:20,000 1917; H-8593, 1:10,000 1961; H-8595 1:10,000 1961; and H-8606 1:10,000 1961.

Field work was accomplished between 14 June 1961 and 24 July 1961.

C. SOUNDING VESSEL:

All hydrography was accomplished with Launch #95, a 30' diesel powered launch, working from the Ship BOWIE. The launch operated at 1,000 RPM at about 6 knots.

Bottom Samples were taken with the Ship BOWIE.

Blue was used to designate both ship and launch positions.

D. SOUNDING EQUIPMENT:

All launch soundings were taken with 808 fathometers calibrated at a speed of 800 fms. per second.

The serial numbers of the fathometers used are as follows: 57-28 and 57-30.

To obtain the 808 fathometer corrections, phase comparisons were made at the beginning of the season, bar checks were taken twice daily during hydrography operations, and temperature and salinity casts were taken to determine the velocity correction.

D. SOUNDING EQUIPMENT: (Continued)

The phase comparisons were obtained for each fathometer by obtaining ten (10) observations at each change of scale. The ten observations were scanned from the fathogram and a mean correction determined. This correction was combined with the bar check correction to give the Echo Correction which is shown on Page B. ✓

At the time of the phase comparisons were taken, a series of tests were run on each fathometer and the results are as follows:

FATHOMETER	SPEED	PAPER ADVANCE	RADIUS STYLUS ARM
57-28	109 RPM	7.8 inch/4 min. (ft. scale)	O.K.
57-30	109 RPM	7.8 inch/4 min. (ft. scale)	O.K.

✓

The paper advance and speed checks were made twice daily for each day of hydrography and are recorded on the fathograms.

The bar checks were taken twice daily for all launch hydrography. These values were used to determine the draft of each launch and any mechanical error in the 808 fathometers. As previously stated, the bar check and phase corrections were combined to give the Echo Correction. ✓

Velocity corrections determined from the temperature and salinity casts are found on Page C. ✓

Due to the irregular and steep bottom, many side echoes and scale changes were encountered in the taking of soundings. ✓

The side echoes caused some missed and erroneous soundings, as the fathometer operators would occasionally follow the side echo and change scales, thus not obtaining the true sounding. ✓

An error in paper speed, not in the soundings, was caused by paper slippage. This error was due to a worn out paper take-up spring belt. The problem was solved by replacing the worn out parts. ✓

Depths recorded were from 0 to 195 fathoms. ✓

E. SMOOTH SHEET:

The projection was made in the Washington Office with the ruling machine. ✓

F. CONTROL:

The control throughout this survey was second and third order triangulation, photo-hydro stations and hydro stations. ✓

Some of the photo-hydro stations had to be changed to hydro signals. The signals changed are RIM and PIE. ✓

RIM. Signal RIM originally was established through photogrammetric control, but is was found that this signal jumped while running hydrography. It was relocated on 23 June 1961, but the fixes using the original signal and hydro signals WAD and KID which used cuts to RIM, prior to 23 June 1961 were not replotted on the boat sheet. Therefore, the fixes using the above signals prior to 23 June 1961 should not be used for comparisons. The smooth plotter later found that this location of RIM plotted the inshore lines near PENNY 1948, sixty to seventy meters offshore when the hydrographer noted that the line was only ten meters offshore. Since many cuts to and from RIM had been taken, signal RIM was relocated and changed to a hydro signal. The center of the triangle formed by the following cuts: at ORGAN to PENNY-RIM, at RIM to PENNY-JUNK, and in launch ORGAN-RIM is used as the new location of RIM. The cuts are foundd in Volume 6, pages 16 and 17. This location of RIM plotted the inshore lines correctly and the other lines using RIM as one signal agreed with the crosslines. Thus it can be assumed that the present location of RIM is the correct location. ✓

PIE. While plotting the inshore line between PEAR 1948 and LAND 1948 at 60° 30' 30'' N., 148° 15' W., it was found that the positions plotted on land. It was found that the location of signal PIE on the boat sheet did not agree with the location of signal PIE on the manuscript. ✓

The location of PIE on the manuscript had been used on the smooth sheet. Thus the manuscript PIE produced the incorrect fixes of the inshore lines. ✓

There was a cut to signal PIE from hydro signal OAK which had been previously located by several cuts. This cut to PIE intersected the shoreline at the location of the boat sheet signal PIE. The Chief of Party stated that the signals in this area were on the MHWL. Thus the intersection of the cut from OAK and the MHWL is the new location of PIE on the smooth sheet. ✓

Signal PIE has been changed to a hydro signal. ✓

It is presumed that some cuts were recorded in the sketch books and not transferred to the sounding volumes. The sketch books could not be recovered. ✓

Signal MAG was relocated on 23 June 1961. ✓

T-9123

Incomplete manuscripts T 9122, T 9124, and T 9125 were used for photographic compilation. ✓

G. SHORELINE AND TOPOGRAPHY:

T-9123 Shoreline for this sheet is taken from blue-line manuscripts T 9122, T 9124 and T 9125. ✓

A short segment of about 100 meters of shoreline was adjusted at the head of East Finger Inlet by approximate visual methods and the use of photos. ✓

All other shoreline on this sheet was verified by the hydrographer and all new features added were located by sextant fixes. ✓

All of the shoreline is adequate for charting. ✓

The low water line is not defined in some areas of the sheet because of shallow, foul water and a steep, broken coast line. ✓

Copious notes were made in the sounding records when running inshore lines. Lines were run as close to the shore as safety permitted, with estimated distances to HWL. ✓

All inshore lines were run at times of high tide. ✓

H. CROSSLINES:

Approximately 9% crosslines were run and in general were in good agreement. Any disagreement encountered can be attributed to the irregular bottom. ✓

I. JUNCTIONS:

Junctions with adjoining surveys ~~H-8593~~, ~~H-8595~~ H-8606 and H-3973 are satisfactory. ✓

Junctions with survey H-7794 is satisfactory except in the following locations:

Latitude	Longitude	H-7794	H-8594
60° 31' 25'' N	148° 23' 40'' W.	~~50~~ 100 fms.	104 fms.
60° 31' 27'' N	148° 23' 48'' W.	~~85~~ 150 fms.	~~160~~ 150 fms.

✓

The area in which the junction with H-7794 is not satisfactory is very steep and irregular. Above location proves very satisfactory with application of final correctors. ✓

In general adequate agreement was made with all previous surveys. ✓

J. COMPARISON WITH PRIOR SURVEYS:

No prior survey exists in the area of this survey. ✓

Item 11 of pre-survey review was investigated and a shoal area with a submerged rock of 0.7 fathoms, least depth, extending south of an island that is in the entrance of East Finger Inlet, 60° 32' 33'' N., 148° 22' 45'' W., was found. This danger was verified by a hand lead sounding and by visual observation. It is located by a sextant fix, positions 2 and 3 'l' day, 1 July 1961. ✓

K. COMPARISON WITH CHART:

No soundings are charted in the area of this survey other than junction lines and one sounding of 3/4 fathoms in the entrance of East Finger Inlet. Soundings charted during partial application before V&R

The shoal sounding of 3/4 fathoms shown on Chart 8517 at the entrance of East Finger Inlet 60° 32' 33'' N. 148° 22' 45'' W. was found to be 0.7 fathoms. 15 ✓

A shoal area exists in Deep Water Bay at 60° 29' 42'' N. 148° 22' 09'' W. with a least depth of 8.1 fathoms recorded by the fathometer. ✓

The shoal was fully developed by running a system of parallel lines over the shoal area. The least depth is between positions 45 and 46 of 'f' day, 20 June 1961. ✓

L. ADEQUACY OF SURVEY: ✓

This survey is complete and adequate for charting.

M. AID TO NAVIGATION: ✓

None.

N. STATISTICS: ✓

	LAUNCH #95	SHIP
Number of Positions	1691	0
Nautical Miles of Soundings	179.3	0
Area (Square Nautical Miles)	5.2	0
Number of Bottom Samples	0	30

O. MISCELLANEOUS: ✓

Silted areas were found at the head of Derickson Bay and Deep Water Bay. These areas are the result of glacial runoff which empties into both bays.

P. TABULATION OF APPLICABLE DATA: ✓

1. Signal List
2. Fathometer Corrections
3. Velocity Corrections
4. Tidal Note

Respectfully submitted,

Horstas A. Uzpurvis

Horstas A. Uzpurvis
ENS, C&GS
USC&GS Ship BOWIE

LIST OF HYDROGRAPHIC SIGNALS H-8594 (BO-10-2-61) ✓

USC&GSS BOWIE-PROJECT OPR-277

Hydrographic Name	Source
Ace	1948 Tri. Sta. Mace
Act	T-9122
Add	Vol. 1. p.4
Ado	Vol. 1, p.5
Aim	T-9124
Amy	T-9122
Arm	T-9122
Art	Vol. 1, p.3
Bed	T-9124
Big	T-9124
Bob	Vol. 1, p.3
Bon	T-9124
Box	T-9122
Bus	T-9122
Cab	T-9122
Cam	T-9122
Cat	Vol.1, p6
Cod	T-9122
Cop	Vol. 1, p.8
Cue	T-9122
Cut	T-9124
Day	T-9122
Dill	1948 Tri. Sta. Dill
Dot	T-9122
Eat	T-9124
End	T-9125
Erg	T-9122
Eva	T-9122
Fat	T-9122
Fig	T-9124
Fini	1917 Tri. Sta. Fini
Fit	T-9122
Fix	T-9122
Fly	T-9122
Fog	T-9124
Fox	T-9122
Fry	T-9122
Fun	T-9124
Gag	Vol. 1, p.5
Gas	Vol. 1, p.6
Got	Vol. 1, p.6
Guy	T-9124
Hat	T-9124
Her	T-9122
Hex	T-9122
His	T-9122
Hop	T-9124
Ice	T-9122
Irk	Vol. 1, p. 5
Ivy	T-9124
Jim	T-9122
Junk	1948 Tri. Sta. Junk
Jut	T-9122
Ked	T-9122
Kid	Vol. 1, p.8
Lad	T-9124
Land	1948 Tri. Sta. Land
Lay	T-9122
Leo	T-9122
Liar	1948 Tri. Sta. Liar
Lip	T-9122
Log	T-9124
Mag	Vol. 6, p.16,18
Mal	Vol. 1, p.3
Man	Vol. 1, p.6
Max	Vol. 1, p.4
Met	T-9122
Money	1948 Tri. Sta. Money
Moo	T-9122
Nat	Vol. 1, p.3
Neck	1948 Tri. Sta. Neck
Ned	T-9122
New	T-9122
Nod	Vol. 1, p.3
Nub	T-9124
Oak	Vol. 1, p.6
Off	T-9124
Organ	1948 Tri. Sta. Organ
Owe	1948 Tri. Sta. Owe

Hydrographic Names	Source	Hydrographic Names	Source
Pear	1948 Tri. Sta. Pear	Sal	T-9122
		Sax	T-9122
Peg	T-9124	Set	T-9124
Pen	1948 Tri. Sta. Penny	Silt	1948 Tri. Sta. Silt
Pet	Vol. 1, p.3	Sky	T-9124
Pie	Vol. 1, p.8	Sow	T-9124
Pit	Vol. 1, p.4, Vol. 5 p. 16	Sue	T-9124
		Tan	T-9122
Pro	T-9122	Tom	T-9124
Quo	T-9124	Use	T-9124
Rat	T-9124	Vex	T-9122
Rim	Vol. 6, p.16,17	Wad	Vol. 1, p.5
Rio	T-9124	Wee	T-9122
Ripe	1948 Tri. Sta. Ripe	Woo	T-9124
		Yak	T-9124
Rum	T-9122	Yam	T-9122
Sad	Vol.1, p.6	Yield	1948 Tri. Sta. Yield
		Zag	T-9124

TOTAL FATHOMETER CORRECTION (ECHO) ✓

(Bar Check & Phase Comparison)

Fathometer #57-28

A Scale	≠ 0.2 fms.
B Scale	≠ 0.2
C Scale	- 0.3
D Scale	≠ 0.2
E Scale	≠ 0.8

Fathometer #57-30

A Scale	≠ 0.2 fms.
B Scale	≠ 0.3
C Scale	≠ 0.2
D Scale	≠ 0.4
E Scale	≠ 1.2

VELOCITY CORRECTIONS

For a, b, c & d days correction is zero

For e, f, g, h, j, k, A, B, l & m days:

FROM	TO	CORRECTION
0 fms.	5 fms.	0 fms.
5	20	≠ 0.1
20	45	≠ 0.2
45	70	≠ 0.3

Above 70 fms. correction is zero.

For n & p days:

FROM	TO	CORRECTION
0 fms.	5fms.	0 fms.
5	10	≠ 0.1
10	20	≠ 0.2
20	35	≠ 0.3
35	50	≠ 0.4
50	65	≠ 0.5
65	85	≠ 0.6
85	100	≠ 0.7
100	120	≠ 0.8
120	140	≠ 0.9
140	160	≠ 1.0
160	180	≠ 1.1
180	200	≠ 1.3

TIDE NOTE ✓

The Kings Bay and Blue Fiord portable tide stations were used for this survey.

The Kings Bay portable tide station (60° 32.52' N., 148° 27.6' W.) was used for a, b, c, d, e, f, g, h, j, k, l & m days. MLLW was 4.56 feet on the tide staff.

The Blue Fiord portable tide station (60° 25.93' N., 148° 14.50' W.) was used for n and p days. MHW was 6.8 feet on the tide staff.

The 150th time meridian was used for all observations.

APPROVAL SHEET ✓

BO-10-2-61

Field work on this hydrographic survey was inspected daily by the Chief of Party. This survey is considered complete and no additional work is necessary. All records are approved and forwarded.

F. X. Popper

F. X. Popper
CDR, C&GS
Cmdg., Ship BOWIE

RH C

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

TIDE NOTE FOR HYDROGRAPHIC SHEET ✓

~~Division of Hydrography and Topography~~ June 4, 1962

Division of Charts: R. H. Carstens

Plane of reference approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET 8594

Locality Port Nellie Juan, Alaska

Chief of Party: F. X. Popper (1961)
Plane of reference is mean lower low water reading
4.6 ft. on tide staff at Kings Bay
17.4 ft. below B. M. 1 (1959)
6.8 ft. on tide staff at Blue Fiord
10.1 ft. below B.M. NO 1 (1961)

Height of mean high water above plane of reference at working grounds is: 11 feet.

Condition of records satisfactory except as noted below:

J. M. Symons
Chief, Tides and Currents Branch

~~Chief, Division of Tides and Currents~~

U. S. GOVERNMENT PRINTING OFFICE 756675

FORM 197
(3-16-55)

GEOGRAPHIC NAMES

Survey No. H-8594 ✓

Name on Survey	A: On Chart No. 8517	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	
Deep Water Bay	✓									1
Derickson Bay	✓									2
East Finger Inlet	✓									3
Port Nellie Juan	✓									4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

George D. Bale
Geographic Names Section
25 May 1962

Form 946

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8594

Records accompanying survey: Smooth sheets 1;
boat sheets 1; sounding vols. 8; wire drag vols. ;
Descriptive Reports 1; graphic recorder envelopes 5;
special reports, etc. .....
.....

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

Number of positions on sheet		1691
Number of positions checked		939
Number of positions revised		48
Number of soundings revised (refers to depth only)		795
Number of soundings erroneously spaced		59
Number of signals erroneously plotted or transferred		0
Topographic details	Time	8.0
Junctions H-8593 (Verified)	Time	8.0
Verification of soundings from graphic record	Time	217.0
Special adjustments 95% of shoreline retransfered from T-Sheets	Time	40.0

Verification by R.D. Sawicki Total time 273 Date 16 May 1972

Reviewed by George A. Kozemczak Time 85 Date 15 JUNE 72

Inspected by D R Engle 21 12 Aug 72

US COMM C&GS DC

H-8594

Items for Future Presurvey Reviews

Position Index Lat.	Long.	Bottom Change Index	Use Index	Resurvey Cycle
602	1482	2	1	50 years
602	1483	2	1	50 years
603	1482	1	1	50 years
603	1483	3	1	50 years

OFFICE OF MARINE SURVEYS AND MAPS

MARINE SURVEYS DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8594 FIELD NO. BO-10-2-61

Alaska, Prince William Sound, Port Nellie Juan

SURVEYED: June 14 - July 24, 1961

SCALE: 1:10,000 PROJECT NO.: OPR-277

SOUNDINGS: 808 Depth Recorder CONTROL: Sextant Fixes on Shore Signals

Chief of Party	F. X. Popper
Surveyed by	J. M. Doherty
Protracted by	L. S. Brown
	A. Tczap
	H. A. Uzpurvis
Soundings Plotted by	H. A. Uzpurvis
Verified and Inked by	R. D. Sanocki
Reviewed by	G. A. Kozemczak
	Date: June 15, 1972
Inspected by	D. R. Engle

1. Description of the Area

This is an inshore survey of three separate areas at the junction of the eastern and middle reaches of Port Nellie Juan including Deep Water and Derickson Bays and vicinity, East Finger Inlet and vicinity, and a small area north of Blue Fiord. The bottom is irregular and steep with depths ranging from 0 to 29 fathoms in East Finger Inlet, 0 to 65 fathoms in Deep Water Bay, and 0 to 80 fathoms in Derickson Bay. Ledges, rocks awash, and small islets fringe much of the shoreline. The bottom consists mostly of blue grey clay, grey mud, sand, and pebbles.

2. Control and Shoreline

The source of control is given in the Descriptive Report.

The shoreline originates with final reviewed shoreline manuscripts T-9122 (1954, 1955, 1957, 1958), T-9123 (1954), T-9124 (1954), and T-9125 (1954).

A substantial portion of the shoreline, inaccurately transferred from the T-sheets by the smooth plotter, was revised by the verifier.

3. Hydrography

A. Depths at crossings are in good agreement.

B. Very little mean lower low water line was delineated by soundings because of steep and generally foul character of the inshore areas. All other usual depth curves were adequately delineated.

A few dashed and brown curves have been added to emphasize important bottom features.

C. Development of the bottom configuration and the investigation of least depths are considered adequate.

4. Condition of the Survey

The field plotting, field verification, sounding records, and the Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual with the following exceptions:

A. Inaccuracies in shoreline transfer as described in section 2 of this review.

B. Rock awash symbols applied by the smooth plotter did not meet prescribed standards. They were revised by the verifier.

C. Fathograms were not properly scanned. Rescanning by the verifier resulted in many depth changes. In many instances adjacent lines of different days were not cross checked resulting in omission of some least depths.

5. Junctions

Adequate junctions were effected with H-8593 (1961) on the west and H-8595 (1961) on the southeast. Junctions with H-8606 (1961) on the northeast and H-7794 (1948) covering the middle portion of the present survey will be considered in the review of those surveys.

6. Comparison with Prior Surveys

No prior surveys exist in the area of this survey.

7. Comparison with Chart 8517, 1:80,000 (10th Edition, January 15, 1972)

A. Hydrography

The charted hydrography originates with the partial application of depths from the boat sheet and unverified smooth sheet of the present survey.

Only minor differences were noted between the charted depths and present survey depths.

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

B. Aids to Navigation

There are no aids to navigation within the area of this survey.

8. Compliance with Instructions

The survey adequately complies with the Project Instructions.

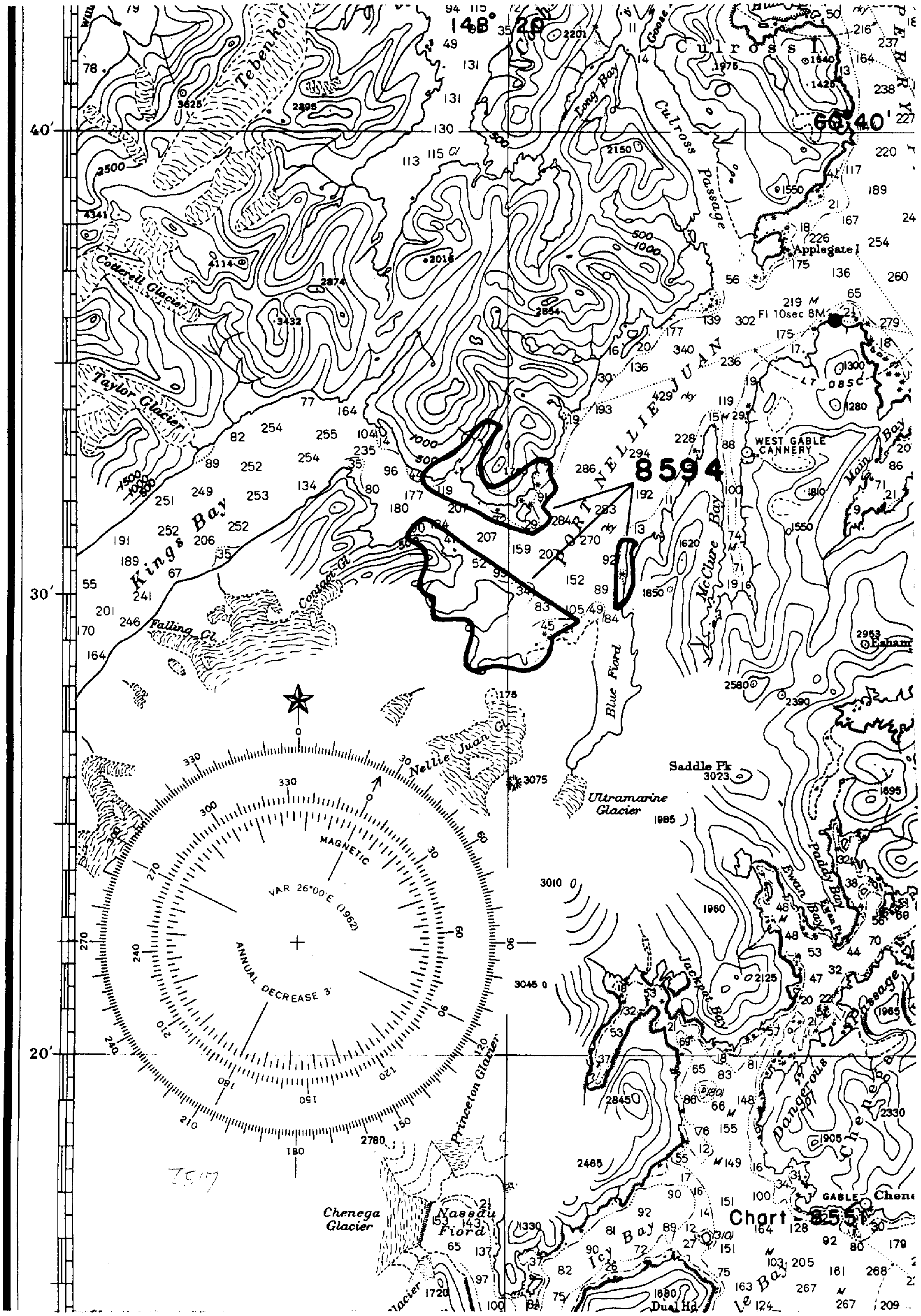
9. Additional Field Work

This is a good basic survey and no additional hydrography is recommended.

Examined and Approved:

A. J. Patrick
Chief
Marine Surveys Division

R. K. Hamilton
Associate Director
Office of Marine Surveys
and Maps



148° 20'
60° 40'
40'
30'
20'
Tebenkof
Culross I.
Culross Passage
Long Bay
Applegate I
Cotterell Glacier
Taylor Glacier
Kings Bay
Falling Gl.
Contact Gl.
PORT NELLIE JUAN
8594
WEST GABLE CANNERY
Fl 10sec 8M
McClure Bay
Main Bay
Blue Fiord
Nellie Juan Gl.
Ultramarine Glacier
Saddle Pk 3023
MAGNETIC
VAR 26°00'E (1962)
ANNUAL DECREASE 3'
Princeton Glacier
Jackpot Bay
Ewan Bay
Paddy Bay
Dangerous Passage
Chenega Glacier
Nassau Fiord
Icy Bay
Dual Hd
Chart 8551
GABLE

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8594

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
1-30-63	8517	E.F.W. Bragaji	Before ~~After~~ Verification and Review Comp appd
2-24-65	8551	J.J. Streifler	Before ~~After~~ Verification and Review
4-13-71	8551	C.S. Forbes	Before ~~After~~ Verification and Review appd 100 fm curve
7/1/75	8551	T.W. Alexander	Part-app After Verification and Review Examined H12 Chl. 8517 (no Critical Corr's found)
4-23-76	8517	C.S. FORBES	~~Before~~ After Verification and Review Before Insp. Revised 10fm curve and LNL, revised sndgs, added sndgs and rocks
12/22/76	8517	M.J. Friese	~~Before~~ EXAM After Verification and Review Inspection No Critical Corrections
11/10/77	8517	Mark J. Friese	~~Before~~ After Verification and Review Inspection Fully Appd hydro within the common area
7-29-91	16700	W.T. Ogden	~~Before~~ After Verification and Review Considered
9-9-91		DC Harpine	Fully Applied Dwg #26
			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.