8312

Diag. Cht. Nos 8551-3.

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

# DESCRIPTIVE REPORT

*Type of Survey* Hydrographic

*Field No.* BO-2156 *Office No.* H-8312

LOCALITY

*State* Alaska

*General locality* Montague Island

*Locality* Patton Bay

1956-57

CHIEF OF PARTY

F. B. Quinn and C. LeFever

LIBRARY & ARCHIVES

DATE March 17, 1958

USCOMM-DC 5087

8312

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-8312

Field No. BO-2156

State Alaska

General locality Montague Island, ~~Prince William Sound~~

Locality Patton Bay

Scale 1:20,000 Date of survey July 1956, May 1957

Instructions dated 28 Dec.,1954, amended 10 Feb., 1955, Supp. 28 Nov.,1955,17 Oct.,1957

Vessel Ship BOWIE and Ship PATHFINDER

Chief of party Curtis Le Fever (BOWIE); F. B. Quinn (PATHFINDER)

Surveyed by H. R. Lippold, G. L. Short, L. S. Baker, H. H. Druebert

Soundings taken by [redacted], graphic recorder, [redacted]

Fathograms scaled by Launch Personnel

Fathograms checked by Ships Officers

Protracted by G. L. Short and V. B. Miller & assistants

Soundings penciled by R. D. Frost

Soundings in fathoms [redacted] at [redacted] MLLW AND ARE TRUE DEPTHS.

REMARKS: This survey was started by the Ship BOWIE in 1956 and completed by the Ship PATHFINDER in 1957.

U. S. GOVERNMENT PRINTING OFFICE 698019

965

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SURVEY H-8312 (BO-2156)

MONTAGUE ISLAND, PRINCE WILLIAM SOUND,

PATTON BAY, ALASKA

Scale: 1:2,000
Project No: 12770
USC&GSS PATHFINDER

Date: July 1956
May 1957
F. B. Quinn, Commanding

A - PROJECT

The authority for this survey is contained in instructions for Project CS-277 dated 28 December 1954, revised instructions 10 February 1955, Supplimental instructions for Project 12770 dated 28 November 1955 (Does not apply to Patton Bay.) and 17 October 1956.

B - SURVEY LIMITS AND DATES

This survey is of PATTON BAY and its approaches. The limits extend approximately from 147° 16' West to 147° 30' West and 59° 50' North to 59° 58' North.

Field work was begun by the Ship BOWIE on 26 July 1956 and discontinued on 31 July 1956. Field work was resumed by the Ship PATHFINDER on 26 April 1957 and the survey completed on 10 May 1957. The survey joins sheet H-4730 (Scale: 1:60,000 - 1927) (Add Work in 1928 and H-5436 (1933)) on the South and sheet H-5460 (Scale: 1:20,000 - 1933) on the East. There are no prior surveys of the area.

During the Ship BOWIE'S 1956 season, work was hampered by heavy seas which eventually made it necessary to suspend operations. During an Easterly storm, launch 92 was sunk.

The Ship PATHFINDER'S 1957 season went smoothly and work progressed satisfactorily during the entire project.

C - VESSELS AND EQUIPMENT

1956 HYDROGRAPHY Ship BOWIE

The 1956 hydrography was accomplished with launch No. 92 operating from the Ship BOWIE, in depths ranging from 0 to 37 fathoms. The launch was equipped with 808 fathometer No. 163T. Launch No. 92 worked in the South West sector of the sheet.

1957 HYDROGRAPHY PATHFINDER Launches 1, 2, and 3.

Launch No. 1 was equipped with 808 fathometer No. 74S. Launch No. 1 worked in the Southeastern area of the sheet.

Launch No. 2 was equipped with 808 fathometer No. 46. Launch No. 2 worked the central portion of the sheet from the Eastern to the Western limits.

Launch No. 3 was equipped with 808 fathometer No. 52. Launch No. 3 worked the Northern section of the sheet.

All fathometers were calibrated for 800 fathoms per second.

The turning radius for all launches is about 20 meters.

D - TIDE AND CURRENT STATIONS

A current station was located at 59° 57' 04 Lat. 147° 16' 77 Long. and was in operation from 1100 6 May 1957 through 0805 11 May 1957. All records and ~~depths~~ data were forwarded to Washington on 21 May 1957.

1956 TIDES

Tide reducers used for this portion of the survey were obtained from a portable tide gage installed on the East side of triangulation station Pointed Rock 1933, Latitude 59° 54'.2, Longitude 147° 26'.3. A continuous record was obtained from 12 July to 7 August 1956.

A range factor of -1.0 feet to high tides and no time corrections were applied to Cordova, Alaska, predicted tides for boat sheet soundings.

1957 TIDES

Tide reducers for this portion of the sheet were determined by the Washington Office. A portable tide gage was put in operation at Seward, Alaska, when sea conditions prevented reestablishment of the 1956 tide station or finding a substitute station.

E - SMOOTH SHEET

The smooth sheet was hand made by Ship PATHFINDER Personnel. The Shoreline was transferred from the blue line tracings.

F - CONTROL STATIONS

The control stations for the sheet are from triangulation established by M. Soberalski in 1933, and Curtis Le Fever in 1956, with the exceptions of COW, END, GIP, IN, JOE, KEL, LOG, PIG, ROC, ROY, SIS, TAN, TIP, TOP, WET, WIG, ZOO.

Station SAL, WAD and WHY are combination hydrographic and triangulation located stations.

Signals WIDE and JAR were located on photos then the manuscripts were matched over the photos and the signals were thus located on the manuscripts. From the manuscripts the points were pricked through onto the boat and the smooth sheet.

A list of stations is attached to this report.

G - SHORELINE AND TOPOGRAPHY

The shoreline for the boat sheets was transferred from preliminary manuscripts, T-8470N, and T-8470S, compiled in 1943 at 1:20,000 scale, from nine lens photographs.

The smooth sheet shore line was obtained from blue line tracings of manuscripts compiled from data furnished by the BOWIE in 1956. T-11578 (1956)

The low waterline was not defined by sounding in most areas due to the rugged coast. The shoreline in this area is generally stable.

H - SOUNDINGS

Soundings were recorded by 808 type portable depth recorders. Lead-line comparisons were made while obtaining bottom samples and generally compared favorably. Bar checks were taken daily as weather and sea conditions permitted and abstracted for fathometer corrections.

Abstract of bar checks is enclosed.

I - CONTROL OF HYDROGRAPHY

HYDROGRAPHY was visually controlled throughout the survey.

J - ADEQUACY OF SURVEY

The survey is adequate and complete. All crosslines and junctions with prior surveys are adequate.

K - CROSSLINES

Approximately ten percent of the hydrography is crosslines. The crossings are adequate and no appreciable discrepancies appeared.

L - COMPARISON WITH PRIOR SURVEYS

No prior surveys of the area are available for comparison.

M - COMPARISON WITH CHARTS

Comparison with chart 8515, dated 5 February 1957 is favorable at the junctions of the survey. No soundings appear in this area.

N - DANGERS AND SHOALS

All dangers and shoals are apparent on the smooth sheet.

O - COAST PILOT INFORMATION

Coast Pilot notes for Patton Bay appear under separate cover forwarded to Washington on 28 May 1957.

P - AIDS TO NAVIGATION

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

Q - LANDMARKS FOR CHARTS

There are no valuable landmarks in the area.

R - GEOGRAPHIC NAMES

No additions or changes are recommended for the Geographic Names.

S - SILTED AREAS

No previous surveys of the area exist for silting comparison, but it is noted that the Nellie Martin river, used in 1956 for anchoring launch No. 92, was closed in 1957 by a bar across its mouth.

U - MAGNETICS

Magnetic observations were made at stations BOX 1933, SOFT No. 2 1956, and SMELT 2 1956. Data submitted under seperate cover on 11 May 1957.

Respectfully submitted,

Bernard L. Gabrielsen

Bernard L. Gabrielsen
Ensign, USC&GS

Approved, Forwarded:

F. B. Quinn

F. B. Quinn
Captain, USC&GS
Commanding Ship PATHFINDER

## GEOGRAPHIC NAMES

BOX POINT

GULF OF ALASKA

JEANIE POINT

MONTAGUE ISLAND

NELLIE MARTIN RIVER

PATTON BAY

WOODED ISLANDS

# LIST OF SIGNALS

## HYDROGRAPHIC SURVEY NO. H-8312 (BO-2156)

| NAME | ORIGIN |
|---|---|
| AGE | 1956 Triangulation |
| AMP | " " |
| BAD | " " |
| BED | " " |
| BIG | " " |
| BOB | " " |
| BOX, 1933 | " " |
| CAB | " " |
| COO | " " |
| COW | Sounding Vol. I Pages 12-13 |
| DOC | 1956 Triangulation |
| DUB, 1933 | " " |
| EAR | " " |
| EEL | " " |
| EGG | " " |
| END | Sounding Vol. 14 Page 42 |
| FAR | 1956 Triangulation |
| FIX | " " |
| FLY | " " |
| FOG | " " |
| GIG | " " |
| GEM | " " |
| GIP | Sounding Vol. I Pages 8-9 |
| HAG | 1956 Triangulation |
| HAT | " " |
| HIGH | " " |
| HUT | " " |
| ICE | " " |
| IN | Sounding Vol. I Pages 7-8 |
| IDA | 1956 Triangulation |
| JAP | " " |
| JAR, JOE | Photo 1957,Sounding Vol. I Pages 7,10,11 |
| KID | 1956 Triangulation |
| KEL | Sounding Vol. 1 Pages 8-9 |
| LAM | 1956 Triangulation |
| LOG | Sounding Vol. 14 Page 42 |
| MAD | 1956 Triangulation |
| MUN | " " |
| NOT | " " |
| OAK | " " |
| OX | " " |
| PAD | " " |
| PIG | Sounding Vol. 1 Pages 12, 13 |
| POINTED ROCK 1933 | 1956 Triangulation |
| RAG | " " |
| RAN | " " |
| RAT | " " |
| RIG | " " |
| ROC | Sounding Vol. 14 Pages 12, 13 |

| NAME | ORIGIN |
|---|---|
| ROY | Sounding Vol. 1 Pages 7, 10, 11 |
| SAD | 1956 Triangulation |
| SAG | " " |
| SAL | " " |
| SHIRT 2, 1956 | " " |
| SIP | " " |
| SIS | Sounding Vol. 1 Pages 11, 12, 13 |
| SLY | 1956 Triangulation |
| SOFT 2, 1956 | " " |
| SQUEEZE, 1933 | 1933 Triangulation |
| SUE | 1956 Triangulation |
| TAN | Sounding Vol. 1 Page 7 |
| TAR | 1956 Triangulation |
| TIP | Sounding Vol. 1 Pages 7, 8 |
| TOP | Sounding Vol. 1 Pages 8, 9, 10 |
| TREE | 1956 Triangulation |
| WAD | " " |
| WHO | " " |
| WHY | " " |
| WET | Sounding Vol. 13 Page 55, 56 |
| WIG | Sounding Vol. 1 Page 10, 11 |
| WIDE | Photo 1957 |
| YAM | 1956 Triangulation |
| YEN | " " |
| ZAG | " " |
| ZOO | Sounding Vol. 1 Pages 11, 13, 14 |

# VELOCITY CORRECTION ABSTRACT

## HYDROGRAPHIC SURVEY H-8312 (BO-2156)

### Launch No. 92 ( Fathometer No. 163J )

A mean correction of +0.1 fathoms for the entire range of depths; all were on "A" phase.

### Launch No. 1 ( Fathometer No. 74S )

| | | | |
|---|---|---|---|
| From | 0 - 3.4 fms | +0.3 fms | |
| | 3.5 - 10.4 " | +0.4 " | |
| | 10.5 - 14.8 " | +0.5 " | |
| | 14.9 - 18.8 " | +0.6 " | |
| | 18.9 - 22.8 " | +0.7 " | |
| | 22.9 - 28.4 " | +0.8 " | |
| | 28.8 - end " | +1.0 " | All work on "A" Phase |

### Launch No. 2 ( Fathometer No. 46 )

| | | | |
|---|---|---|---|
| From | 0.0 - 11.6 fms | +0.3 fms | |
| | 11.7 - 15.8 " | +0.4 " | |
| | 15.9 - 20.1 " | +0.5 " | |
| | 20.2 - 24.4 " | +0.6 " | |
| | 24.5 - 28.6 " | +0.7 " | |
| | 28.7 - 32.9 " | +0.8 " | |
| | 33.0 - 37.8 " | +0.9 " | |
| | 37.9 - 43.9 " | +1.0 " | |
| | 44.0 - end " | +1.1 " | All work on "A" Phase |

### Launch No. 3 ( Fathometer No. 52 )

| | | | |
|---|---|---|---|
| From | 0.0 to Max. Sound fms | +0.2 fms | All work on "A" Phase |

For additional information on fathometer corrections see "Special Report on Depth Recorder Corrections."

TIDAL NOTE

FOR

HYDROGRAPHIC SURVEY NO. H-8312

During the 1956 survey by the Ship BOWIE the tide gage and staff were located at the West side of PATTON BAY, near triangulation station POINTED ROCK 1933, Latitude 59° 54.'2 Longitude 147° 26'.3. This gage was in operation during the period 12 July 1956 through 7 August 1956 and all the data from it was sent to the Washington Office.

During the 1957 survey by the Ship PATHFINDER no adequately protected location for a tide gage was found. The POINTED ROCK, 1933 site had given the Ship BOWIE trouble, the 1956 tide gage being destroyed by a storm. Therefore, a portable tide gage was installed in Seward during the survey to operate while the standard gage there was inoperative, this data being submitted by the regular tide observer in Seward.

The tide reducers for the smooth sheet were furnished by the Washington Office.

STATISTICS

HYDROGRAPHIC SURVEY H-8312 (BO-2156)

| Volume Number | Day Letter | Date | Number of Positions | Statute Mile Sounding |
|---|---|---|---|---|
| Launch No. 92 | | This launches work recorded in green in volumes plotted in red | | |
| 1 | a (red) | 26 July 1956 | 29 | |
| 1 | b | 27 " " | 146 | 33.5 |
| 2 | b | 27 " " | 23 | 6.3 |
| 2 | c | 28 " " | 128 | 26.2 |
| 3 | d | 29 " " | 138 | 29.0 |
| 3 | e | 30 " " | 40 | 9.6 |
| 4 | e | 30 " " | 82 | 21.2 |
| 4 | f | 31 " " | 66 | 15.6 |
| Totals | | | 652 | 141.4 |
| Launch No. 1 | | | | |
| 5 | a (blue) | 29 April 1957 | 121 | 29.2 |
| 5 | b | 30 " " | 90 | 30.4 |
| 6 | c | 1 May " | 156 | 42.1 |
| 6 | d | 6 " " | 53 | 11.7 |
| 6 | e | 7 " " | 48 | 12.8 |
| 7 | e | 7 " " | 98 | 24.2 |
| 7 | f | 8 " " | 173 | 30.2 |
| 8 | g | 9 " " | 138 | 28.8 |
| 8 | h | 10 " " | 114 | 18.2 |
| Totals | | | 991 | 227.4 |

| Volume Number | Day Letter | Date | Number of Positions | Statute Mile Sounding |
|---|---|---|---|---|
| Launch No. 2 | | | | |
| 9 | a (purple) | 30 April 1957 | 148 | 31.2 |
| 9 | b | 1 May 1957 | 91 | 26.9 |
| 10 | c | 6 " " | 79 | 12.9 |
| 10 | d | 7 " " | 182 | 56.3 |
| 10 | e | 8 " " | 22 | 7.8 |
| 11 | e | 8 " " | 161 | 35.2 |
| 11 | f | 9 " " | 89 | 24.2 |
| 11 | g | 10 " " | 20 | 6.2 |
| 12 | g | 10 " " | 160 | 35.6 |
| Totals | | | 952 | 236.3 |
| Launch No. 3 | | | | |
| 13 | a (green) | 27 April 1957 | 66 | 29.0 |
| 13 | b | 30 " " | 90 | 26.9 |
| 14 | b | 30 " " | 28 | 9.1 |
| 14 | c | 1 May 1957 | 115 | 28.5 |
| 14 | d | 6 " " | 55 | 19.9 |
| 14 | e | 7 " " | 44 | 12.8 |
| 15 | e | 7 " " | 101 | 24.7 |
| 15 | f | 8 " " | 155 | 39.0 |
| 15 | g | 9 " " | 8 | 1.8 |
| 16 | g | 9 " " | 133 | 31.8 |
| 16 | h | 10 " " | 100 | 15.8 |
| Totals | | | 895 | 239.3 |

Total Area 63 square miles

APPROVAL SHEET

HYDROGRAPHIC SURVEY H-8312 (BO-2156)

The 1957 portion of this survey was done under my close daily supervision. Junction with, and crosslines over, the 1956 work show very satisfactory agreement. I consider the survey complete and adequate for charting. No additional work is recommended within the area of this survey.

F. B. Quinn
Captain, USC&GS
Commanding Ship PATHFINDER

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8312

Records accompanying survey:

Boat sheets 3; sounding vols. 16; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 4-Envelopes

special reports, etc. 1-Smooth sheet, 1-Descriptive report,....

and ~~1-Letter~~ 21 (Topo. Control Station Identification.).....

9-Recovery Note, Triangulation Station

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

| | | |
|---|---|---|
| Number of positions on sheet | | 3490 |
| Number of positions checked | | 209 |
| Number of positions revised | | 1 |
| Number of soundings revised (refers to depth only) | | 21 |
| Number of soundings erroneously spaced | | 3+10 |
| Number of signals erroneously plotted or transferred | | — |
| Topographic details | Time | 8 hr. 4 |
| Junctions & curves | Time | 32 hr. 58 |
| Verification of soundings from graphic record | Time | 128. 4 |

Verification by John P. Weir Total time 168 hr. Date Jan. 6, 1961

Reviewed by [signature] Time 28 Date 16 May 1961

M-2232-1

RHC

Form 712
(11-30-55)

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

**TIDE NOTE FOR HYDROGRAPHIC SHEET**

Chart Division: R. H. Carstens

5 May 1958

Plane of reference approved in
16 volumes of sounding records for

HYDROGRAPHIC SHEET 8312

Locality Patton Bay, Alaska

Chief of Party: C. LeFever & F. B. Quinn in 1956-1957

Plane of reference is mean lower low water reading

5.6 ft. on tide staff at Patton Bay

9.2 ft. below B.M. 3 (1956)

Height of mean high water above plane of reference is 9.3 feet.

Condition of records satisfactory except as noted below:

William Shofnos

Signature

Chief, Tides Branch

Comm-DC 34330

OFFICE OF CARTOGRAPHY

REVIEW SECTION-NAUTICAL CHART DIVISION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8312 FIELD NO. BO-2156

Alaska, Montague Island, Patton Bay

SURVEYED: July 1956 - May 1957 SCALE: 1:20,000

PROJECT NO. 12770

SOUNDINGS: 808 Portable Depth Recorder CONTROL: Sextant fixes on shore signals

Chief of Party----------Curtis LeFever, F. B. Quinn
Surveyed by----------H. R. Lippold; G. L. Short; L. S. Baker; H. H. Druebert
Protracted by----------G. L. Short; V. B. Miller
Soundings plotted by----------R. D. Frost
Verified and inked by----------J. P. Weir
Reviewed by----------L. S. Straw DATE: 5-11-61
Inspected by----------R. H. Carstens

1. Description of the area

Patton Bay is located on the southeast coast of Montague Island between Box Point and Wooded Islands. The shoreline is rugged and stable except for occasional land slides from the cliffs. However, a sand beach strewen with boulders extends for about two miles in the vicinity of the Nellie Martin River.

Of unusual interest for this area are the numerous coral bottom characteristics recoreded by several hydrographers on this survey.

2. Control and shoreline

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

The shoreline and associated detail originate with unreviewed photogrammetric survey T-11578 (1943-56) supplemented by T-4835 (1933) in the vicinity of Box Point.

3. Hydrography

The hydrographic features as depicted by the depth curves were adequately developed. The depths at sounding line crossings are in reasonable agreement. The bottom of Patton Bay is regular from depths of 50 fathoms to 5 fathoms; but reefs and isolated rocks extend from the main shoreline and islands seaward as far as a half mile.

The hydrography in the Kelp area near the small islands and reefs east of Box Point is supplemented by soundings from H-5460 (1933).

4. Condition of survey

The field plotting, records and reports are adequate and conform to the requirements of the Hydrographic Manual.

5. Junctions.

In accordance with the Project Instructions, satisfactory junctions with H-4730 (1927-28) on the south, H-5454 (1933) on the southeast and H-5460 (1933) on the east and north, were made with the present survey.

Six lines of soundings running generally along lat. 59°55' from long. 147°17' to long. 147°25' on H-5460 (1933) have not been transferred to the present work because their addition would not contribute materially to the development in this vicinity on the present survey. They have been indicated as "superseded" on H-5460 (1933). However, as indicated in paragraph 3 above, several sounding lines and scattered soundings have been transferred to the present survey in the area east of Box Point where they furnish additional information for charting purposes.

6. Comparison with prior surveys

There are no prior hydrographic surveys by this Bureau in Patton Bay.

7. Comparison with chart 8515 (Latest print date 2-13-61)

A. Hydrography

The chart is based on the present survey applied before verification and review, and the adjoining surveys H-4730 (1928), H-5454 (1933) and H-5460 (1933).

Minor corrections to a few soundings and some rock detail were made to the present survey (H-8312) during verification and review. The chart should be revised accordingly.

The present survey with the additional indicated information from T-4835 (1933) and H-5460 (1933) is adequate for charting purposes.

B. Aids to navigation

There are no aids to navigation within the limits of the present survey.

8. Compliance with instructions.

The survey adequately complies with the project instructions.

9. Additional Field Work

This survey is considered basic and no additional field work is required.

Examined and Approved:

Marvin T. Pawlowski
Chief,
Nautical Chart Division

J. T. Thomas
Assistant Director,
Office of Cartography

John V. Dalton
Projects Officer,
Operations Division

Max B. Ricketts
Assistant Director,
Office of Oceanography

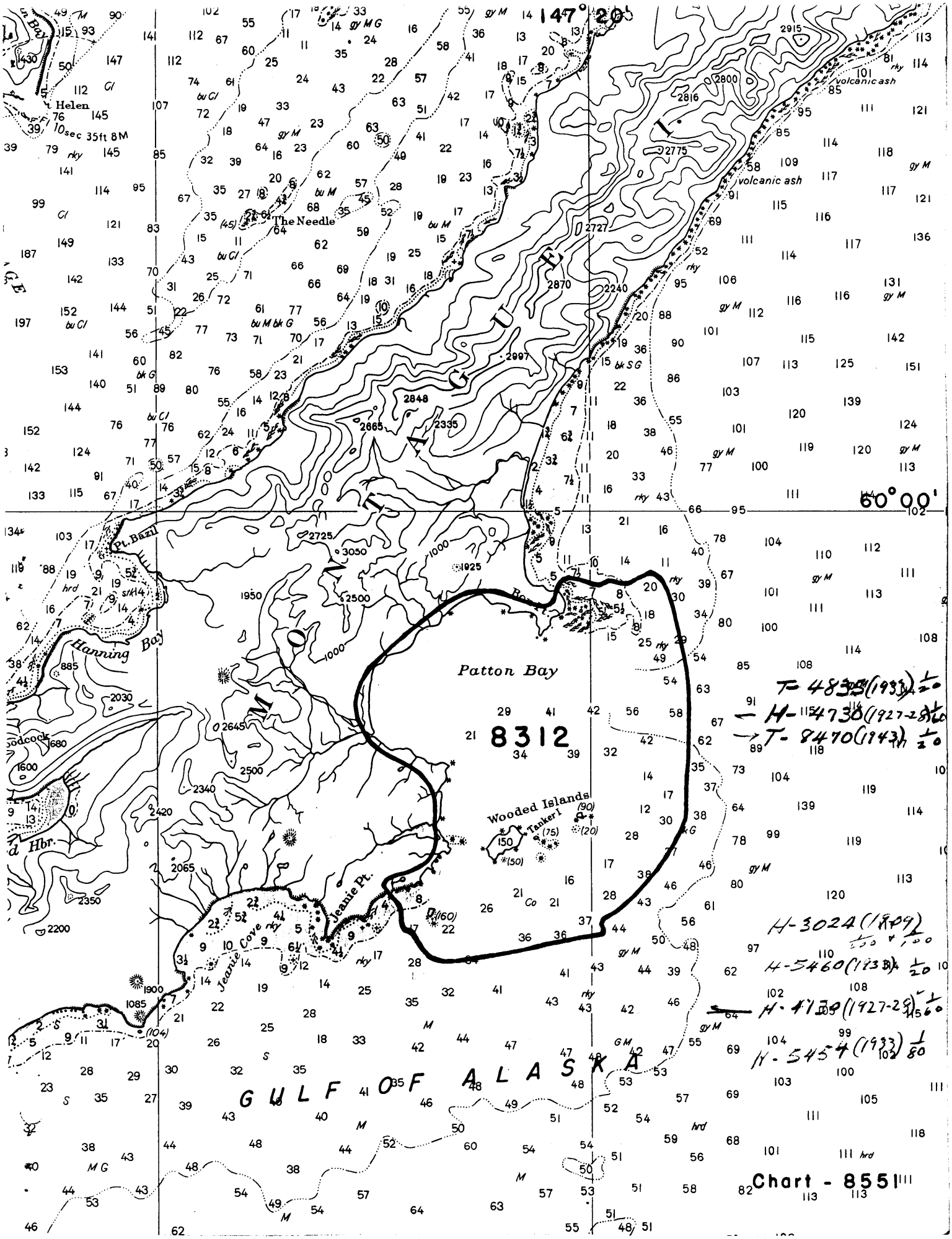
# GEOGRAPHIC NAMES

Survey No. H-8312

| Name on Survey | On Chart No. A | On previous survey No. B | On U. S. quadrangle Maps C | From local information D | On local Maps E | P. O. Guide or Map F | Rand McNally Atlas G | U. S. Light List H | K | |
|---|---|---|---|---|---|---|---|---|---|---|
| Alaska | | | | (for title) | | | | | | 1 |
| Prince William Sound | | | | " | | | | | BGN | 2 |
| Patton Bay | | | | " | | | | | " | 3 |
| Gulf of Alaska | | | | | | | | | | 4 |
| Jeanie Point | | | | | | | | | BGN | 5 |
| Wooded Islands | | | | | | | | | | 6 |
| Nellie Martin River | | | | | | | | | | 7 |
| Montague Island | | | | | | | | | BGN | 8 |
| Box Point | | | | | | | | | " | 9 |
| | | | Names approved 4-10-58 | | | | | | | 10 |
| | | | | | | | | | | 11 |
| Tide station off sheet: | | | | | | | | | | 12 |
| Cordova | | | | | | | | | | 13 |
| | | | | | | | | | | 14 |
| | | | | | | | | | | 15 |
| | | | | | | | | | | 16 |
| | | | | | | | | | | 17 |
| | | | | | | | | | | 18 |
| | | | | | | | | | | 19 |
| | | | | | | | | | | 20 |
| | | | | | | | | | | 21 |
| | | | | | | | | | | 22 |
| | | | | | | | | | | 23 |
| | | | | | | | | | | 24 |
| | | | | | | | | | | 25 |
| | | | | | | | | | | 26 |
| | | | | | | | | | | 27 |

H. Heck

M 234


147° 20'
60° 00'
GULF OF ALASKA
Patton Bay
8312
Hanning Bay
Pt. Bazil
Jeanie Pt.
Jeanie Cove
Wooded Islands
Tanker I
The Needle
volcanic ash
Helen
10sec 35ft 8M
T- 4835(1933) 1/20
H- 4730(1927-28) 1/20
T- 8470(1943) 1/20
H-3024(1899) 1/20
H-5460(1933) 1/20
H-4139(1927-29) 1/20
H-5454(1933) 1/80
Chart - 8551

# NAUTICAL CHARTS BRANCH

## SURVEY NO. H8312

### Record of Application to Charts

| DATE | CHART | CARTOGRAPHER | REMARKS |
|---|---|---|---|
| 3/26/58 | Chartlet for 8515 | Jann | Before ~~After~~ Verification and Review |
| 5/12/58 | 8502 | M. Rogers | Before ~~After~~ Verification and Review Partial, 8 soundings added and 3 sounds removed |
| | | | Before After Verification and Review |
| 7/6/59 | 8551 | DK | Before ~~After~~ Verification and Review Partial |
| 19 Oct 59 | 8500 | Nichols | Before ~~After~~ Verification and Review Exam - no corr. |
| 14/11/59 | 8515 | Helmer | Before ~~After~~ Verification and Review Fully applied thru chartlet |
| 7-27-61 | 8551 | Earl M Brogoj | ~~Before~~ After Verification and Review Fully appl current Sndgs revised without zoning chart change, scale East 8515. BKD 8-15-61 |
| 7-27-61 | 8502 | Earl M Brogoj | ~~Before~~ After Verification and Review Fully appl Revised H Sndgs. |
| 8-24-61 | 8515 | G.R. Johnson | ~~Before~~ After Verification and Review Fully Applied |
| | | | 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.