

8067

Diag. Cht. Nos. 8102-3 & 8152-2.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. H0-1353 Office No. H-8067

LOCALITY

State S. E. Alaska

General locality Cordova Bay

Locality Vicinity Ship Islands to Hunter

Point

194 53-54

CHIEF OF PARTY

F. R. Gossett

LIBRARY & ARCHIVES

DATE July 1, 1956

8067

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-8067

Field No. HO-1353

State S. E. Alaska

General locality Cordova Bay

Locality Vicinity of Ship Islands to Hunter Bay

Scale 1 : 10,000 Date of survey 13 August - 20 Sept., 1953  
24-25 April 1954

Instructions dated 17 March, 1953

Vessel USC&GS Ship HODGSON

Chief of party F. R. Gossett, J. Bowie

Surveyed by F. R. Gossett, E. F. Hicks, Jr., & D. L. Campbell

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

Fathograms scaled by A. M. Legako and H. W. Hildahl

Fathograms checked by R. O. Owens and D. T. Williams

Protracted by \_\_\_\_\_

Soundings penciled by \_\_\_\_\_

Soundings in fathoms <sup>and tenths</sup> ~~feet~~ at ~~MLLW~~ MLLW and are based on a velocity of sound of 800 fms./sec.

REMARKS: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

JAF

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SURVEY H-8067, FIELD NO. HO-1353

SCALE 1:10,000

PROJECT CS-357

CORDOVA BAY, S. E. ALASKA

U.S.C. & G.S.S. HODGSON

FRANKLIN R. GOSSETT, COMDG.

SURVEYED BY: F. R. GOSSETT, E. F. HICKS, JR., D. L. CAMPBELL

A. PROJECT

The work on Project CS-357 was executed in accordance with project instructions 22/MEK, S-2-HO, dated 17 March 1953. ✓

B. SURVEY LIMITS AND DATES

The area covered by this survey is on eastern side of Cordova Bay and covers the approaches to Klakas Inlet and Hunter Bay from the vicinity of Ship Islands to Turn Point. The limits are from Lat.  $54^{\circ} 51' 30''$  N on the south to Prince of Wales Island on the north. At the west end (from Long.  $132^{\circ} 30' 30''$  W, to Long.  $132^{\circ} 34' W$ ), the northern limit is along Lat.  $54^{\circ} 53' 15''$  N. The western limit is along Long.  $132^{\circ} 34' W$  and the eastern limit is along Long.  $132^{\circ} 21' W$ . Hydrography in Klakas Inlet, Hunter Bay, and Ruth Bay was deferred this season, in accordance with paragraph 3 of the Instructions. *Surveys subsequently made on adjacent sheets* ✓

Work on this sheet began 13 August 1953 and ended 20 September 1953. *Sec addendum re Add'l work in 1954.*

This survey makes a junction on all sides with H-3043, 1909, scale 1:20,000. ✓ Along the southern limit the survey is joined by contemporary survey H-8066, 1953, scale 1:10,000 from Long.  $132^{\circ} 21' W$  to  $132^{\circ} 30' 30'' W$  and by H-8064, 1953, scale 1:20,000 from Long.  $132^{\circ} 30' 30''$  to  $132^{\circ} 34'$ .

Several times while work on this sheet was being carried out, storms slowed the progress. Most of the time a protected area could be found, but on several occasions work was halted by intense rains. ✓

C. VESSELS AND EQUIPMENT

The Ship HODGSON, Launch No. 98, and Launch No. 134 were used on this survey. The Ship HODGSON was used for the offshore hydrography along the southern edge of the sheet. Launch No. 98 a standard 30 foot hydrographic launch and Launch No. 134, a plane personnel boat, were used for all inshore hydrography and in areas that might be dangerous to the ship. ✓

Both launches were operated from the ship which anchored northwest of Bird Rock at Lat.  $54^{\circ} 53' 20''$ , Long.  $132^{\circ} 27' 30''$  or northwest of Anchor Island on Sheet H-8066 while survey operations were in progress. ✓

The Ship HODGSON had a turning radius of 100 meters with a 20 degree rudder. Both launches had a 25 meter turning radius with a full rudder.

The following fathometers were used:

| Type  | Serial No. |
|-------|------------|
| 808   | 628        |
| 808   | 77         |
| NMC-1 | 289        |

The NMC-1 was used by the ship in depths over 50 fathoms. The 808's were used at the lesser depths by the ship and both launches.

D. TIDE AND CURRENT STATIONS

Tide stations at Elbow Bay (Lat. 54° 54'10, Long. 132° 39'12) and Tah Bay (Lat. 54° 49'70, and Long. 132° 19'98) were used without time or range corrections, in reducing soundings. The Elbow Bay tides were available for the period 28 Aug. - 20 Sept. 1953. Where Elbow Bay tidal data was not available the Tah Bay tides were used. Gages used for tide reducers were in accordance with letter 36-rob dated 3 November 1953. (Both tide stations outside area of this survey)

See Tide Note.

No current stations, within the limits of this survey were occupied this season.

E. SMOOTH SHEET

The smooth sheet projection, signal transfer and hydrographic plot will be made by the Seattle Processing Office. This section will be covered by a report from their office.

F. CONTROL STATIONS

The following triangulation control was used on this survey:

| Station         | G. P. Page | Vol. | Chief of Party   |
|-----------------|------------|------|------------------|
| LEDGE 2, 1908   | 236        | G609 | R.B.D.           |
| SHIP 2, 1908-25 | 236        | "    | R.B.D., & H.B.C. |
| BIRD, 1909      | 246        | "    | R.B.D.           |
| KLINK, 1909     | 247        | "    | R.B.D.           |
| TURN, 1909      | 245        | "    | R.B.D.           |
| HUNTER, 1909    | 247        | "    | R.B.D.           |

All topographic control was located on 1953 graphic control sheets "HO-D", "HO-E", and "HO-F" by standard methods.

*Graphic control sheets to be destroyed See Processing Office Notes*

G. SHORELINE AND TOPOGRAPHY

Shoreline and topographic detail on the boat sheet was transferred from a photostat of the old boat sheet by the method of expanding by squares.

The smooth sheet shoreline and topographic detail will be taken from the air

photo compilation when it is completed.

*See Review IP 1*

The low water line was not defined due to the steep rocky shoreline.

#### H. SOUNDINGS

All soundings on this sheet were made by fathometers listed in Section C except for a few isolated soundings taken in connection with the bottom sampling and shoal investigations where a wire or lead line was used.

During the later part of the work on this sheet considerable trouble was experienced with Fathometer No. 77 in that the take up roll did not operate satisfactorily. At times this would allow the paper to wrap around the drive drum and cause an apparent increase in speed. The days are indicated by the torn condition of the sprocket holes in the fathogram and by the fathogram being out in pieces that were later spliced together.

On "1" day, Launch No. 98, 20 September 1953, the governor apparently failed to function correctly as the paper travel showed a considerable variation in speed ranging from 15% slow to 5% fast. This trouble was not noted on any other day. (*see Review IP 7b*)

To correct for the speed trouble the paper was scaled between successive positions and a factor table for corrections was computed using actual travel against correct travel. The speed seemed to vary so much that it was believed advisable to make the factor correction for as small an increment of time as possible. The table showing the computation of the corrections will be found under Item U-Y of this report.

#### I. CONTROL OF HYDROGRAPHY

All hydrographic control was visual by sextant angles on shore objects or signals and positions were usually taken at two minute intervals.

#### J. ADEQUACY OF SURVEY

This survey is complete within the limits defined except for the following three small areas where further investigation is desirable:

- Shoal Area- 200 m. SE of Bird Rock, Lat.  $54^{\circ} 52'76N$ ; Long.  $132^{\circ} 26'80W$ . \*
- Shoal Area - 250 m. ESE of Turn Island, Lat.  $54^{\circ} 52'12N$ ., Long.  $132^{\circ} 23'40W$ .
- Shoal Area- 1.05 naut.mi. SE of Ship Island, Lat.  $54^{\circ} 52'88N$ , Long.  $132^{\circ} 30'31W$ .  
(See Item N for comparison with prior survey)

During the progress of field work on this survey the rock awash SE of Bird Rocks shown on the old survey, was seen by the topographic party. It was seen on an extreme low tide and was not visible for long enough to obtain a location. \*

During the later part of the season further work on this project had to be postponed in order to undertake a special wire drag survey. For this reason, adequate investigation of the three previously mentioned areas was deferred. \*

This survey should supersede all prior surveys for charting purposes pending the investigation of the areas mentioned. *See Review IP 5*

Junctions with adjoining surveys appear to be in good agreement and depth curves can be adequately drawn. *See Review IP 3*

\* Further investigation completed in 1954 - see Item N and Addendum of 1954.

K. CROSSLINES

About 38.0 nautical miles of sounding lines were crosslines or about 8.1% of the total. ✓

On the boat sheet discrepancies of about 1% were noted in places where a level bottom was found. In other places the irregular rough character of the bottom made a comparison impractical. ✓

L. COMPARISON WITH PRIOR SURVEY

This survey was compared with prior survey H-3043, 1:20,000 scale made in 1909. In general, the soundings shown on the old survey were in fair agreement with those on the new. Since the old survey was not as complete as the new, much of the necessary detail was not shown. Several shoals that were not apparent on the old survey were tabulated in Item N of this report. ✓

It is believed that all known shoals were proved. In most cases lesser depths and a slightly different location was found. See Review TP 5

Junctions with the prior survey were in fair agreement considering the incompleteness of the older survey. ✓

M. COMPARISON WITH CHART

A comparison with Chart No. 8145, second edition April 1943, print date 14 May 1951, and Chart 8147, third edition, print date 12 May 1952, shows no features not shown by prior surveys. Therefore, the comparison under Item L and N will be adequate. ✓

N. DANGERS AND SHOALS

Following is a list showing a comparison with the prior survey as well as a listing of dangers and/or shoals found within the limits of this survey. The locations listed under "Present Survey" are taken from the boat sheet and may change slightly when the smooth plot is made. Locations revised from smooth sheet.

Dangers and Shoals

| NO. | Prior Survey                             |                               | Present Survey                                                           |                               | POSITION                                | RECOMMENDATIONS AND REMARKS                               |
|-----|------------------------------------------|-------------------------------|--------------------------------------------------------------------------|-------------------------------|-----------------------------------------|-----------------------------------------------------------|
|     | DEPTH                                    | LOCATION                      | DEPTH                                                                    | LOCATION                      |                                         |                                                           |
| 1.  | Rk. Aw. ✓                                | 54° 53:80N<br>132° 23:88W ✓   | Rk. Aw. ✓<br><del>at MHW (8)</del>                                       | 54° 53:76N ✓<br>132° 23:88W ✓ | Sig. "ZAG" ✓<br>"HO-D" *                | Chart kelp and rock awash. ✓                              |
| 2.  | <del>2 Rk. Aw.</del><br>bars rk. & ledge | 54° 52:83N ✓<br>132° 24:40W ✓ | 2 Rk. Aw. ✓<br>at MHW                                                    | 54° 52:85N ✓<br>132° 24:40W ✓ | Topo Sheet<br>"HO-E" *                  | Chart kelp & 2 rocks awash ✓                              |
| 3.  | 2 Rk. Aw.                                | 54° 52:87N ✓<br>132° 25:44W ✓ | Rk. Aw.<br>MHW (2 <sup>nd</sup> rk.<br>approx 40 m WSW - no elev. given) | 54° 52:88N ✓<br>132° 25:44W ✓ | Sig. "DAY"<br>"HO-E" * ✓<br>and T-11300 | Chart 2 rocks awash.                                      |
| 4.  | 4 Rk. Aw. ✓                              | 54° 52:4N ✓<br>132° 24:10W ✓  | 2 Rk. Aw.<br>Uncov. <del>3:4(4)</del><br>& <del>1:4(2)</del>             | 54° 52:4N ✓<br>132° 24:10W ✓  | 21 & 25c<br>Vol. 6 ✓                    | Chart Rocks awash (See No. 2 "New dangers and shoals"). ✓ |

| ← Prior Survey → |                               | ← Present Survey →                 |                                                    |                                    | RECOMMENDATION AND REMARKS                   |                                                                             |
|------------------|-------------------------------|------------------------------------|----------------------------------------------------|------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------|
| NO.              | DEPTH                         | LOCATION                           | DEPTH                                              | LOCATION                           | POSITION                                     |                                                                             |
| 5.               | Foul area -<br>Numerous Rocks | 54° 52:3N<br>132° 23:45W           | Foul area<br>Numerous Rks.<br>and ledge            | 54° 52:3N<br>132° 23:45W           | 12-16c<br>18-20c<br>Vol. 6                   | Chart rocks awash<br>(See photo compilation)<br>and ledge                   |
| 6.               | 2 Bare Rks.                   | 54° 52:96N<br>132° 22:95W          | 2 bare Rks.                                        | 54° 52:96N<br>132° 22:95W          | Sig. "JAY"<br>"HO-D" *<br>4                  | Chart 2 bare rocks.<br>"JAY" higher rk.<br>of 2. (See photo<br>compilation) |
| 7.               | Rk. Aw.                       | 54° 53:05N<br>132° 22:86W          | Rk. uncov.<br>12 ft. MLLW                          | 54° 53:04N<br>132° 22:85W          | Sig. "ION"<br>"HO-D" *<br>22:85              | Chart kelp and rk.<br>awash. (See also<br>Vol. 4 - 104k+)                   |
| 8.               | Foul area                     | 54° 52:94N<br>132° 22:54W          | Rk. uncov.<br>10 ft. MLLW<br>9                     | 54° 52:94N<br>132° 22:54W          | 128k<br>Vol. 4                               | Chart kelp & rock.<br>awash. (See photo<br>compilation)                     |
| 9.               | Foul area                     | 54° 53:25N<br>132° 22:08W          | Rk. uncov.<br>13 ft. MLLW<br>awash at MHW          | 54° 53:25N<br>132° 22:08W          | Sig. "EEL"<br>"HO-D" *<br>151d, Vol. 7       | Chart kelp and rk.<br>awash. (See photo<br>compilation)                     |
| 10.              | Foul area                     | 54° 53:23N<br>132° 22:18W          | Rk. uncov.<br>9 ft. MLLW<br>10                     | 54° 53:23N<br>132° 22:18W          | 128k<br>Vol. 4<br>(position from<br>T-11300) | Chart kelp and rk.<br>awash. (See photo<br>compilation)                     |
| 11.              | Rk. aw.                       | 54° 53:62N<br>132° 30:56W          | Rk. aw. MHW                                        | 54° 53:62N<br>132° 30:56W          | Sig. "PUT"<br>"HO-F" *                       | Chart kelp and rk.<br>awash.                                                |
| 12.              | 4.5 fm.                       | 54° 52:08N<br>132° 23:63W          | Rk. awash of<br>Sunkon Rk.<br>Cov. 2.7 ft.<br>MLLW | 54° 52:11N<br>132° 23:64W          | 17c<br>Vol. 4<br>6<br>(pos. from T-11302)    | Chart <del>sunkon rk.</del><br>rk. awash                                    |
| 13.              | Rk. Aw.                       | 54° 52:75N<br>132° 26:79W          | 2.8<br>Rk. awash. (2)                              | 54° 52:75N<br>132° 26:80W          | 60n<br>168-169b<br>Vol. 11<br>11             | Chart rk. awash<br>Further investiga-<br>tion desirable<br>(See Item J)     |
| 14.              | 0.8                           | 54° 52:78N<br>132° 22:70W          | 0.8 (hydro)<br>Rk. awash (top)                     | 54° 52:77N<br>132° 22:67W          | 36l<br>160-1610<br>Vol. 75<br>& T-11300      | Chart <del>new depth.</del><br>rk. awash                                    |
| 15.              | 11.8                          | 54° 52:55N<br>132° 23:51W          | 1.2                                                | 54° 52:55N<br>132° 23:53W          | 65-661<br>Vol. 5                             | Chart kelp and<br>new depth                                                 |
| 16.              | 6.0                           | 54° 53:89N<br>132° 27:51W          | 3.0                                                | 54° 53:84N<br>132° 27:67W          | 40-41c<br>Vol. 1                             | Chart new depth                                                             |
| 17.              | 7.1                           | 54° 52:77N<br>132° 22:95W<br>23.07 | 3.5                                                | 54° 52:77N<br>132° 22:96W<br>23.07 | 41-42 1<br>Vol. 5                            | Chart new depth                                                             |
| 18.              | 7.8                           | 54° 53:12N<br>132° 23:14W          | 3.6                                                | 54° 53:16N<br>132° 23:03W          | 91-92k<br>Vol. 4                             | Chart new depth                                                             |
| 19.              | 4.8                           | 54° 53:00N<br>132° 23:12W          | 4.0                                                | 54° 53:03N<br>132° 23:13W          | 82-83k<br>Vol. 4                             | Chart new depth                                                             |

| NO. | Prior Survey                               |                                             | Present Survey                        |                                             |                                                           | RECOMMENDATION AND REMARKS                                  |
|-----|--------------------------------------------|---------------------------------------------|---------------------------------------|---------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------|
|     | DEPTH                                      | LOCATION                                    | DEPTH                                 | LOCATION                                    | POSITION                                                  |                                                             |
| 20. | 7.8 ✓                                      | 54° 52:87N ✓<br>132° 23:12W ✓               | 4.6 ✓                                 | 54° 52:88N ✓<br>132° 23:12W ✓               | 82-83k ✓<br>Vol. 4                                        | Chart new depth ✓<br>2.1 discredited by present development |
| 21. | 2.1 ✓                                      | 54° 52:12N ✓<br>132° 23:38W ✓               | 4.8 <sup>5</sup>                      | 54° 52:12N ✓<br>132° 23:40W ✓ <sub>2</sub>  | <sup>183-184 c</sup><br>81-82b<br>Vol. 17                 | <del>Further investigation desirable</del><br>(See Item j)  |
| 22. | 6.8 ✓                                      | 54° 53:58N ✓<br>132° 26:12W ✓               | 4.8 ✓                                 | 54° 53:53N ✓<br>132° 26:10W ✓               | 134-135e ✓<br>Vol. 2                                      | Chart new depth. ✓                                          |
| 23. | 9.1 ✓                                      | 54° 52:23N ✓<br>132° 22:16W ✓               | 5.3 <sup>2</sup>                      | 54° 52:23N ✓<br>132° 22:21W ✓               | <sup>6</sup><br>190-191b<br><del>5-61</del><br>Vol. 86    | Chart new depth. ✓                                          |
| 24. | 9.5 ✓                                      | 54° 52:51N ✓<br>132° 22:17W ✓               | 5.3 ✓                                 | 54° 52:51N ✓<br>132° 22:12W ✓               | 10-11 1 ✓<br>Vol. 5                                       | Chart new depth. ✓                                          |
| 25. | 17.0 ✓                                     | 54° 52:62N ✓<br>132° 23:61W ✓               | 6.3 <sup>6</sup>                      | 54° 52:66N ✓<br>132° 23:65W ✓               | 112-113o ✓<br>Vol. 27                                     | Chart new depth. ✓                                          |
| 26. | 7.8 ✓                                      | 54° 53:23N ✓<br>132° 26:37W ✓               | 7.8 <sup>0</sup>                      | 54° 53:15N ✓<br>132° 26:37W ✓               | <sup>4</sup><br>32-33g<br><del>101-102 1</del><br>Vol. 53 | Chart new depth. ✓                                          |
| 27. | 8.8 ✓                                      | 54° 52:78N ✓<br>132° 31:09W ✓               | 7.8 ✓                                 | 54° 52:78N ✓<br>132° 31:07W ✓               | 25-26e ✓<br>Vol. 2                                        | Chart new depth. ✓                                          |
| 28. | 8.0 ✓                                      | 54° 53:91N ✓<br>132° 28:61W ✓               | 8.6 ✓                                 | 54° 53:88N ✓<br>132° 28:62W ✓ <sub>2</sub>  | 27-28c ✓<br>Vol. 1                                        | Chart shoaler <sup>prior</sup> depth. ✓                     |
| 29. | Sdg. 26.3 ✓                                | 54° 52:84N ✓<br>132° 30:47W ✓               | 9.0 ✓                                 | 54° 52:88N ✓<br>132° 30:37W ✓               | 102-103c ✓<br>Vol. 10 ✓<br>845-76 m, Vol. 11              | <del>Chart new depth further investigation desirable.</del> |
| 30. | 11.0 ✓                                     | 54° 53:37N ✓<br>132° 27:52W ✓               | 9.1 ✓                                 | 54° 53:39N ✓<br>132° 27:47W ✓               | 68-69e ✓<br>Vol. 2                                        | Chart new depth. ✓                                          |
| 31. | Sdg. 16.0 ✓                                | 54° 52:51N ✓<br>132° 28:37W ✓               | 12.0 <sup>2</sup><br><del>12.6</del>  | 54° 52:57N ✓<br>132° 28:05W ✓ <sub>10</sub> | <sup>74-76 m</sup><br><del>161-162A</del><br>Vol. 811     | Chart new depth. ✓                                          |
| 32. | Sdg. "22.0?" ✓                             | 54° 53:07N ✓<br>132° 32:65W ✓               | 14.2 ✓                                | 54° 53:07N ✓<br>132° 32:65W ✓               | 29-30C ✓<br>Vol. 9                                        | Chart new depth. ✓                                          |
| 33. | Sdg. 33.0 ✓                                | 54° 52:89N ✓<br>132° 32:15W ✓               | 15.7 <sup>4</sup><br><del>16.3</del>  | 54° 52:95N ✓<br>132° 32:12W ✓ <sub>86</sub> | <sup>25-26 m</sup><br><del>21-220</del><br>Vol. 811       | Chart new depth. ✓                                          |
| 34. | Sdg. 25.0 <sup>3</sup> ✓                   | 54° 52:50N ✓<br>132° 32:10W ✓               | 16.6 <sup>47</sup><br><del>17.2</del> | 54° 52:50N ✓<br>132° 32:00W ✓ <sub>8</sub>  | <sup>16-17 m</sup><br><del>155-156A</del><br>Vol. 811     | Chart new depth. ✓                                          |
| 35. | Sdg. 40.0 ✓                                | 54° 51:55N ✓<br>132° 23:40W ✓ <sub>35</sub> | 18.6 ✓                                | 54° 51:56N ✓<br>132° 23:61W ✓               | 3-4B ✓<br>Vol. 8                                          | Chart new depth. ✓                                          |
| 36. | Sdg. 27.0 ✓                                | 54° 51:50N ✓<br>132° 25:30W ✓               | 21.3 ✓                                | 54° 51:61N ✓<br>132° 25:20W ✓ <sub>22</sub> | 33-34A ✓<br>Vol. 8                                        | Chart new depth. ✓                                          |
| 37. | Sdg. 47 <sup>47</sup><br><del>17.0</del> ✓ | 54° 52:23N ✓<br>132° 26:55W ✓               | 36.2 ✓                                | 54° 52:27N ✓<br>132° 26:57W ✓ <sub>8</sub>  | 134-135A ✓<br>Vol. 8                                      | Chart new depth. ✓                                          |



New Dangers and Shoals PART B

| NO. | DEPTH                             | LOCATION                      | POSITION                                            | RECOMMENDATION AND REMARKS                                                          |
|-----|-----------------------------------|-------------------------------|-----------------------------------------------------|-------------------------------------------------------------------------------------|
| 1.  | Bare Rock ✓                       | 54° 53:32N ✓<br>132° 24:11W ✓ | Sig. "VAL" ✓<br>"HO-E" *                            | Chart bare rock ✓                                                                   |
| 2.  | Rk. Awash. ✓                      | 54° 52:35N ✓<br>132° 24:15W ✓ | <del>23</del> & 24 c<br>Vol. 6                      | Chart <sup>adjacent bare rk.</sup> <del>2</del> rocks awash and kelp (from T-11302) |
| 3.  | Rk. Awash<br><del>0.2</del> (6) ✓ | 54° 53:59N ✓<br>132° 26:07W ✓ | <del>6-7j</del> 18, 19j<br>Vol. 4                   | Chart <del>new depth</del><br>rk. awash                                             |
| 4.  | 2.3 ✓                             | 54° 53:40N ✓<br>132° 30:38W ✓ | 110-111e ✓<br>Vol. 2                                | Chart kelp and new depth. ✓                                                         |
| 5.  | 2.8 ✓                             | 54° 53:73N ✓<br>132° 27:47W ✓ | <del>67-68c</del> 142-143j<br>Vol. 24               | Chart new depth. ✓                                                                  |
| 6.  | 2.8 ✓                             | 54° 52:95N ✓<br>132° 21:72W ✓ | 117-118d ✓<br>Vol. 7                                | Chart new depth. ✓                                                                  |
| 7.  | 3.2 ✓                             | 54° 53:83N ✓<br>132° 26:85W ✓ | 53-54c ✓<br>Vol. 1                                  | Chart new depth. ✓                                                                  |
| 8.  | 3.8 ✓                             | 54° 51:49N ✓<br>132° 21:02W ✓ | 4-5b ✓<br>Vol. 6                                    | Chart new depth. ✓                                                                  |
| 9.  | 3.7 ✓                             | 54° 53:27N ✓<br>132° 23:16W ✓ | 33-34k ✓<br>Vol. 4                                  | Chart new depth. ✓                                                                  |
| 10. | 4.0 ✓                             | 54° 53:07N ✓<br>132° 23:50W ✓ | 53-54k ✓<br>Vol. 4                                  | Chart new depth. ✓                                                                  |
| 11. | <del>3.0</del><br>4.2 ✓           | 54° 52:71N ✓<br>132° 22:23W ✓ | <del>170-171c</del><br><del>15-16i</del><br>Vol. 27 | Chart new shoal area ✓<br>and new depth.                                            |
| 12. | 4.3 ✓                             | 54° 52:19N ✓<br>132° 23:50W ✓ | 72-73b ✓<br>Vol. 1                                  | Chart new depth. ✓                                                                  |
| 13. | 4.7 ✓                             | 54° 53:13N ✓<br>132° 23:94W ✓ | 11-12k ✓<br>Vol. 4                                  | Chart new depth. ✓                                                                  |
| 14. | 4.8 ✓                             | 54° 54:33N ✓<br>132° 27:40W ✓ | 113-114h ✓<br>Vol. 3                                | Chart new depth. ✓                                                                  |
| 15. | 4.0<br><del>5.2</del> ✓           | 54° 53:01N ✓<br>132° 25:71W ✓ | <del>17-18n</del><br><del>133-134g</del><br>Vol. 11 | Chart new depth. ✓                                                                  |
| 16. | 5.6 ✓                             | 54° 53:95N ✓<br>132° 27:53W ✓ | 20-21c & 108-109g<br>Vol. 1 & Vol. 3                | Chart new depth. ✓                                                                  |
| 17. | 5.7 ✓                             | 54° 53:49N ✓<br>132° 27:75W ✓ | 4h ✓<br>Vol. 3                                      | Chart new depth. ✓                                                                  |
| 18. | 6.0 ✓                             | 54° 53:11N ✓<br>132° 26:17W ✓ | <del>35-36g</del> 49-50n<br>Vol. 11                 | Chart new depth. ✓                                                                  |

| NO. | DEPTH                     | LOCATION                      | POSITION                                               | RECOMMENDATIONS AND REMARKS |
|-----|---------------------------|-------------------------------|--------------------------------------------------------|-----------------------------|
| 19. | 7.4 ✓                     | 54° 53!47N ✓<br>132° 30!02W ✓ | 134-135j ✓<br>Vol. 4                                   | Chart new depth. ✓          |
| 20. | 7.4 ✓                     | 54° 52!83N ✓<br>132° 24!77W ✓ | 218-219b ✓<br>Vol. 1                                   | Chart new depth. ✓          |
| 21. | 7.6 ✓                     | 54° 53!41N ✓<br>132° 26!10W ✓ | 98-99 1 ✓<br>Vol. 5                                    | Chart new depth. ✓          |
| 22. | 7.8 ✓                     | 54° 52!65N ✓<br>132° 24!93W ✓ | 136-137b ✓<br>Vol. 1                                   | Chart new depth. ✓          |
| 23. | 8.7 ✓                     | 54° 52!65N ✓<br>132° 26!57W ✓ | 132-133b ✓<br>Vol. 1                                   | Chart new depth. ✓          |
| 24. | 9.2 ✓                     | 54° 53!48N ✓<br>132° 25!88W ✓ | 98-99e ✓<br>Vol. 2                                     | Chart new depth. ✓          |
| 25. | 9.2 ✓<br><del>9.8</del>   | 54° 51!67N ✓<br>132° 22!88W ✓ | <del>5-6</del> 32-33d ✓<br>Vol. 7                      | Chart new depth. ✓          |
| 26. | 9.9 ✓                     | 54° 52!87N ✓<br>132° 26!10W ✓ | 200-201b ✓<br>Vol. 1                                   | Chart new depth. ✓          |
| 27. | 10.3 ✓                    | 54° 53!48N ✓<br>132° 26!80W ✓ | 100-101e ✓<br>Vol. 2                                   | Chart new depth. ✓          |
| 28. | 10.3 ✓<br><del>11.2</del> | 54° 52!18N ✓<br>132° 23!28W ✓ | <del>59-60</del> 62-63n ✓<br><del>Vol. 7</del> Vol. 11 | Chart new depth. ✓          |

\* Refers to 1953 graphic control sheets.

All charted dangers and shoals were found as charted except those mentioned in Item "J". In most cases a shoaler depth and a slightly different location was found.

O. COAST PILOT INFORMATION

See Coast Pilot Notes, Ship HODGSON, 195<sup>4</sup>. (8-216/54) ✓ Jam

There are no recommended anchorages within the limits of this sheet.

Although the ship anchored NW of Bird Rocks, at Lat. 54° 53!4, Long. 132° 27!4, for a short period during the progress of the work, it is not considered as a good anchorage for a ship of any size. Swells from Dixon Entrance are frequently noticeable in this area.

Frequently while this survey was in progress small fishing boats were seen entering or leaving Klakas Inlet and Hunter Bay. Boats entering Klakas Inlet navigated through either the channel just east of the mouth of Ruth Bay or the channel east and north of Turn Island. Boats entering Hunter Bay navigated

past Turn Island and into the channel just north of Turn Point. No recommended courses, ranges, bearing, or marks for clearing dangers, will be given in this report pending completed surveys in the two previously mentioned areas.

In the spring and summer the prevailing weather was from the south. During stormy weather rough to very rough seas were encountered near the west edge and slight to moderate seas near the east edge of the area covered by this survey.

Currents were encountered in the vicinity of the entrances to Klakas Inlet and Hunter Bay while the hydrography was in progress. The magnitude of these currents was not measured, but it is believed that they are not strong enough to be a difficulty while navigating in the area.

P. AIDS TO NAVIGATION

The only aid to navigation within the area covered by this survey is Turn Island Daybeacon. The location of this aid will be included in a special report on Form 567. (CL 93-1954)

Q. LANDMARKS FOR CHARTS

The only landmarks shown on the chart are the village of Klinkwan and a church spire at the same location. The village site was visited this season and no buildings were left standing. Both of these should be deleted from the chart. ✓

See special report on Form 567. (CL 93-1954)

R. GEOGRAPHIC NAMES

The following charted names are pencilled on boat sheet:

- |                       |                      |
|-----------------------|----------------------|
| ✓ 1. Shipwreck Island | ✓ 7. Grave Point     |
| ✓ 2. Shipwreck Point  | ✓ 8. Gusdagane Point |
| ✓ 3. Ruth Bay         | ✓ 9. Klinkwan        |
| ✓ 4. Klakas Inlet     | ✓ 10. Turn Island    |
| ✓ 5. Bird Rocks       | ✓ 11. Turn Point     |
| ✓ 6. Double Island    | ✓ 12. Hunter Bay     |

The following new geographic names were recommended by this party:

1. Ship Island Passage
2. Ruth Cutoff
3. Ruth Island

See Geographic Names Report, Ship HODGSON, 1953. on file with 454 ✓  
L. HECK

S. SILTED AREAS

Not applicable. ✓

T. BY-PRODUCT INFORMATION

None. ✓

U-Y. MISCELLANEOUS

No velocity corrections were applied to fathometer soundings since <sup>800</sup>808

fathom per second reeds were used. (See Letter 22/MEK, S-1-HO, dated 15 June 1953).

The following table of speed corrections is explained under Item H.

SPEED CORRECTION  
for "1" day, Vol. 5  
Fathometer 808, Number 77

| DISTANCE BETWEEN POSITIONS |       |       |        | DISTANCE BETWEEN POSITIONS |         |       |        |
|----------------------------|-------|-------|--------|----------------------------|---------|-------|--------|
| TIME MIN.                  | POS.  | CM.   | FACTOR | TIME MIN.                  | POS.    | CM.   | FACTOR |
| 3                          | 1-2   | 2.195 | 1.13   | 2                          | 61-62   | 1.545 | 1.07   |
| 2                          | 3-4   | 1.492 | 1.11   | 2                          | 63-64   | 1.627 | 1.02   |
| 2                          | 5-6   | 1.500 | 1.10   | 2                          | 64-65   | 1.667 | 0.99   |
| 2 $\frac{1}{2}$            | 7-8   | 1.908 | 1.08   | 2                          | 65-66   | 1.571 | 1.05   |
| 2                          | 9-10  | 1.542 | 1.07   | 2                          | 66-67   | 1.583 | 1.04   |
| 2                          | 10-11 | 1.547 | 1.07   | 2                          | 67-68   | 1.580 | 1.04   |
| 2                          | 11-12 | 1.478 | 1.12   | 1 $\frac{1}{2}$            | 69-70   | 1.173 | 1.05   |
| 3                          | 13-14 | 2.200 | 1.12   | 2                          | 71-72   | 1.715 | 0.96   |
| 3                          | 15-16 | 2.200 | 1.12   | 2 $\frac{1}{2}$            | 73-74   | 2.133 | 0.97   |
| 2                          | 17-18 | 1.571 | 1.05   | 2 $\frac{1}{2}$            | 75-76   | 2.133 | 0.97   |
| 2                          | 19-20 | 1.572 | 1.05   | 2                          | 78-79   | 1.600 | 1.03   |
| 2                          | 20-21 | 1.548 | 1.07   | 2                          | 79-80   | 1.600 | 1.03   |
| 2                          | 21-22 | 1.493 | 1.11   | 2                          | 81-82   | 1.655 | 1.00   |
| 2                          | 23-24 | 1.596 | 1.03   | 2                          | 82-83   | 1.655 | 1.00   |
| 1 $\frac{1}{2}$            | 25-26 | 1.164 | 1.06   | 2                          | 83-84   | 1.535 | 1.07   |
| 2                          | 27-28 | 1.571 | 1.05   | 2                          | 84-85   | 1.500 | 1.10   |
| 2                          | 29-30 | 1.435 | 1.15   | 2                          | 86-87   | 1.656 | 1.00   |
| 2                          | 31-32 | 1.435 | 1.15   | 2                          | 87-88   | 1.700 | 0.97   |
| 2                          | 33-34 | 1.473 | 1.12   | 2                          | 88-89   | 1.583 | 1.04   |
| 2                          | 37-38 | 1.482 | 1.11   | 3                          | 89-90   | 2.338 | 1.06   |
| 2 $\frac{1}{2}$            | 39-40 | 1.891 | 1.09   | 2                          | 91-92   | 1.552 | 1.06   |
| 2 $\frac{1}{2}$            | 41-42 | 1.964 | 1.05   | 2                          | 92-93   | 1.552 | 1.06   |
| 2 $\frac{1}{2}$            | 43-44 | 1.965 | 1.05   | 2                          | 93-94   | 1.712 | 0.96   |
| 2                          | 45-46 | 1.578 | 1.05   | 2                          | 94-95   | 1.700 | 0.97   |
| 2                          | 46-47 | 1.624 | 1.02   | 2                          | 96-97   | 1.743 | 0.95   |
| 2                          | 47-48 | 1.498 | 1.10   | 2                          | 97-98   | 1.550 | 1.07   |
| 2                          | 49-50 | 1.452 | 1.14   | 2 $\frac{1}{2}$            | 98-99   | 1.874 | 1.10   |
| 2                          | 50-51 | 1.546 | 1.07   | 2                          | 100-101 | 1.482 | 1.11   |
| 2                          | 52-53 | 1.548 | 1.07   | 2 $\frac{1}{2}$            | 101-102 | 1.810 | 1.14   |
| 2                          | 53-54 | 1.618 | 1.02   | 2 $\frac{1}{2}$            | 103-104 | 1.953 | 1.06   |
| 2 $\frac{1}{2}$            | 55-56 | 2.133 | 0.97   | 2 $\frac{1}{2}$            | 105-106 | 1.867 | 1.11   |
| 2                          | 57-58 | 1.703 | 0.97   |                            |         |       |        |
| 2                          | 59-60 | 1.690 | 0.98   |                            |         |       |        |

Z. TABULATION OF APPLICABLE DATA

- a. Triangulation Records and Report - forwarded to Wash. 12/18/53
  - b. Air Photo Inspection and Report - forwarded to Wash. 12/18/53
  - c. Fathometer Report - forwarded to Wash. 12/18/53
  - d. Coast Pilot Report - forwarded to Wash. 12/18/53
  - e. Geographic Names Report - forwarded to Wash. 12/18/53
  - f. Fixed Aids to Navigation Report - to be forwarded
  - g. Graphic Control Sheets HO-D, E, & F and reports - forwarded to Wash. 12/16/53
- ↑ not available  
during verification  
and review

{ 945  
545  
8064  
1953  
6

Respectfully submitted,

*Donald J. Campbell*  
D. L. Campbell,  
Ensign, USC&GS

FATHOMETER CORRECTIONS ✓

Ship HODGSON *o.k.*

808 Fathometer No. 62  
 (Initial set 1.0 fms.)  
 A Scale +0.1  
 B Scale +0.2  
 C Scale +1.9

(Initial set 0.0 fms.)  
 A Scale +1.1  
 B Scale +1.2  
 C Scale +2.9

NMC Fathometer  
 (Initial set 0.0 fms.)  
 Total correction +0.7

Launch No. 98 *o.k.*

808 Fathometer No. 62  
 A Scale +0.2  
 B Scale +0.3

808 Fathometer No. 77  
 A Scale +0.2  
 B Scale +0.8

Launch No. 134 *o.k.*

808 Fathometer No. 62  
 A Scale 0.0  
 B Scale +0.1

See "Fathometer Report" Ship HODGSON 1953. ✓

TIDE NOTE

The following portable automatic tide gage stations were used in reducing soundings on this sheet:

| <u>STATION</u> | <u>LOCATION</u>                        | <u>MLLW ON STAFF</u> |
|----------------|----------------------------------------|----------------------|
| TAH BAY        | Lat. 54° 49:70 N<br>Long. 132° 19:98 W | 3.1 ft. ✓            |
| ELBOW BAY      | Lat. 54° 54:0 N<br>Long. 132° 39:2 W   | 4.8 ft. ✓            |

Tide reducers for this survey were determined using Elbow Bay tides for the period 28 August to 20 September 1953 and Tah Bay tide for all other dates. ✓

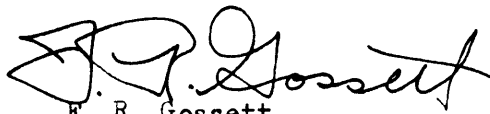
The method of determining tide reducers was in accordance with letter 36-rob dated 3 November 1953.

APPROVAL SHEET

Hydrographic Survey H-8067 (Field No. HO-1353) has been examined and is approved as follows: Boat Sheet, records, fathograms, Ens. Campbell's report.

Sheet is being forwarded to Seattle Processing Office for smooth plotting.

1/25/54

  
F. R. Gossett,  
CDR, USC&GS  
Comdg., Ship HODGSON



ADDENDA TO DESCRIPTIVE REPORT FOR HYDROGRAPHIC SURVEY

FIELD NO. HO-1353 - REGISTRY NO. H-8067

1954

1. This report is to cover additional work accomplished on this survey during the 1954 season under instructions 22/MEK, S-2-HO dated 18 March 1954, Subject "Additional Field work, Project CS-357".

2. This survey was accomplished with Launch 98, 808 fathometer No. 156SPX and 62S, both calibrated for a velocity of 800 fathoms per second.

3. Soundings taken 24 April were reduced for tide using the Tah Bay gage, but the gage stopped on the 25th and to obtain the reducers a comparison with predicted tides at Sitka was made for 22, 23, and 24 April and from the factor obtained a predicted curve was drawn for the 25 April and reducers taken from this curve.

4. Hydrography was controlled by visual sextant angles on shore objects located during the 1953 season. Standard methods were used.

5. The only significant feature found by this additional work was a rock awash at MLLW S. E. of Bird Island, Lat.  $54^{\circ} 54' 76''$ , Long.  $132^{\circ} 26' 79''$ . (Rock is charted on Charts 8145 and 8147). Hand lead soundings were taken on this rock to obtain the least depth.

6. Statistics for additional work:

| Vol.           | Date    | Day | Vessel | Positions | Stat. Mile Sounding | H. L. Soundings |
|----------------|---------|-----|--------|-----------|---------------------|-----------------|
| 11             | 4/24/54 | m   | 98     | 92        | 12.1                | --              |
| 11             | 4/25/54 | n   | 98     | 71        | 6.8                 | 4               |
| TOTALS - - - - |         |     |        | 163       | 18.9                | 4               |

Respectfully submitted,

*E. F. Hicks, Jr.*  
E. F. Hicks, Jr.  
CDR, USC&GS

Approved:

*J. Bowie*  
J. Bowie,  
CDR, USC&GS  
Comdg., Ship HODGSON

E. SMOOTH SHEET

The projection was made by hand on a cut sheet supplied by the Washington Office.

The shoreline and topographic detail were taken from air-photo compilation sheets T-11299, T-11300, and T-11302. See Review TP 7(d)

The topographic control was transferred from the 1953 graphic control sheets "HO-D", "HO-E" and "HO-F" except for noted discrepancies. [HO-D not available in Wash. Office during verification and review]

F. CONTROL STATIONS

Station KLINK 1909

This station was inked in the wrong position on "HO-D". The signal location was taken from the published G.P.'s.

Signal RAM

There was a small difference of location of this signal between the air photo compilation T-11300 and "HO-D". The signal location was taken from "HO-D" (1/2 mm.) (5 meters). Revised to pos. from T-11300 in verification (no change in hydro).

Signal BAY (1 mm.) (10 meters)

This signal was located on "HO-D" and also by a round of sextant cuts taken at the signal and recorded in Vol. 3, page 43, pos. 14h-H-8066. The hydrographic location of the signal fitted the hydrography and was therefore used on this sheet.

Signal BAH (15 meters)

There was a difference in the location of this signal on "HO-E" and "HO-D". As this signal was used mostly in the area of sheet "HO-D", that location was plotted on the smooth sheet; however, it was noted that rocks located in the area of TURN ISLAND which used Signal BAH in the fix and had a check angle, favored the location from "HO-E". Revised in verification to agree with HO-E-53 and check angles.

H. SOUNDINGS

Numerous discrepancies were found in plotting this sheet. In the development of the 7.8 shoal - Lat.  $54^{\circ} 52.76' N$  and Long.  $132^{\circ} 31.046'$ , notes in the sounding records stated that the fathometer "appeared" to be running fast due to incorrect paper take-up tension. A speed correction applied on "d", "e", and "C" days made all of the crossings agree.

(speed corr'n to "d" & "e" days (Lannoch 98) retained; speed corr'n to "C" day (Hodgson) rejected for better fit)

In the development of the 9.2 shoal - Lat.  $54^{\circ} 51'.68 N$  and Long.  $132^{\circ} 22'.87$ , the crossings were resolved by rejecting some of the

angles to signal RAM and plotting the fixes according to time and course. This solution was also used on lines run below TURN ISLAND on the same day. *Positions replotted on original fixes, discrepancies resolved by rescanning fathograms, in verification.*

In the 1954 development of the 10 fm. shoal at Lat. 54° 52'.03, Long. 132° 23'.11, crossings were resolved by using signal KEY in the fix instead of station KLINK. ✓

Soundings in Vol. 3, 182g to 207g were resolved by examination of the fathogram. An imperfection of the paper kept the fathometer from recording the true depth in certain depths. Only those traces which did not appear on the imperfection area were plotted and the rest was rejected. ✓

The fathograms were rescanned only in cases of doubt or on all shoals by the smooth plotter and many crossings were resolved by corrections to the recorded and checked soundings. ✓

#### J. ADEQUACY OF SURVEY

The three areas listed under this heading in the hydrographer's report were investigated further in 1954 and are noted under item N, and also on the overlay tracing. ✓

Junction with H-8066 was checked and appears to be in agreement. The depth curves can be adequately drawn except for some in-shore curves and in areas of very rough bottom. ✓

#### K. CROSSLINES

All crossings and discrepancies were resolved.

(see Review TP 76 Y)

#### N. DANGERS AND SHOALS

Since no notes to shoals or least depths appear on the smooth sheet, an overlay tracing of all dangers and shoals, listed in the hydrographer's report, was made to accompany this smooth sheet, additional shoals which were not plotted on the boat sheet have been added. The report which was made on the 1953 work was corrected to agree with the 1954 work. ✓

Destroyed  
after  
review.

Several of the items listed under Item N refer to kelp. The kelp symbol was added to the smooth sheet. ✓

CORDOVA BAY  
H-8067 HO-1353  
New Dangers and Shoals

| <u>No.</u> | <u>Depth(fms)</u><br>MLLW | <u>Locations</u>                                          | <u>Position</u>                                     | <u>Recommendation</u> |
|------------|---------------------------|-----------------------------------------------------------|-----------------------------------------------------|-----------------------|
| 4B         | 1.5 ✓                     | 54° 52.87N ✓<br>132° 22.89W ✓                             | <del>80-81d</del><br><del>105-106k</del><br>Vol. 47 |                       |
| 7B         | 2.6 ✓                     | 54° 53.22N ✓<br>132° 23.18W ✓                             | 77-78k ✓<br>Vol. 4                                  |                       |
| 9B         | 2.8 ✓                     | 54° 52.82 <sup>4</sup> N ✓<br>132° 22.33W ✓               | 23-24 1 ✓<br>Vol. 5                                 |                       |
| 10B        | <del>2.9</del><br>3.0     | 54° 53.41N ✓<br>132° 22.93W ✓                             | 100-101k ✓<br>Vol. 4                                |                       |
| 11B        | 3.0 ✓                     | 54° 52.78 <sup>9</sup> N ✓<br>132° 22.28 <sup>4</sup> W ✓ | 170-171C ✓<br>Vol. 7                                |                       |
| 16B        | 3.6 ✓                     | 54° 53.14 <sup>5</sup> N ✓<br>132° 23.03W ✓               | 91-92k ✓<br>Vol. 4                                  |                       |
| 20B        | <del>4.4</del><br>4.4     | 54° 52.78 <sup>3</sup> N ✓<br>132° 22.94 <sup>4</sup> W ✓ | 135-136c ✓<br>Vol. 7                                |                       |
| 23B        | 5.3 ✓                     | 54° 52.78 <sup>5</sup> N ✓<br>132° 22.17W ✓               | 13-14 1 ✓<br>Vol. 5                                 |                       |
| 27B        | <del>6.8</del><br>6.9     | 54° 53.11N ✓<br>132° 23.31W ✓                             | 69-70k ✓<br>Vol. 4                                  |                       |
| 28B        | <del>6.8</del><br>6.8     | 54° 52.95N ✓<br>132° 26.55W ✓                             | 86-87 1 ✓<br>Vol. 5                                 |                       |
| 29B        | 6.7 ✓                     | 54° 53.28 <sup>3</sup> N ✓<br>132° 26.98 <sup>4</sup> W ✓ | 6-7g ✓<br>Vol. 3                                    |                       |
| 30B        | 6.8 ✓                     | 54° 53.78N ✓<br>132° 27.35W ✓                             | 49-50c ✓<br>Vol. 1                                  |                       |
| 31B        | 7.1 ✓                     | 54° 53.23N ✓<br>132° 23.99W ✓                             | 9-10k ✓<br>Vol. 4                                   |                       |
| 35B        | 7.7 ✓                     | 54° 52.12N ✓<br>132° 24.14W ✓                             | 148b ✓<br>Vol. 6                                    |                       |
| 38B        | <del>8.8</del><br>8.6     | 54° 53.12N ✓<br>132° 26.94W ✓                             | 25-26g ✓<br>Vol. 3                                  |                       |

| <u>No.</u> | <u>Depth(fms)</u><br>MLLW | <u>Locations</u>              | <u>Position</u>      | <u>Recommendation</u> |
|------------|---------------------------|-------------------------------|----------------------|-----------------------|
| 39B        | 8.8 ✓                     | 54° 52.24N ✓<br>132° 24.40W ✓ | 58b ✓<br>Vol. 1 ✓    |                       |
| 45B        | 12 ✓                      | 54° 53.01N ✓<br>132° 24.54W ✓ | 67-68g ✓<br>Vol. 3 ✓ |                       |
| 46B        | 13 ✓                      | 54° 52.60N ✓<br>132° 28.56W ✓ | 120-121B ✓<br>Vol. 8 |                       |
| 47B        | 19 ✓                      | 54° 51.60N ✓<br>132° 29.74W ✓ | 26-27A ✓<br>Vol. 8   |                       |
| 48B        | 19 ✓                      | 54° 52.68N ✓<br>132° 33.47W ✓ | 154-155B ✓<br>Vol. 9 |                       |

Respectfully submitted,

*Harvey C. Parsons*

Harvey C. Parsons  
Cart. Aid(Gen.), C&GS

Examined and Approved:

*William M. Martin*

William M. Martin  
Cartographer in Charge

Approved and Forwarded:

*L. S. Hubbard*

L. S. Hubbard, Captain, C&GS  
Seattle District Officer

GEOGRAPHIC NAMES PENCILED ON H-8067

BIRD ROCKS ✓  
CORDOVA BAY ✓  
DOUBLE ISLAND ✓  
GRAVE POINT ✓  
GUSDAGANE POINT ✓  
HUNTER BAY ✓  
KLAKAS INLET ✓  
KLINKWAN COVE  
PRINCE OF WALES ISLAND ✓  
RUTH BAY ✓  
RUTH CUTOFF ✓  
RUTH ISLAND ✓  
SHIP ISLANDS  
SHIP ISLAND PASSAGE ✓  
SHIPWRECK POINT ✓  
TURN ISLAND ✓  
TURN POINT ✓  
KLAKAS ISLAND

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ...8067...

Records accompanying survey:

Boat sheets ..2...; sounding vols. 11....; wire drag vols. ....; bomb vols. ....; graphic recorder rolls 7-Envelopes, special reports, etc. 1-Smooth sheet and 1-Descriptive report.....

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

|                                                      |       |             |
|------------------------------------------------------|-------|-------------|
| Number of positions on sheet                         | ..... | 2952        |
| Number of positions checked                          | ..... | 75          |
| Number of positions revised                          | ..... | 2           |
| Number of soundings revised (refers to depth only)   | ..... | 219 * 1     |
| Number of soundings erroneously spaced               | ..... |             |
| Number of signals erroneously plotted or transferred | ..... | 0           |
| Topographic details                                  | Time  | ..... 40    |
| Junctions                                            | Time  | ..... 2     |
| Verification of soundings from graphic record        | Time  | ..... 30 hr |

Verification by J. E. GEARHART..... Total time 396.. Date 3-20-57

Reviewed by [Signature]..... Time 78.. Date 6/14/57

\* Approx. 1500 additional soundings revised due to speed corrections

GEOGRAPHIC NAMES

Survey No. H-8067

| Name on Survey                |   |                             |                                 |   |   |   |   |   |         |     |    |
|-------------------------------|---|-----------------------------|---------------------------------|---|---|---|---|---|---------|-----|----|
|                               | A | B                           | C                               | D | E | F | G | H | K       |     |    |
| <u>Southeast Alaska</u>       |   | } title                     |                                 |   |   |   |   |   |         |     | 1  |
| <u>Cordova Bay</u>            |   |                             |                                 |   |   |   |   |   |         |     |    |
| <u>Prince of Wales Island</u> |   |                             |                                 |   |   |   |   |   |         |     | 3  |
| <u>Hunter Bay</u>             |   |                             |                                 |   |   |   |   |   |         |     | 4  |
| <u>Turn Point</u>             |   |                             |                                 |   |   |   |   |   |         |     | 5  |
| <u>Klinkwan</u>               |   |                             | (do not use: abandoned in 1920) |   |   |   |   |   |         |     | 6  |
| <u>Klinkwan Cove</u>          |   |                             | (this maintains old name)       |   |   |   |   |   |         |     | 7  |
| <u>Gusdagane Point</u>        |   |                             |                                 |   |   |   |   |   | BGN     |     | 8  |
| <u>Grave Point</u>            |   |                             |                                 |   |   |   |   |   |         |     | 9  |
| <u>Turn Island</u>            |   |                             |                                 |   |   |   |   |   |         |     | 10 |
| <u>Double Island</u>          |   |                             |                                 |   |   |   |   |   |         |     | 11 |
| <u>Klakas Island</u>          |   |                             |                                 |   |   |   |   |   |         |     | 12 |
| <u>Klakas Inlet</u>           |   |                             |                                 |   |   |   |   |   |         |     | 13 |
| <u>Bird Rocks</u>             |   |                             |                                 |   |   |   |   |   |         |     | 14 |
| <u>Ruth Island</u>            |   |                             |                                 |   |   |   |   |   |         |     | 15 |
| <u>Ruth Bay</u>               |   |                             | (larger application of name)    |   |   |   |   |   |         |     | 16 |
| <u>Ruth Cutoff</u>            |   |                             |                                 |   |   |   |   |   |         |     | 17 |
| <u>Shipwreck Point</u>        |   |                             |                                 |   |   |   |   |   |         |     | 18 |
| <u>Ship Island Passage</u>    |   |                             |                                 |   |   |   |   |   |         |     | 19 |
| <u>Ship Islands</u>           |   |                             | (applies to group)              |   |   |   |   |   |         |     | 20 |
|                               |   |                             |                                 |   |   |   |   |   |         |     | 21 |
|                               |   |                             | Names approved 7-7-51           |   |   |   |   |   |         |     | 22 |
|                               |   |                             |                                 |   |   |   |   |   | L. Heck |     | 23 |
| <u>Elbow Bay</u>              |   | } tide stations (off sheet) |                                 |   |   |   |   |   |         | BGN | 24 |
| <u>Tah Bay</u>                |   |                             |                                 |   |   |   |   |   |         |     |    |
|                               |   |                             |                                 |   |   |   |   |   |         |     | 26 |
|                               |   |                             |                                 |   |   |   |   |   |         |     | 27 |



DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8067

FIELD NO. HO-1353

S. E. Alaska - Cordova Bay - Ship Islands to Hunter Bay

Project No. CS-357

Surveyed - Aug.-Sept. 1953, April 1954

Scale 1:10,000

Soundings:

Control:

808 Fathometer (mainly)  
NMC-1 Fathometer  
Hand lead (rocks and shoals)

Sextant fixes on  
shore signals

Chief of Party - F. R. Gossett and J. Bowie  
Surveyed by - F. R. Gossett, E. F. Hicks, Jr., and D. L. Campbell  
Protracted by - H. C. Parsons (Seattle Processing Office)  
Soundings plotted by - H. C. Parsons  
Verified and inked by - J. E. Gearhart  
Reviewed by - L. V. Evans, III 14 June 1957  
Inspected by - R. H. Carstens

1. Shoreline and Control

The shoreline originates with unreviewed photogrammetric surveys T-11299, T-11300 and T-11302 of 1953-54.

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

2. Sounding Line Crossings

Final depths after verification are in satisfactory agreement at crossings.

3. Depth Curves and Bottom Configuration

In general, the usual curves in depths of 5 fms. and greater are well defined. In depths less than 5 fms. the customary curves in inshore areas were not completely developed because of the steep slopes and rocky shoreline.

The bottom in the area of this inshore survey is rugged and irregular, with generally steep slopes and many shoals and pinnacles.

4. Junctions with Contemporary Surveys

The junctions with H-8064 (1953) and H-8066 (1953), both to the south, have been compared and appear to be satisfactory. These junctions will be considered further in the reviews of the respective surveys.

No other adjoining contemporary surveys have yet been registered in the Washington Office.

5. Comparison with Prior Surveysa. H-2331 (1897) 1:80,000 (Reconnaissance)

This reconnaissance sketch contains nothing of value for comparative purposes and is entirely superseded by the present survey.

b. H-3043 (1909) 1:20,000

This prior survey covered the entire area of the present survey. Soundings on the prior survey are generally comparable to those on the present survey, although the latter survey is more comprehensive and portrays the irregular bottom in greater detail. Rocks and least depths from the former survey were generally confirmed, usually with lesser depths and slightly different positions, except for the following 2 soundings:

(1) In lat.  $54^{\circ}52.12'$ , long.  $132^{\circ}23.35'$ , a 2.1-fm. sounding is considered to be discredited by the development of the present survey. The sounding probably falls in comparable present depths about 100 m. northwest of its position on H-3043.

(2) In lat.  $54^{\circ}53.91'$ , long.  $132^{\circ}28.61'$ , an 8-fm. sounding was carried forward as the least depth on a ridge with 8.6 to 9 fms. on the present survey.

The detached reef awash shown on H-3043 from T-2976 (1909), at lat.  $54^{\circ}53.93'$ , long.  $132^{\circ}28.0'$ , should be disregarded. The position of the reef falls in depths of about 20 fms. on the present survey. The reef is considered to be the same ~~is~~ the one on the present survey about 160 m. northwest of the prior survey position.

With the addition of the sounding, carried forward, the present survey supersedes H-3043 in the common area.

6. Comparison with Chart 8145 (print date 1/16/56)  
 Chart 8146 (print date 11/1/54)  
Chart 8147 (print date 5/28/56)

A. Hydrography

The charted hydrography originates with prior survey H-3043, previously discussed, and preliminary application of the present survey from copies of the boat sheets (Bp. 51041-42). Minor revisions in position and depths have been made in smooth plotting and verification as a result of office plotting, rescanning of portions of fathograms and application of final reducers. Final survey depths of less than 10 fms. are generally a maximum of 1 fm. greater than charted depths, with the following exceptions:

Chart 8145

H-8067

|        |                |                  |          |
|--------|----------------|------------------|----------|
| 5 fms. | Lat. 54°53.04' | Long. 132°25.72' | 4 fms. ✓ |
| 7 fms. | Lat. 54°52.95' | Long. 132°26.76' | 5.3 fms. |

Attention is called to the following:

(1) A group of 4 bare rocks charted at lat. 54°53.75', long. 132°29.28' (charts 8145 - 8147) do not exist and should be deleted from the charts. No such rocks appear on either the prior or present hydrographic or topographic surveys. The charted rocks apparently originated from scratches on the negative of chart 8145 and were subsequently applied to chart 8147 from that source.

(2) The detached rock awash charted at lat. 54°53.93', long. 132°28.0' should be deleted. (See discussion under comparison with prior survey H-3043).

(3) The 37 fms. charted in lat. 54°52.25', long. 132°28.65', from H-3043 should be disregarded. The 37 falls in present depths of about 75 fms. and is considered to be recorded in error.

The following 2 soundings, near the limits of the present survey, originate with advance information from adjoining surveys, smooth sheets of which are not available at this time, and should be retained as charted pending review of those surveys:

(1) Lat. 54°53.38' - Long. 132°22.95' 1¼ Rk

(2) Lat. 54°53.5' - Long. 132°30.4' 1½ Rk

Except for the 2 soundings just noted the present survey supersedes the charted hydrography.

B. Aids to Navigation

The only aid to navigation within the area of this survey is the Turn Island daybeacon, which is correctly charted from its triangulation position of 1909.

7. Condition of Survey

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

b. Although fathometer speed corrections had been applied by the field party for one day and by the processing office for 3 additional days not all conflicts in depths had been resolved. The verifier applied speed corrections for 4 additional days, and rejected those applied by the smooth plotter for one day, to obtain satisfactory agreement. About 1500 soundings were thus revised 1 to 3 fms. during verification.

c. Rescanning of the NMC-1 fathometers during verification resulted in corrections to the spacing of numerous soundings on several line sections, thus improving agreement with adjacent soundings from 808 fathometers.

d. The application of shoreline and other topographic survey details was not up to usual standards, necessitating excessive re-inking during verification.

e. The listing of "Dangers and Shoals" in the Descriptive Report was unnecessarily long. Of the 37 items listed in comparison with the prior survey, 2 were published in the Notice to Mariners; of the 28 new dangers, one was published. A more discriminating selection which would provide information of cartographic value for immediate chart correction of dangers to navigation and important shoals would have saved appreciable time not only for the field party but also at each successive step in processing the survey. Unimportant differences with charted depths and features not dangers to navigation need not be tabulated. The list of 20 items added by the smooth plotter to supplement the original list added little information of cartographic value not self-evident on the survey.

f. Three hydrographic signals located offshore from the mean high-water line were not described. Although it is quite apparent that those signals were on rock ledge the requirement for descriptions of offshore signals still applies.

g. Except as noted in the preceding items the smooth plotting was satisfactory.


8. Compliance with Project Instructions


The survey adequately complies with the Project Instructions.

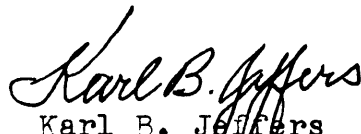
9. Additional Field Work Recommended

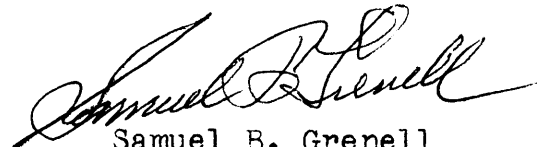
This is a basic survey. No additional field work is recommended. As a matter of record it is noted that the 3.7 fm. shoal in lat.  $54^{\circ}53.28'$ , long.  $132^{\circ}23.68'$  was not completely developed.

Examined and Approved:

  
Max G. Ricketts  
Chief, Nautical Chart Branch

  
Charles A. Schanck  
Chief, Division of Charts

  
Karl B. Jeffers  
Chief, Hydrography Branch

  
Samuel B. Grenell  
Chief, Division of Coastal Surveys

FORM 537a  
(9-24-47)

DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

REGISTER NO. T - *HO-"E" & "F", 1953, p.1*

TOPOGRAPHIC TITLE SHEET

FIELD NO. "B"

Each Planetable and Graphic Control Sheet should be accompanied by this form, completed so far as practicable, when forwarded to the Washington Office.

STATE

S. E. ALASKA

GENERAL LOCALITY

CORDOVA BAY

LOCALITY

TURN ISLAND

SCALE

1:10000

DATE OF SURVEY

3 September, 1953

VESSEL

U.S.C.G.S. S. HODGSON

CHIEF OF PARTY

F. R. Gossett

SURVEYED BY

Donald L. Campbell and Allan C. Haglund

INKED BY

Allan C. Haglund

HEIGHTS IN FEET ABOVE MHW OR \_\_\_\_\_

TO GROUND

TO TOPS OF TREES .

TIPOUR None

APPROXIMATE CONTOUR

FORM LINE INTERVAL \_\_\_\_\_ FEET

PROJECT NUMBER

CS-357

REMARKS



DESCRIPTIVE REPORT

to accompany

SHEET HO-"E" AND HO-"F" 1953

U.S.C.&G.S. SHIP HODGSON

F. R. GOSSETT, COMMANDING

A. INSTRUCTIONS

All work on these sheets was done in accordance with Instructions - Project CS-357 dated 17 March 1953. ✓

B. LIMITS AND DATES

The sheet limits are given below:

Sheet "E" - Latitude  $54^{\circ} 52' 00''$  to  $54^{\circ} 55' 00''$  ✓  
Long.  $132^{\circ} 23' 30''$  to  $132^{\circ} 30' 30''$

Sheet "F" - Latitude  $54^{\circ} 53' 30''$  to  $54^{\circ} 57' 30''$  ✓  
Long.  $132^{\circ} 30' 30''$  to  $132^{\circ} 36' 00''$

Sheet "F" was completed northward to about Latitude  $54^{\circ} 56' 05''$ . Signals were not established north of this latitude. ✓

Field work on Sheet "E" began 10 August 1953 and was completed on 3 Sept. 1953.

Field work on Sheet "F" began 5 September 1953 and was completed on 17 September 1953.

C. PROJECTION

Both sheets were polyconic projections plotted on a scale of 1:10,000 and are North American 1927 Datum. ✓

D. CONTROL

All basic control used was triangulation established in 1907-25, 1908-25, and 1909.

The stations used are given below:

Sheet "E" - TURN, 1909 and BIRD, 1909 ✓

Sheet "F" - SHIP 2, 1908-25, and LEDGE 2 1908. Station CLUMP 1907-25 is plotted but was not used.

E. DISCUSSION OF METHODS

Standard methods of intersection, resection, traverse, and three point were employed in locating the graphic control. ✓



On Sheet "F" a short traverse was run northward from triangulation station SHIP 2, 1908-25 and was closed on the same station with zero error of closure. No adjustment was necessary. This traverse provided an extension of control to the signals lying on the other side of the islands. The graphic triangulation was then continued with two cuts on Signal GUM and sufficient check cuts were made on GUM at succeeding setups to insure proper accuracy throughout the sheet.

The offshore rocks in the area covered by Sheet "E" were located by hydrographic, photogrammetric, or topographic methods with one exception. A rock was seen at a very low stage of the tide about 200 meters southeast of station BIRD 1909, but no definite location was obtained. It is recommended that this rock be investigated when field work is continued in the area. *See Item J, Desc. Report of H-8007, also 1954 Addendum to that report.*

On sheet "F" as many rocks as practicable were located by topographic and photogrammetric methods. Very little hydrography was done in this area.

Listed below are rocks which were located as graphic control signals and are awash at MHW.

|                                     |         |
|-------------------------------------|---------|
| SHEET E                             | SHEET F |
| PUT ✓                               | TOY ✓   |
| DAY ✓                               |         |
| HIP <i>bare 3' MHW per T-11300</i>  |         |
| ZAG <i>bare 0' MLLW per T-11300</i> |         |

Appropriate notes were made on all of the located rocks. Other features and topographic details which were located were noted on the sheet by standard methods. *See Review*

Since the purpose of these sheets was to provide control for hydrographic surveys, very little topographic detail was shown. Several short sections of mean high water line were rodded in where practicable and notes indicating distances to the high water line were made on various signals.

Magnetic observations (declinatoire) were made on Sheets E and F at stations BIRD 1909 and LEDGE 2, 1908 respectively. *28°45' E at 1400* *29°05' E at 1530 - 7 Sept 1953*

One station was located by sextant fixes on signals lying in the area covered by Sheet "F". The location fell on the outer edge of the sheet and was transferred by divider measurements to Sheet "E". The station is in blue and the observed angles are recorded on the sheet.

F. RECOVERABLE STATIONS

Recoverable stations for which descriptions were written are as follows:

- Sheet "E" - HIP and RUT *(filed in Photogrammetry under T-11300)*
- Sheet "F" - BOX *( " " " " T-11299)*

G. GENERAL DESCRIPTION OF AREA

The area covered by these sheets is composed of heavily wooded islands with generally rough rocky shoreline part of which is obscured by the overhanging vegetation.

- 3 -

See Seasons Report for Costs.

Respectfully submitted,  
*Allan C. Haglund*  
Allan C. Haglund,  
Ens., USC&GS

Approved and forwarded:

*F. R. Gossett*  
F. R. Gossett,  
CDR, USC&GS  
Comdg., Ship HODGSON

STATISTICS FOR HYDROGRAPHIC SURVEY  
H-8067 (FIELD NO. HO-1353)

| DATE          | DAY | VESSEL  | NO. POS.           | STAT. MILES |
|---------------|-----|---------|--------------------|-------------|
| 3 Sept. 1953  | a   | 98      | 17                 | 2.5         |
| 4 Sept. 1953  | b   | 98      | 232                | 43.3        |
| 7 Sept. 1953  | c   | 98      | <del>146</del> 136 | 27.7        |
| 8 Sept. 1953  | d   | 98      | 50                 | 9.4         |
| 9 Sept. 1953  | e   | 98      | 153                | 32.1        |
| 10 Sept. 1953 | f   | 98      | 111                | 21.0        |
| 11 Sept. 1953 | g   | 98      | 207                | 38.8        |
| 17 Sept. 1953 | h   | 98      | 185                | 25.6        |
| 18 Sept. 1953 | j   | 98      | 172                | 18.6        |
| 19 Sept. 1953 | k   | 98      | 208                | 29.7        |
| 20 Sept. 1953 | l   | 98      | 106                | 15.7        |
| 24 Aug. 1953  | a   | 134     | 8                  | 0.0         |
| 25 Aug. 1953  | b   | 134     | 238                | 36.6        |
| 26 Aug. 1953  | c   | 134     | 188                | 26.3        |
| 27 Aug. 1953  | d   | 134     | 169                | 23.2        |
| 18 Sept. 1953 | e   | 134     | 117                | 15.0        |
| 13 Aug. 1953  | A   | HODGSON | 171                | 68.3        |
| 21 Aug. 1953  | B   | HODGSON | 163                | 51.0        |
| 11 Sept. 1953 | C   | HODGSON | 111                | 38.7        |
| 17 Sept. 1953 | D   | HODGSON | 55                 | 14.3        |

TOTALS

| VESSEL                    | NO. POS.   | STAT. MI. SDG. |
|---------------------------|------------|----------------|
| Launch 98                 | 1577       | 264.4          |
| Launch 134                | 712        | 101.1          |
| HODGSON                   | 500        | 172.3          |
| Launch 98 (1954)          | <u>163</u> |                |
|                           | 2942       |                |
| Area - 20.8 sq. stat. mi. |            |                |

Review of Graphic Control Surveys HO-E and HO-F - 1953

These surveys were made to provide control for hydrographic surveys in Cordova Bay between Ship Islands and the entrance to Klakas Inlet, specifically survey H-8067 (1953-54) and adjoining 1954 surveys to the north.

These control surveys are adequate for their purpose.

Topographic stations GUY and AIM, which lie outside the mean high-water line, are not described. Since they are in areas of rock ledge as defined by photogrammetric surveys T-11299 and T-11300 of 1953-54 they are presumed to be rocks awash.

All pertinent data have been transferred to H-8067. These planetable sheets will be destroyed after review of the adjoining hydrographic surveys to which these control surveys also pertain.

Reviewed by - L. V. Evans, III  
14 June 1957

Inspected by - R. H. Carstens

46

# TIDE NOTE FOR HYDROGRAPHIC SHEET

~~DIVISION OF COASTAL SURVEYS~~

15 August 1956

Division of Charts: R. H. Carstens

Plane of reference approved in  
11 volumes of sounding records for


HYDROGRAPHIC SHEET 8067

Locality Cardova Bay, Alaska

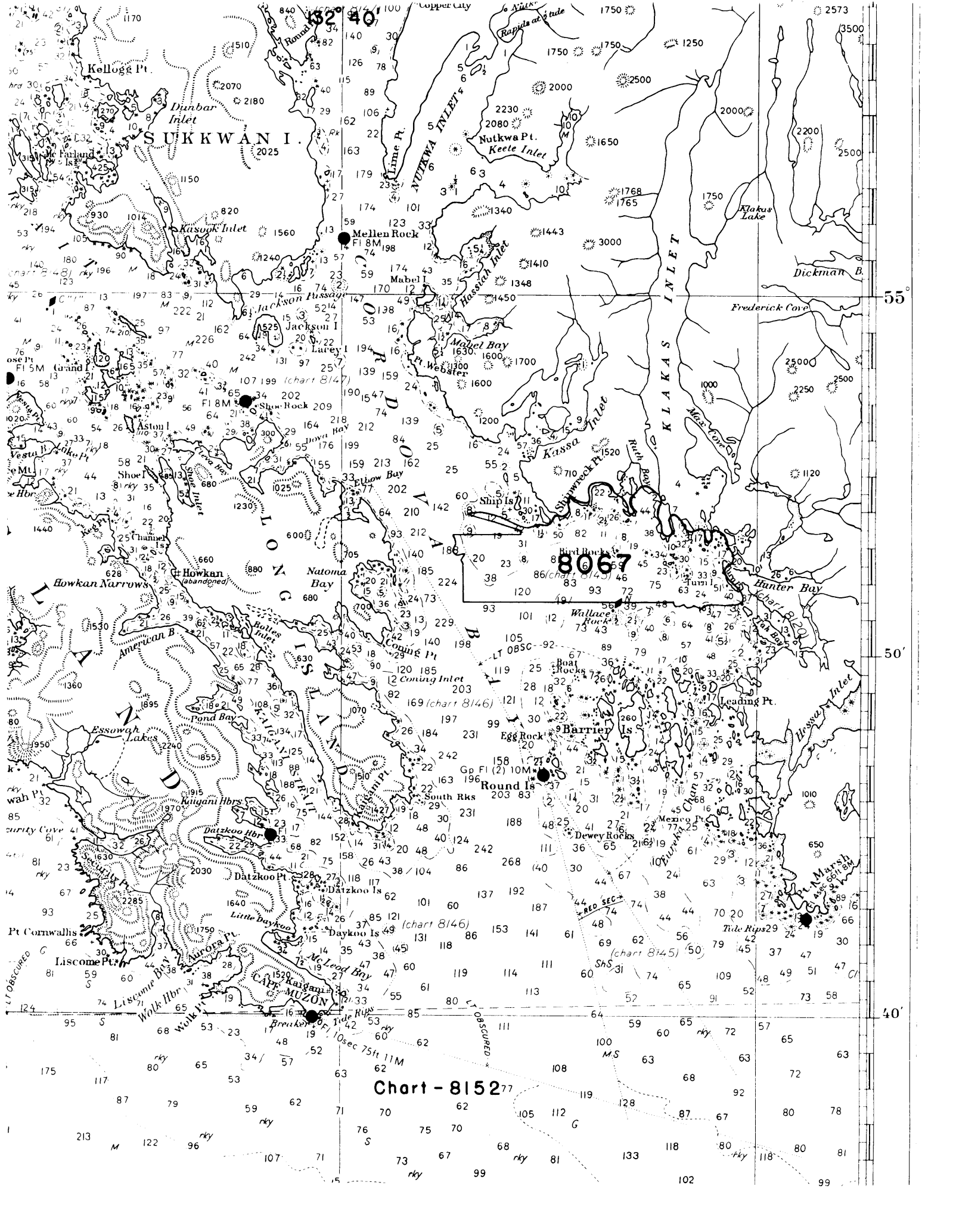
Chief of Party: J. Bowie )  
                                  F. R. Gossett) in 1953-54  
Plane of reference is mean lower low water, reading  
4.8 ft. on tide staff at Elbow Bay  
15.9 ft. below B. M. 1 (1925)  
3.1 ft. on tide staff (1953) at Tah Bay  
3.2 ft. on tide staff (1954) at Tah Bay  
14.2 ft. below B.M. 1 (1909)

Height of mean high water above plane of reference is as follows:  
Elbow Bay = 11.9 feet  
Tah Bay = 11.9 feet

Condition of records satisfactory except as noted below:



Chief, ~~Division of~~ Tides ~~and Currents~~ Branch



SUKKWAN I.

Chart - 815277

8067

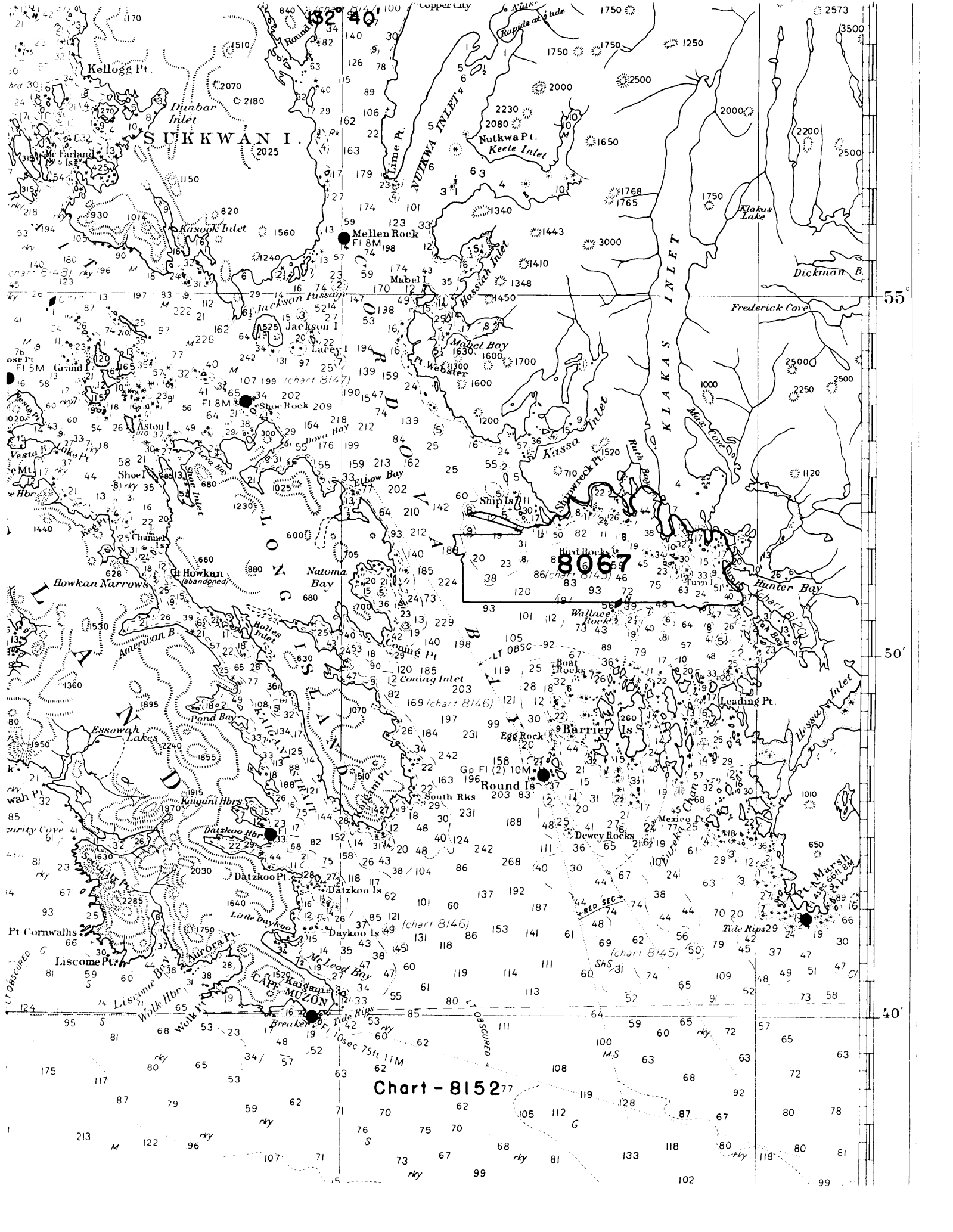


Chart - 815277

8067

# NAUTICAL CHARTS BRANCH

SURVEY NO. H-8067

*Reviewed 6-14-57*

## Record of Application to Charts

| DATE                     | CHART | CARTOGRAPHER | REMARKS                                                                                                                           |
|--------------------------|-------|--------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 6-4-57                   | 8145  | C.R. Wittman | <del>Before</del> <sup>after</sup> <del>After</del> Verification and Review <i>Part. dit. only.</i>                               |
| 6-28-57                  | 8147  | C.R. Wittman | <del>Before</del> After Verification and Review <i>Part only.</i>                                                                 |
| 30 Aug 57                | 8145  | Nichols      | <del>Before</del> After Verification and Review <i>Partial only</i>                                                               |
| 5 Sept 57<br>(Thru 8145) | 8102  | Nichols      | <del>Before</del> <sup>step</sup> <del>After</del> Verification and Review <i>Partial</i>                                         |
| 10-28-58                 | 8152  | R.F. Elkins  | <del>Before</del> After Verification and Review<br><i>Partly applied - thru chrt 8102.</i>                                        |
| Nov '60                  | 8152  | Elkins       | <del>Before</del> After Verification and Review <i>Completely</i>                                                                 |
| 1/4/61                   | 8102  | E.E. Thomas  | <i>Fully applied thru chrt 8152</i><br><del>Before</del> After Verification and Review <i>Aug 12</i>                              |
| 13 Mar 61                | 8002  | E. Gray      | <del>Before</del> After Verification and Review <i>Fully appd</i><br><i>thru chrt 8152 Drawing #12</i>                            |
| 4/3/61                   | 8145  | Helmer       | <del>Before</del> After Verification and Review. <i>Fully appd. Exam</i><br><i>chart 8152, Aug 12</i>                             |
| 4/8/61                   | 8146  | Helmer       | <del>Before</del> After Verification and Review <i>Fully appd. Exam</i><br><i>chart 8152, Aug 12</i>                              |
| 4-14-62                  | 8147  | H. Radden    | <i>proposed next drawing in Radden file.</i><br>After V & R <i>Fully appd. Exam. Charts</i><br><i>8145 &amp; 8146 for overlap</i> |
| 8-5-63                   | 8147  | h.j. Keeler  | <del>Appd. thru chart 8151.</del> <i>Part appd after V &amp; R</i>                                                                |
| 2/3/75                   | 8147  | M.D. KANIS   | <i>After signature - re-examined for</i><br><i>critical corrections only</i>                                                      |
| 5/22/75                  | 8145  | M.D. KANIS   | <i>Re-examined - only for items in conjunction</i><br><i>with reviewed T-sheets, T-11299, T-11300</i>                             |

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.

M-2168-1  
7-11302