DESCRIPTIVE REPORT

Topographic Sheet No. B.1940
Hydrographic

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES
JAN 14 1941

ACC. No. ...............

State  S.E. Alaska

LOCALITY

Glacier Bay

Drake and Francis Islands and

mainland to westward.

1940

CHIEF OF PARTY

[Signature]

U. S. GOVERNMENT PRINTING OFFICE: 192251
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

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

Field No. E 1940

REGISTER NO. T 6754

State: Alaska

General locality: Glacier Bay

Locality: Vicinity of Drake Island

Drake and Francis Islands and mainland to westward.

Scale: 1:20000

Date of survey: August-September, 1940

Vessel: WESTBAHL

Chief of party: Benjamin H. Rigg

Surveyed by: Benjamin H. Rigg and William F. Deane

Inked by: William F. Deane

Heights in feet above MHW to ground +6.5

Contour: Approximate contour, form line interval 100 feet

Instructions dated March 10, 1938 and April 19, 1939.

Remarks: Form lines to be drawn on small scale sheet.
DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET NUMBER B-1940

REG: NO. T-6754

SOUTHEASTERN ALASKA 1940  M. V. WESTDAHL

PROJECT HT-221

INSTRUCTIONS:

This survey was made in compliance with the Director’s Instructions dated March 10, 1938 and supplemental instructions dated April 19, 1939.

LOCALITY:

The area covered by this sheet embraces Francis Island, Drake Island, Lone Island, and the west side of Glacier Bay from a point west of Francis Island to the south side of the entrance to Geikie Inlet.

METHOD OF SURVEY:

Standard planetable methods were used, combining traverses, three-point fixes, and resections. A traverse was run around Francis Island making a loop from and to FRANK 1939. The closing error of this traverse was 6 meters which was adjusted proportionately from end to beginning. An additional check by resections on other stations facilitated an accurate adjustment. A traverse was run on Drake Island from OPEN 1939 to DUCE 1939 with no resulting error. This traverse was additionally controlled by resections on the stations located on Francis Island. Another traverse was run on Drake Island from DUCE 1939 to DRAKE 1939, and the closing error was 2 meters. This was adjusted proportionately for a short distance back on the traverse; the error being too small to carry farther. The remainder of the survey was made from three-point fixes and resections.
ELEVATIONS:

Elevations were determined from vertical angles with the alidade. On all but two sightings it was possible to use ground level without subtracting for the trees. The exceptions are the elevation on Francis Island of 174 feet and the elevation of 117 feet on the south end of Drake Island. An allowance of 40 feet was made for the heights of trees. Form lines were drawn on Francis and Drake Islands but the mainland was left for the small scale form line sheet.

GENERAL DESCRIPTION OF COAST:

On the mainland the shore line lies, generally speaking, at the base of a mountain range. The land varies from almost level to a moderate slope from the coast to the foot of the range. Considering the coast proper the following is noted. From the south limit of the sheet (QUICK 1939) to about a mile northward along the shore the beach is of gravel moraine with trees growing within a few meters of the water line. From here on to a short distance north of GOLD 1939 the shore line is generally rocky and steep with less trees than to the southward. From Latitude 58° 38' to a point about ½ mile northward of KILL 1939 the beach is of gravel moraine with trees of moderate growth found close to the water line. This region seems to abound in game if tracks and occasional glimpses of animals are indicative. The topographic party saw black bears, marmots, and a porcupine in this locality. From this section northward the shoreline is mostly rocky and precipitous to the limit of the sheet.

Francis Island has a rocky shoreline and is densely wooded. On the north point of the island the trees thin out and give way to shrubs and high grass.
Drake Island is oblong in shape with the maximum elevations near the north end. The south end is densely wooded but the other sections are only moderately covered. This is due to the comparatively level surface of the former area. The east side of the island from the south end to DUCE 1939 is mainly made up of gravel and boulder beach with the trees growing near the water line. The low water area here is more extensive than elsewhere on the island. The point on which DUCE 1939 is located is rocky and steep, vegetation being abundant from the tops of the bluffs inland. From this point northward for about ½ mile the beach is of gravel and ledge rock and the slope upward more apparent. The section is moderately wooded inland almost to the highest elevation. From this stretch northward and westward around the north end of the island and then southward to Latitude 58° 39' the shore is rocky and steep with occasional brief sections of gravel and boulder beach. Inland, the area is moderately wooded to the higher slopes. From Latitude 58° 39' to the south end of the island the shore line is made up of gently sloping rock ledges interspersed with gravel and boulder beaches. Vegetation varies from moderate to dense as the shore runs southward. Near JUST 1939 are the remains of an old Indian fort. This fort was constructed very simply by placing a ring of rock rubble on a smooth rock ledge; the inside of this ring was occupied by the primitive garrison.

Lone Island has a rocky, precipitous shore line and is sugar loaf in profile. The island is covered with grass from the steep bluffs inland, and is a rookery for cormorants, sea parrots, sea gulls, and oyster catchers. Hair seals are always to be found on the rocky ledges of the shore.

Seikie Rock because of its low elevation of 6 feet has no vegetation and is a mere rock outcrop surrounded by rocky ledges and gravel.
ICE CONDITIONS:

The passage between Drake and Francis Islands on the east and the mainland on the west is comparatively free of ice; only occasionally are bergs to be found here.

OFF- LYING DANGERS:

A large rocky ledge baring 11.5 feet at mean lower low water was located in Latitude 58° 41.95'; Longitude 136° 18.08'. This rocky ledge is about 45 meters long in a north-south direction and is 23 meters wide.

LANDMARKS FOR CHARTS:

There are no objects of sufficient prominence on this sheet to be charted as landmarks.

DECLINATOIRE OBSERVATIONS:

Declinatoire No. 209 was used for all observations. This instrument was standardized at Lincoln Park, Seattle, on April 1, 1940. The declinatoire variation was 22° 54' E.; the variation from the chart was 23° 15' E; the correction to be applied is then +0° 21'.

<table>
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<th>Station</th>
<th>Date</th>
<th>Scaled Value</th>
<th>Corrected Value</th>
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<td>GEIKIE 1939</td>
<td>Sept. 23, 1940</td>
<td>28° 25' E.</td>
<td>28° 46' E.</td>
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<tr>
<td>KILL 1939</td>
<td>Sept. 22, 1940</td>
<td>29° 04' E.</td>
<td>29° 25' E.</td>
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<tr>
<td>QUICK 1939</td>
<td>Aug. 21, 1940</td>
<td>29° 23' E.</td>
<td>29° 44' E.</td>
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GEOGRAPHIC NAMES:

The charted names are in general usage. A name is suggested for the passage between the mainland on the west and Drake and Francis Islands on the east; this name to be DRAKE PASSAGE from Drake Island to the eastward.

JUNCTIONS WITH OTHER SHEETS:

This sheet joins T 6679 on the south and unsurveyed area on the north.
CONTROL STATIONS:

The following triangulation stations appear on this sheet and were used for control of the survey:

**LONE 1939**  
Lat. 58° 43' 631.7 m., Long. 136° 17' 573.3 m.

**GEIKIE 1939**  
58° 41' 1177.2 m.  
136° 18' 594.6 m.

**FLAT 1939**  
58° 41' 145.6 m.  
136° 20' 940.9 m.

**RIDGE 1939**  
58° 40' 541.3 m.  
136° 19' 36.2 m.

**KILL 1939**  
58° 39' 697.6 m.  
136° 16' 667.6 m.

**GOLD 1939**  
58° 37' 1664.1 m.  
136° 14' 491.5 m.

**QUICK 1939**  
58° 36' 1651.2 m.  
136° 12' 262.0 m.

**DRAKE 1939**  
58° 40' 967.9 m.  
136° 13' 232.6 m.

**PIRATE 1939**  
58° 40' 74.9 m.  
136° 13' 768.4 m.

**ENTER 1939**  
58° 39' 935.9 m.  
136° 14' 653.8 m.

**DUCE 1939**  
58° 38' 1578.4 m.  
136° 12' 480.3 m.

**JUST 1939**  
58° 38' 927.6 m.  
136° 13' 594.6 m.

**OPEN 1939**  
58° 38' 64.2 m.  
136° 12' 569.3 m.

**FRANK 1939**  
58° 37' 920.1 m.  
136° 10' 608.3 m.

The following recoverable stations were marked with standard hydrographic stations disks: (See descriptions on P. 9.)

**FINIS 1940**  
Lat. 58° 40' 553 m.  
Long. 136° 18' 695 m.

**ATOM 1940**  
58° 38' 1424 m.  
136° 15' 762 m.

**NATA 1940**  
58° 37' 665 m.  
136° 13' 382 m.

STATISTICS:

Shore line, statute miles..................13.6

Area, square statute miles...............11.9
REMARKS:

The whole of Francis Island and the southern end of Drake Island to DUCE 1939 on the east and JUST 1939 on the west was surveyed by Benjamin H. Rigg. The remainder was surveyed by William F. Deane.

Respectfully submitted,
William F. Deane,
Jr. H. & G. E.

Forwarded:

Benjamin H. Rigg, H. & G. E.,
Chief of Party

[Signature]

A.M. Cocinale

Officer in Charge,
Seabird Processing Office.
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Names underlined in red approved by F. Heck on 2/19/41
Also 7/9/42
MEMORANDUM
IMMEDIATE ATTENTION

SURVEY DESCRIPTIVE REPORT
PHOTOSTAT OF  \[\text{No. T T6754}\]

received Jan. 14, 1941
registered Jan. 16, 1941
verified reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

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RETURN TO

\(\text{82} \quad \text{T. B. Reed}\)

\(\checkmark\)
REVIEW OF TOPOGRAPHIC SURVEY

REGISTRY NO. T-6754
FIELD NO. B-1940

Alaska, Glacier Bay, Vicinity of Drake Island

SURVEYED: Aug. - Sept. 1940
SCALE: 1:20,000

INSTRUCTIONS DATED: March 10, 1938 & April 19, 1939

Plane Table Survey
Aluminum Mounted

Chief of Party....................... B. H. Rigg
Surveyed by......................... B. H. Rigg
................................................... W. F. Deane
Inked by.............................. W. F. Deane
Reviewed by......................... R. W. Derkazarian
Inspected........................... R. H. Carstens
Date................................. October 26, 1973

1. Purpose

The purpose of this survey was to provide the shoreline for survey H-6458 (1939-40), Project HT-221. A later survey H-8817 (1964) utilizes the shoreline of Drake Island and a portion of the mainland not covered by subsequent surveys.

2. Junctions with Contemporary Surveys

The junction on the south with T-6679 (1939) is satisfactory. There are no contemporary topographic surveys on the north. However, photogrammetric survey T-12782 (1964-70) extends southward to lat. 58°38' along the mainland and an adequate junction occurs in this locality.

3. Comparison with Prior Surveys T-2852 (1907) 1:80,000

This small scale survey is quite generalized and affords no adequate basis for comparison. The present survey is adequate to supersede this prior survey in the common area.

4. Comparison with Chart 8202 (latest print date 9/11/71)

A. Topography

The charted topography originates largely with the present survey in the common area and requires no revisions.
2.

B. Magnetic Meridian

As a matter of record it is noted that the declination observation at station GEIKE 1939 differed about 2 with the comparable charted value for that period and at two other stations the difference was about 1.

5. Condition of Survey

A. The inking of the shoreline and other details is very good.

B. The Descriptive Report is clear and covers all matters of importance.

6. Compliance with Project Instructions

The survey adequately complies with the project instructions.

7. Additional Field Work Recommended

This is an excellent survey and no additional field work is recommended.

[Signatures]

Chief, Marine Chart Division

Associate Director
Office of Marine Surveys and Maps