DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
L. O. Colburn, Director

State: AK ALASKA

DESCRIPTIVE REPORT
Topographic Sheet No. T-6653

LOCALITY
NORTHWEST END SANAK ISLAND
SANAK HARBOR and VICINITY

19...38

CHIEF OF PARTY
Ray L. Schoppe

U. S. GOVERNMENT PRINTING OFFICE: 1938
Applied to chart 8860 S.M.A. 6/19/29

8941 2446 March 1940

5338 H.E. Stegman June 1942
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. "H" 1938

REGISTER NO. T-6653 TSC

State  ALASKA

General locality  Northwest End, Sanak Island

Locality  Sanak Harbor and Vicinity

Scale  1:10,000  Date of survey  July 1938

Vessel  U.S.C. & G.S. SHIP DISCOVERER

Chief of party  Ray L. Schoppe

Surveyed by  Ira T. Sanders

Inked by  Ira T. Sanders

Heights in feet above mean lower high water to ground  .

Form line interval .100 feet


Remarks:  Project H.T. 208
DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET FIELD NO. "H" 1938

REGISTER NO. T-6553

Scale 1: 10,000

NORTHWEST END, SANAK ISLAND

SANAK HARBOR and VICINITY

SOUTHWEST ALASKA

Ray L. Schoppe, CHIEF of PARTY

Season of 1938
DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET FIELD NO. "H" 1938

REGISTER NO. T-6653

NORTHWEST END, SANAK ISLAND

SANAK HARBOR and VICINITY

SOUTHWEST ALASKA

INSTRUCTIONS:

The work on this sheet was authorized by the Director's Instructions dated March 30, 1936, and Supplemental Instructions dated March 30, 1937.

LIMITS:

The shoreline surveyed on this sheet lies between North Latitudes 54° 29.28' and 54° 27.69' and West Longitudes 162° 46.45' and 162° 49.22'. The survey includes reefs, rocks and small islets off the northwest end of Sanak Island.

This sheet joins Sheet Register No. T-6652 at Signal RCT, and Sheet Register No. T-6654 at Signal PAL. The work on these sheets was done during the 1938 season. Formline junctions with sheets Register No. T-6652 (scale 1: 10,000) and Register No. T-6650 (scale 1: 20,000) were made as indicated by pencil lines, with appropriate notes, on the sheets involved.

CONTROL:

This survey was controlled by Triangulation Stations GRANITE, CROW, SANAK LIGHT, SANAK HARBOR BEACON, and PETROF, all of which were
established or recovered by parties operating from the Str. DISCOVERER in 1936.

The Greek Church at Sanak Village has been destroyed, therefore Station ACHERK GREEK CHURCH SPIRE 1901 no longer exists. A thorough search was made for Station ACHERK HILL 1901. No signs of the station were discovered.

The triangulation is based on the Unalaska Datum, field computations unadjusted.

SURVEY METHODS:

The work on this sheet was done by a party operating from the Launch HELIANTHUS.

Signals SON and PAL were located by graphic triangulation on Sheet Register No. T-6654 (scale 1: 20,000) and transferred to this sheet. From these two points other graphic control points were located, both for inland and offshore detail, as needed. A traverse was run between triangulation Station CROW and the marked topographic Station RUM, then continued as outlined in the report for Sheet T-6652, to Triangulation Station NAK.

The usual plane table methods were used for the location of detail and signals.

The trails indicated on the sheet were sketched. All lakes shown were rodded.

The low water line between signals PAL and HOT was sketched. The work along this stretch of shoreline was done during a period when the highest tide of the day came during working hours. This area was seen several times before and after the survey, at MLLW or minus tides and it is believed that the low water line as sketched very nearly represents the correct line. The water along this section is quite shoal.
Minor corrections to the low water line will no doubt be necessary after the hydrography along this section has been done.

A detached reef, shown in pencil on the sheet, was seen approximately 200 meters NNW of Signal Fat at the time the low water line was sketched. This reef should be definitely located by the Hydrographic Party. Lat. 54°41’’ Shoal area. Reef not located Long. 163°49’’ by hydro party. Inked as sketched.

The two submerged reefs northwest of Yukon Reef were located only approximately by readings on a telemeter rod held in a boat. Readings were taken from plane table set-up at Signal Pole. The details of these reefs should be charted by the Hydrographer when sounding is done in this vicinity. Yukon Reef was surveyed when the tide was about 1 to 2 feet above MLLW according to the tide table. The reef areas indicated were at that time, a solid mass of breakers, but no rocks were visible.

The sunken rock indicated in pencil 210 meters northwest of Sanak Light was transferred from Chart 884. Hydrography in Sanak Harbor has not been done. 25th of 1922 which reports rock covered 7 ft. at MLLW.

Form Lines:

Elevations for form lines were determined as follows: Where possible to do so, two or more cuts, with vertical angles resulting in elevations in close agreement were taken to required points. The mean of the values retained was used as the elevation of the point. Where intersections to required points were impracticable the distance was determined by stadia and the vertical angle measured with reversals of both the level and the telescope. However, no elevations of over 100 feet were determined by the latter method.

The heights of smaller and offshore rocks were determined as follows: Before beginning field work the telemeter rod was graduated on the backside in feet. The rodman was required to hold the rod on the high-
water mark and the elevation read in feet from the alidade telescope.

Rocks which appear on this sheet with the legend "Awash at HW" are bare 5 to 6 feet at MLLW. As the mean range of tide in this vicinity is 6 feet approximately, they are covered at extreme high tides.

The form line junction with Sheet Register No. T-6650 (1937) is shown along the solid pencil line as indicated. Survey No. T-6650 was done on a scale of 1: 20,000, and as the work on it covered the larger portion of the inland area of this sheet, a junction as shown was decided upon to avoid making the transfer to the larger scale.

COMPARISON WITH PREVIOUS SURVEYS:

The plane table survey, Register No. 2553, and the Hydrographic examination of Sanak Harbor, Register No. 2557, both of 1901 are the only previous surveys of this area. This survey agrees as to the main outline of the shore and the larger of the small islands west of Sanak Harbor. Yukon Reef agrees closely with 1901 position, but differs somewhat in detail. The rocks and small rocky islets southeastward from Yukon Reef agree with the 1901 survey as to number but differ considerably as to position. As the 1901 survey was of much smaller scale (1: 40,000) than the present survey, it is not thought necessary to enumerate all the differences.

The island which forms the western shore of Sanak Harbor is now joined to Sanak Island proper, except at unusually high stages of the tide. The narrow neck which joins them was seen awash once during the season.

No indications of the following charted rocks were seen at any time during the season:

(a) Sunken Rock (P.D) eastern central part of Sanak Harbor. Chart 8841. See page 3.

(b) Sunken Rock, Lat. 54° 30.2', Long. 162° 52.4', Chart 8860. (Not on latest print.)

(c) Sunken Rock, Lat. 54° 29.3', Long. 162° 53.05', Chart 8860. These rocks are from very approx. outside information. (Over)
The Mexican Revolution has not made any significant change in the economic or political situation of the country. The revolution has brought about a change in the government, but the economic conditions remain largely the same. The revolution has not had a major impact on the agricultural sector, and the government's efforts to modernize the economy have not been successful. The country's foreign debt has increased significantly, and the government has been unable to find a solution to this problem. The revolution has also led to an increase in violence and political instability, which has had a negative impact on the country's development.
However, a breaker was cut in on this survey at Latitude 54° 30.16' Longitude 162° 52.96'. The position as shown is the result of 3 alidade cuts giving a small triangle of error. During the working season numerous trips with the Launch HELIANTHUS were made between Yukon Reef and this breaker, and it was the only one seen in this vicinity.

The lake on the island west of Sanak Harbor is much smaller than shown on Chart 8841. The small lake shown 100 meters SSE of Sanak Light on Chart 8841 no longer exists. Nothing is left of the old wreck shown on the west side of Sanak Harbor, Chart 8841. The Greek Church at Sanak has been torn down.

**GENERAL DESCRIPTION:**

The area on this sheet to the westward of Sanak Harbor is very foul. The rocks and reefs are surrounded, and in many cases joined, by kelp. A detached kelp patch was seen midway between Point Petrof and Yukon Reef. This may mark a submerged reef, although no breakers were observed there. A clear channel for vessels of 8 foot draft or under lies just west of Point Petrof and just east of Signal SON. The Launch HELIANTHUS passed through the scattered kelp 250 meters southeast of Signal SON without difficulty.

That part of Sanak Island covered by this sheet is grass covered and dotted with numerous lakes. The land rises steeply from the high water line, the bluffs varying in elevation from 10 to 100 feet. The points and more exposed sections of shoreline are characterized by low rocky bluffs, usually black in color. Much of the shoreline is fringed with rocky ledges and detached rocks. Except for the shoal area southward of Sanak Harbor and in the head of Sanak Harbor, kelp flourishes adjacent to the shoreline.

The large island which forms the western shore of Sanak Harbor is grass covered. The small island marked by Signal RIK has a fringe of
grass along the northeastern edge of the larger section. Rabbit Island is grassy, but none of the small ones attached to it at low water are, except for a few tufts at elevation 25. The small island marked by Signal JOY is grassy east of the narrowest part. The island marked by Signal PETROF is grass covered.

The small islet north of Point Petrof is bare as are those of Yukon Reef and those west of Longitude 162° 50' between parallels 54° 28' and 54° 29' north Latitude.

Except where bluffs are indicated on the sheet, the beach slopes are grass covered to the storm high water line. There are no trees, except a few small spruce trees in Cemetery at Sanak.

The village of Sanak, on the east side of Sanak Harbor consists of nine dwelling houses, a school, a Post Office, a small wharf and shed, and various small shacks. During the summer months the village is watched by one old man while the other residents are away at fishing camps variously located about Sanak Island. The mail boat from Seward calls twice monthly on the way to and from the westward. The official name of the Post Office is SANAK, ALASKA.

Fresh water, from the stream which flows through the village, is available, but its purity is questionable. The residents use water from seepage wells, but due to a lack of sanitary measures, the use of the well water is not recommended.

The Lighthouse Service maintains a permanent fixed white light and a beacon in Sanak Harbor. According to the U. S. Coast Pilot, Alaska, part II, page 261, and the Pacific Coast Light List, this beacon is 104 feet above high water. This beacon is 30 feet high, and a careful determination of its elevation shows it to be only 182 feet above Mean High Water. The beacon is not over the highest point, but about 7 meters north of it.
Murphys. Crack, a small bight at the eastern edge of the sheet, is no longer used by fishermen. The old saltery has rotted away.

**DISTORTION:**

No distortion of this sheet was noted at any time.

**MAGNETIC OBSERVATIONS:**

The Magnetic Meridian was determined with a declinatoire at Station PETROF, July 25, 1938 at 11:30 A.M. The declination was found at Normal that time to be $16^\circ 50'$ East.

The declinatoire was standardized at the Green Lake Magnetic Station, Seattle, Washington, before beginning the season.

**GEOGRAPHIC NAMES:**

SANAK ISLAND, SANAK HARBOR, SANAK (Village) and POINT PETROF are names shown on Coast Survey Charts 8841 and 8860. SANAK (Village) and SANAK ISLAND are used locally. But it was found that SANAK HARBOR, COMPANY HARBOR and ACHERK HARBOR were used indiscriminately for the Harbor.

MURPHYS CRACK is the locally accepted name for the small cove at the eastern edge of this sheet. (See U. S. Coast Pilot, Alaska, part II, page 262.)

**NEW NAMES:**

The reef at Latitude $54^\circ 30'$ and Longitude $162^\circ 51.6'$ is known locally as YUKON REEF since the S.S. YUKON of the Pacific Alaska Navigation Company was lost there June 23, 1913.

The small island at Latitude $54^\circ 28.8'$, Longitude $162^\circ 50'$ is known locally as RABBIT ISLAND. It was at one time stocked with rabbits, although there are none on it now.

The residents of SANAK call Point Petrof McLOUGHLINS POINT and sometimes refer to Yukon Reef as McLOUGHLINS ROCKS. Many years ago a man by that name, now dead, lived at Point Petrof. It is believed though,
that YUKON REEF is the locally preferred name.

Respectfully submitted,

Ira T. Sanders,
Jr. H. & G. Engineer,
Ship DISCOVERER.

APPROVED:

Ray L. Schoppe,
H. & G. Engineer,
Chief of Party.

FORWARDED:

G. C. Jones,
H. & G. Engineer,
Commanding DISCOVERER.
STATISTICS

to accompany

TOPOGRAPHIC SHEET FIELD NO. "H" 1938

REGISTER NO. T-6653

Number of Statute miles of shoreline - - - - - - - - - - - - -14

Area surveyed in Square Statute miles - - - - - - - - - - - - - 9

Number of elevations determined:

(a) Inland, for form lines - - - - - - - - - - - - - - - -35

(b) Offshore islets and rocks - - - - - - - - - - - - - - - -57
MAGNETIC NOTE

The magnetic declination at the Green Lake Magnetic Station, Seattle, Washington, was observed with the Declinatoire used on this sheet, on April 8, 1938. The index error was found to be zero.

This error was not checked in the Fall, as observations at Green Lake in October by Lieutenant Pfau indicated local attraction at that Station. The Declinatoire used on this sheet is part of the equipment for alidade No. 187. This alidade was returned to the Washington Office on November 4, 1938, which was prior to the establishment of the new Magnetic Station at Lincoln Park.
**LANDMARKS FOR CHARTS**

Seattle, Washington  January 23, 1939

I recommend that the following objects which have been inspected from seaward to determine their value as landmarks, be the charts indicated.

The positions given have been checked after listing.

<table>
<thead>
<tr>
<th>NAME AND DESCRIPTION</th>
<th>LATITUDE</th>
<th>LONGITUDE</th>
<th>DATUM</th>
<th>METHOD OF LOCATION</th>
<th>DATE OF LOCATION</th>
<th>CHARTS AFFECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acherk Greek Church Spire</td>
<td>54 28</td>
<td>1704.5</td>
<td>162 48</td>
<td>Unalas-Triangulation</td>
<td>1901</td>
<td>8041</td>
</tr>
</tbody>
</table>

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS." The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

U.S. GOVERNMENT PRINTING OFFICE
I recommend that the following objects which have (unmarked) been inspected from seaward to determine their value as landmarks, be charted on the charts indicated.

The positions given have been checked after listing.

<table>
<thead>
<tr>
<th>NAME AND DESCRIPTION</th>
<th>LATITUDE</th>
<th>LONGITUDE</th>
<th>METHOD OF LOCATION</th>
<th>DATE OF LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanak Harbor Beacon</td>
<td>54° 29'</td>
<td>162° 49'</td>
<td>Unalaska Triangulation</td>
<td>1936</td>
</tr>
<tr>
<td>Sanak Light</td>
<td>54° 29'</td>
<td>162° 48'</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>Sanak School House,</td>
<td></td>
<td></td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>(Signal HOOL)</td>
<td>54° 28'</td>
<td>162° 48'</td>
<td>Topography</td>
<td>1938</td>
</tr>
</tbody>
</table>

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS." The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.
<table>
<thead>
<tr>
<th>Remarks</th>
<th>Decisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>540625 USCB</td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>540625</td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6 Do not ink pending USCB decision</td>
<td>545625</td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8 Local usage.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td></td>
</tr>
<tr>
<td>Name on Survey</td>
<td>A</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---</td>
</tr>
<tr>
<td>Sanak Island</td>
<td></td>
</tr>
<tr>
<td>Pacific Ocean</td>
<td></td>
</tr>
<tr>
<td>Murphys Crack</td>
<td></td>
</tr>
<tr>
<td>Point Petrof</td>
<td></td>
</tr>
<tr>
<td>Sanak Harbor</td>
<td></td>
</tr>
<tr>
<td>Yukon Reef (vill &amp; p.o.)</td>
<td></td>
</tr>
<tr>
<td>Sanak</td>
<td></td>
</tr>
<tr>
<td>Rabbit Island</td>
<td></td>
</tr>
</tbody>
</table>

Names underlined in red approved by L. Heel on 6/24/39
MEMORANDUM
IMMEDIATE ATTENTION

SURVEY DESCRIPTIVE REPORT
No. T -6653

received May 3, 1939
registered June 17, 1939
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. The complete original records are available if desired. 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.

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>Initial</th>
<th>Attention called to</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>63</td>
<td></td>
<td></td>
</tr>
<tr>
<td>82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>88</td>
<td></td>
<td></td>
</tr>
<tr>
<td>90</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

RETURN TO
82 T. B. Reed

[Signature]
DIVISION OF CHARTS

Section of Field Records

REVIEW OF TOPOGRAPHIC SURVEY NO. 6653 (1938) FIELD NO. H
S. W. Alaska; Northwest End Sanak Island;
Sanak Harbor and Vicinity
Surveyed July, 1938
Scale 1:10,000
Instructions dated March 30, 1936; March 30, 1937 (DISCOVERER)

Plane Table Survey

Aluminum Mounted

Chief of Party - R. L. Schoppe.
Surveyed and inked by - I. T. Sanders.
Reviewed by - J. A. McCormick, December 17, 1940.
Inspected by - H. R. Edmonston.

1. Junctions with Contemporary Surveys.

Satisfactory junctions were effected with T-6652 (1938) on the east, T-6650 (1937-38) on the southeast and T-6654 (1938) on the south.

2. Comparison with Prior Surveys.

T-2553 (1901), 1:40,000.

The old survey shows evidence of considerable sketching and, in addition, is on a scale which precludes the close detail shown on the present survey. Differences in position and shape of offshore islets are probably due to confusing of cuts on T-2553. The descriptive report, pages 4 and 5, lists principal differences. The present survey satisfactorily covers the area and supersedes T-2553.

3. Comparison with Chart 8641 (New Print of September 4, 1940)
Chart 8660 (New Print of November 25, 1940)

a. Topography.

The present survey already has been applied to the latest prints. In this connection, it should be noted that two groups of sunken rocks in approximate lat. 54°30.3', long. 162°51.8' on the present survey have been revised by the reviewer to show as rocks awash in accordance with information on the boat sheet of H-6482 (1938-39). The charts should be changed to correspond.

b. Navigational Aids.

Charted positions of fixed aids in Sanak Harbor are identical with those on the survey.
4. **Condition of Survey.**
   Satisfactory.

5. **Compliance with Instructions for the Project.**
   Satisfactory.

6. **Additional Field Work Recommended.**
   None

7. **Superseded Surveys.**
   T-2553 in part.

Examined and approved:

T. B. Reed
Chief, Section of Field Records.

J. S. Booth
Chief, Division of Charts.

Raymond A. Lumen
Chief, Section of Topography.

E. H. Hude
Chief, Division of Coastal Surveys.