DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: A. E. Alaska

LOCALITY:
West Coast Bases
of Wales Island
St. Nicholas Canal

CHIEF OF PARTY:
J. J. Mahir
Descriptive Report to Accompany Topographic Sheet No. 3914
of Saint Nicholas Canal.

This topographic survey of St. Nicholas Canal was made following instructions from the Director, U.S.C.G. Survey to T.J. Maher, H.G. Engineer dated Feb. 12, 1921.

St. Nicholas Canal is a narrow channel in S.E. Alaska, west of Prince of Wales Island, between No Name Island and No Name Island. At the northeast end it borders the Gulf of Esquibel and at the southwest end, Sea Otter Harbor.

General Description of Shore-line

Approaching St. Nicholas Canal from Sea Otter Harbor, the hills on the west end of No Name Island with elevations of 850' and 710' appear as rounding gradually sloping hills and are not particularly conspicuous. The two islands upon which are Tip and Hen are located are plainly visible features, when in the proximity of the rocks at Pt. San Francisco is very prominent, appearing to reach well out into the Canal and to be low in elevation. Proceeding further up the Canal the hills extending from Pt. Sta. Gertrudis south to the hill with an elevation of 920', appear as one range and sloping towards Pt. Sta. Gertrudis. The island upon which is located is not prominent unless viewed from near the east shore of the Canal.

Approaching from the Gulf of Esquibel, Pt. San Francisco is prominent; the islands at a Tip and Hen may be seen against the east shore-line of the Canal and the peak of 1618' elevation is very prominent, appearing rather sharp at the top with a steep slope to the northeast and a gradual slope to the southwest. The other two hills to the west of this peak appear as rounding hills. The hills and mountains shown on this topographic sheet are dark green in appearance with very little ledge exposed.

The shore-line above the high water mark is almost extensively rocky ledge with scattered streches of small boulders and coarse gravel and several sandy beaches of small extent. Where gravel, small boulders or rocky ledge are shown upon the sheet below the H.W. line the shore-line above the H.W. line is, in nearly all places of the same character. Places where no conventional sign is shown below the H.W. line have an abrupt shore-line of rocky ledge.

At a Sand, on the west side of the Canal, a sandy point extends out. Just north of the Dog on the west shore of the Canal, and near a Tim and Bare on the east shore are gravel and rock beaches which make well out at low water. On the west shore between Pik and Small the shore-line above the H.W. line is composed of reddish and gray, very irregular ledge which extends well back in many places. In the bights in this locality are gravel beaches. On the east shore from Pik to Nek broken rocky ledge extends well back from the H.W. line in many places.

Dangers and Islands.

The point at the southwest end of No Name Island between Nek
and α Pog is foul for approximately 100m from the shore-line. Rocky reefs extend out along the point and in heavy weather breakers may be seen 100m and possibly 150m from the H.W.line. There is growing kelp in the foul area. This kelp extends north to the rock 270m, 300° from α Pit. This rock bears at 1/2 tide and appears to be the end of a reef running out from the shore. About 20m. inshore from this rock is another which does not cover at high water. This rock is small and not readily seen. It is awash at higher high water.

Near Α Isle are two rocks approximately six meters wide, each, Δ Isle is located on the N'ly of the two. They are approximately two feet above H.W. in elevation and are flat.

55o. 156° from α Zoe is a single rock which bares at 1/2 tide. This appears to be a pinnacle rock. Approximately half way between this rock and the shore-line is growing kelp, 180m. was located on the center of which a high spot was located.

The island upon which o Tip is located has no particular characteristics. It's shore-line is abrupt. There is growing kelp about 60m. off the east side.

66o. 71° from Ω Tip is a ledge which is awash at high water. It is about 10m. in length.

The three islands west of Δ Rag form one island at low water. The largest of these islands is the highest in St. Nicholas Canal. It's southwestern side is a sheer rock bluff and is not conspicuous as the bluff is dark in color and irregular in structure. East of this largest island are four rocks detached at high water.

The island upon which o Bo is located has an abrupt rock shore-line. There is a rocky islet west of it which is detached at high water. About 140m. west of this islet is a rocky ledge which bares at 1/2 tide. It is approximately 50m. long and has growing kelp just west of it.

The island upon which α Flat is located has an abrupt shore-line except at it's southwest extremity where ledges made out into the water. There are also several detached rocks here which do not cover. Northwest of this island 110m. is a rock which bares at 1/2 tide. East of this island is another similar in features, but smaller. It also has ledges making out at it's southwest end. Between and north of these two islands is a rock which bares at 3/4 tide. There is growing kelp around it. 170m. 285° from α Lop is a rock which bares at 3/4 tide.

Point San Francisco is a sandy point making out about 100m. at low water. Above the high water mark is sand and grass.

About 220m. north of α Bec is a long flat rock ledge which bares at low water. It is approximately 60m. long and 10m. wide. Rocky ledges make out to the southwest of α Bec and 110m. 215° from this station are two rocks which bares at 3/4 tide. 210m. 208° from α Long is a single rock which bares at low water. This rock is small and sharp. Another rock is located 420m. 250° from α Long. It has growing kelp near it. This ledge is about 80m. long.

The islet upon which α Long is located is rocky and has no trees. There are rocky shelves at it's southwest end.

The island upon which Α Bend is located has no characteristic features. There are two bights on it's east shore. On the south and west sides of the island are ledges making out at the points. 210m. 197° from Α Bend is a small rocky islet about 6' above H.W. 95m. north of this is a rock which bares at 1/2 tide. There is growing kelp outside of this rock.
159m. north of A Bend is a group of four rocks which bare at 3/4 tide. They are the tops of a long ledge which comes to the surface there.

The island upon which O's Gow and Pine are located is abrupt but with a reef running out from it's southwest extremity for approximately 10m. 430m. 38° from O Gow is an off-lying rock which bares at 1/2 tide. It is 15m. long in a north and south direction. There is growing kelp to the northwest and southwest.

105m. 72° from O Leb is a rock which bares at 1/2 tide. It is part of a ledge running inshore to another rock which also bares at 1/2 tide.

Landmarks.

There are few land marks in St. Nicholas Canal. A peak with an elevation of 1688' on the southwest part of No Name Island is prominent when approaching from the Gulf of Esquibel. The top is covered with grass and bushes and is moderately sharp with a long ridge sloping to the southwest.

There is a dark rock bluff about 100m. high on the west side of the island upon which O Hen is located. This can hardly be seen a mile distant.

Pt. San Francisco is made prominent by light colored sand above the H.W. line when within one mile of the point. The point is low and slopes gradually to the water's edge.

Anchorages.

On the east side of the Canal ESE of Pt. San Francisco and in the locality of O Pid, a good anchorage for small vessels is afforded. Anchorage can be made in from 8 to 15 fms. of water, sand and gravel bottom and plenty of swinging room. However, an anchorage should not be made too far in the night as a gravel beach makes well out.

Kelly's Cove affords excellent protection in any weather except north to northwest, blowing down the Canal. The cove is hardly large enough for a small boat anchorage and the bottom is rocky. Fishing vessels, however, use the dock extensively, mooring there during SE blows. The dock is fast falling to pieces.

On the east side of the Canal SSE of Pt. San Francisco and in the locality of O Bare a good anchorage for small vessels is afforded in about 10 fms. of water and sand and gravel bottom. There is plenty of swinging room but a gravel beach at the head of the night makes well out.

Survey Methods.

The topography was done by traversing between triangulation stations previously established and plotted on the sheet. Positions were located by three point fix but twice. When the topography was in progress the sheet has expanded about 7 meters per nautical mile in a north and south direction and about half that in an east and west direction.

Traverses run, their closures and adjustments were as follows:

1. From A Next to A Bight closure 0m.
2. From A Bight to AKelly-closure 7m.
3. From A Kelly to A Small - closure 7 m. in error NE of A Small
   Adjusted proportionally from A Small to A Kelly.
4. From A Platt to A Gert - closure 2m.
5. From A Platt to A Bend - closure 2m. S of A Bend - no adjustment.
6. From A Bend to A Rag - closure 5m. in error NE of A Rag.
   Adjusted proportionally from A Rag to O Long.
7. From A Rag to A Moss - closure 6m. in error west of A Moss.
   Adjusted proportionally from A Moss to O Bo.
8. From A Moss to A Far - closure 10m. in error NW of A Far.
   Adjusted proportionally from A Far to A Moss.
9. From A Far to A Cone - closure 0m.

The two rocky ledges located 415m, 250° from O Long and 212m,
307° from O Long were plotted from fixes taken upon them by the
hydrographic party.

The elevations of all peaks which are shown on previous topo-
graphic sheets were redetermined. The elevation of the valley between
peaks with elevations of 1618' and 1386' at the SE border of this
sheet was estimated 100' lower than on the adjoining sheet of Port
Real Marina. No cuts could be taken to a point in this valley.

Note: All bearings as given in this descriptive report are
true with North as the initial.

[Signature]
Aid, C. & G.S.
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| Pog | 55 26 | 776.6 | 173.8 | 133 36 | w.w.
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| Bite | 55 26 | 1813.0 | 801.6 | 133 37 | w.w.
| Mob | 55 26 | 42.6 | 112.8 | 133 37 | w.w.
| Spite | 55 26 | 425.6 | 941.8 | 133 36 | dead tree
| Hag | 55 26 | 420.0 | 641.5 | 133 36 | large boulder
| Men | 55 26 | 431.0 | 612.5 | 133 36 | w.w.
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| Pog | 55 26 | 133 37 | w.w.
| Nek | 55 26 | 133 37 | w.w.
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Scaled from topo sheet by [Signature]

Checked by [Signature]
DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
WASHINGTON

SECTION OF FIELD RECORDS

Report on Topographic Sheet No. 3914.
Surveyed in 1921.
Instructions dated Feb. 12, 1921.

Chief of Party, T. J. Maher.
Surveyed by L. C. Wilder.
Inked by L. C. Wilder.

1. The records conform to the requirements of the General Instructions the descriptive report being unusually complete.

2. The plan and character of the survey fulfill the requirements of the General Instructions and the plan and extent of the survey satisfy the specific instructions.

3. The junctions with adjacent sheets are satisfactory.

4. The field drafting was completed to the extent prescribed in the General Instructions.

5. No further surveying is required within the limits of the sheet. It should be noted, however, that there remains unsurveyed a deficient area of about 2 square miles in the center of No Name (Lulu) Island.

6. Additional names of prominent geographic features might have been named by the field party.

7. The character of the survey of shoreline details is good. That of the relief and interior details may be considered a reconnaissance sufficient for present needs.

The field drafting is good.

8. Reviewed by E. F. Ellis, December, 1922.
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

The finished Topographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 3914

State S., E., Alaska

General locality West Coast Prince of Wales Island

Locality Saint Nicholas Canal

Chief of party T. J. Maher

Surveyed by L. C. Wilder

Date of survey August 1921

Scale 1:10000

Heights in feet above Mean Sea Level

Contour interval 100 feet

Inked by L. C. Wilder Lettered by L. C. Wilder

Records accompanying sheet (check those forwarded): Photographs, Descriptive report, Horizontal angle books, Field computations, Data from other sources affecting sheet Plane-table Positions.

Remarks: