

4330

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

State: S. E. Alaska

11-5813

DESCRIPTIVE REPORT.

I

Topographic

Sheet No.

4330

LOCALITY:

Kuiu and Kupreanof Islands

S. End of Keku Strait

1927

CHIEF OF PARTY:

H. A. Cotton

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DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET NO. 4330

(Field Letter "I")

KEKU STRAIT

SOUTH END

SOUTH EAST ALASKA

Sept. - Oct., 1927.

Scale 1:20,000

AUTHORITY:

The topography was executed in accordance with instructions of Feb. 18, 1927 to the Commanding Officer of the Steamer EXPLORER.

LIMITS:

The survey extends from about two miles east of Point Barrie to Point Barrie, thence north to the entrance to Rocky Pass, and thence west to station Δ STOP. Strait Islands on the south, and Sumner and Conclusion Islands on the west are included in this survey.

CONTROL:

Control for this survey was furnished by a system of triangulation based on recovered stations Δ REEF and Δ SUMNER, and established by the party during the season. Station Δ "BARRIE 2" was also recovered.

ELEVATIONS:

Elevations are in feet above high water and are taken to the tops of the trees. Elevations of two high water rocks, one $\frac{3}{4}$ mile N-W of Skiff Island and one about $\frac{1}{2}$ mile S-W of Skiff Island are in feet above High water and are indicated on the sheet by red numerals.

METHODS:

The plane table and stadia method was used for this survey. The sextant was used for location of part of the low water line.

Control for the planetable was obtained from triangulation stations, and from stations located by planetable triangulation and by planetable traverses.

East of Point Barrie the work was done as follows:

Starting at Δ "BARRIE 2" a traverse was run inshore to \odot SIP and all signals from \odot WEN to \odot PILE located by intersections. The graphic location of these signals was used for control up to Δ END. Additional

checks by intersections were later obtained on O PILE and O FIN.

Survey of the shore line from A ISA to A STOP was made ahead of the triangulation, stations A STOP and A PORT not having been established at the time. Signals were built along the shore and located by intersections as follows:

Cuts from A NAR

Cuts from O SIM (located by three point fix on A NAR, A MIKE and A OFF)

Cuts from O TRY (located by three point fix on A ISA, A MIKE, and A OFF)

In this manner good intersections from three stations were obtained on signals from A ISA to O ROK. Further intersections were obtained from O ROK, locating signals up to O STOP and also signals O TOP, O GUS, and O DAM. However, when signal STOP was later located by triangulation it showed the plane table position of that signal to be in error about twenty meters. Re-location of O TOP from A PORT showed the same error as at signal STOP. Cuts from A STOP and A PORT showed an error approximately equal to the error in O STOP, in signals O GUS and O DAM, and in signals along the shore from O STOP back to O ROK. Similar cuts showed this error decreasing in the signals from O ROK towards A ISA.

The probable cause of error in the graphic scheme was the distortion of the sheet which was about 12 meters short in one minute of latitude at the time.

Adjustment was made as follows:

From O ROK to O STOP the shore line was shifted onto the new positions of the signals (the error being the same over this section). From O SON to O ROK the error was taken up proportionally.

Summer Islands were surveyed by a traverse run by Lieut. (J. G.)

P. R. Hathorne on a separate sheet. This work was later traced and drafted

onto this sheet.

When Conclusion Island was surveyed by traverse the sheet was short about $2/3$ of one per cent in latitude. A minus correction of $2/3$ of one per cent was applied to the north and south components of the traverse lines to compensate the error in the sheet.

The following is a list of traverses run:

LOCATION	DISTANCE Stat. Mi.	CLOSURE in meters	
1. Δ FIR to \odot MID	2.1	12	adjusted.
2. \odot DAM to Δ OFF (around west side of id.) Conclusion Island	1.6	2	
3. Δ EX to Δ SEE	1.7	7	adjusted.
4. Δ SEE to Δ ALL	2.1		
5. Δ EX to Δ CLEW	1.4	12(in dist.)	adjusted.
6. Δ CLEW to Δ ALL	2.2	10(in azimuth)	adjusted.
<u>Summer Island</u>			
7. Δ REEF to Δ THAT	2.2	4	
8. Δ REEF to \odot STO)Closed	1.8	2	
Δ THAT to \odot STO)at \odot STO	1.9	6	adjusted.
<u>Strait Islands</u>			
9. Δ CON to Δ LIT	1.3		
Δ LIT to Δ CON	1.2	3	
	19.5	58	

DESCRIPTION OF SHORE LINE:

The shore line is generally very broken with many off-lying rocks. The beaches are low with a gradual slope, and are composed largely of rock ledge and loose rocks and boulders with a few stretches of coarse sand and gravel as indicated on the sheet. Trees make down nearly to high water.

Around the east and north sides of the small bay north of Skiff Island there are extensive tide flats. The country is comparatively level for some distance back from the beach in this section.

On the south west side of Conclusion Island the rise of the hills from the beach is very steep, in some cases almost vertical, and deep water makes close inshore.

On Strait Island the beach is composed largely of a rugged lava rock and has a steep slope.

LOW WATER LINE:

Those low water areas composed of sand or loose rock and gravel are indicated on this sheet by the corresponding symbols. The areas composed of rock ledge or solid rock are marked either by a plain black dotted line or by the symbol for rock ledge. The dotted line was substituted for the symbol for rock ledge in places where the symbol would tend to obscure high water rocks or would detract from the distinctiveness of the high water line. In all places where a dotted line is used it is to be taken as indicating rock ledge or solid rock.

GENERAL APPEARANCE OF THE COUNTRY:

The country back from the beach is generally broken and heavily wooded. Crests of the hills are wooded except for the cliff shown in the eastern and central section of the sheet. This cliff, at the crest of the hill, has a reddish-brown color and is the most prominent object in the immediate vicinity.

The entrance to Rocky Pass is marked by the range of hills immediately to the west and by comparatively low, flat country on its eastern side.

NOTES FOR NAVIGATION:

In approaching the entrance to Rocky Pass particular attention should be given the rocks on the east side of Monte Carlo Island and about two miles south of the entrance. These two rocks, nearly on an east and west line, restrict the width of the passage to about one half a mile at this point. The rocks are marked by kelp. After passing north of Monte Carlo Island care should be taken to hold well off the rocks which make south from the east side of the entrance. Most of these rocks are covered at high water and the appearance is deceiving at that stage of the tide.

The best anchorage for small boats is inside of the pass, about two miles north of the entrance. See sheet "J".

LOCAL NAMES:

The names Monte Carlo[✓], Skiff Island[✓] and Meadow Island[✓] are local names used by inhabitants in the vicinity. Local usage is to apply the name "Keku Straits" to the body of water extending from Pt. Barrie and Sumner Island on the south to Pt. Macartney and Keku Islet on the north, and the name "Rocky Pass" to the narrow passage extending from a point about two 56°33' miles north of Monte Carlo Island on the south to Pt. Camden on the north.

STRAIT ISLAND REEF:

No Hydrography was done around the south shore of Strait Islands. Rocks shown were located by plane table intersections. The limits of the kelp which are thought to mark the extent of the reef were located by sextant fixes. The rock marked "position doubtful" was located by only one plane table cut, but is within the limits of the kelp and probably within a few meters of the position shown on the sheet.

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STATISTICS

Statute miles shore line--high water	83.1
Statute miles shore line--low water	40.5
Area square statute miles	34.0
Number of elevations	80
Number of recoverable stations, triangulation	19
topographic	8
Positions occupied with planetable	182

Examined, approved & forwarded.

Respectfully submitted.

Harold A. Cotton

Harold A. Cotton,
Commanding Officer,
U.S.C. & G.S.S. EXPLORER.

B. G. Jones

B. G. Jones,
Jr. H. & G. E.,
C. & G. Survey.

Inspected and found adequate, except that the shoreline differs from that on T. 4331 in vicinity of Δ Nar and there are 15 errors in the formlines.

E. P. Ellis

May 21, 1928

10-McC

May 28, 1929.

~~Return to M.T. Div. for filing~~

To: Commanding Officer,
U. S. C. & G. S. S. EXPLORER,
202 Burke Building,
Seattle, Washington.

Through: Inspector, Seattle Field Station.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Topographic sheets 4330 and 4331.

Under separate cover, there are forwarded photostats of topographic sheets 4330 and 4331.

The shape of the islet on which triangulation station Nar is located as shown on T 4330 differs considerably from that shown on T 4331. Similarly, the details in the vicinity of triangulation station Isa do not agree. In addition T 4331 shows a small indentation directly east of triangulation station Nar and there is a question whether the much larger indentation on T 4330 is the same one or whether there are two such indentations.

On T 4330 a number of errors in form lines are indicated. From the information on hand, it is impossible to determine whether the form lines or the elevations are in error.

There is also a question as to the extent of the wooded area on Kupreanof Island, particularly in the area where form lines are shown. From the location of the notes, it might be deduced that only the valleys are wooded.

You will please examine these sheets and furnish in the form of a supplemental descriptive report for each sheet such information as may be available that will help in adjusting these discrepancies.

These discrepancies should be brought to the attention of the members of your party, and measures taken to avoid similar errors in the future.

(Signed) R. L. Farris

Acting Director.

POST-OFFICE ADDRESS: 202 Burke Building, Seattle, Washington.

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

U.S.C. & G.S.S. EXPLORER.

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AUG 18 9 09 AM '28

7 August 1928.

To: Director, U.S. Coast & Geodetic Survey,
Washington, D. C.

From: Commanding Officer, U.S.C. & G.S.S. EXPLORER,
Sitka, Alaska.

Subject: Supplemental Descriptive Reports - Keku Strait.

There is transmitted herewith the Supplemental Descriptive Reports for Topographic Sheets 4330 and 4331 as requested in your letter of May 29th. *28th*

2. The discrepancies have been thoroughly investigated by consulting both Lieut. Hathorne and Lieut. Jones. The information from Lieut. Hathorne had to be obtained by corresponding with him at his home in Woolwich, Maine. This correspondence has taken some time and explains the unusual delay in replying to your letter.

3. It is regretted that such discrepancies occurred and proper measures will be taken to avoid similar errors in the future.

4. The following items are enclosed:

- (a) Supplemental Descriptive Report for Topographic Sheet 4330 and 4331.
- (b) Tracing of junction of above sheets.

5. Transmitted under separate cover:

- (a) Bromide of Topographic Sheet 4330
- (b) Photostat of Section of Topographic Sheet 4331.

Harold A. Cotton
Harold A. Cotton,
Commanding Officer,
U.S.C. & G.S.S. EXPLORER.

Forwarded
For steady
Inspector.

SUPPLEMENTAL DESCRIPTIVE REPORT

to accompany

Topographic Sheets 4330 - 4331

The following information is furnished in reply to Director's letter of May 28, 1928 with reference to discrepancies noted on Topographic Sheets Nos. 4330 and 4331.

This information is being furnished after a thorough discussion of details with both Lieut. (j.g.) P. R. Hathorne, topographer for sheet 4331 and Lieut. (j.g.) B. G. Jones, topographer for sheet 4330.

VICINITY OF TRIANGULATION STATION "ISA"

There is really no discrepancy at this point. An apparent discrepancy was caused by each topographer extending topographic symbols somewhat too far beyond the definite end of his work. The actual condition is clearly seen on the bromide which is being returned.

*Photostat
of T 4331
ans.*

VICINITY OF TRIANGULATION STATION "NAR"

Lieut. Hathorne executed the detailed topography about the small island on which triangulation station NAR is located and his work should be accepted as correct. The actual junction of the topographic sheets is really on the shore line to the eastward of this island. Both indentations referred to in the Director's letter of May 28 actually exist. The smaller (Northern) indentation was rodded in by Lieut. Hathorne while the larger (Southern) indentation was rodded in by Lieut. Jones. Between the two indentations there is a straight shoreline as is shown on the enclosed tracing. This short straight stretch of shore line forms the junction between the two sheets.

FORM LINES - SHEET 4330

The 900 foot form line toward the north end of Conclusion Island is somewhat in error; it should of course run just above the 898 foot elevation. This has been corrected on the bromide being returned.

The other form lines that appear to be in error are really intermediate form lines on which it was neglected to show the elevations. The elevations of all such intermediate form lines have been shown in red ink on the sheet being returned. The correct form of the summits is much better shown by the use of such inter-

*This is
contrary
to par 13
of genl inst.*

All intermediate form lines should be removed from topo sheet. Done

SEP 5, 1928

mediate form lines . At the time of originally submitting this sheet the desirability of showing these intermediate form lines had been discussed and it had been decided to put them on the sheet with elevations but the placing of the elevations was neglected.

WOODED AREAS

This is really covered by the last paragraph (General appearances of the country) page 4 of the 'original descriptive report for sheet 4330. The whole area is wooded with the exception of the cliff at the crest of the hill (elevation 1780) in Latitude 56 30' Longitude 133 37', which is bare and of a reddish brown color. This bare area is indicated with hatchures on the topographic sheet.

Respectfully submitted,

Harold A. Cotton,
Commanding Officer,
U.S.C. & G.S.S. EXPLORER.

The following is a list of planetable positions marked for recovery for hydrographic use in the near future. The stations were marked with the idea of recovering them the following season and will probably not be recoverable over any long period of time. In recovering the stations a copy of the topographic sheet should be used and the following brief descriptions are written to supplement the use of a map.

CONCLUSION ISLAND

Starting at \odot YET and going north along the west side of the island.

NOTE: Fox Farm Signs mentioned in these descriptions are all of about 8" x 30" board--lettered "FOX FARM", in black on a white back ground.

NAME	DESCRIPTION
"YET"	"Fox Farm Sign" nailed to a small spruce which stands on a small, rocky point. Spruce is blazed just under the sign.
"SNO"	Fox Farm Sign nailed to a small spruce which is blazed just under the sign.
"MAY"	Nail set with cement in hole in rock ledge on a small, rocky point. Station set so as to see station "YET".
"DRY"	Fox Farm sign nailed to a tree which is blazed just under the sign.
"NO"	Same as "DRY".
"TUT"	Nail set with cement in hole in rock of the face of the cliff and about 5 ft. above high water. Fox farm sign stands about 10 M. S-E of station.
"ROK"	The top of a large boulder about 115 meters S-E of Δ ALL. Top of boulder shows just off shore line at H. W. It is inside of L. W. and the most prominent rock at that point.
"STEEP"	Nail set with cement in crevice in the rock. Station is just above ordinary H. W. and is probably covered at extreme tides.

NAME	DESCRIPTION
"BOX"	Nail set with cement in small niche in cliff just above H. W. Branches of trees overhang at about 5 feet above H. W.
"LOG"	Nail set with cement in top of a rock which stands a little above H. W. and is about 3 ft. higher than the surrounding ledge.
"MAX"	Fox farm sign nailed to large spruce which is blazed just under the sign.
"NIB"	Nail set with cement in top of a rock knoll on the small, rocky point.
"WA"	Window in center of front of a small shack.
"SI"	Fox farm sign nailed to upright fastened to trunk of a large downfall spruce.
"BAK"	Fox Farm sign nailed to trunk of a small spruce which is blazed just under the sign.
"CRO"	Fox farm sign nailed close to ground to trunk of a small tree which stands on a rock ledge about 10 ft. above H. W.
"TY"	Nail set with cement in rock ledge just above H. W. and under the high bank at this point. Position can be found as the only possible planetable set up at this point.
"SON"	Fox farm sign nailed to a tree.
"AM"	Door in center of front of the most northerly of the group of houses in the cove.
"SO"	Post standing on rock point on north side of entrance to the cove. Probably used as a lantern hanger.
"DO"	Nail set with cement in rock.

SUMNER ISLAND
(by P. R. Hathorne)

"DOR"	Is marked by some small stones a few inches in diameter cemented together on top of a rough honeycombed point of ledge.
"GILL"	Is marked the same way on a kind of shelf about half way up the face of a low cliff.

NAME	DESCRIPTION
"NO"	Is marked by small cemented stones on the face of a steep ledge just east of a small indentation.
"KEI"	Is marked by small cemented stones on top of an irregular outcrop of ledge about ten feet high that stands well out from the shore at high water.
"ILE"	Is marked by small cemented stones near the edge of the grass on a narrow, rocky point.
"HALF"	Is marked by cemented stones on top of a large boulder about ten feet out from overhanging trees.
"SO"	Is marked by cemented stones on the top of a low bluff just east of a small bight.
"UP"	Is marked by cemented stones on a steep ledge in the head of a small bight.
"POINT"	Is marked by cemented stones eight feet above H. W. on the end of a high, tree-covered point.
"CLAM"	Is marked by a smear of cement on a smooth vertical face of rock about five feet above H. W.
"KING"	Is marked by small cemented rocks on a small, narrow point at the entrance to a small bight.
"MON"	Is a fox farm sign on a tree on small island.
"SAL"	Is a tall, dead stub standing among some trees. Top shows plainly.
"PIN"	Is marked by a little pile of cemented rocks on a low, bare point of rough, water-worn ledge.
"OF"	Is marked by small cemented stones on the end of a high, rocky point.
"STO"	Is marked by cemented stones on a high cleft rock on the end of a rocky point. About 10 meters inshore is a moss-covered hump having a single small tree.
"DOK"	Is marked by small, cemented stones on an outcrop of ledge on a wide, flat, rocky point.
"VON"	Is marked by a smear of cement on a vertical face of rock under overhanging trees.

NAME	DESCRIPTION
"ALL"	Is marked by cement and cemented rocks on a low, vertical front of ledge under overhanging trees.
"MIX"	Is marked by a little pile of cemented stones at the edge of the grass on the end of a rocky point.
"IN"	Is a small shack beside a stream at the head of a large bight.
"LE"	Is marked by cement smeared on a vertical face of rock under overhanging trees 150 meters south of the fox farm float.
"OUT"	Is marked by cement on a low, steep front of rough, yellow-colored ledge. It is about 100 meters N-W of the fox farm float.
"STE"	Is marked by cemented rocks on top of a small, rocky islet.
"TAM"	Is a fox farm sign on a small tree.
"AG"	Is marked by cemented rocks on a rough, bare, rocky shore.
"LAN"	Is marked by cemented stones.
"WEN"	Is marked by cemented stones on some square, smooth-looking rocks.
"TIC"	Is marked by a pile of small cemented stones.
"AL"	Is marked by a little pile of cemented stones on a low, flat ledge.

STRAIT ISLANDS

"WAS"	Nail set with cement in hole in rock.
"SO"	Nail set with cement in the highest knoll of rock on the extreme end of the small, rocky point which makes out at this position. The rock will be partly awash and appear as an island at H. W.
"NOT"	A nail set with cement in the top of the rock knoll which stands on end of the point.
"TOP"	Nail set with cement in center of top of H. W. rock which stands off the entrance to the fox farm harbor.
"CHIM"	Chimney of dwelling house of the fox farm, standing in opening between the two islands.

NAME	DESCRIPTION
"FAR"	Nail set with cement in rock on the extreme end of the point.
"NEX"	Same as "FAR"--a fox farm sign is about 20 meters to S-W of the station.
"CUT"	Nail set with cement in hole in rock on the point just above H. W. Probably covered at extreme tides.
"HI"	Center of front of house on bluff.
"AFT"	Nail set with cement in hole in rock.
"OUT"	Same as "AFT".
"LOT"	Same as "OUT".
"TAN"	Same as "LOT".
"HO"	Center of south end of house.

RECOVERABLE PLANETABLE POSITIONS

NAME	LATITUDE	D. M.	LONGITUDE	D. P.	DESCRIPTION
"TRE 2"	56° 31'	804 1032	133° 46'	655 367	Top of a small lone spruce tree on the S-W end of Monte Carlo Island. The tree stands just a few meters outside of the main group of trees which grow to within about 50 meters of high water.
"NIL"	56° 32'	95 1741	133° 46'	286 734	Top of the southernmost of the two small, lone spruce trees which stand in the open ground at this point.
"TOP"	56° 32'	338 1499	133° 47'	438 583	Top of the tall, lone spruce tree standing on the northern end of the island.
"HI"	56° 23'	1642 196	133° 42'	881 144	Center of the west end or front of a small house on the bluff at this point.
"HO"	56° 23'	171 1666	133° 41'	914 109	Center of southern end of a small one-room house.
"TAR"	56° 28'	591 1247	133° 46'	598 425	Center of door on offshore side of a small house on the point.
"GIN"	56° 27'	1775 58	133° 46'	712 311	Center of offshore end of a small house.
"AM"	56° 29'	1258 578	133° 50'	148	Door at center of front of house on north end of the group of houses at this point.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.
4330

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. "I"

REGISTER NO. 4330

State SE. ALASKA

General locality ~~KEKU STRAIT~~ Kuiu Island Kupreanof I.

Locality SOUTH END KEEKU STRAIT

Scale ~~1:19,000~~ ^{20,000} Date of survey Sept. 1-Oct. 15, 1927.

Vessel Steamer EXPLORER

Chief of Party Harold A. Cotton

Surveyed by B. G. Jones and P. R. Mathorne

Inked by B. G. Jones

Heights in feet above H. W. ~~to ground~~ to tops of trees

~~Contours Approximate contours~~ Form line interval 100 feet

Instructions dated February 18, 1927.

Remarks: