6281

~~Add'l Work 1939~~

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

~~R. S. Patton~~ *Director*

State: S.W. Alaska ~~ALASKA~~

DESCRIPTIVE REPORT

~~Topographic~~ *Hydrographic* } *Sheet No.* 2637

LOCALITY

Sanak Islands

~~ALASKA PENINSULA — SANAK ID.~~

Caton Island to Sanak Reef

~~VICINITY SOUTH END SANAK ID.~~

~~UMLA ID. — CATON ID. — CATON HBR.~~

19 37

CHIEF OF PARTY

Ray L. Schoppe

U. S. GOVERNMENT PRINTING OFFICE: 1930

6281

~~Add'l Work 1939~~

Form 537
Ed. Dec., 1930

REG. NO.

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.

Field No. 2637

REGISTER NO. H-6281

State S.W. ALASKA

General locality ~~ALASKA PENINSULA- SANAK ID.~~ Sanak Islands

Locality ~~Vicinity Sotuk and Sanak Id. Umla Id. Caton Id. Caton Hbr.~~ Caton Island to Sanak Reef

Scale 1:20 000 Date of survey July - September, 1937

Vessel Standard 30 ft. Launches Nos. 14,812 - 12,645.

Chief of Party Ray L. Schoppe

Surveyed by Charles Pierce

Protracted by Charles Pierce

Soundings penciled by Charles Pierce

Soundings in fathoms ~~feet~~

Plane of reference M. L. L. W.

Subdivision of wire dragged areas by

Inked by H. F. Stegman

Verified by H. F. S.

Instructions dated March 30, 1936- March 30, 1937, 19

Remarks:

U. S. GOVERNMENT PRINTING OFFICE. 1932

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET NO. 2637- 1937

AUTHORITY

This survey was executed in accordance with the Director's Instructions dated March 30, 1936. Supplemental Instructions dated March 30, 1937.

SCALE

The scale of this sheet is 1 : 20,000
All soundings are in fathoms.

EXTENT

This sheet includes the hydrographic survey of the area south of Sanak Id., Caton and Elma Ids., East of longitude 162 degrees, 39 minutes and the western portion of Caton Harbor.

SURVEY METHODS

The position of the sounding launch was located for all work on this sheet by the standard three point fix method, using sextants with telescopes. All of the control used was either triangulation or topographic, with the exception of hydrographic signal KAK located by cuts from the launch.

All soundings were taken with the hand lead or sounding machine. The hand lead was checked before and after each days sounding work over 4" x 4" stakes set on line and grade with a steel tape and level. The sounding machine was chain connected to the launch engine shaft for reeling in and worked very satisfactorily. An electric light was mounted directly over the registering sheave in the after cockpit to facilitate reading. The old type sounding machine was used without the automatic brake provision, and some trouble was experienced with the wire jumping the sheave.

The registering sheaves were tested before and after the seasons work by direct measurment along the dock and during the season in camp by marking a small piece of stranded wire stretched taut around the sheave, and measuring this marked wire with a beam compass over a meter bar. No corrections to soundings were necessary for errors in sheaves or lead lines.

Bottom characteristics were obtained when sounding with the machine by having the leadsman off duty arm the lead approximately once per page of the sounding volume. For hand lead soundings, the majority of the bottom characteristics were determined by the feel of the lead on the bottom.

The sounding boats used were port and starboard motorsailers, standard 30 foot, decked over amidship, Navy launches, cockpits fore and aft, engines aft.

A wooden framework, canvas covered mounted on the after canopy was used to protect the boat sheet from the weather. The junior officer steered and took left angle and the officer in charge of the boat took right angle and plotted. The recorder was stationed amidships with a small wooden canvas covered framework for protecting his records mounted on the canopy amidships. The recorder signalled the engineer and leadsman, located below in the after cockpit, by bell systems, for machine sounding. The usual type of sounding chair was mounted on the forward deck for hand lead work.

Due to the shortage of seamen available from the ship no coxswain could be furnished. For the area of this survey, with numerous shoals, breakers and necessity of sounding among the numerous islets, a coxswain would have been very useful. The junior officer could then have been free for such duties as estimating distances from rocks awash, distance offshore on turns of lines and for lookout duty in approach to breakers and shore line. In dangerous areas it was necessary to place the leadsman off duty in the bow and depend upon his judgement for approaching dangers. It is my opinion that the use of a coxswain, altho increasing the cost of the hydrography, would result in obtaining more thorough work.

During light rain and showers, weather quite common in this locality, the small house on the canopy, known as "dog house", does not adequately protect the boat sheet. The work sheet soon becomes so damp and soggy as to prevent a protractor from sliding on the sheet.

DISCREPANCIES

The islet located by topography in latitude 54 - 18.48', longitude 162 - 38.55', was determined from the sounding launch as being 50 meters northwest of this position.

On position 54 p, the islet was noted in the sounding record as being 10 meters to starboard and baring 8 feet. It is recommended that the hydrographic position be accepted and that ~~that~~ the hydrographic position be verified next season when junction with this sheet is made in this vicinity. The islet is shown in pencil on the smooth hydrographic sheet.

Hydro pos. accepted. H.W.M.

Position 32 j has been rejected. The position plots 100 meters south of Seal Rock, outside of depths of 16 fathoms. The estimated distance from Seal Rock was 40 meters. The center object, Seal Rock, has no signal erected on it and selection of the highest part of this rock as this close distance may have been the cause of an incorrect position location. It is recommended that position 32 j and the sounding of 11 fathoms be rejected as inconsistent with the other data, mentioned above.

Rejected.

On the crossing of sounding lines no discrepancies were noted other than differences on rapid changes of slope. This condition was particularly noted in the vicinity of Seal Rock and the area of the breakers located 0.5 miles east of Seal Rock.

2 5

DANGERS

1. Rock baring 3 feet at M.L.L.W. located 0.45 miles east of Seal Rock. Breakers were visible on this rock at all times we sounded in this area.

2. Rock awash at M.L.L.W. located 0.8 miles eastnortheast of Seal Rock. Breakers visible on this rock in moderate weather. There were times in smooth weather when breakers were not visible on this rock.

3. Rock baring 3 feet at M.L.L.W. located in latitude 54 - 17.62', longitude 162 - 37.74'. Breakers visible on this rock in all weather in which we worked in this area.

4. Sunken rock in latitude 54 - 17.41', longitude 162 - 37.7'. Breakers visible on this rock in heavy weather, with swells greater than moderate. While at anchor distant 0.5 miles northwest of this sunken rock, in moderate weather, we watched this location for one half hour and only by constant attention were we able to detect occassional breakers. On position 182 k the sounding launch passed within 20 meters of this sunken rock, a light swell running, and we observed no sign of breakers, but humping of the sea was noticed.

5. Latitude 54 - 17.1', longitude 162 - 36.9'. A shoal sounding of 2-1/2 fathoms, on position 173 k. This shoal sounding is located distant 0.35 miles from the offshore end of a ridge, which is the southeast extension into deep water of islands and shoals comprising Sister and South islands. This shoal sounding of 2-1/2 fathoms was obtained on a hand lead line along the crest of the ridge. Sounding for least depth here was not made as the smooth sea required was not available after this shoal was discovered. The bottom was visible here. Breakers were never seen on this shoal while working in this area. No opportunity was had for checking breakers on this shoal in heavy weather. Apparently this 2-1/2 fathom spot is the sunken rock shown on chartn 8860, 3.4 miles southwest of Seal Rock.

6. Latitude 54 - 17.8', longitude 162 - 38.05, position 100 p. A least depth of 8 feet found at the northwest end of the ridge mentioned above. The seas hump badly here in moderate weather but did not break during our work in this area. We anchored on this shoal several times for lunch and humping of the sea was quite marked in this general area. Breakers undoubtedly occur here in reasonably heavy weather.

7. Latitude 54 - 17.05', longitude 162 - 35.05', between positions 145 146 u. A shoal sounding of 13 fathoms in depths from 16 to 20 fathoms. This apparently is the 12 fathom sounding shown on chart 8860, 0.7 miles south of Seal Rock. No development was done here for lack of smooth weather at end of season. Further development is recommended.

8. Latitude 54 - 19.76', longitude 162 - 38.83', between positions 28-29 u. A 3-1/2 fathom shoal in heavy kelp with rocky bottom. It was not developed due to heavy kelp here.

9. Latitude 54 - 19.65', longitude 162 - 38.50', position 54 u. A 4-2/6 fathom shoal in scattered kelp. Further development recommended.

10. A 3 fathom shoal located 0.15 miles northwest of Seal Rock, between positions 168-169 u. Very broken bottom in this vicinity varying from this shoal depth to 16 fathoms, in distance of 1/10 of a mile. No breaking or humping observed in this area.

11. Latitude 54 - 17.8', longitude 162- 34.0, between positions 26-27 d. A shoal of 6-1/4 fathoms. No breakers observed in this locality. Further development recommended.

12. Latitude 54 - 18.75', longitude 162 - 34.15', between positions 15-16 c. A least depth found here of 9 fathoms, after 15 minutes searching for least depth.

13. Latitude 54 - 19.24', longitude 162 - 35.15', position 67 g. A shoal of 9-3/4 fathoms and no shoaler soundings found after running cross lines.

14. Latitude 54 - 24.15', longitude 162 - 32.72'. A shoal bare at M.L.L.W. distant ~~1.4~~ 0.25 miles from the low water line.

15. Latitude 54 - 19.3', longitude 162 - 34.1', on position 30 s. A depth of 6-1/2 fathoms, rocky bottom, scattered kelp in this area. The launch drifted around over this spot for nearly one half hour sounding constantly with hand lead and taking separate positions.

16. South of Telemitz Id. and Umla Id. the 20 fathom curve runs approximately east and west and distant 0.35 miles from the line of breakers, rocks and kelp extending between these islands. Inside of this 20 fathom curve the bottom is very broken, ranging in depths from 3-3/4 fathoms to 20 fathoms. For this reason of a very broken bottom, no dangers have been listed in this area. The smooth sheet showing clearly these shoal spots. The whole area is foul.

17. At the southeast entrance to Southeast Pass, between Caton and Elma Ids., is a shoal with least depth of 6-2/6 fathoms between positions 64-65 w. This shoal is in unfinished area. Lat. 54°20.7 long. 162° 25.0

18. On the inshore lines at southeast end of Caton Id., from approximately signals BIM northeastward to longitude 162 - 21.5', the launch was taken in as close to the breakers as was considered safe. In a moderate swell a continuous line of breakers are visible along the southeast coast of Caton Id. A flat sea will be required to sound in any closer to the shore line. The sounding lines were discontinued in vicinity of longitude 162 - 21 for lack of visible topographic signals on the southeast end of Caton Id. and due to remote distance from camp at Peterson Bay.

COMPARISON WITH PREVIOUS SURVEYS

Comparison of this survey with chart 8860 shows the following:
Seal Rock shown on chart 8860 as rock awash is an island bare at all stages of the tide.

The sunken rock charted in latitude 54 - 18.1', longitude 162 - 34.15' is awash at M.L.L.W. and located by this survey in Latitude 54 - 18.2 longitude 162 - 34.17'. See Danger 2.

The sunken rock charted in latitude 54 - 17.65', longitude 162 - 34.70' bares 3 feet at M.L.L.W. and located by this survey in Latitude 54 - 17.85 longitude 162 - 34.65'. See Danger 1.

The sunken rock charted in latitude 54 - 17.3', longitude 162 - 36.4', was not found. The 2-1/2 fathom shoal located by this survey in latitude 54 - 17.1', longitude 162 - 36.9' is probably this sunken rock. See Danger 5.

The sunken rock charted in latitude 54 - 17.6', longitude 162 - 37.5', bares 3 feet at M.L.L.W. and located by this survey in Latitude 54 - 17.6 longitude 162 - 37.7'.

The 12 fathom sounding charted in latitude 54 - 17.3', longitude 162 - 35.45', is apparently the 13 fathom shoal located by this survey in latitude 54 - 17.05', longitude 162 - 35005. Present survey accepted. H.W.M.

The 17 fathom shoal charted 1.5 miles south of Seal Rock plots on this survey in 18 fathoms of water, on a shoal area.

ANCHORAGES AND CHANNELS

These details will be described if any are found after additional work is done in this area.

The coast pilot range for approaching Peterson Bay crosses this sheet and appears adequate. No better information is available at this time.

GEOGRAPHIC NAMES ✓GHE

Geographic names are covered by descriptive reports of topographic sheets, E-1936; L-1937; N-1937; O-1937.

SOUTHEAST PASS- The passage into Caton Harbor from the southeast between Caton and Elma Islands. This is the name in local use.

UNFINISHED WORK

The area covered by this sheet 2637 was not completed during the 1937 field season and will be continued on this sheet during 1938 season.

NOTE REGARDING DANGERS:

WHERE EVER a recommendation has been made by the field party that additional work is necessary, every effort will be made during the 1938-season to further develop those areas.

The BOAT SHEET is being retained on board this vessel in order that that work may be accomplished more satisfactorily.

STATISTICS

FOR SHEET, FIELD NO. 2637

PORT AND STARBOARD MOTORSAILERS

DATE 1937	DAY	POS.	SOUNDINGS WIRE	SOUNDINGS H.L.	STAT. MILES WIRE	STAT. MILES H.L.	MILES TO & FROM	MILES SDG. LINE	NAUTICAL MILES TOTAL
July 7	a	19	87		8.4		3.0	7.3	10.3
July 12	b	99	301	35	16.7	1.5	5.2	15.8	21.0
July 15	c	97	308		17.5		2.2	15.2	17.4
July 16	d	147	391		21.7		9.8	18.9	28.7
July 19	e	161	354	17	19.6	0.8	11.2	17.7	28.9
July 22	f	117	329		17.7		7.3	15.4	22.7
July 27	g	178	438	36	23.2	1.5	6.5	21.4	27.9
TOTAL	JULY	818	2208	88	124.8	3.8	45.2	111.7	156.9
Aug. 2	h	105	234	15	11.7	0.5	10.0	10.6	20.6
Aug. 3	j	190	427	25	21.9	0.7	10.0	19.6	29.6
Aug. 4	k	202	329	116	16.7	2.1	10.7	16.3	27.0
Aug. 5	l	219	445	104	21.8	3.9	9.7	22.3	32.0
Aug. 19	m	158	50	432	3.7	9.8	4.7	11.7	16.4
Aug. 23	n	216	170	485	7.1	15.3	6.7	19.5	26.2
Aug. 24	p	167	123	369	6.0	11.8	7.0	15.5	22.5
TOTAL	AUGUST	1257	1778	1546	88.9	44.1	58.8	115.5	174.3
Sept. 4	q	201		1148		22.4	8.4	19.5	27.9
Sept. 8	r	37		109		3.0	8.2	2.6	10.8
Sept. 9	s	31		55		2.3	8.1	2.0	10.1
Sept. 10	t	145		723		17.6	12.4	15.3	27.7
Sept. 11	u	191	53	449	2.4	15.4	8.1	15.5	23.6
Sept. 12	v	141	298	75	16.5	2.0	8.0	16.1	24.1
Sept. 13	w	74	183		7.8		12.5	6.8	19.3
Sept. 14	x	91	201		8.0		16.5	6.9	23.4
TOTAL	SEPT.	911	735	2559	34.7	62.7	82.2	84.7	166.9
GRAND TOTALS		2986	4721	4193	248.4	110.6	186.2	311.9	498.1

LAC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Ed. Feb. 1935

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 25, 1938.

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. E. P. Ellis

Plane of reference
~~Tide Reducers are~~ approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET 6281

Locality Caton Island to Sanak Reef, Sanak Islands.

Chief of Party: R. L. Schoppe in 1937
Plane of reference is mean lower low water reading
3.2 ft. on tide staff at Peterson Bay
9.8 ft. below B.M. 2

Height of mean high water above plane of reference is 5.4 feet.

Condition of records satisfactory except as noted below:

P. Schureman.

Acting Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE

GEOGRAPHIC NAMES

Survey No. H-6281

Name on Survey	On Chart No. 8860 A,	On previous survey No. B,	On U. S. quadrangle Maps C,	From local information D, R. Bakers Dict. Do local Maps D	E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Finneys Island	✓									1
Wanda Island	✓									2
Princess Rock	✓ GNS									3
Caton Harbor	GNS									4
Devils Pass	GNS									5
Fairway Reef	GNS									6
Caton Island	✓									7
Lookout Point	✓									8
Southeast Pass				✓						9
Gunboat Island										10
Inikla ~~Inkla~~ Island	✓	✓			✓					11
Telemitz Island	✓									12
Peterson Island	✓	✓			✓					13
Dora ~~Dora~~ Island										14
Sanak Reef	✓									15
~~Haystacks~~		Hay Stack								16
Haystacks Rock		✓								17
Umla Island	✓	✓			✓					18
Sanak Island	✓									19
Seal Rock	✓	✓			✓					20
Sisters Island	✓	✓			✓					21
Mary Island	✓	✓			✓					22
Peterson Bay	✓									23
Elma I	✓									24
										25
										26
										27

Names underlined in red approved by GBE on 5/27/35

M 234

	Remarks	Decisions
1		N-6143 see T-6508
2		"
3		See T-6508
4		" "
5		see H-6280
6		" "
7		See T-6508
8		" "
9		
10		See T-6607
11		
12		See H-6280
13		
14		see T-6607
15		
16	A part of Sanak Reef there are Shumagin Is.	Haystacks ch. 8802
17		
18		
19		USGB decision
20		
21		
22		
23		See H-6280
24		
25		
26		
27		

M 234

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. H6281

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

Number of positions on sheet	2986.
Number of positions checked	139.
Number of positions revised	4.
Number of soundings recorded	8914.
Number of soundings revised	68.
Negative soundings recorded with wrong sign.	16
Number of signals erroneously plotted or transferred	None.

Date: July 23, 1938

Verification by H.F. STEGMAN Time: 16 DAYS - 0 3/4 HOURS.

Review by Harold W. Murray Time: 2 " 0 3/4 "

HYDROGRAPHIC SURVEY NO. H-6281

Smooth Sheet Yes

Boat Sheet No

Records; Sounding 8 Vols., Wire Drag ___ Vols., Bomb ___ Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Vol.#1

Landmarks for Charts (Form 567) None

Statistics None

Approved by Chief of Party None D.R. not signed.

Recoverable Station Cards (Form 524) None

Special Chart for Lighthouse Service (Circular Nov.30, 1933) None

Hydrography: Total Days 22 ; Last Date Sept. 14, 1937

Remarks

3776

FORM M-238

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT } No. H-6281
~~PHOTOSTAT OF~~ ~~No. T~~

received April 18, 1938
registered April 27, 1938
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.

ROUTE		Initial	Attention called to
20			
22	✓	JEP	Pages 5 and 5a
24			
25	✓	W.F.M.	Pages 3, 4 and 5
26			
30			
40			
62			
63			
82			
83	✓		Page 5
88			
90			

RETURN TO

82	T. B. Reed

Report on Verification of Hydrographic Survey H-6281

Surveyed: July - September 1937

Chief of Party: Ray L. Schoppe.

Surveyed by: Charles Pierce

Scale: 1:20,000

Vessels: Standard 30 ft. launches Nos. 14,812 and 12,645

Protracted by: Charles Pierce.

Soundings penciled by: Charles Pierce.

Verified and Inked by: Harold F. Stegman

The records of this survey conform to the requirements of the general instructions, with the following exceptions:

1. The descriptive report was not signed by the Chief of Party. Approval of the work is given, however, on page 72 of Vol eight, of the Sounding Record. mentioned in Rev., par. 1

2. All negative soundings, sixteen in number, were entered in the record and plotted on the smooth sheet with a positive sign. These were corrected by the verifier.

3. In the list of dangers no mention is made of the 3 1/6 fathom shoal at ϕ-54°-19.7 λ-162°-38.6, just before position 30 P, although this is the least depth found in this vicinity. This area as charted is foul, Hydrographic danger listed on page 3, par. 8

4. No mention is made of the 7 3/4 fathom shoal at

ϕ - 54°-20.5 λ - 162°-25.4, although it probably should be developed further. mentioned in Rev. / par. 10a.

5. The field draftsman made some notes in the sounding record in lead pencil. E.G. Vol 4 pages 34 and 48

6. The names of three of the topographic signals were not inked on the smooth sheet. These were inked in the office.

7. The field plotting was neatly and carefully done. Of 139 positions checked, only four were found to be in error. Sixty eight soundings were revised. Most of these were in error due to being plotted to the nearest foot in depths of from seven to eleven fathoms, and to the nearest quarter fathom in depths of less than seven fathoms.

8. The boat sheet of this survey was not available to the reviser as it had been retained in the field for additional work in 1938.

9. There were no junctions with contemporary surveys. The only adjacent sheet, H-6280 (1937) had not yet been verified.

10. Hydrographic signal Kak was located by sextant cuts by the hydrographic party. as recorded in volume 6 pages 18, 27, and 28. All other signals were established by triangulation and planetable topography.

11. Planetable sheets T-6508 (1936), T-6607 (1937), and T-6608 (1937), were the source of the shoreline and topo signals for this hydrographic sheet. A careful comparison with these sheets was made. The following descrepancies were noted:

12. The rock shown bare one foot at high water on T-6508, ϕ - 54°-24.4 λ - 162°-31.4, is called a rock awash at five feet above M.L.L.W. in Vol. 6 page 62 of the sounding record.

Shown as awash MHW

13 The islet located by T-6607 in φ 54-18.5 [48], λ-162-38.55 and found by the hydrographic party to be 50 meters northwest of this position (noted in descriptive report, page 2) was plotted as located by the hydrographic party. This rock was shown bare one foot at mean high water on T-6607 and bare four feet at mean high water in the sounding record of H-6281, Vol. 6 page 20., position 54p. ✓

Hydro sheet accepted. Hum.

14 The rock awash 125 meters south of △ Tuff, φ-54°-20.1, λ-162°-35.9 is shown as a rock awash baring six feet at M.L.L.W. on T-6607. There are two notes in the sounding record of H-6281 which very probably refer to this rock. At position 11h, volume 3 page 30,✓ the rock is said to be bare four feet at tide stage of four feet above M.L.L.W., and the note at position 9j, volume 3 page 48 states it is bare 2½ ft. at 2 feet of tide. This latter note may not apply to the rock in question, but there is no other mention of any other rock awash in the vicinity of △ Tuff. Assumed to be another rock because of rocks shown on T-2553 Hum.

15 The rock awash as located by the hydrographic party at φ-54°-20.5 λ-162°-38.1, is about 40 meters north of the rock located on T-6607. The topographic sheet states this rock bares three feet at M.L.L.W. and the sounding record of H-6281 states (Vol. 4, page 49) that it bares 2½ ft. at M.L.L.W. There is a possibility that this note refers to a different rock, although since the launch passed close to this rock this would appear doubtful. It is possible that the note is entered opposite the wrong sounding. ✓

Same Rock, used T. Hum.

16 The note on page 63 Vol. 8, puts the sounding following position 44x, φ-54°-20.7, λ-162°-27.4, 125 meters from rock ledge to port, while the position plots 75 meters from a rock bare one foot at mean high water. This bare rock was probably not observed by the hydrographic party due to high wind and sea - see weather note on same page of sounding record. ✓

One rock. Hum.

17 Topographic sheet T-6607 shows breakers at φ-54°-20.5, λ-162°-28.8 while the least depth found here by the hydrographic party was three fathoms. ✓

18 The reef located on T-6508 in φ-54°-23.85 λ-162°-30.2, baring four feet at M.L.L.W. was not mentioned in the record of H-6281. What is believed to be the same reef is located about 125 meters north, from position 52t, Vol 7 page 34. Both the hydro and topo locations are plotted on the sheet. Two reefs here, one at pos. 52t plotted as * because T-2553 (1901) shows an islet here although it is slightly out of position. H.W.M.

19 Along the low water line at φ-54°-22.5, between λ-162°-30.0 and 162°-30.5 there are three instances where there is a descrepancy of about 100 meters between the topo (T-6508) and hydro (H-6281). As the slope of the bottom is very gradual in this area the topographic location is probably more nearly correct.

Hydro sheet accepted. H.W.M.

20 Between signal Jad, φ-54°-24.2 λ-162°-33.2, and Pun, φ-54°-24.7 λ-162°-32.7 the low water line is inked as determined by zero soundings.

21 The sounding record states that there is a rock bare 7 feet at M.L.L.W. 150 meters to starboard (north) of position 141g (Vol. 6 page 67) This is probably the rock shown at φ-54°-24.6 λ-162°-33.2 on T-6508, as bare one foot at mean high water, which plots 110 meters north of position 141g. Correct. H.W.M.

22 The note in the sounding record, Vol. 2 page 34 states that there is a rock 200 meters on the starboard beam (north). There is no other authority for a rock at this location. (φ-54-20.4 λ-162-30.5) This note is recorded at position 120e, and possibly refers to the rock awash 250 meters northeast of this position. Adjoining sheet when received from the field will be consulted for a more accurate position of this rock. H.W.M.

23 The note on breakers, in Vol. 1, page 40, was disregarded. See note on page 61 of Vol. 1. Position 36J, φ-54°-17.9 λ-162°-34.0, falls in the same location as these breakers. This area is recommended for further development - see danger No. 11, page 4 of descriptive report.

Breaker note not plotted. H.W.M.
because of note in sounding record, p. 61 of Vol. 1

24 The note on page 9 of Vol. 3 of the sounding record, regarding the height of the rock at φ-54°-19.6', λ-162°-35.3' was disregarded in favor of the note on page 71 of Vol. 7 which agreed with the height as given in T-6607. The accepted height of this rock was bare five feet at M.H.W. while the disregarded note stated it was two feet higher. shown as awash at M.H.W. H.W.M.

25 Notes on positions 39h and 55h, Vol. 3 pages 34 and 37 place breakers about 50 meters north of the rock awash at φ-54°-17.8', λ-162°-34.6' It is believed that the notes refer to the rock as plotted, because no mention is made of breakers on the line 53-54k which crosses this spot. See volume 4, page 20. Rock accepted. H.W.M.

26 Rocks shown in red on T-6508, which had been transferred from T-2553 (1901), were not placed on this sheet. disposed of. H.W.M.

27 Position 12a, φ-54°-20.2 λ-162°-30.5' has a note in the sounding record, Vol. 1, page 6 which states that there is a rock awash ⅛ mile to port. This plots on a 7 fathom shoal between positions 44 and 45 b. Assumed to be one of 2 rocks 1/4 mile north. H.W.M.

28 The note on page 21 of Vol 1 of the sounding record, between positions 43 and 44 b, φ-54°-20.3' λ-162°-30.5' states that there is a rock awash 125 meters to port (north) This plots in about 10 fathoms. The note may refer to the rock awash 200 meters north of this position. Northern rock accepted, H.W.M.

29 According to the descriptive report no recoverable station card was submitted for signal Kak, φ-54°-18.5' λ-162°-38.1'. This signal is shown on an islet. T-6607 states the islet is bare two feet at mean high water, while the sounding record of this survey, Vol 4, page 52 states it is a reef bearing 5½ feet at M.L.L.W. Topo shows both reef and islet, T. accepted. H.W.M. φ 54°22.1'; λ 162°31.3' φ 54°17.4 λ 162°36.6

30 Cuts to breakers from positions 72b, 79c, 77J and 78J were drawn in pencil. The latter breakers are outside of the limits of H-6281. Breaker at Pos. 72b + 79c, plotted, action on other breaker is deferred pending further information. H.W.M.

H. F. Stegman

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6281 (1937) FIELD NO. 2637

Caton Island to Sanak Reef, Sanak Islands, S. W. Alaska
Surveyed in July - September 1937, Scale 1:20,000
Instructions dated March 30, 1936 and 1937 (DISCOVERER)

Hand Lead and Machine Soundings. 3 Point fixes on shore signals.

Chief of Party - Ray L. Schoppe.
Surveyed by - Charles Pierce.
Protracted by - Charles Pierce.
Soundings plotted by - Charles Pierce.
Verified and inked by - H. F. Stegman.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual.

A note in the sounding record, pos. 12a, in lat. 54° 20.3' long. 162° 30.5', mentions a rock awash 1/8 mile to port (northward) at a 3 foot tide which falls directly on a detached 7 fathom shoal. Since the 7 (line 44-45b) was also obtained at a 3 foot tide and no mention is made of the rock nor is mention made on other lines in this vicinity run at tides of 4 to 5 feet, it is assumed that the note refers to one of the two rocks awash shown on the present survey 1/4 mile to the northward in lat. 54° 20.5'. Assumption correct. See 1939 Addl. Work.

The Descriptive Report is clear and satisfactorily covers all items of importance except that it was not signed, nor was it approved by the Chief of Party.

2. Compliance with Instructions for the Project.

The plan and character of the survey satisfy the Instructions for the Project. About 50% of the area to be included on this sheet, which is necessary to effect a junction with H-6143 (1936) was surveyed during the 1937 season. The field party has retained the boat sheet for use in completing the survey during the season of 1938.

3. Shoreline and Signals.

The shoreline and signals originate with plane table surveys: T-6508 (1936), T-6607 (1937) and T-6608 (1937). Hydrographic signal "Kak" in lat. 54° 18.4', long. 162° 15.1' was located by sextant cuts listed in the index of Vol. 8.

4. Sounding Line Crossings.

Agreement of sounding line crossings is satisfactory.

5. Depth Curves.

The usual depth curves may be satisfactorily drawn.

6. Junctions with Contemporary Surveys.

a. The junction on the north with H-6280 (1937) will be considered in the review of that sheet.

b. The junction with other field work will be considered when that work is received from the field.

7. Comparison with Prior Surveys.

There are no prior surveys made by this Bureau within the limits of the present survey.

8. Comparison with Chart 8860 (New Print dated Jan. 12, 1938).

Hydrography shown on the chart originates with miscellaneous sources which cannot be readily ascertained in all cases. Some soundings originate with blueprint 13893 (1911) and Map No. 2005 (1887) by S. Applegate and others are shown on Chart No. 8860, edition of 1906. Because of the small scale of the charted information, a satisfactory comparison cannot be made with the present survey; the comparison noted in the Descriptive Report, page 5, however, sufficiently covers the area. The present survey should supersede this information in future charting.

9. Field Plotting.

Field protracting and plotting were satisfactory and conform to the requirements of the Hydrographic Manual.

10. Additional Field Work Recommended.

An investigation of the following items, many of which were specifically mentioned in the Descriptive Report, pages 2 to 4, is necessary for the completion of the present survey.

a. The several shoal areas enclosed by the 10 fathom curves from Umla Island to long. 162° 21', should be further developed. Accomplished on H-6385 (1938)

b. The following shoal soundings should be investigated for shoaler depths by feeling around.

(1) 13 fathoms 13 fms. on H-6385 lat. 54° 17.0', long. 162°35.0'
(2) 2-1/2 " ½ fm. on Addl. Work. 54° 17.1', " 162°36.9'
(3) 11 " 10¼ " " " " 54° 19.9', " 162°34.95'

(4) 3-1/6 to 4-4/6 fms. (four shoals) lat. 54°19.7', long. 162°38.7' 2½ fms. on H-6437 (1938).
(5) 6-5/6, 7 and 7-1/4 fms. 4½ fms. on Addl. Work. " 54°20.3', " 162°30.5' (see par. 1 this rev.)
(6) 6-1/6 fms. 4½ and 4⅝ fms. on H-6385 " 54°17.8', " 162°34.0'

c. If weather conditions permit additional sounding lines should be run inshore of the present survey limits at the southeastern end of Caton Island. Accomplished on H-6385 (1938).

d. The Descriptive Report (page2) states that the location of the islet in lat. 54° 18.48', long. 162° 38.55', will be checked during the 1938 field season. The location shown on H-6281 was by the hydrographic party, whereas the location on T-6607 (1937) is 50 meters to the southeastward. Revised on 1939 Addl. Work.

11. Superseded Prior Surveys.

There are no prior surveys made by this Bureau in this area.

12. Reviewed by - Harold W. Murray, July 30, 1938.

Inspected by - E. P. Ellis.

Examined and approved:

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

K. T. Adams
Chief, Division of Charts.

Fred. L. Peacock
Chief, Section of Field Work.

Chief, Division of H. & T.

DIVISION OF CHARTS

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6281(1939) Add'l.Work)
FIELD NO. 2637

Southwest Alaska, Sanak Islands, Caton Island
Surveyed in June, 1939, Scale 1:20,000
Instructions in par. 10, review of H-6281 (1937)

Soundings:
Hand Lead and Machine

Control:
Three point fixes on shore signals

Chief of Party - G. C. Jones.
Surveyed by - L. S. Hubbard.
Protracted by - G. B. Littlepage, Jr.
Soundings plotted by - G. B. Littlepage, Jr.
Verified and inked by - R. H. Carstens.
Reviewed by - J. A. McCormick, June 18, 1940.
Inspected by - H. R. Edmonston.

1. Purpose of Survey.

Par. 10, review of H-6281 (1937) recommended additional investigation of several shoals. Some of these items were disposed of on H-6385 (1938) and H-6437 (1938), adjoining surveys on east and west. The remaining investigations were satisfactorily accomplished in 1939 and the results are summarized in the following paragraph.

2. Results of Survey.

a. A depth of 1/2 fathom obtained on a rock in lat. 54° 17.1', long. 162° 36.9', where the original survey showed 2-1/2 fathoms.

b. A depth of 10-1/4 fathoms obtained in lat. 54° 19.9', long. 162° 34.95', where the original survey showed 11 fathoms.

c. A depth of 4-1/6 fathoms obtained in lat. 54° 20.35', long. 162° 30.45', where the original survey showed 6-5/6 to 7-1/4 fathoms.

d. Three additional rocks were located in the vicinity of lat. 54° 20.5', long. 162° 30.6'. Two are awash at M.L.L.W. and the third is covered 2 feet at M.L.L.W.

e. Reef detail in vicinity of lat. 54° 18.45', long. 162° 38.55' was revised.

The above items are discussed in considerable detail in the descriptive report with cross references to the original review. This summary is made as an aid to the chart compiler in identifying the new work.

Examined and approved:

Thos B Reed

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

F. S. Borden

Chief, Division of Charts.

Raymond P. Eyman.

Chief, Section of Field Work.

G. Rude

Chief, Division of H. & T.

applied to chart 8860 Dec 1. 1938 J.G.L.
" " Compilation 8705 July 8, 1942 J.M.A.

6281 Additional work 1939

Form 504
Rev. April 1935
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

~~Topographic~~
Hydrographic } *Sheet No.* Field 2637
Reg. No. H-6281

State Southwestern Alaska

LOCALITY

Sanak Islands

Caton Island to Sanak Reef

1939

CHIEF OF PARTY

G. C. Jones

U. S. GOVERNMENT PRINTING OFFICE

6281 Additional work 1939

Form 537
Ed. Dec. 1930

REG. NO.

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.

Field No. 2637 H6281 Add'l Wk. 1939

REGISTER NO. H-6281 (1937)

State Southwestern Alaska

General locality Sanak Islands

Locality Caton Island to Sanak Reef

Scale 1:~~10~~20,000 Date of survey June 21, 22, 1939
(Original survey 1:20,000)

Vessel DISCOVERER

Chief of Party G. C. Jones

Surveyed by L. S. Hubbard

Protracted by G B Littlepage

Soundings penciled by G B Littlepage

Soundings in fathoms ~~feet~~ fathoms

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by

Inked by R.H. Carstens

Verified by R.H. Carstens

Instructions dated March 30, 1936; March 30, 1937, 19

Remarks: Additional field work, as recommended by Section of Field Records, in Review of Hydrographic Survey H-6281 (1937)

U. S. GOVERNMENT PRINTING OFFICE

DESCRIPTIVE REPORT

to accompany

Additional Work on

Field Sheet No. 2637

Register No. H-6281

U.S.C.& G.S.S. DISCOVERER and Launches

G. C. Jones, H.& G. Engr. Commanding

Sanak Islands, Alaska

Caton Island to Sanak Reef

Scale 1:~~10~~20,000

AUTHORITY

This survey was originally executed in accordance with Instructions dated March 30, 1936 and March 30, 1937 (DISCOVERER). Additional field work was executed in 1939, as recommended by the Section of Field Records, in their Review of Hydrographic Survey No. 6281 (1937) Field No. 2637.

LOCALITY

The shoal areas developed are situated south of Sanak Island, in Southwestern Alaska.

ADDITIONAL WORK PERFORMED

The following items, recommended for investigation in the Review of Hydrographic Survey H-6281, are covered by this sheet and report:

Paragraph 10b, items 2, 3 and 5; and Paragraph 10d.

The items mentioned in Paragraph 10a; 10b, 1, 4 and 6; and 10c; were executed during the usual course of surveys made in the 1938 field season.

BOAT AND SMOOTH SHEETS

The original survey of sheet H-6281 was plotted on a scale of 1:20,000. In order that the development of shoals might be shown in more detail, the 1939 work was plotted on a boat sheet having a scale of 1:10,000. This boat sheet was also used for the investigation of shoals recommended in the Review of Hydrographic Sheet H-6280 (1937).

Office plotting on original 1:20,000 scale sheet.

RECORDS

The development on one shoal, properly belonging to the work on sheet H-6280, was erroneously recorded in the H-6281 (1939) sounding records. (Pos. 51b to 101b). These are copied into Vol. I, sheet H-6280. (1939)

CONTROL

Many of the signals used in the original survey were still standing in place in 1939. These were used for control in determining the boat's position.

SURVEY EQUIPMENT

A motor launch was used in making this survey. Hand lead soundings were taken from a sounding chair rigged off the starboard bow. Machine soundings were taken over a sheave off the stern. Sextant angles were taken from amidships.

TIDES

A portable automatic tide gage was in operation in Sanak Harbor, on the north side of Sanak Island, during the period of this resurvey. Marigrams from this tide gage were used in reducing soundings.

Par. 10b - Item 2: 2-1/2 fms. - Lat. 54° 17.1', Long. 162° 36.9'

This shoal was investigated on a day when the sky was blue and sunny and the sea glassy smooth. It was possible to see the bottom in this locality. Current ripples and overfalls were found over the rock. The rock itself was a remarkable sight. It was shaped like a church spire, its sides covered with grass undulating with the current. There was no kelp. The tip of the rock was about four feet across. Soundings of three feet were taken on the tip of the rock (Pos. 4c, 5c). Soundings of 8 and 10 fms. were taken at the base of the rock. This rock is located in Lat. 54° 17.10', Long. 162° 36.95'.

Since the bottom could be seen, this whole area for a radius of about 300 meters around the rock was cruised over, in search of other shoal spots. One other shoal was discovered. This was a rocky mound about 20 meters across, having a least depth of 4-1/2 fms. (Pos. 27c, 28c). The second rock is located in Lat. 54° 17.05', Long. 162° 36.87'.

Par. 10b - Item 3: 11 fms. - Lat. 54° 19.9', Long. 162° 34.95'

The sea was smooth and the wind light on the day when this shoal was investigated. No kelp was seen in this area. A system of parallel sounding lines was run to determine the extent and limits of the shoal. The shoal was then felt over with a hand lead to determine the least depth. Feeling out the shoal was continued for twenty minutes. The area of least depth is small, about 25 meters across. The least depth found was 10-1/6 fms., rocky bottom. (Pos. 136b).

Par. 10b - Item 5: 6-5/6, 7, and 7-1/4 fms. - Lat. 54° 20.3', Long. 162° 30.5'

The sea was smooth and the air calm when this shoal was investigated. In addition, the investigation took place during a minus one foot tide, revealing all rocks awash. There was a moderate growth of kelp on this shoal. Enough sounding lines were run to determine the outer limits of the shoal. The shoal was then felt over with a hand lead for about 40 minutes, searching for the least depth. Three soundings of 4-1/6 fms. were obtained close together, (Pos. 31, 32, and 34b), in Lat. 54° 20.35', Long. 162° 30.45'. These were on rocky pinnacles, all within an area of 30 meters. Three soundings of 4-4/6 fms. were obtained in Lat. 54° 20.32', Long. 162° 30.42'. These were also on rocky pinnacles, close together.

The conclusion reached in Paragraph 1 of the Review, that the rock awash mentioned as 1/8 mile north of Pos. 12a should read 1/4 mile north, is correct. During a minus tide, no rock awash was seen 1/8 mile north of that position, but several rocks were observed 1/4 mile north. The launch took positions close to five of these rocks, and made estimates of distances off and heights. One rock baring 4 feet at M.L.L.W. is situated in Lat. 54° 20.51', Long. 162° 30.41', (see Pos. 16b). Not plotted. Accept T-6607 Two rocks, covered 1 foot at M.L.L.W., are situated

in Lat. 54° 20.46', Long. 162° 30.35' (see Pos. 17b). Plotted as awash MLLW A rock baring 3 feet at M.L.L.W. is situated in Lat. 54° 20.45', Long. 162° 30.68' (see Pos. 49b). Not plotted. Accept T-6607. A rock covered 2 feet at M.L.L.W. is located in Lat. 54° 20.44', Long. 162° 30.75' (see Pos. 50b). 49

Par. 10d: Location of Islet in Lat. 54° 18.48', Long. 162° 38.55'

A navigating sextant was taken ashore on this reef, and a number of fixes and cuts taken for the location of its most salient features. These fixes and cuts are plotted on the boat sheet. The position and shape of the reef, as well as of adjacent smaller reefs, is inked on the boat sheet. The highest point on the main reef (marked "A") is located in Lat. 54° 18.46', Long. 162° 38.57'. There are smaller and lower reefs both 50 meters east and 50 meters west of the main reef. A pinnacle rock (marked "b") is located about 90 meters S by E of the highest point of the main reef.

A tracing of the reef is attached to this report. Detail added to H-6281.

STATISTICS

Vol.	Date	Day	No. of Positions	No. of Soundings	Miles of Sdg. Lines (Stat.)
1	June 21	b	85	176	3.8
2	June 22	c	28	28	1.0
	TOTALS		113	204	4.8

Area surveyed: 1/8 square mile (statute).

Respectfully submitted,

L. S. Hubbard

L. S. Hubbard, H. & G. E.,
U.S.C.& G. Survey.

Examined and Approved:

J. M. Smook

J. M. Smook, H.& G. Engr.,
U.S.C.& G. Survey,
Officer in Charge,
Seattle Processing Office.

162°-39'

162°-38'

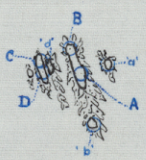
54°-19'

54°-19'

POSITION OF REEF

REVIEW OF SHEET H6281-PARA.10D

SCALE 1:10,000



54°-18'

54°-18'

162°-39'

162°-38'

RAC
HRE.

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

April 10, 1940

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. H. R. Edmonston

Plane of reference approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 6281

Locality Caton Island to Sanak Reef, Sanak Island, Southwest Alaska.

Chief of Party: G. C. Jones in 1939
Plane of reference is mean lower low water reading
4.8 ft. on tide staff at Sanak Harbor
8.1 ft. below B. M. 1
6.2 ft. on tide staff at King Cove
17.4 ft. below B.M. 1

Height of mean high water above plane of reference is 5.8 feet at Sanak Harbor, 6.1 feet at King Cove.

Condition of records satisfactory except as noted below:

Acting Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 164327

Verifier's Report on H-6281 Add'l Wk (1939)

1. Condition of the sounding records was satisfactory ✓
2. The protracting was satisfactory ✓
3. Field plotting of soundings was satisfactory ✓
4. The soundings for H 6281 Add'l Wk (1939) are plotted on H 6281 (1937) in black and are identified by red position numbers The areas on which this work falls are in φ 54-20.3 λ 162-30.5 ✓ φ 54-19.8 λ 162-35.0 ✓ φ 54-17.1 λ 162-37.0 ✓ and the islands in φ 54-19.5 λ 162-38.55
5. Soundings in the area φ 54-20.3 λ 162-30.5 fell on the overlap of H 6385 (1938) ✓ and were plotted on that sheet also.
6. The rocks mentioned on pages 4 & 5 of the descriptive report as being located from positions 16 b and 50 b fall fairly close to rocks previously located on T-6607 (1937). These rocks may be identical and were left uninked pending the decision of the reviewer

See notations in D.R.

Respectfully submitted
R. H. Carstens

Field Records Section (Charts)

Additional Work 1939

HYDROGRAPHIC SHEET NO H6281

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

Number of positions on sheet	113
Number of positions checked	15
Number of positions revised	0
Number of soundings recorded	204
Number of soundings revised	0
Number of soundings erroneously spaced	0
Number of signals erroneously plotted or transferred	0

Date: June 14, 1940

Verification by R.H. Carstens Time: 10 hr

Review by J.A. McCormick 6/18/40 Time: 3 hr.

Additional work 1939

HYDROGRAPHIC SURVEY NO. H6281

Smooth Sheet No

Boat Sheet Yes

Records; Sounding 2 Vols., Wire Drag ___ Vols., Bomb ___ Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes

Landmarks for Charts (Form 567) No

Statistics Yes

Approved by Chief of Party No

Recoverable Station Cards (Form 524) None

Special Chart for Lighthouse Service (Circular Nov.30, 1933) No

Hydrography: Total Days 2 ; Last Date June 22, 1939

Remarks Approved by J M Smook

2776

FORM M-238

MEMORANDUM

IMMEDIATE ATTENTION

Additional work 1939

SURVEY
DESCRIPTIVE REPORT
~~PHOTOSTATIC~~

No. H 6281
~~None~~

received 3/14/40
registered 4/4/40
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.

ROUTE		Initial	Attention called to
20			
22			
24			
25			
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	Lt. Reed

✓ JBR

Add'l. work 1939 applied to ch. 8802 8860 D.M.A. Oct. 23, 1940.
" " " " " Compilation 8705 D.M.A. July 8, 1942