8142

Diag. Cht. No. 8863-3

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. EX-2254 *Office No.* H-8142

LOCALITY

State Alaska

General locality Aleutian Islands, Andreanof Group

Locality North Side Kanaga Island

19 54

CHIEF OF PARTY

S. B. Grenell

LIBRARY & ARCHIVES

DATE November 14, 1955

B-1870-1 (1)

8142

Form 537
(Ed. June 1946)

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.

REGISTER No. H-8142

Field No. EX-2254

State Alaska

General locality Aleutian Islands, Andreanof Group

Locality North side Kanaga Island, ~~Bridge Point to Cape Miga~~

Scale 1:20,000 Date of survey 3 June to 12 July 1954

Instructions dated 19 March 1952, 20 February 1953, 6 April1953 and 23 December 1953.

Vessel USC&GSS EXPLORER, Launches 1, 2, & 3

Chief of party S. B. Grenell

Surveyed by S. B. Grenell, M. E. Wennermark, J. C. Tison Jr. and D. M. Whipp

Soundings taken by ~~fathometer~~ graphic recorder, hand lead, ~~wire~~

Fathograms scaled by Fathometer readers

Fathograms checked by K. B. Jeffers, J. C. Tison Jr. and D. M. Whipp

Protracted by G. E. Haraden

Soundings penciled by C. R. Lehman

Soundings in fathoms ~~feet~~ at ~~MEAN~~ MLLW and are based on a velocity of sound of 800 fms/sec

REMARKS:

U. S. GOVERNMENT PRINTING OFFICE 693019

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SHEET H-8142
(FIELD NO EX-2254)
NORTH SIDE KANAGA ISLAND, BRIDGE PT TO CAPE MIGA
PROJECT CS-218 SEASON 1954
SCALE 1:20,000
USC&GSS EXPLORER S. B. GRENELL, COMDG
SURVEYED BY
S. B. GRENELL
M. E. WENNERMARK
J. C. TISON JR
D. M. WHIPP

A. PROJECT

This survey was executed in accordance with the following instructions for project CS-218:

1. Original instructions dated 19 March 1952.
2. Supplemental instructions dated 20 February 1953.
3. Letter 22/MEK S-1-EX, dated 6 April 1953, subject: "Clarification of Instructions".
4. Supplemental instructions dated 23 December 1953.

B. SURVEY LIMITS AND DATES

This survey includes the inshore hydrography along the north shore of Kanaga Island between Bridge Point and Cape Miga. The hydrography extends offshore to the limits of EX-6253: H-~~8159~~ 8057.

Field work was begun 3 June and ended 12 July. Junctions with prior surveys:

H-~~8159~~ 8057 (EX-6253) 1953, 1:60,000

Junctions with contemporary surveys:

H-8141 (EX-2154), H-8143 (EX-2354), H-8139 (EX-4154).

C. VESSEL AND EQUIPMENT

Hydrography on this sheet was accomplished by the Ship EXPLORER and by EXPLORER launches #1, #2 and #3. Turning radius of Ship EXPLORER (from 1952 descriptive report):

Full right rudder - 360 meters
Full left rudder - 275 meters

Fathometers of the 808 type were used as follows:

Ship EXPLORER	fathometer No.	113S
Launch #1	"	49

Launch #2	Fathometer No.	50
# 3	"	60

A few soundings were recorded in deep water off Cape Miga on the ships EDO recording fathometer No. 4.

D. TIDE AND CURRENT STATIONS

A portable automatic recording tide gage was maintained at Barbara Island, Lat. 51-48.55, Long. 177-44.52. No time or height corrections were applied. Not on this sheet

There are no current stations within the limits of this survey.

E. SMOOTH SHEET

The smooth sheet projection was made by machine in the Washington Office. Triangulation stations and shoran arcs were drawn by EXPLORER officers. The topographic stations and shoreline were transferred to the smooth sheet in the Seattle Processing Office.

F. CONTROL STATIONS

Triangulation stations were established by G. C. Mattison and C. D. Meaney in 1943.

Computations for the positions of shoran stations "Ship" and "Bobo" are included in this report.

Photo-hydro stations were taken from air-photo compilations made by the Washington Office from 1954 field inspections. See topographic manuscripts Nos. T-9924, T-9925, T-9932 and T-9933. all (1952-54)

G. SHORELINE AND TOPOGRAPHY

Shoreline and topography are from Shoreline Manuscripts T-9932, T-9933 and T-9925. The shoreline for Bobrof Island is not shown on this sheet but is on H-8141. (1954)

The low water line was not defined by soundings because of breakers and rocks close inshore.

Foul areas and kelp are defined by the hydrography.

Where offshore topographic features from the manuscripts were verified by the hydrographer, the distances from the launch to the feature are recorded in the sounding records. The distances are estimated and do not always agree perfectly with the detail on the manuscript. Appropriate notes were made in the record as to the disposition of each reference to offshore detail.

Topography features located by the hydrographer and not shown on the manuscripts are:

FEATURE	LAT.	LONG.	POS. NO.	LAUNCH NO
		Position of boat		
Rock Awash	51-47.15	177-22.29	5d	2
Rock Awash	51-45.96	177-23.75	12d	2
Rock Awash	51-46.25	177-23.53	32d	2
some rock Rock Awash	51-46.61	177-23.52	38d	2
Rock Awash	51-46.55	177-23.31	48d	2
Rock Awash	51-48.13	177-13.96	57a	3
Rock Awash	51-51.00	177-11.94	61b	3

H. SOUNDINGS

All soundings were scaled from continuous profiles obtained on 808 fathometers as mentioned in paragraph C. Soundings were scaled at 30 second intervals with intermediate soundings scaled where necessary to locate important submerged features.

See "Special Report on Fathometer Corrections, Ship EXPLORER, Season 1954." (in library)

I. CONTROL OF HYDROGRAPHY

The hydrography done by the Ship EXPLORER and Launch #1 was controlled entirely by three point fixes.

The sounding lines run by launch #2 near the base line extension were controlled by sextant fixes.

The shoran signals were too weak to use in the area off Cape Miga. In this area few shore signals were available for sextant fixes and in one instance (pos. 77c to 80c, the line was controlled by dead reckoning).

Much of b and d day in launch #3 was controlled by one angle and the "SHIP" arc.

(in library)

See "Special Report on Shoran Corrections", Project CS-218, 15 May to 12 July 1954, for description of shoran stations and derivation of corrections applied to shoran distances. Special Report 141-1954

J. ADEQUACY OF SURVEY

The survey is considered complete and adequate for charting. There are no holidays.

See appendix I for discussion of junction with other surveys and agreement of depth curves. (P.O. notes)

K. CROSSLINES

Crosslines constitute 75% of the regular system of sounding lines. See appendix I for discussion of discrepancies at crossings. (P.C. notes)

L-M. COMPARISON WITH PRIOR SURVEYS AND CHARTS

This is an original, basic survey. There are no prior surveys. A few soags from H-6770 (1943)

N. DANGERS AND SHOALS

Newly found shoals are as follows:

LAT.	LONG.	LEAST DEPTH	POS.NO.	LAUNCH
51-46.87	177-22.61	1.6 fms.(H.L.)	6d	2
51-47.29	177-18.90	0.9 fms.(H.L.)	20d	3
51-47.40	177-18.40	1.2 fms.(H.L.)	16e	3
51-53.59	177-12.29	1.3 fms.(fath) H.L. on Rattlesnake	92c	3
51-55.91	177-11.87	~~1.4~~ 5.4 fms.(fath)	55c + 1 sdg	3
51-47.05	177-22.32	0.5 fms.(H.L.)	3d & 4d	2

O. COAST PILOT INFORMATION

During the survey the ship EXPLORER anchored several times one-half mile east of Ship Rock at latitude 51° 47.25, longitude 177° 21.50 in about 20 fathoms of water. The bottom is sandy and hard. It is a satisfactory anchorage in southerly weather.

The ship also anchored about one mile north of Lakeside Point at latitude 51° 51.06 and longitude 177° 12.88 in about 12 fathoms of water. This is a satisfactory anchorage in SE'ly weather. Strong gusts come down the side of the volcano in NE'ly weather.

In good weather small boats may anchor inshore along the North coast of Kanaga Island.

Refer to "Coast Pilot Notes - Ship EXPLORER, 1954" previously forwarded.

P. AIDS TO NAVIGATION

There are no aids to navigation within the limits of this survey and no bridges, overhead or submerged cables, or ferry routes exist.

Q. LANDMARKS FOR CHARTS

No new landmarks are recommended.

R. GEOGRAPHIC NAMES

See "Special Report on Geographic Names - Tanaga and Kanaga Islands, USC&GSS EXPLORER - Season 1953" and "Special Report on Geographic Names - Bobrof, Kanaga and Adak Islands - USC&GSS EXPLORER - Season 1954", previously submitted. The following new place names are suggested: Belleview Beach, Bridge Point and Lakeside Point. Noted by 85th L.H.

Z. TABULATION OF APPLICABLE DATA

Data forwarded with this report:

(a) Smooth sheet H-8141.
(b) Two Boat sheets, EX-2254(A) and EX-2254(B).
(c) Four sounding volumes (1 to 4).
d. Four envelope fathograms.

Data forwarded separately

(a) Field Inspection Report for Maps T-9925, T-9926, T-9932 thru T-9934, T-9940, T-9941, Project CS-218, Ph-34 Kanaga Island, Alaska, Ship EXPLORER, 1954.
(b) Tide data for Barabara Island tide station forwarded 15 September 1954.
(c) Special Report on Shoran Corrections, 15 May to 12 July 1954, Ship EXPLORER, forwarded 25 February 1955.
(d) Special Report on Fathometer Corrections, Ship EXPLORER, 1954, forwarded 25 February 1955.
(e) Special Report on Geographic Names, Bobrof, Kanaga and Adak Islands, 1954, forwarded 18 November 1954.
(f) Coast Pilot Notes, Ship EXPLORER, 1954, forwarded 20 December 1954.
(g) Season's Report, Ship EXPLORER, Project CS-218-1954, forwarded 30 November 1954.

Additional Applicable Data:

Computations for location of shoran masts at stations "BOBO" and "SHIP" attached to this report.

Respectfully submitted

Gerard E. Haraden

Gerard E. Haraden
Lt (jg) C&G Survey

STATISTICS
HYDROGRAPHIC SURVEY H-8142 (1954)
FIELD NO EX-2254
SHIP EXPLORER
PROJECT CS-218

VOL. NO.	DAY LTTR	DATE	H.L. OR WIRE SDGS	NO.POS.	STAT MILES SDG LINES
		SHIP EXPLORER			
1	A	3 June	-	83	32.8
		LAUNCH #1			
2	a	7 June	-	50	17.0
		LAUNCH #2			
4	a	7 June	-	90	29.2
4	b	8 July	-	41	9.5
4	c	9 July	-	25	5.7
4	d	12 July	8	97	19.4
		LAUNCH #3			
2	a	1 July	7	160	45.9
2 & 3	b	7 July	7	139	41.0
3	c	8 July	5	115	29.3
3	d	9 July	2	44	8.7
1 & 3	e	12 July	14	145	33.6
		TOTALS	35	989	272.1

Total Area - 11 square statute miles

GEOGRAPHIC NAME LIST. H-8142

Belleview Beach
Bridge Point
Cape Miga
Kanaga Island
Lakeside Point
Ship Rock

TIDAL NOTE

To Accompany Hydrographic Sheet EX-2254, Reg. No. H-8142

For tide reducers a portable gage was maintained at Barabara Island.

Latitude: 51-48.55
Longitude: 177-44.52

The reducers were taken from the records with no correction for distance from the gage.

The staff reading of MLLW was 2.8 ft.

APPROVAL SHEET FOR
H-8142 (EX-2254)

Hydrography accomplished by the ship on this survey was done under my direct supervision. The launches operated from this ship as a base and all launch work was inspected daily. The survey is complete and adequate. No additional work is recommended.

The smooth sheet is complete except for penciling of soundings which will be done by the Seattle Processing Office.

All records have been examined and are approved. The smooth sheet is approved to the extent of the work accomplished prior to transfer.

S. B. GRENELL
Comdg. Ship EXPLORER

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 244
Rev. Oct., 1932

LIST OF DIRECTIONS

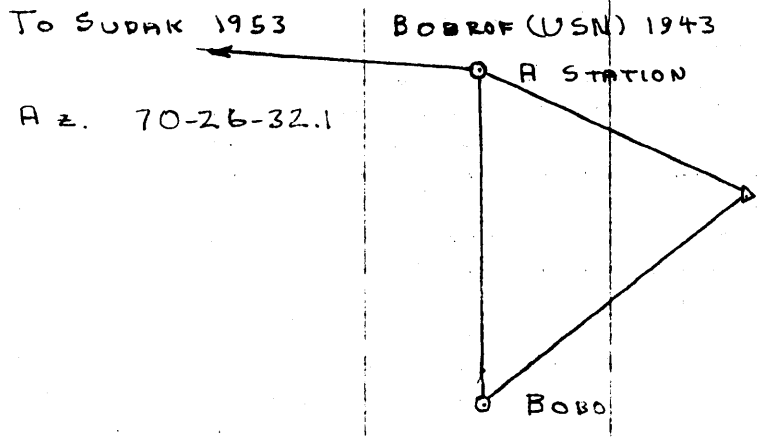
A STA.

Station BOBROF (USN) 1943 State ALASKA - BOBROF IS.

Chief of party S. B. Grenell Date MAY 13 1954 Computed by C.W.C.

Observer C. W. CLARK Instrument WILD T2 No. 19295 Checked by H. G. C.

OBSERVED STATION	Observed direction	Eccentric reduction	Sea level reduction*	Corrected direction with zero initial	Adjusted direction*
	° ′ ″	′ ″	″	° ′ ″	′ ″
SUDAK 1953	0 00 00.00			0 00 00.00	
BOBROF (USN) 1943 SLOPE DISTANCE TELESCOPE TO MARK 4.05 FT. ABOVE MARK 195.8 FT.	192-31-36				
⊙ BOBO (SHORAN STN)	286-45-33				



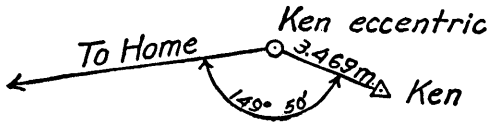
* These columns are for office use and should be left blank in the field.

Station: Ken *State:* Maryland

Chief of party: C. V. H. *Date:* 1917 *Computed by:* O. P. S.

Observer: C. V. H. *Instrument:* No. 168 *Checked by:* W. F. R.

OBSERVED STATION	Observed direction	Eccentric reduction	Sea level reduction	Corrected direction with zero initial	Adjusted direction
	° ′ ″	′ ″	″	° ′ ″	′ ″
Chevy	0 00 00.00	− 7.31		0 00 00.00	
Tank west of △ Dulce	29 03 37.0	−1 09.8		29 02 34.5	
Ken (center), 3.469 meters	176 42				
Forest Glen standpipe	313 24 53.0	+3 01.2		313 28 01.5	
Home	326 31 30.21	+ 31.93		326 32 09.45	
Bureau of Standards, wireless pole	352 17 20.8	+ 5.7		352 17 33.8	
Reno	357 28 48.63	− 1.16		357 28 54.78	
Reference mark, 16.32 m	358 31 20				



This form, with the first three and fifth columns properly filled out and checked, must be furnished by field parties. *To be acceptable it must contain every direction observed at the station.*

It should be used for observations with both repeating and direction theodolites.

The directions at only one station should be placed on a page.

If a repeating theodolite is used, do not abstract the angles in tertiary triangulation. The local adjustment corrections (to close horizon only) are to be written in the Horizontal Angle Record, and the List of Directions is to be made from that record directly.

Choose as an initial for Form 24A some station involved in the local adjustment, and preferably one which has been used as an initial for a round of directions on objects not in the main scheme. Use but one initial at a station. Call the direction of the initial 0° 00′ 00.″ 00, and by applying the corrected angles to this, fill in opposite each station its direction reckoned *clockwise* around the whole circumference regardless of the direction of graduation of the instrument. The clockwise reckoning is necessary for uniformity and to make the directions comparable with azimuths.

If a station has been occupied eccentrically, reduce to the center and enter in this form, in ink, the resulting corrections to the observed directions in the column provided for them. If an eccentric reduction is necessary, but not made in the field, leave the column blank. If the station was occupied centrally, and no eccentric reduction is required, put dashes in the column to show that no corrections are necessary.

Directions in the main scheme should be entered to hundredths of seconds in first-order triangulation; otherwise to tenths only. Points observed upon but once, direct and reverse, should be carried to tenths in first-order and second-order triangulation, and to even seconds only in third-order triangulation. In general, but two uncertain figures should be given.

It is recommended that the following simple plan of observing be used with a repeating instrument: Measure each single angle in the scheme at each station and the outside angle necessary to close the horizon. *Measure no sum angles.* Follow each measurement of every angle immediately by a measurement of its explement. Six repetitions are to constitute a measurement. The local adjustment will consist simply of the distribution of the error of closure of the horizon.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 24A
Rev. Oct., 1932

LIST OF DIRECTIONS

Station SHIP 1943 *State* ALASKA

Chief of party S.B. GREENELL *Date* JULY 3 1954 *Computed by* C.W.C.

Observer C.W.C. *Instrument* W.I.P. 19295 *Checked by* H.G.C.

OBSERVED STATION	Observed direction	Eccentric reduction	Sea level reduction*	Corrected direction with zero initial	Adjusted direction*
	° ′ ″	′ ″	″	° ′ ″	′ ″
BOBROF 1943	0 00 00.00			0 00 00.00	
SHORAN MAST STA SHIP. H.D. 2.95M.	335°-30-				

*These columns are for office use and should be left blank in the field.

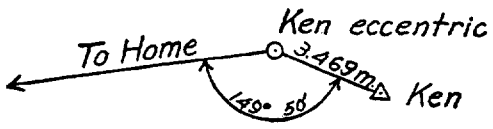
✓

Station: Ken | *State:* Maryland

Chief of party: C. V. H. | *Date:* 1917 | *Computed by:* O. P. S.

Observer: C. V. H. | *Instrument:* No. 168 | *Checked by:* W. F. R.

OBSERVED STATION	Observed direction	Eccentric reduction	Sea level reduction	Corrected direction with zero initial	Adjusted direction
	° ′ ″	′ ″	″	° ′ ″	′ ″
Chevy	0 00 00.00	− 7.31		0 00 00.00	
Tank west of △ Dulce	29 03 37.0	−1 09.8		29 02 34.5	
Ken (center), 3.469 meters	176 42				
Forest Glen standpipe	313 24 53.0	+3 01.2		313 28 01.5	
Home	326 31 30.21	+ 31.93		326 32 09.45	
Bureau of Standards, wireless pole	352 17 20.8	+ 5.7		352 17 33.8	
Reno	357 28 48.63	− 1.16		357 28 54.78	
Reference mark, 16.32 m	358 31 20				



This form, with the first three and fifth columns properly filled out and checked, must be furnished by field parties. *To be acceptable it must contain every direction observed at the station.*

It should be used for observations with both repeating and direction theodolites.

The directions at only one station should be placed on a page.

If a repeating theodolite is used, do not abstract the angles in tertiary triangulation. The local adjustment corrections (to close horizon only) are to be written in the Horizontal Angle Record, and the List of Directions is to be made from that record directly.

Choose as an initial for Form 24A some station involved in the local adjustment, and preferably one which has been used as an initial for a round of directions on objects not in the main scheme. Use but one initial at a station. Call the direction of the initial 0° 00′ 00.″ 00, and by applying the corrected angles to this, fill in opposite each station its direction reckoned *clockwise* around the whole circumference regardless of the direction of graduation of the instrument. The clockwise reckoning is necessary for uniformity and to make the directions comparable with azimuths.

If a station has been occupied eccentrically, reduce to the center and enter in this form, in ink, the resulting corrections to the observed directions in the column provided for them. If an eccentric reduction is necessary, but not made in the field, leave the column blank. If the station was occupied centrally, and no eccentric reduction is required, put dashes in the column to show that no corrections are necessary.

Directions in the main scheme should be entered to hundredths of seconds in first-order triangulation; otherwise to tenths only. Points observed upon but once, direct and reverse, should be carried to tenths in first-order and second-order triangulation, and to even seconds only in third-order triangulation. In general, but two uncertain figures should be given.

It is recommended that the following simple plan of observing be used with a repeating instrument: Measure each single angle in the scheme at each station and the outside angle necessary to close the horizon. *Measure no sum angles.* Follow each measurement of every angle immediately by a measurement of its explement. Six repetitions are to constitute a measurement. The local adjustment will consist simply of the distribution of the error of closure of the horizon.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 25
Ed. Jan., 1929

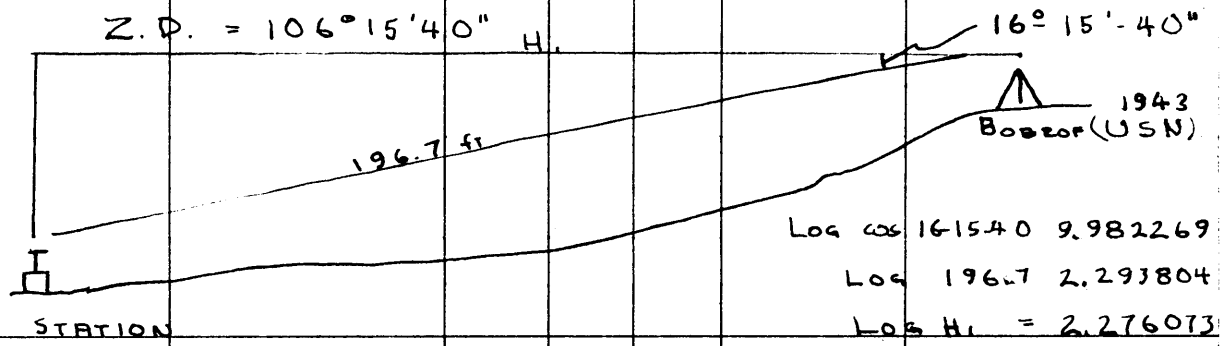
COMPUTATION OF TRIANGLES

State: ALASKA

11—9121
U. S. GOVERNMENT PRINTING OFFICE: 1930

NO.	STATION	OBSERVED ANGLE	CORR'N	SPHER'L ANGLE	SPHER'L EXCESS	PLANE ANGLE AND DISTANCE	LOGARITHM
	2-3					57.53 M	1.759894
	1 BOBO	(17-20-19)					0.525757
	2 A STATION	94-13-57					9.998814
	3 BOBROF	68-25-44					9.968465
	1-3					192.52M	2.284465
	1-2						

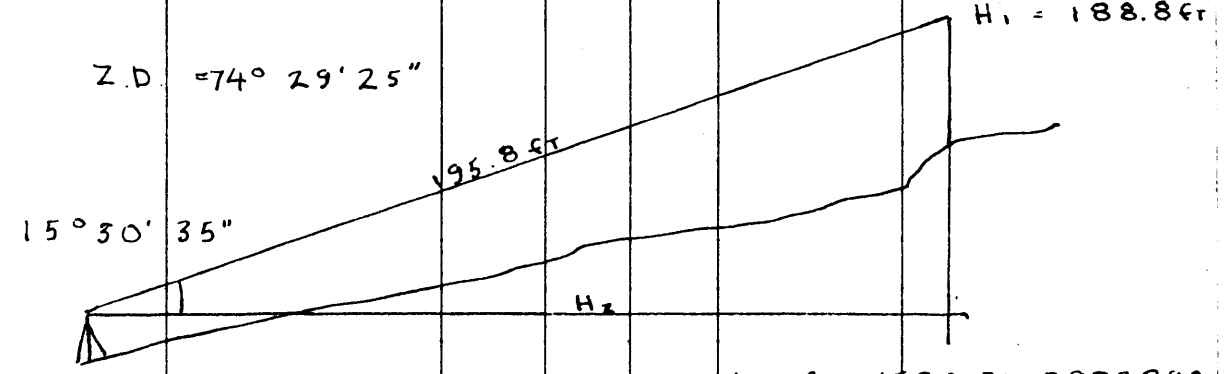
Z.D. = 106°15'40"



Log cos 16 15 40 9.982269
Log 196.7 2.293804
Log H_1 = 2.276073

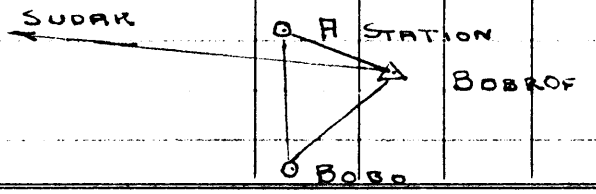
Do not write in this margin

Z.D. = 74° 29' 25"



Log Cos 15 30 35 = 9.983890
Log 195.8 = 2.291813
Log H_2 = 2.275703
H_2 = 188.7 ft

MEAN H = 188.75 ft
= 57.33 m.



✓

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 27
Ed. April 1945

POSITION COMPUTATION, THIRD-ORDER TRIANGULATION

		°	′	″			°	′	″
α	2 SHIP 1943 to 3 BARROF (USN) 1943	155	04	34	α	3 to 2			
2d ∠	&	+335	30		3d ∠	&	−		
α	2 SHIP to 1 SHORAN MAST STATION "SHIP"	130	34	34	α	3 to 1			
Δα					Δα				
		180	00	00.0			180	00	00.0
α′	1 to 2				α′	1 to 3			

First Angle of Triangle

	°	′	″			°	′	″		°	′	″			°	′	″
φ	51	47	12.852	2 SHIP 1943	λ	177	22	17.285	φ				3	λ			
Δφ	+	00	00.062	2.95 M	Δλ	+	00	00.117	Δφ					Δλ			
φ′	51	47	12.914	1 SHIP	λ′	177	22	17.402	φ′				1	λ′			

	Logarithms	Values in seconds
s	0.469822	
Cos α	9.813219	
B	8.509948	
h	8.792989	1st term − 0.0621″
s²		
Sin²α		
C		
		2d term +
h²		
D		
		3d term +
		−Δφ

	°	′	″		
½(φ+φ′)					
		Logarithms	Values in seconds		
s		0.469822			
Sin α		9.880552			
A′		8.508817			
Sec φ′		0.208599			
Δλ		9.067790	+ 0.11689″		
Sin ½(φ+φ′)					
−Δα					

	Logarithms	Values in seconds
s		
Cos α		
B		
h		1st term ″
s²		
Sin²α		
C		
		2d term +
h²		
D		
		3d term +
		−Δφ

	°	′	″		
½(φ+φ′)					
		Logarithms	Values in seconds		
s					
Sin α					
A′					
Sec φ′					
Δλ			″		
Sin ½(φ+φ′)					
−Δα					

16—44238-1 U. S. GOVERNMENT PRINTING OFFICE

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 27
Ed. April 1945

POSITION COMPUTATION, THIRD-ORDER TRIANGULATION

		°	′	″			°	′	″
α	2 Bobboe 1943 to 3 Sudak 1954	70	26	32	α	3 to 2			
2d ∠	&	+304	01	38	3d ∠	&	−		
α	2 to 1	14	28	10	α	3 to 1			
$\Delta\alpha$					$\Delta\alpha$				
		180	00	00.0			180	00	00.0
α'	1 to 2				α'	1 to 3			

First Angle of Triangle

	°	′	″			°	′	″		°	′	″				
ϕ	51	53	30.153	2 Bobboe 1943	λ	177	27	00.712	ϕ				3	λ		
$\Delta\phi$	−	00	06.031		$\Delta\lambda$	+	00	02.515	$\Delta\phi$					$\Delta\lambda$		
ϕ'	51	53	24.122	1 Bobo	λ'	177	27	03.227	ϕ'				1	λ'		

	Logarithms	Values in seconds
s	2.284465	745.5
Cos α	9.986001	(1108.8
B	8.509940	
h	0.780406	+ 1st term 6.0312
s^2		
Sin$^2\alpha$		
C		
		2d term +
h^3		
D		
		3d term +
		$-\Delta\phi$

° ′ ″

$\frac{1}{2}(\phi+\phi')$

	Logarithms	Values in seconds
s	2.284465	61.7
Sin α	9.397703	(1085.7)
A′	8.508815	
Sec ϕ'	0.209593	
$\Delta\lambda$	0.400576	2.5152
Sin $\frac{1}{2}(\phi+\phi')$		
$-\Delta\alpha$		

	Logarithms	Values in seconds
s		
Cos α		
B		
h		1st term ″
s^2		
Sin$^2\alpha$		
C		
		2d term +
h^3		
D		
		3d term +
		$-\Delta\phi$

° ′ ″

$\frac{1}{2}(\phi+\phi')$

	Logarithms	Values in seconds
s		
Sin α		
A′		
Sec ϕ'		
$\Delta\lambda$		″
Sin $\frac{1}{2}(\phi+\phi')$		
$-\Delta\alpha$		

16—44238-1 U. S. GOVERNMENT PRINTING OFFICE

PROCESSING OFFICE NOTES

H-8142
EX-2254

G. SHORELINE & TOPOGRAPHY

All of the rocks shown on T-9925 are without elevations. The prints of this sheet that we have are without elevations. Numerous rocks awash shown on T-9932 and T-9933 are shown with high water elevations. That is to say, there is no bar under the number in parenthesis . These elevations have been left in pencil. Rechkd during verification after field inspection ✓

H. SOUNDINGS

A correction to soundings taken with 808 fathometer No. 113S has been made in accordance with Captain Grenell's letter dated 12 April 1955. ✓

J. ADEQUACY OF SURVEY

Junctions with H-8141 and H-8143 have been compared and appear to agree, though the junction with H-8143 is somewhat sparse. ✓

The depth curves can be adequately drawn. ✓

K. CROSSLINES

Crossings between launch sounding lines are in good agreement. Crossings of "A" day (ship) over launch lines appear to be about one fathom too deep. The fathograms have been checked for speed and initial and no discrepancies appear. Adjusted by rescanning bar-checks ✓

N. DANGERS AND SHOALS

The shoal listed in the hydrographers report at Lat. 51°55.91' Long. 177°11.87' pos. 55c launch No. 3 of 1.4 fathoms has been changed to 5.4 fathoms because on examination of the fathogram there appears to be about 4 fathoms of kelp on the rock. Also the shoal sounding at 92c, same launch, appears to have kelp on it but in view of a note on the fathogram that says"H.L. 1.4" this depth was let stand. ✓
and BS

Respectfully submitted

William M. Martin

William M. Martin
Cartographer C&GS

Approved and Forwarded

L.S. Hubbard

L.S. Hubbard, Captain, C&GS
Seattle District Officer

The disagreement between the ship and launch work was reconciled by careful scanning of the initial and bar checks of the launch work.

GEOGRAPHIC NAMES

Survey No. H-8142

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
Alaska			)							1
Aleutian Islands			)	for title						2
Andreanof Islands (or Group)			)							3
										4
Kanaga Island									BGN	5
Kanaga Sound										6
Cape Miga									BGN	7
Lakeside Point										8
Belleview Beach										9
Bridge Point										10
Ship Rock										11
				Names approved 12-6-55						12
					CHECK					13
Barabara Island			(tide station)							14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8142

Records accompanying survey:

Boat sheets 2; sounding vols. 4; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 4-Envs.;

special reports, etc. 1-Smooth sheet, & 1-Descriptive report.

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

Number of positions on sheet		987
Number of positions checked		69
Number of positions revised		1
Number of soundings revised (refers to depth only)		1480
Number of soundings erroneously spaced		0
Number of signals erroneously plotted or transferred		0
Topographic details	Time	34 hrs
Junctions	Time	20 hrs
Verification of soundings from graphic record	Time	10 hrs

Verification by D.J. Kennon Total time 255 hrs Date 4-3-56

Reviewed by A.R. STIRNI Time 36 hrs Date 4/20/56

M-2232-1

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8142 FIELD NO. EX-2254

Alaska, Aleutian Islands, Andreanof Group, North Side
Kanaga Island

Project No. CS-218

Surveyed - June, July, 1954 Scale 1:20,000

Soundings:

808 Fathometer
EDO Fathometer
Leadline

Control:

Sextant fixes on shore signals.
Shoran
One sextant angle and one shoran distance.

Chief of Party - S. B. Grenell
Surveyed by - S. B. Grenell, M. E. Wennermark, J. C. Tison, Jr. and D. M. Whipp
Protracted by - G. E. Haraden
Soundings plotted by - C. R. Lehman
Verified and inked by - D. J. Kennon
Reviewed by - A. R. Stirni 4/26/56
Inspected by - R. H. Carstens

1. Shoreline and Control

The shoreline originates with the manuscripts of reviewed air-photographic surveys T-9925 (1952-54), T-9932 (1952-54), and T-9933 (1952-54).

The control consists of Shoran Stations "Ship" and "Bobo" and photo-hydro. stations taken from the above air-photographic surveys.

2. Sounding-Line Crossings

The sounding-line crossings are in satisfactory agreement. Discrepancies between ship and launch soundings were reconciled during verification by rescanning the bar-check for "a" day, launch No. 2 and prorating the redetermined bar-check correction throughout the day's work. The corrections applied ranged between 0 and + 0.2 fathom.

3. Depth Curves and Bottom Configuration

The surveyed area is characterized by a rugged shoreline and numerous offshore reefs and pinnacle rocks. The low-water line and some of the shoaler depth curves were not delineated by the regular system of sounding lines because of the ruggedness of the inshore area; however, other depth curves are adequately delineated.

4. Junctions with Contemporary Surveys

An adequate junction was effected on the north and west with reviewed survey H-8057 (1953-54). Junctions with unverified surveys H-8141 (1954) on the southwest, H-8139 (1954), and H-8143 (1954) on the northeast will be considered in the review of those surveys.

5. Comparison with Prior Surveys

H-6778 (1943), 1:120,000

A few soundings from this prior survey fall in the present survey area in the vicinities of lat. 51°49', long. 177°15' and lat. 51°47.8', long. 177°18.3'. Differences between present and prior survey soundings are minor. The prior survey which was of a reconnaissance nature, partly controlled by observed bearings to tangents and radar bearings to uncertain points, is superseded by the present survey in the common area.

6. Comparison with Chart 8863 (print date 1/14/52)
Chart 9193 (print date 7/5/54)

A. Hydrography

The few soundings charted on both charts originate with the previously discussed prior survey H-6778, with the exception of the 1¼ fm. sounding at lat. 51°53.7', long. 177°12.28' on Chart 9193 which originates with the boat sheet of the present survey. Two islets and two rocks awash south of lat. 51°50.0' are also charted from the boat sheet of the present survey.

The present survey is adequate to supersede the charted information in the common area.

B. Aids to Navigation

There are no aids to navigation within the area of the present survey.

7. Condition of Survey

(a) The sounding records and Descriptive Report are complete and comprehensive.

(b) The smooth plotting was accurately done.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

This is a good basic survey and no additional field work is recommended.

Examined and Approved:

H. R. Edmonston
Chief, Nautical Chart Branch

Charles A. Schanck
Acting Chief, Chart Division

J. C. Bull
Chief, Hydrography Branch

for Earl O. Heaton
Chief, Division of Coastal Surveys

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. Apr. 1950

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coast and Geodetic Survey~~ 15 December 1955

Division of Charts: R. H. Carstens

Plane of reference approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 8142

Locality Aleutian Islands, Alaska

Chief of Party: S. B. Grenell in 1954
Plane of reference is mean lower low water, reading
2.8 ft. on tide staff at Barabara Island
7.2 ft. below B. M. 1 (1953)

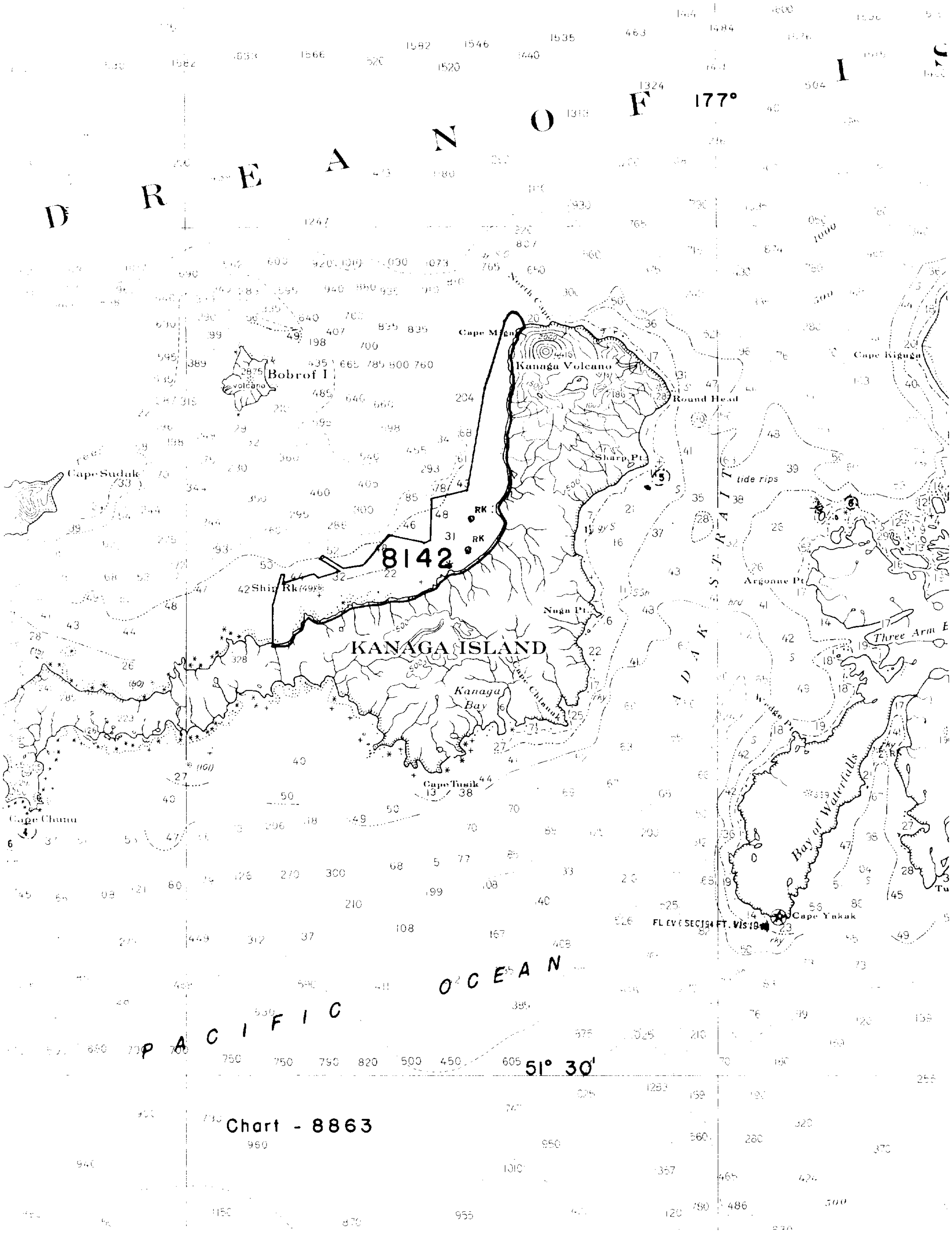
Height of mean high water above plane of reference is: 3.2 feet

Condition of records satisfactory except as noted below:

William Shaw

Acting Chief, ~~Division of~~ Tides ~~and Currents~~ Branch

U. S. GOVERNMENT PRINTING OFFICE 877933


D R E A N O F I S
177°
North Cape
Kanaga Volcano
Round Head
Bobrof I
volcano
Cape Sudak
Sharp Pt
8142
RK
Ship Rk
KANAGA ISLAND
Nuga Pt
Kanaga Bay
Cape Tusik
Cape Chunu
ADAK STRAIT
tide rips
Argonne Pt
Cape Kiguga
Three Arm B
Bay of Waterfalls
Cape Yakak
PACIFIC OCEAN
51° 30'
Chart - 8863

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8142

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
8/1/58	Tide Over 8863	[illegible signature]	~~Before~~ After Verification and Review Partial - Critical adjt - [illegible]
11/21/56	9193	[illegible signature]	~~Before~~ After Verification and Review [illegible]
6/10/58	8863	E.R. Wittman	~~Before~~ After Verification and Review
12/30/92	16467	Joseph Robinson	~~Before~~ After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.