9210

Diag. Cht. No. 8556-2

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT
(HYDROGRAPHIC)

Type of Survey HYDROGRAPHIC

Field No. RA-20-1-71

Office No. H-9210

LOCALITY

State ALASKA

General Locality SHELIKOF STRAIT

Locality VICINITY OF DOUGLAS REEF

1971

CHIEF OF PARTY
Roger F. Lanier

LIBRARY & ARCHIVES

DATE 1/25/74

☆U.S. GOVERNMENT PRINTING OFFICE: 1974-763-098

9210

FORM C&GS-537 (5-66)

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REGISTER NO. H-9210

INSTRUCTIONS - 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. RA-20-1-71

State ALASKA

General locality Shelikof Strait

Locality ~~Cape Douglas~~ Vicinity of Douglas Reef

Scale 1:20,000 Date of survey 21 June - 26 July 1971

Instructions dated 28 January 1971 Project No. OPR-478-RA-71

Vessel NOAA Ship RAINIER launches RA-3, RA-4 & RA-5

Chief of party Capt. R. F. Lanier

Surveyed by LCDR Gelb, LTJG Adams, LTJG Muller, LTJG Suloff, ENS Turnacliff

Soundings taken by echo sounder, lead line Raytheon DE-723 #532, #253, #256

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Personnel

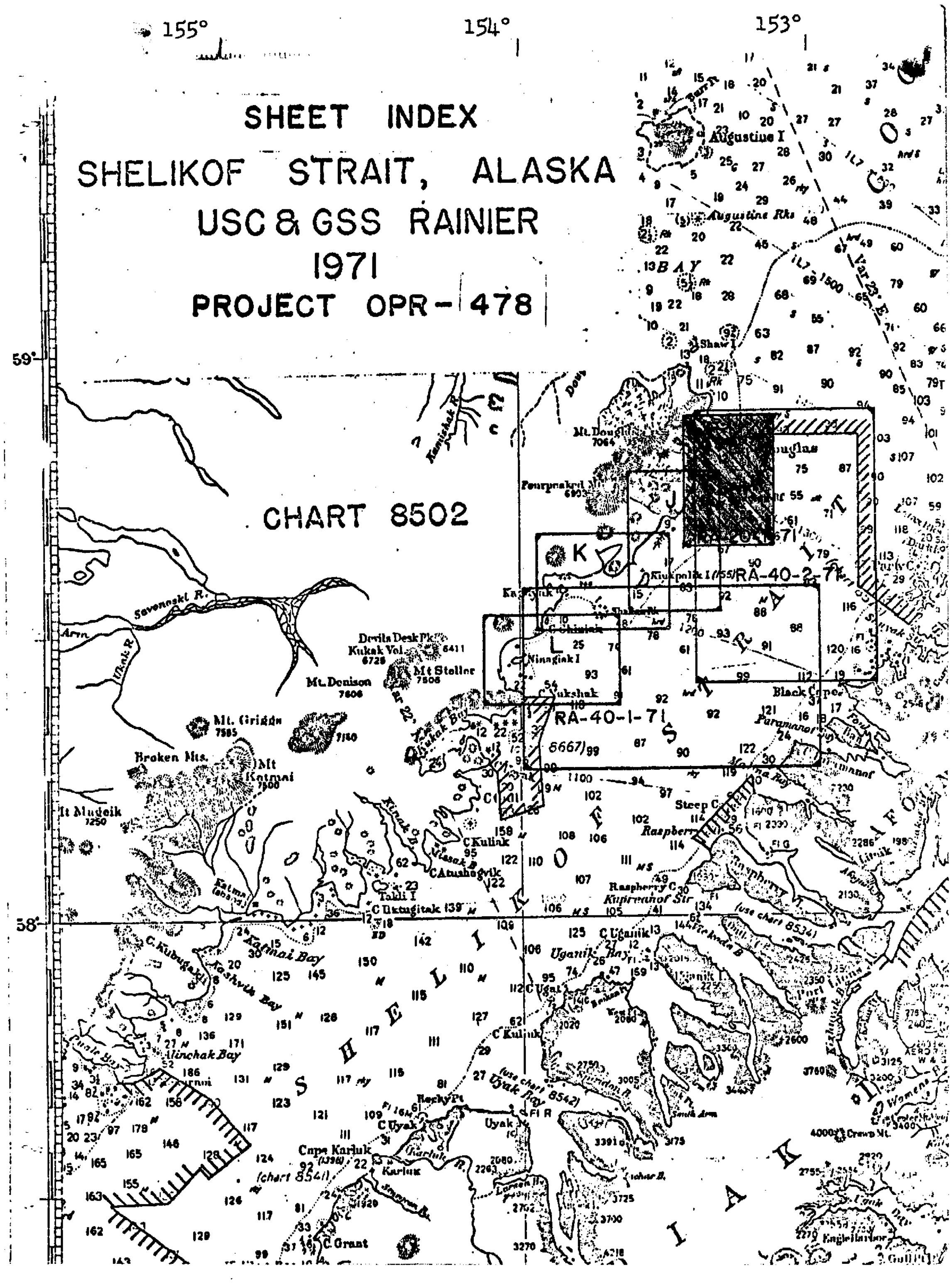
Positions verified by Karol Hoops Automated plot by Digital plotter - PMC

Soundings verified by Nicholas Lestenkof

Soundings in fathoms ~~feet~~ at ~~MHW~~ MLLW

REMARKS: The boatsheet for this survey has been broken into three sections; RA-20-1A-71, RA-20-1B-71, RA-20-1C-71. North section, South East section, Southwest section

Applied Tides 4/8/74 CB



155°
154°
153°
SHEET INDEX
SHELIKOF STRAIT, ALASKA
USC & GSS RAINIER
1971
PROJECT OPR-478
CHART 8502
59°
58°
K
J
L
RA-40-2-71
RA-40-1-71
Augustine I
Mt Douglas
Devils Desk Pk
Kukak Vol
Mt Steller
Mt Denison
Mt Griggs
Broken Mts
Mt Katmai
Kukak Bay
C Kuliak
Kinak B
C Atushagvik
Takli I
C Uktugitak
Katmai Bay
Kashvik Bay
Alinchak Bay
C Kuliuk
Uyak Bay
C Uyak
Rocky Pt
Cape Karluk
Karluk
C Grant
Steep C
Raspberry C
Kupreanof Str
C Uganik
Uganik Bay
Black Cape
Paramanof Bay
Crown Mt
(use chart 8542)
(use chart 8534)
(chart 8541)

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SURVEY

H-9210 (Field No. RA-20-1-71)

SCALE 1:20,000

1971

NOAA SHIP RAINIER

ROGER F. LANIER
CAPT., NOAA
COMMANDING

A. PROJECT

This survey was conducted in accordance with PROJECT INSTRUCTIONS: OPR-478-RA-71, dated 28 January 1971, and the changes listed below.

Change No.	Dated
1	30 March 1971
2	10 May 1971
3	9 June 1971
4	16 June 1971

B. AREA SURVEYED

Sheet H-9210, RA-20-1-71, scale 1:20,000, covers the general area of Cape Douglas, Alaska extending south approximately 12 miles, including Douglas Reef. The survey is bounded by Lat. 58° 39'N and Lat. 58° 51'N, and Long. 153° 12'W and Long. 153° 25'W. This sheet includes approximately 16 miles of the Alaska Peninsula coastline, which consists of pebble and boulder beaches, and ledge outcrops.

The area surveyed was subdivided into three sections; boatsheets RA-20-1A-71, RA-20-1B-71, and RA-20-1C-71.

The survey began on 21 June and was carried out intermittently, as weather permitted, in conjunction with hydrographic surveys H-9201 (RA-40-1-71) and H-9209 (RA-40-2-71). Survey operations were completed 26 July 1971.

This area is joined on the north by contemporary survey H-8841 (1:20,000-1965). Contemporary survey H-9209 (RA-40-2-71), scale 1:40,000, junctions to the east.

H-2980 (1:200,000-1908-09) is the only prior survey of the area covered by H-9210. *There are no contemporary surveys to the south & southwest*

C. SOUNDING VESSEL

Soundings on sheet RA-20-1-71 were obtained by three launches, each using a different sheet identification color. Launch RA-5 obtained soundings for sheet RA-20-1A-71, and used green ink for the position numbers. Launch RA-4 obtained soundings for sheet RA-20-1B-71, and used red ink for positions numbers. Launch RA-3 obtained soundings for sheet RA-20-1C-71, and used violet ink.

D. SOUNDING EQUIPMENT

Launch RA-5 used Raytheon DE-723 fathometer, Serial

No. 532 in depths from 0-90 fathoms. Leadline soundings were used for verification of least depths.

Launch RA-4 used Raytheon DE-723 fathometer, Serial No. 256 in depths from 0-92 fathoms. Leadline soundings were also used for verification of least depths.

Launch RA-3 used Raytheon DE-723 fathometer, Serial No. 253 in depths from 0-40 fathoms. Leadline soundings were taken for verification of least depths.

Fine arc and AF checks were frequently made in all cases. Initial checks were made and an abstract of corrections prepared. The echo sounders were routinely checked twice daily with bar checks, and the results abstracted. Phase comparisons were taken when depths permitted. Phase corrections were made for RA-4 and RA-5. No phase correction was made for RA-3 as it operated within the 0-40 fathom scale for the entire survey. A +0.3 fathom draft correction was used for the Bertram launch. Transducer Correction was obtained by summing the initial, draft, and phase corrections. These corrections were entered in the Transducer Correction/Table Indicator (TC/TI) tapes for automated processing.

Velocity corrections were computed from bar checks and water temperature and salinity observations obtained from a Nansen cast taken on 1 July 1971 in Lat. 58° 48.2'N and Long. 153° 08.0'W. The resulting velocity correction table was entered on tape, and referenced in the TC/TI tape, for automated processing. There were no apparent equipment faults which would affect soundings. See the SOUNDING CORRECTION REPORT, OPR-478, NOAA Ship RAINIER, 1971 for further discussion of sounding corrections.

E. SMOOTH SHEET

Fixes from electronic control and soundings were plotted on standard mylar boatsheets. The smooth sheet will be plotted by the PMC Electronic Data Processing Division.

F. CONTROL

Hi-Fix electronic control, utilizing hyperbolic mode, type A-moderate power, on frequency 1799.6 KHZ, was used for position control throughout the survey.

The master station was located on Nukshak Island, on the west shore of Shelikof Strait, Alaska. A whip antenna was erected approximately 125 feet above sea level, on a reference mark, NUKSHAK RM #6 1971 (Lat. 58° 23' 29.514"N, Long. 153° 57' 40.528"W). *Falls outside limits H-9210*

Slave station #1 was located on Dark Island, a

small island just north of Shuyak Island, Alaska. The whip antenna was erected on a bronze disk at station DARK 2, 1971 (Lat. 58° 38' 34.324"N, Long. 152° 32' 32.049"W), at an elevation of 115 feet. (outside limits of H 9210) #400

Slave station #2 was located on a small peninsula of land two miles west of Broken Point, Kodiak Island, Alaska. The one quarter square mile peninsula was a plateau approximately 75 feet above sea level. The whip antenna was located over station GAN 1971 (Lat. 57° 52' 56.193"N, Long. 153° 39' 46.739"W). (outside limits of H-9210)

The Hi-Fix chain operated smoothly and caused no significant problems throughout the survey. Calibration of Hi-Fix receivers was accomplished by visual three-point sextant fixes on signals located by ground survey methods along the shoreline in the Cape Douglas area. (See sketch and list of GP's in appendix.) The Hi-Fix receivers were also calibrated whenever "lock" was lost and when there was any doubt as to lane count.

Problems involved in control and calibration were caused by inconsistant power sources in the launches and intermittent antenna problems. Frequently foul weather prohibited accurate calibration both before and after the days' run. Any data taken which could not be controlled by adequate calibration was rejected. For futher information on Hi-Fix control and the problems involved see Hi-Fix Report, OPR-478, NOAA Ship RAINIER, 1971.

For information related to the location of the Hi-Fix stations and the calibration signals see the Descriptive Report, Geodetic Surveying Operations, OPR-478, NOAA Ship RAINIER, 1971.

G. SHORELINE

Shoreline details (1962-71) were taken from (1967-71) incomplete shoreline manuscripts T-12930 and T-13156. In general the compilation was very accurate. Sextant fixes were taken from established control and agreed very well with the compiled shoreline.

Some additions and deletions were made to topographic details. Special note should be given to the area in Lat. 58° 50.8'N, Long. 153° 15.0'W. An extensive ledge extends seaward from the cape with an isolated rock off the end of the ledge. Rock reefs indicated in Lat. 58° 49.6'N, Long. 153° 21.7'W and in Lat. 58° 50.8'N, Long. 153° 19.7'W, on the field edit ozalid T-12930 are not present and should be deleted.

The only significant foreshore feature to the south end of the survey sheet is a large boulder 25 meters seaward from the MHWL in Lat. 58° 46' 55"N, Long. 153° 22' 33"W. This boulder appears prominently

Topo. information updated to agree with unreviewed Advance Manuscript T-12930 (1962-71)

11 ft. at M.H.W.

from seaward, being bares 20 feet at 11:10, June 15, 1971 (Time ref. 135°W Long.). This boulder would be helpful to navigation in this area and should be considered a landmark.

The entire area of Douglas Reef is surrounded by rocks, both submerged and awash, which should be considered dangerous to navigation.

Southwest of Douglas Reef in Lat. 58° 44.0'N, Long. 153°21.0'W, is a rocky shoal area as indicated on the sheet. This area also contains numerous rocks awash and should be considered hazardous to navigation. In-depth descriptions of these areas are given in the Field Edit Report, OPR-478, NOAA Ship RAINIER, 1971. Shoreline features noted on the boat sheets were obtained by shoreline inspection and were transferred directly from photos 67L4090, 67L4092, 67L4360, and 67L4356 to the boat sheets. In the area of Douglas Reef three-point sextant fixes were used to position topographic features. Notes on rocks and kelp in this area are given on the data print out. In general the dotted foul line taken from the incomplete manuscripts agreed well with the data, and was inked in black after inspection.

The low water line is not defined in the area of Douglas Reef because the reef perimeter is foul with rocks and kelp. A recompilation of the reef using the hydrographic data and field edit information should allow adequate definition of the low water line. Some of the low water line along the shoreline is not defined as lack of time prevented the launches from completing the shoreline. The low water line between Lat. 58° 46.3'N and Lat. 58° 43.7'N, sheet RA-20-1C-71, is well defined.

H. CROSSLINES

Crosslines on sheet RA-20-1A-71 amounted to 3% of the miles run. The crosslines are very good, agreeing within one fathom, although the flatness of the bottom does not afford a strong check.

Sheet RA-20-1B-71 does not contain crosslines as time did not permit them to be run. (S.E.) On sheet RA-20-1C-71 8% of the total miles run are crosslines. These crosslines also check very well, agreeing within one fathom. No crossing discrepancies need further resolution.

I. JUNCTIONS

All three sections of sheet H-9210 (RA-20-1-71), overlap with good sounding agreement. The survey area is joined on the NE by sheet H-8841 (scale 1:20,000-1965), and on the E by contemporary sheet H-9209 (RA-40-2-71). Soundings at all junctions agree very well and no adjustments are necessary. There are no contemporary junctional surveys to the south and southwest.

J. COMPARISON WITH PRIOR SURVEYS

There are no presurvey review items for the area covered by this survey.

Soundings agree very well with soundings from H-2980,1908-~~1909~~, scale 1:200,000. No evidence of the rock awash on the prior survey at Lat. 58° 50.2'N, Long. 153° 18.4'W was found. The only rock awash found in the same general area was located on H-9210 at Lat. 58° 50.2'N, Long. 153° 17.9'W. *Position of rk. awash on H-2980 in agreement with two rks. on F-12930 & H-9210.*

K. COMPARISON WITH CHART

The survey compares favorably with soundings from C&GS-8556, 1967. A rock on that chart at Lat. 58° ~~50.3~~ 50.2'N, Long. 153° 18.4'W, was not present and should be removed from the chart. The same rock awash mentioned in the previous section was found at Lat. 58° 50.2'N, Long. 153° 17.9'W. The shoreline in this area on chart 8556 was generalized and shows very little detail. In some areas this shoreline is displaced by 0.2 miles. *stet rk awash see above*

The following possible dangers to navigation were discovered. A shoal with a least depth of ~~0.9 fathoms~~ *1.1 fms* exists in Lat. 58° 49.8'N, Long. 153° 20.8'W (Pos. No. 1157). A shoal with a least depth of 2.3 fathoms exists at Lat. 58° 49.6'N, Long. 153° 20.7'W (Pos. No. 1158). A shoal with a least depth of 2.3 fathoms exists in Lat. 58° 47.6'N, Long. 153° 21.1'W (Pos. No. 1249). Time did not permit development of the latter.

Shoal areas around Douglas Reef and SW of Douglas Reef are shown on C&GS Chart 8556, 1967. Again, this area has been generalized and shows very little detail. The configuration of Douglas Reef and the reef SW of Douglas Reef could be improved.

L. ADEQUACY OF SURVEY

The survey is considered adequate to the extent of its completion. However, the survey is incomplete in the following respects:

1. A triangular holiday exists in Lat. 58° 45.5'N, Long. 153° 18.5'W. *East of Douglas Reef.*
2. The following developments should be run:
   2.3 fm sndg at Lat. 58° 47.6'N, Long. 153° 21.1'W
   6.5 fm sndg at Lat. 58° 47.7'N, Long. 153° 20.6'W
3. Splits and development are needed in the area between Douglas Reef and the reef to the South west.
4. No bottom samples were taken on this survey.

5. More crosslines are needed on RA-20-1A-71 and RA-20-1B-71.

M. AIDS TO NAVIGATION

No floating or maintained aids to navigation exist in this area.

One large boulder exists on a pebble beach in Lat. 58° 46.9'N, Long. 153° 22.6'W, and appears prominently from seaward. This boulder has been photo identified and is listed as a landmark in the report on Landmarks For Charts and Fixed Aids To Navigation.

N. STATISTICS

LAUNCH	#POS.	NAUT. MILES SNDG. LINE	AREA IN SQ. NAUT. MILES
RA-3	760	201.1	
RA-4	1261	227.0	
RA-5	1484	360.2	
TOTALS	3505	788.3	50.5

O. DATA PROCESSING

All data was processed in accordance with the Instruction Manual, Automated Hydrographic Surveys.

Raw data was hand logged on time in launches RA-4 and RA-5 using the single indicator format with the logger connected to a teletype. On RA-3 all data was recorded in sounding volumes and later hand logged using the dual indicator format with the logger connected to a Flexowriter. Raw data tapes were later edited for all sounding changes, peaks and deeps, errors in time, and errors in the recorded Hi-Fix rates.

One dual indicator electronic control format corrector tape was produced for each section of the sheet and was used to apply calibration corrections and some additional sounding corrections to the basic survey data.

Standard formats were used for the TC/TI and velocity correction tapes. Hourly tidal data is being furnished Pacific Marine Center's Electronic Data Processing Branch. In accordance with the PMC OPORDER, the tide reducer tape will be made by EDAT.

P. RECOMMENDATIONS

All work listed under L. (Adequacy of Survey) should be completed.

Delineation of the low water line should be completed along the Alaska Peninsula coastline.

It should be noted, when continuing this survey, that weather conditions in this area are subject to rapid change which can hamper small boat operations.

Q. REFERENCES TO REPORTS

1. CORRECTIONS TO ECHO SOUNDINGS, OPR-478, NOAA Ship RAINIER, 1971.
2. FIELD EDIT REPORT, OPR-478, NOAA Ship RAINIER, 1971.
3. HI-FIX REPORT, OPR-478, NOAA Ship RAINIER, 1971.
4. SPECIAL LAND MAGNETICS REPORT, OPR-478, NOAA Ship RAINIER, 1971.
5. GEODETIC SURVEYING OPERATIONS, OPR-478, NOAA Ship RAINIER, 1971.
6. TIDE REPORT, OPR-478, NOAA Ship RAINIER, 1971.

Respectfully submitted,

Nelson M. Franklin

Nelson M. Franklin
Ens., NOAA

ABSTRACT OF CORRECTIONS TO ECHO SOUNDINGS

VELOCITY TAPE OPR-478

Depth	Vel. Corrn.	Vel. Tab.
004000	0000	0001
000060	1001	0003
000900	0000	
001300	0001	
000070	1001	0004
000800	0000	
001300	0001	
000050	1002	0005
000300	1001	
001300	0000	

Sheet RA-20-1A-71

Time	Phase	Inital	Draft	Total	Tab	Day
153900	0	0	.3	.3	0005	172
161000	0			.3		
105000	0		.3	.3	0005	174
105730	-.2			.1		
110100	0			.3		
114445	-.2			.1		
132000	0			.3		
162215	0			.3		
104330	0		.3	.3	0005	177
135615	0	-.1		.2		
140045	0	0		.3		
155825	0			.3		
115615	0		.3	.3	0005	178
121515	0			.3		
105430	0		.3	.3	0005	180
161045	0			.3		
092000	0		.3	.3	0005	181
132430	-.2			.1		
132845	0			.3		
135130	-.2			.1		
135500	0			.3		
143815	-.2			.1		
144030	0			.3		
151545	-.2			.1		
152000	0			.3		
154200	-.2			.1		
154615	0			.3		
155730	0			.3		
085815	0		.3	.3	0005	182
090845	-.2			.1		
091215	0			.3		
093245	-.2			.1		
093745	0			.3		
095745	-.2			.1		
100345	0			.3		
104300	-.2			.1		
105000	0			.3		
110930	-.2			.1		
111515	0			.3		
113530	-.2			.1		
114045	0			.3		

Sheet RA-20-1A-71

Time	Phase	Initial	Draft	Total	Tab	Day
120100	-.2		.3	.1		
120645	0			.3		
125915	-.2			.1		
130530	0			.3		
135815	-.2			.1		
141830	0			.3		
153945	-.2			.1		
154300	0			.3		
162500	0			.3		
092300	0	0	.3	.3	0005	191
110430	-.2			.1		
111145	0			.3		
133230	-.2			.1		
133715	0			.3		
150200	-.2			.1		
150715	0			.3		
155345	0			.3		
090000	0	0	.3	.3	0005	192
092600	-.2			.1		
093045	0			.3		
110315	-.2			.1		
110945	0			.3		
131015	-.2			.1		
131245	0			.3		
135930	-.2			.1		
140300	0			.3		
154500	0			.3		
134700	0	-.1	.3	.2	0005	194
142600	-.2			0		
145630	0			.2		
145700	0	-.2		0		
145900	0	-.1		.2		
150500	0	-.2		.1		
151100	0	-.1		.2		
151500	0	-.2		.1		
152300	0	-.1		.2		
154300	0	-.2		.1		
155100	0	-.1		.2		
155900	0	-.1		.2		
092330	0	0	.3	.3	0005	195
105730	-.2			.1		
110100	0			.3		
112215	-.2			.1		
112400	0			.3		

Sheet RA-20-1A-71

Time	Phase	Initial	Draft	Total	Tab	Day
134900	-.2	0	.3	.1		
135300	0			.3		
163700	0			.3		
084515	0	0	.3	.3	0005	196
112830	-.2			.1		
113800	0			.3		
131800	-.2			.1		
132430	0			.3		
142700	-.2			.1		
143330	0			.3		
155445	-.2			.1		
160110	0			.3		
170215	-.2			.1		
170900	0			.3		
181615	0			.3		
112730	0	0	.3	.3	0005	207
154800	-.2			.1		
161035	0			.3		
161940	-.2			.1		
163808	0			.3		
164615	-.2			.1		

Sheet RA-20-1B-71

105000	0	0	.3	.3	0004	174
105300	-.1			.2		
124930	0			.3		
140100	-.1			.2		
151000	0			.3		
154000	0			.3		
103600	0	0	.3	.3	0004	177
154000	0			.3		
095030	0	0		.3	0004	180
095400	-.1			.2		
102300	0			.3		
102600	-.1			.2		
110400	0			.3		
143630	0	-.1		.2		
153730	0	-.1		.2		
101200	0	0	.3	.3	0004	181
123030	-.1			.2		
125400	0			.3		
131030	-.1			.2		
132800	-.1			.2		

Sheet RA-20-1B-71

Time	Phase	Initial	Draft	Total	Tab	Day
091030	0	0	.3	.3	0004	182
111230	-.1			.2		
115300	0			.3		
125700	-.1			.2		
130700	0			.3		
160156	0			.3		
095600	0	0	.3	.3	0004	191
110630	0	-.1		.2		
124400	0	-.1		.2		
092500	0	0	.3	.3	0004	192
093130	-.1			.2		
100430	0			.3		
101700	-.1			.2		
102000	0			.3		
104400	-.1			.2		
110000	0			.3		
124130	-.1			.2		
125530	0			.3		
131930	-.1			.2		
135100	0			.3		
142300	-.1			.2		
144400	0			.3		
154130	0			.3		
115430	0	0	.3	.3	0004	194
153900	0			.3		
094400	0	0	.3	.3	0004	195
102800	0			.3		
103330	-.1			.2		
103530	0			.3		
112330	-.1			.2		
113030	0			.3		
114900	-.1			.2		
115700	0			.3		
120630	-.1			.2		
133630	0			.3		
153230	0			.3		
091300	0	0	.3	.3	0004	196
121300	0			.3		
094730	0	0	.3	.3	0004	207
160100	0			.3		

Sheet RA-20-10-71

Time	Phase	Initial	Draft	Total	Tab	Day
144100	0	0	.3	.3	0003	192
152900	0	-.1	|	.2		
153900	0	0	|	.3		
162830	0	|	|	.3		
121100	0	0	.3	.3	0003	194
145330	0	0	|	.3		
092530	0	-.1	|	.2	0003	195
093330	0	0	|	.3		
154100	0	0	|	.3		
090800	0	0	|	.3	0003	196
170630	0	0	|	.3		
095100	0	0	|	.3	0003	205
095500	0	-.1	|	.2		
114000	0	-.1	|	.2		
091445	0	0	|	.3	0003	207
195800	0	0	|	.3		

ABSTRACT OF CORRECTIONS TO DISTANCE MEASUREMENTS

POSITION ABSTRACT
H-9210 (RA-20-1-71)

DAY	LAUNCH	POS #'s	
172	RA-5	5001-5010	
174	RA-4	5011-5070	
	RA-5	09-70	(1-8 Rejected)
177	RA-4	5071-5174	
	RA-5	71-137	
178	RA-5	138-146	
180	RA-4	5175-5325	
	RA-5	167-281	(147-166 Rejected)
181	RA-4	5326-5407	
	RA-5	282-424	
182	RA-4	5408-5587	
	RA-5	425-621	
191	RA-4	5587B-5625	
	RA-5	622-771	
192	RA-3	7501-7555	
	RA-4	5626-5804	
	RA-5	772-900	
194	RA-3	7556-7603	
	RA-4	5805-5898	
	RA-5	901-954	
195	RA-3	7604-7744	
	RA-4	5899-6030	
	RA-5	955-1138	
196	RA-3	7745-7942	
	RA-4	6031-6112	
	RA-5	1139-1369	
205	RA-3	7943-8007	
207	RA-4	6113-6261	
	RA-5	1370-1512	
	RA-3	8008-8260	

LIST OF STATIONS ON
H-9210 (RA-20-1-71)

SIGNAL NO.	NAME
101	REEF 1967
102	GLACIER 1971
103	RAINIER 1971
104	DARK 1908
105	SOUTH DOUGLAS 1908
106	KATMAI 1971

SIGNAL PLOTTER CARDS

H-NO.		LATITUDE LONGITUDE	X	Y	X	
09210	101	71 58454469 153161572	04555	07256		101
09210	102	71 58452886 153232671	08193	07001		102
09210	103	71 58435510 153245974	08981	05480		103
09210	104	71 58425666 153274216	10355	04533		104
09210	105	71 58504912 153174757	05329	12200		105
09210	106	71 58495156 153212226	07139	11267		106

000000

4-17-73

APPENDIX

1. Sheet Index.
2. Hi-Fix Station Locations.
3. Sketch of Signal Positions.
4. Non-floating Aids or Landmarks for Charts.

APPROVAL SHEET
OPR-478
H-9210 (RA-20-1-71)
21 June-26 July, 1971
Shelikof Strait, Alaska

Hydrographic procedures were observed and the data was examined daily during the execution of this survey.

The smooth plotted data on the boat-sheets and the accompanying records have been examined by me; although this survey is incomplete it has been found adequate wi within the extent of its completion, and is approved.

Roger F. Lanier

Roger F. Lanier
Capt., NOAA

APPROVAL SHEET

The smooth sheet has been inspected, is complete, and meets the requirements of the General Instructions for automated surveys and the Hydrographic Manual. (Note: All exceptions are listed in the Verifier's Report) see Review Notes

Examined and approved,

James S. Green
Supervisory Cartographic Technician

Approved and forwarded,

Walter F. Forster, LCDR, NOAA
Chief, Processing Division
Pacific Marine Center

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

9/29/72

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center

Hourly heights are approved for

Tide Station Used (NOAA form 77-12): Cape Douglas, S.W., Alaska

Period: 6/15 - 7/26, 1971

HYDROGRAPHIC SHEET: H-9209, H9210

OPR: 478

Locality: Shelikof Strait, Alaska

Plane of reference (mean lower low water): 9.2
which is 2.1 feet on tide staff.

Height of Mean High Water above Plane of Reference is 12.9 ft.

Remarks: Hourly heights have been revised in red & verified as follows:

Date	Hours
June 19	1900
21	0100
22	1000-1400
23	1000-1800
24	0700-1200
25	1300-1800
26	0800-1000
July 20	0600,1100, 2300
21	0500, 0600, 1100, 1300, 1400, 1900, 2300
22	0000, 0600, 0800, 1100, 1200, 1300, 1400, 1800, 1900
24	1200

Hourly heights which were computed from the Seldovia observation have been entered for:

July 26 1900-2100

James R. Hubbard
for Chief, Tides Branch
5/14/75

TIDE NOTE
H-9210 (RA-20-1-71)

The tide station established at Cape Douglas, Alaska Peninsula, in Lat. 58° 50.4'N, Long. 153° 18.8'W, will be used to control the soundings on this survey. This gage operated on time meridian 135°W. Hourly heights are being furnished to the Pacific Marine Center Processing Division and the Tides Section In Rockville. See the TIDE REPORT, OPR-478, NOAA Ship RAINIER, 1971 for more information on this gage.

Predicted tides for the boat sheet were applied directly from the Red Fox Bay, Shuyak Strait (No. 1815) tide station.

GEOGRAPHIC NAMES

Survey No. H-9210

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
CAPE DOUGLAS										1
DOUGLAS REEF										2
~~KODIAK ISLAND~~										3
SHELIKOF STRAIT										4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
					APPROVED BY:					18
					Chas. E. Harrington					19
					STAFF GEOGRAPHER					20
					18 APRIL 1974					21
										22
										23
										24
										25
										26
										27

NOAA FORM 77-27
(9-72)
(PRESC. BY HYDROGRAPHIC MANUAL 20-2, 6-94, 7-13)

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HYDROGRAPHIC SURVEY STATISTICS

HYDROGRAPHIC SURVEY NO. H-9210

RECORDS ACCOMPANYING SURVEY: To be completed when survey is registered.

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET & PNO	1	BOAT SHEETS	3
DESCRIPTIVE REPORT	1	OVERLAYS	3

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES		3 [illegible]	1 [illegible]			
CAHIERS	3					
VOLUMES	6					
Positions, Boxes, grid, and T-SHEET PRINTS (List)			1			

SPECIAL REPORTS (List)

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				
POSITIONS CHECKED		3476	20	
POSITIONS REVISED		48	12	
DEPTH SOUNDINGS REVISED		450	27	
DEPTH SOUNDINGS ERRONEOUSLY SPACED		----		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		----	0	
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		156	40	
JUNCTIONS			20	
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		199	20	
SPECIAL ADJUSTMENTS		12	20	
ALL OTHER WORK		74	146	
TOTALS		441	246	

	BEGINNING DATE	ENDING DATE
PRE-VERIFICATION BY		
VERIFICATION BY Nicholas Lestenkof Nicholas Lestenkof	11 June 1973	15 January 1974
REVIEW BY J. T. Gallahan	5-2-75	8-10-75

Cursory Insp. JK Mapes 38 hrs 7/20/76

Reg. No. H-9210

The Computer and Excess Sounding Cards for this survey have not been corrected to reflect the changes made to the Computer Card and Excess Card Printouts at this time of the review.

When the cards have been updated to reflect the final results of the survey the following shall be completed:

CARDS CORRECTED

DATE_____ TIME REQ'D_____ INITIALS_____

REMARKS:

Reg. No. _____

The magnetic tape containing the data for this survey has not been corrected to reflect the changes made during evaluation and review.

When the magnetic tape has been updated to reflect the final results of the survey, the following shall be completed:

MAGNETIC TAPE CORRECTED

DATE_____ TIME REQ'D._____ INITIALS_____

REMARKS:

H-9210

Items for Future Presurvey Reviews

This survey covers an area in Shelikof Strait at Cape Douglas. The lack of development on the earlier survey precludes any detailed comparison between the prior and present depths. However, no substantial differences in the bottom are noted. Additional work should be scheduled in areas as listed in item 8 of the review.

Position Index		Bottom Change Index	Use Index	Resurvey Cycle (Years)
Lat.	Long.			
584	1532	2	1	50
584	1533	2	0	50
585	1532	2	0	50
585	1533	2	0	50

OFFICE OF MARINE SURVEYS AND MAPS

MARINE SURVEYS DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-9210 FIELD NO. RA-20-1-71

Alaska, Shelikof Strait, Vicinity of Douglas Reef

SURVEYED: June 21 through July 26, 1971

SCALE: 1:20,000 PROJECT NO.: OPR-478

SOUNDINGS: DE-723 Depth Recorders
Leadline CONTROL: Hi-Fix
(Hyperbolic Mode)

Chief of Party	R. F. Lanier
Surveyed by	M. L. Adams
	E. M. Gelb
	R. K. Muller
	D. L. Suloff
	W. F. Turnacliff
Automated Plot by	Gerber Digital Plotter (PMC)
Verified by	N. Lestenkof
	K. Hoops
Reviewed by	J. T. Gallahan
	Date: August 10, 1975
Cursory inspection made--survey processing considered complete	G. K. Myers Date: February 20, 1976

1. Control and Shoreline

The origin of control is adequately covered in part F of the Descriptive Report.

The shoreline originates with class I maps T-12930 (1962-71) and T-13156 (1967-71).

2. Hydrography

A. Depths at crossings are in good agreement.

B. The usual depth curves were adequately delineated, except in some foul areas or where ledge made passage dangerous. In some cases, dashed depth curves were drawn by the reviewer to emphasize lesser depths in areas of deeper soundings. The absence of sounding lines west of Douglas Reef precluded a complete delineation of the 10- and 20-fathom depth curves in this area.

C. The development of the bottom configuration was, in general, adequate. However, little specific development and no handlead verification of many critical depths were accomplished. Fathometer development and/or leadlines should

have been utilized to obtain the least depths over the following features:

Soundings (fathoms)	Latitude	Longitude
2.6	58°47.6'	153°21.1'
4.1	58°46.51'	153°14.3'
0.8	58°45.6'	153°17.69'
4.5	58°44.77'	153°20.8'
1.5	58°44.75'	153°20.39'
4.3	58°44.49'	153°19.93'
4.6	58°44.56'	153°19.15'
3.2	58°43.75'	153°19.88'

3. Condition of the Survey

The field work, sounding records, Pacific Marine Center verification, and Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual supplemented by the Instruction Manual - Automated Hydrographic Surveys, except for the following:

A. No bottom characteristics were obtained in the field.

B. Additional crosslines should have been run by the field party for the purpose of verifying the accuracy of the survey and the control.

C. It was necessary for the reviewer to rescan the fathograms in some areas and select additional soundings to provide a more complete portrayal of the bottom configuration. Also, some peaks were added or adjusted for time by the reviewer.

D. Ledges, rocks, and kelp sometimes were not shown on the verified smooth sheet because hydrographic data was not always consulted. Boat sheet references and hydrographic notes in the sounding volumes and raw data printouts should be utilized to properly delineate such features.

E. An excessive amount of dashed line has been transferred from the photogrammetric surveys where soundings adequately indicated the limits of foul areas.

F. Tide approval sheet not in Descriptive Report.

4. Junctions

Adequate junctions have been effected with H-8841 (1965) on the north and H-9209 (1971) on the east and southeast. There are no contemporary surveys junctioning the present survey on the south and southwest.

5. Comparison with Prior Surveys

H-2980 (1908) 1:200,000

This smaller scale prior survey with only a few sounding lines falling in the common area of the present survey is of little value for comparative purposes between the prior and present depths. However, a few bottom characteristics have been brought forward in order to provide this information on the present survey.

With these additions, the present survey is adequate to supersede the prior survey within the common area.

6. Comparison with Chart 8556, latest print date Nov. 20, 1971

A. Hydrography

The charted hydrography originates with the previously discussed prior survey which requires no further consideration.

The present survey is adequate to supersede the charted hydrography within the common area.

B. Aids to Navigation

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

7. Compliance with Instructions

This survey adequately complies with Project Instructions, except as indicated in items 2 and 3 of the review.

8. Additional Field Work

This survey is considered adequate for charting. Investigation of several shoal features was not accomplished during the survey but would be desirable at an opportune time. Least depth determination of the following features is lacking:

Soundings (fathoms)	Latitude	Longitude
2.6	58°47.6'	153°21.1'
4.1	58°46.51'	153°14.3'
0.8	58°45.6'	153°17.69'
4.5	58°44.77'	153°20.8'
1.5	58°44.75'	153°20.39'
4.3	58°44.49'	153°19.93'
4.6	58°44.56'	153°19.15'
3.2	58°43.75'	153°19.88'

Sounding to complete the coverage of the bottom delineation in the area of the 10- and 20-fathom depth curves near the western end of Douglas Reef is recommended.

Examined and Approved:

Chief
Marine Surveys Division

Associate Director
Office of Marine Surveys
and Maps

OPR.....478
SHEET-RA.....20-1A-71
TYPW OF DATA..Raw
FLEXOWRITER...X
COMMENTS:
Corrector tape for
RA-5
Smooth logged

SHEET LAUNCH 5 "A"

CORRECTOR TAPE ABSTRACT

TIME ✓	IND ✓	SNDG ✓	POS # ✓	DAY	FM	R_1C	R_2C ✓	TIDE ✓	TRA	
105000	00	0054	0009	174	1	000002	100001	0000	000	000
133600	00	0054	0029	174	1	000102	100001	0000	000	000
151600	00	0072	0044	174	1	100022	100016	0000	000	000
104330	00	0084	0071	177	1	100007	100016 03	0000	000	000
131300	00	0110	0101	177	1	000001	000004	0000	000	000
152030	00	0128	0121	177	1	100006	000004	0000	000	000
155200	00	0090	0134	177	1	100106	000004	0000	000	000
11[illegible]15	00	0054	0138	178	1	000005	000005	0000	000	000
10[illegible]30	00	0134	0167	180	1	100005	100005	0000	000	000
092000	00	0142	0282	181	1	000010	000000	0000	000	000
085815	00	0106	0425	182	1	100008	000005	0000	000	000
092300	00	0120	0622	191	1	100007	100003	0000	000	000
090000	00	0125	0772	192	1	000008	100002	0000	000	000
134700	00	0040	0901	194	1	000024 33	000005	0000	000	000
092330	00	0144	0955	195	1	100011	000001	0000	000	000
084515	00	0056	1139	196	1	100006	000000	0000	000	000
112730	00	0126	1370	207	1	000001	000001	0000	000	000

V5.14

FORM NO. 37
(6-30-67)
COMM-DC 28424

SHEET LAUNCH 4 "B"

FLEXOWRITER....X
COMMENTS:
Corrector tape for
RA-4
Smooth logged

CORRECTOR TAPE ABSTRACT

TIME	IND	SNDG	POS #	DAY	FM	R_1C	R_2C	TIDE	TRA	
153900	00	0040	5001	172	1	000015	100009	0000	000	000
105000	00	0046	5011	174	1	100007	100005	0000	000	000
151000	00	0194	5060	174	1	100007	100105	0000	000	000
154000	00	0128	5070	174	1	100007	100005	0000	000	000
103600	00	0163	5071	177	1	000000	100108	0000	000	000
153730	00	0150	5171	177	1	103000	100108	0000	000	000
095030	00	0034	5175	180	1	100018	100009	0000	000	000
103400	00	0805	5196	180	1	000082	100009	0000	000	000
101200	00	0056	5326	181	1	000007	000002	0000	000	000
0 030	00	0021	5408	182	1	000102	100004	0000	000	000
092000	00	0064	5411	182	1	000102	000096	0000	000	000
103900	00	0142	5463	182	1	000102	000196	0000	000	000
110800	00	0013	5479	182	1	000202	000196	0000	000	000
110900	00	0041	5480	182	1	000302	000196	0000	000	000
113930	00	0835	5496	182	1	000402	000296	0000	000	000
144600	00	0650	5526	182	1	100006	100002	0000	000	000
095630	00	0024	5587	191	1	000005	100003	0000	000	000
092500	00	0013	5626	192	1	100001	100003	0000	000	000
115430	00	0112	5805	194	1	100077	100015	0000	000	000
094400	00	0076	5899	195	1	000000	000000	0000	000	000
091300	00	0145	6031	196	1	000058	000019	0000	000	000
094730	00	0102	6113	207	1	100100	000000	0000	000	000
095515	00	0052	6118	207	1	100200	000000	0000	000	000
100330	00	0098	6121	207	1	000100	000000	0000	000	000
132900	00	0076	6192	207	1	000000	000000	0000	000	000

60

✓SH

COMM-DC 26424

SHEET LAUNCH 3 "C"

COMMENTS:
Corrector tape for RA-3.
Smooth logged

CORRECTOR TAPE ABSTRACT

TIME	IND	SNDG	POS #	DAY	FM	R_1C	R_2C	TIDE	TRA	
144100	00	0030	7501	192	1	100003	000000	0000	000	00
121100	00	0022	7556	194	1	100070	100018	0000	000	00C
092530	00	0018	7604	195	1	000003	100001	0000	000	00C
090800	00	0032	7745	196	1	000001	000002	0000	000	00C
095100	00	0114	7943	205	1	000000	000000	0000	000	00C
091445	00	0130	8008	207	1	100003	000000	0000	000	00C

NOAA FORM 76-40
(2-71)
PRESCRIBED BY
PHOTOGRAMMETRY INSTRUCTION NO. 64.

U.S. DEPARTMENT OF COMMERCE–NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

ORIGINATING ACTIVITY
- ☐ FIELD INSPECTION
- ☒ FIELD EDIT
- ☐ COMPILATION
- ☐ FINAL REVIEW
- ☐ QUALITY CONTROL AND REVIEW

(See reverse for responsible personnel)

☒ TO BE CHARTED
☐ TO BE DELETED

ORIGINATING LOCATION: NOAA SHIP RAINIER

DATE: 6/15/71

The following objects have (have not) been inspected from seaward to determine their value as landmarks:

JOB NUMBER: ~~AK~~ OPR-478

SURVEY NUMBER: T - 12930

STATE:

TP-

DATUM: 1927

POSITION

CHARTING NAME	DESCRIPTION	LATITUDE ° ′	LATITUDE ″ D.M. METERS	LONGITUDE ° ′	LONGITUDE ″ D.P. METERS	METHOD AND DATE OF LOCATION (See instructions on reverse of this form) FIELD INSPECTION	COMPILATION	FIELD EDIT	CHARTS AFFECTED
	Large boulder on pebble beach. 25m. seaward of MHWL	~~58~~ 46	~~55~~ 54	153 22	~~33~~ 26	6/15/71	67L(C) 4360	P.1	C&GS 8556

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	NAME	TITLE
1. Objects inspected from seaward	N.M.FRANKLIN ENS. NOAA	☐ FIELD INSPECTOR ☒ FIELD EDITOR
2. Positions determined and/or verified	N.M.FRANKLIN ENS. NOAA	FIELD INSPECTOR
		FIELD EDITOR
		COMPILER
3. Forms originated by Quality Control and Review Group and final review activities		☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR 'METHOD AND DATE OF LOCATION' SECTION

NOTE: 'Photogrammetric Positions' are dependent entirely, or in part, upon control established by photogrammetric methods. 'Field Positions' are determined by field observations based entirely upon ground control.

COLUMN TITLE	TYPE OF ENTRIES
COMPILATION	Applicable to office identified and located objects only. Enter the number and date of the photograph used to identify the object.
FIELD INSPECTION AND FIELD EDIT	1. New Position Determined–Enter the applicable data by symbols as indicated below:

F – Field	P – Photogrammetric	EXAMPLES:
1. Triangulation	1. Field identified	
2. Traverse	2. Theodolite	F. 3.c
3. Intersection	3. Planetable	
4. Resection	4. Sextant	P.2
a. Theodolite		
b. Planetable		
c. Sextant		

Immediately beneath the data described above, enter the following:

a. For 'Field Positions' enter the date of location.

b. For 'Photogrammetric Positions' enter the date of field work; and, if a photograph was used in locating the object or the object was identified on a photograph, enter the number of the photograph used.

2. Triangulation Station Recovered – Enter 'Triang. Rec. mo/day/yr.'

3. Position Verified – Enter 'Verif. mo/day/yr.'

C&GS FORM 567
(11-61)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED
~~TO BE REVISED~~
~~TO BE DELETED~~
} STRIKE OUT TWO

June 15, 1971

I recommend that the following objects which have *(have not)* been inspected from seaward to determine their value as landmarks be charted on *(~~deleted from~~)* the charts indicated.

The positions given have been checked after listing by N. M. Franklin

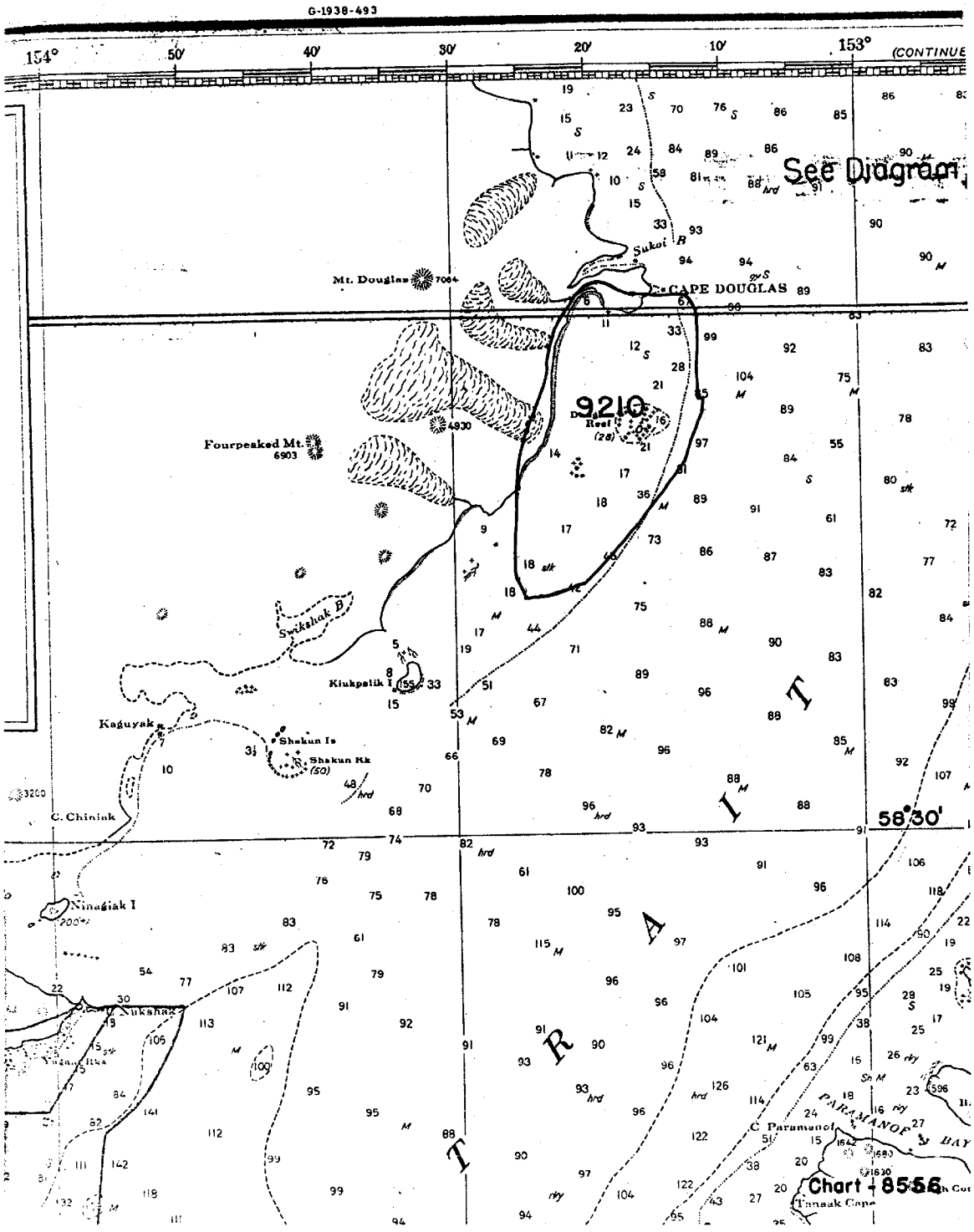
R. F. Lanier
Chief of Party

STATE / CHARTING NAME	DESCRIPTION	SIGNAL NAME	POSITION LATITUDE* ° ′	LATITUDE* ″ B.R. METERS	LONGITUDE* ° ′	LONGITUDE* ″ B.P. METERS	DATUM	METHOD OF LOCATION AND SURVEY No.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
Boulder	Large boulder 25m. seaward of MHWL, Bare 20ft.		58 46	55	153 22	33	Photogrammetric 1927	H-9210	6/15/71	x			8556
	11:10,6/15/71 Time 135 W.												

This form shall be prepared in accordance with Hydrographic Manual, Publication 20.2, Sec. 1-55, 2-39, 6-36, 7-18 to 22 inclusive, and Fig. 79. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

* TABULATE SECONDS AND METERS

USCOMM-DC 10284-P61


G-1938-493
154°
50'
40'
30'
20'
10'
153°
(CONTINUE
See Diagram
Mt. Douglas 7064
CAPE DOUGLAS
Sukot
9210
Fourpeaked Mt. 6903
6930
Swikshak B.
Kiukpalik I.
Kaguyak
Shakun Is
Shakun Rk
(50)
C. Chiniak
58°30'
Ninagiak I
200+
Nukshak
Paramanof Bay
C. Paramanof
Tanaak Cape
Chart 8556

FORM C&GS-8352
(3-25-69)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9210

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
8556	4/12/74	M. D. Kanis	~~Full~~ Part ~~Before~~ After Verification ~~Review Inspection Signed Via~~
			Drawing No. Critical corrections Applied
8502	4/15/74	M. D. Kanis	~~Full~~ Part ~~Before~~ After Verification ~~Review Inspection Signed Via~~
			Drawing No.
			Critical corrections applied thru chart 8556
8500	4/15/74	M. D. Kanis	~~Full~~ Part ~~Before~~ After Verification ~~Review Inspection Signed Via~~
			Drawing No.
			Examined for critical corrections - thru 8502
8554	4/15/74	M. D. Kanis	~~Full~~ Part ~~Before~~ After Verification ~~Review Inspection Signed~~ Via
			Drawing No.
			Examined for critical corrections - NO corrections
8554	12/10/75	M. D. Kanis	~~Full~~ Part ~~Before~~ After Verification Review ~~Inspection Signed~~ Via
			Drawing No. Applied ~~minor revisions~~ curves
			and sndgs.; revised shoreline; added rocks
8556	8/8/77	M. J. Pruess	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. Consider hydro fully zoned throughout
			common area
8502	1/30/78	J. Baily	Full ~~Part Before~~ After ~~Verification Review~~ Inspection Signed Via
			Drawing No. 4 Applied thru cht. 8556
16640	5/11/78	KANIS	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing ~~No~~. Aid Proof #18
16648	3/9/79	D. A. Clements	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. 1
531	8-6-79	Owen R. Stembel	Full ~~Part Before~~ After Verification Review Inspection (Signed) Via
(8500)			Drawing No. 16 Fully applied thru 16013 (8503)
16608	9/5/81	J. A Graham	Fully zoned hydro to new Charts

FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975.

USCOMM-DC 8556-P68