7049

Diag'd. on Diag. Ch. No. 8863-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC RECONNAISSANCE

Field No. SU-16145 *Office No.* H-7049

LOCALITY

State ALASKA

General locality ALEUTIAN ISLANDS

Locality ANDREANOF TO RAT ISLANDS

194 5

CHIEF OF PARTY

C.D. Meaney, Commanding Ship SURVEYOR

B-1870 T(1)

7049

FEB 4 1947

Form 537
(Ed. Nov. 1941)

REG. NO. H7049

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-7049

Field No. SU 16145

State ALASKA

General locality ALEUTIAN ISLANDS

Locality ANDREANOF to RAT ISLANDS

Scale 1:160,000 Date of survey July to October, 1945

Instructions dated Feb. 3, 1938; Feb. 1, 1944; January 29, 1945

Vessel Ship SURVEYOR

Chief of party C. D. Meaney, Comdg.

Surveyed by C. D. Meaney

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

Protracted by W. M. Martin

Soundings penciled by W. M. Martin

Soundings in fathoms ~~feet~~ at ~~MLW~~ MLLW

REMARKS: Reconnaissance Survey only

Processed in the Seattle Processing Office.

U. S. GOVERNMENT PRINTING OFFICE 428975

DESCRIPTIVE REPORT

To ACCOMPANY

HYDROGRAPHIC RECONNAISSANCE SHEET SU-16145
H-7049

ANDREANOF TO RAT ISLANDS

ALEUTIAN ISLANDS

1945

Scale: 1 to 160,000

Cheif of Party: C.D. Meaney, Comdg. Ship SURVEYOR, 1945

Field work By: C.D. Meaney

A. PROJECT

This is a reconnaissance survey made while enroute between the working grounds in the Delarof Islands and Amchitka Island. Two additional lines were run while enroute to and from Adak. This work was executed under the Director's Orders of 29 January 1945, Instructions of 3 February, 1938, and Supplemental Instructions of 1 February, 1944.

B. SURVEY LIMITS AND DATES:

This survey consists of reconnaissance lines in Amchitka Pass between Latitudes 51° 16' and 51° 50'. There are two lines along the south side of Tanaga and Kanaga Islands from Skagul Island to Adak Strait. This work was accomplished between 14 July and 9 October, 1945.

C. VESSELS AND EQUIPMENT:

All work was done by the ship SURVEYOR. (See paragraph H).

D. TIDE AND CURRENT STATIONS:

None (See separate Tide & Velocity notes appended to report).
(amended - see Processing Office Notes)

E. SMOOTH SHEET:

It is not recommended that a smooth sheet be plotted. It is recommended that the lines as plotted on the boatsheet be forwarded to the Washington Office for inspection and chart revision. S/S plotted

F. CONTROL STATIONS:

All main control stations used were located by triangulation or topography. Reference: SU-J-1945.

G. SHORELINE AND TOPOGRAPHY:

As shown on the boat sheet.
(see notes by Processing Office)

H. SOUNDINGS:

Standard methods were used to obtain depths. All soundings were obtained by the R.C.A. (Type NMC) Fathometer for depths over one hundred fathoms and by the Dorsey III Fathometer for depths of one hundred fathoms or less. Continuous recording of soundings was maintained.

I. CONTROL OF HYDROGRAPHY:

The sounding lines were controlled as far as visibility would permit by sextant fixes and bearings, followed by radar to the limit of its range, and then by dead reckoning. The lines were tied in on both sides of Amchitka Pass. The location of positions outside the range of triangulation stations was dependent on sextant angles on tangents and mountains with very poor present locations.

J. ADEQUACY OF SURVEY:

This work is considered of a reconnaissance nature only and is not considered a survey. Charting of soundings is recommended to show depths in previously uncharted areas and supplement the present charts. Standard surveys controlled by shoran should be executed in this area when possible.

K. CROSSLINES:

Crossings are satisfactory.

L & M. COMPARISON WITH CHART:

There is considerable variation with previously charted soundings. There have been no previously well controlled surveys in this area.

N. DANGERS AND SHOALS:

No depths dangerous to navigation were found. A depth of 54^{50} fathoms was obtained twenty miles west of the northern tip of Ulak Island.

P. AIDS TO NAVIGATION:

No aid to navigation have been established in the area covered by this report.

Q. LANDMARKS FOR CHARTS:

None.

Respectfully Submitted,

Wilbur R Porter

WILBUR R. PORTER
Lt. Comdr., C. & G. Survey

Approved:

C.D. Meaney

C.D. MEANEY
Lt. Comdr., C. & G. Survey
Comdg. Ship SURVEYOR

WPP

NOTE: To accompany descriptive report
Hydrographic survey H-7049.

A frequency meter is attached to the R.C.A. Model N.M.C. fathometer. A reading of 60.0 indicates that the speed of the driving arm is correct. A higher reading indicates that the speed is too great and a negative correction should be applied to each sounding. Frequency meter readings between 59.7 and 60.3 indicate an error up to 1/2 of 1% and no corrections have been made when the frequency meter read within that range.

On only one day did the meter vary sufficiently to warrent corrections (A day). The necessary corrections have been entered in the record book but have not been applied to the soundings or the boat sheet. The maximum correction this day was 12 fathoms representing a 2% error in 600 fathoms.

STATISTICS FOR RECONNAISSANCE SHEET H-7049

Day	Date	Volumn	No. Pos.	Stat. Miles
A	7-14-45	1	37	64.4
B	7-17-45	2	40	88.5
C	7-28-45	3	43	63.3
D	8-2-45	4	34	59.8
E	8-8-45	3	31	70.7
F	8-11-45	5	36	63.2
G	8-13-45	5 & 6	39	60.6
H	8-14-45	6	41	80.5
J	8-15-45	6 & 7	42	65.0
K	8-24-45	8	38	68.6
L	8-25-45	8 & 9	49	73.1
M	8-28-45	9	37	71.2
N	9-15-45	9 & 10	89	96.8
P	9-28-45	10	34	50.6
P	9-29-45	11	12	19.5
TOTAL			602	995.5

AREA 1825 sq. miles.

ABSTRACT OF VELOCITY CORRECTIONS - Sheet H-7049

No corrections were applied to soundings obtained by the R.C.A. type N.M.C. fathometer for the following reasons:

This is a reconnaissance survey only and the positions of the soundings are poorly controlled.

It is impossible to read the scale 0 - 2000 (deep water) accurately. (Probably correct to ten fathoms).

The velocity corrections (Temerature, Salinity and pressure) for this machine are positive and negligable in quanity.

Frequency meter of NMC. maintained at 60 cycles + so recorded in all record books

H-7049

SU 16145

Kanaga I. to Amchitka I.

Seattle Processing Office Notes

Smooth Sheet-

The projection is hand made on unimbossed Paragon paper, scale 1:160,000.

Sounding Corrections-

Fathometer corrections were applied throughout the books.
Tide corrections were applied under 100 fathoms.

Plotting Positions-

After plottting all reliable information on the sheet and studying the data, it was observed that N day supplied the most dependable positions. Fortunately certain well marked shoals were found on this day. They were very useful in fixing the crossings of other lines with N day soundings. The lines were adjusted in the following order:

N day was plotted chiefly from 3 point fixes which were obtained throughout most of the day. The dead reckoning interval from 64N to 78N was plotted on line and time. This line was held fixed and other less well controlled lines adjusted to it.

M day was plotted on 3 point fixes from 1M to 8M and 32M to 37M. The line from 8M to 32M is plotted on course and distance with straight line adjustment applied.

J day - three point fixes some of which are on tangents, bearings, and single angles. Some slight adjustment was made to obtain good crossings with N day lines. The position of J day line is considered fairly good.

K day - three point fixes, 1K to 7K and 35K to 38K. The soundings from 26K to 28K were fitted to the N line. Straight line adjustments applied 7K to 26K and 28K to 35K.

D day - three point fixes, 1P to 12P and 40P to 46P. Adjustments were made to cross K day between 18 and 19P. The crossing of the J line between 22 and 23P crossed very well. Pos. 37P was adjusted to make suitable crossing with the N and J lines between 37 and 39P.

G day - three point fixes, single angles and bearings, positions 1 to 4G. Three point fixes, Pos. 38 and 39G. Single angles, bearings, positions 36G and 38G. The soundings at 18G were adjusted slightly to fit the N line. Then straight line adjustments were applied from 4 to 18G and 18 to 36G.

H day - three point fixes, positions 38H to 41H. The soundings at 5H were fitted to the G line and plotted back to 1H on time and course and giving some weight to the radar distance at 1H. Soundings between 29 and 30H were fitted to the N line. Straight line adjustments between 5 and 29H. Straight line adjustment, positions 30 and 38H.

E day - 1E starts near buoy. Three point fixes between 30 and 31E. Soundings between 4 and 5E were fitted to N line. Straight line adjustment between pos. 1 to 4E. It is possible that the line between 3 and 4E should lay north of the H line. Straight line adjustment applied between positions 5E and 30E.

A day - three point fixes at 1A and 33 to37A. Soundings between 25 to 26A fitted to the N line. H line then crossed well. Slight adjustments made to cross G line between 30 and 31A. This gave good agreement with P, J, and K lines. Straight line adjustment from 1A to 25A.

F day - Three point fixes, 1 and 2F. Weak 3 pt. fixes on tangents 3F to 5F. Line ends near buoy at Pos. 36F. Soundings at 14F fitted to the N line. Soundings between 30 and 31F fitted to A line. Straight line adjustments 2F to 14F and 14F to 30F and 31F to 36F.

L day - three point fixes, 1L to 6L. Line ends at buoy, pos. 49L. Soundings between 20 and 22L were fitted to the N line. Soundings between 39 and 40L were fitted to F day. Straight line adjustments applied from 6L to 20L and 22L to 39L and 40L to 49L.

B day - started near buoy. Pos. 40B is fixed by four weak radar distances where line ends. Straight line adjustment applied between. No crossings.

C day - three point fixes, 1C to 16C, and at 20C, 21C, and 26 to 39C. Course and time adjustments applied where control failed.

D day - Bearings and single angles at 7D to 12D and 16D to 20D. Plotted back to Pos. 1D on course and time. Three point fixes at 13, 14, and 15D and 21 to 24D. Weight given to radar for pos. 31 to 34D. Straight line adjustment from 24 to 31D.

Shoreline-

Shoreline shown on the sheet is from sources listed below:

Kanaga Island - from Photo Topo C.S. 295. SHIP, TOP, and CHU held as plotted.

Shoreline continued:

Bobrof I.- from Photo Topo C.S. 295. BOBROF and BOBROF VOL. held as plotted.

Tanaga I.- from Photo Topo C.S. 312 and 313. Also from charts 9145 and 9146. DAY, ZED, PATTON, WASH and ROK held as plotted.

Ilak I.- from Photo Topo 36538. ILAK identified and held with azimuth from topo sheet.

Gareloi I.- from Photo Topo 36530. GARELOI VOL. and PIL identified and held.

Ogliuga I.- from T-8005. YOKE and CAB held.

Skagul I.- " " . GUL and ⅛TEM held.

Tag I.- " " TAG held with GUL.

Ugidak I.- from Photo Topo 36534. TAG and UGIDAK spotted and held.

Kavalga I.- from T-8005. OFF and LAG held.

Unalga I.- from Photo Topo C.S. 360. JUMP and UNALGA held.

Ulak I.- from T-8006. JOE and LOW held as plotted.

Amatignak I.- from Navy Photo Topo 36531. DOM and KNOB identified and held.

Semisopochnoi I.- from Photo Topo by U.S.S. OGLALA, 1935. SEMISOPOCHNOI and SEMISOPOCHNOI PK. identified and held.

Amchitka I.- from Photo Topo by U.S.S. OGLALA, 1935. SYL and CHITKA identified and held.

All shoreline reduced from original scale by pantograph.

H-7049

TIDAL NOTE

Tide reducers from the gage at Ogliuga Island were applied in depths less than 100 fathoms.

Ogliuga Gage-

Latitude	51° 36.2 N
Longitude	178 37.0 W

Staff reading of MLLW is 3.8 feet.

H-7049

List of Signals

AMATIGNAK	Triang. 1944
ACE	T-8006
BAC	Triang. 1944
BAT	T-8006
BAKER CONTROL TOWER	Triang. 1944
BLACK	T-8006
BUT	T-8006
BOBROF	Triang. 1943
CAT	H-7023
CAB	T-8005
CENT	CENTER RADIO TOWER 1945
CHU	Triang. 1943
DOC	Triang. 1944
EBB	T-8005
EBB (Amchitka I.)	T-6967b
EDDY ROCK	Triang. 1943
EGG	T-8005
GARELOI	Triang. 1944
GARELOI VOL.	Triang. 1943
GOOSE	Triang. 1943
GUL	Triang. 1944
HAD	T-8005
HANGER	Triang. 1944
HAP	T-6967b
HAT	H-7023
HIGH	T-8006
ISLE	H-6778
ISLE	Triang. 1944
ILAK	Triang. 1944
JOE	T-8006
JUMP	Topo C.S. 360
KANA	Triang. 1943
KNOB (Kanaga I.)	Triang. 1943
KNOB (Amatignak I.)	Triang. 1945
LAS	T-6967b
LATE	T-6967b
LOW	T-8006
MAG	Triang. 1943
MAT	From Boat sheet H-7049
MIK	Triang. 1943
MIST	Triang. 1945
NUB	Triang. 1943
OFF (Tanaga I.)	Triang. 1943
OFF (Kavalga I.)	Triang. 1944
PYLAK	Triang. 1943
REAR RANGE	T-6967a
RIP	H-7049
RADAR BUOY	H-~~7042~~ 7007
ROCK	T-8005
ROCKY	Triang. 1943
ROK	H-7041
SAS	Triang. 1943
SHIP	Triang. 1943
STKP	Hydro (see note on sheet
SUD (Tanaga I.)	Triang. 1943
SUD (Amchitka I.)	T-6967b
SEMISOPOCHNOI	Triang. 1944
SEMISOPOCHNOI PK.	Triang. 1944
SILO	Triang. 1945
SYL	Triang. 1945
TAG	Triang. 1944
TAN	Triang. 1944
TANAGA VOLCANO	Triang. 1943
TIG	H-7049
TOWER	Triang. 1944
TWIN	T-8005
ULAK	Triang. 1944
UNA	Triang. 1944
UNALGA	Triang. 1944
UGIDAK	Triang. 1944

Respectfully submitted,

Edgar E. Smith

Edgar E. Smith
Cartographic Engineer
Seattle Processing Office

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography:~~

Division of Charts: H. W. MURRAY

Plane of reference approved in
11 volumes of sounding records for

HYDROGRAPHIC SHEET 7049

Locality - Andreanof to Rat Islands, Aleutian Islands, Alaska

Chief of Party: C. D. Meaney in 1945
Plane of reference is mean lower low water, reading
3.8 ft. on tide staff at Ogliuga Island
4.7 ft. below B. M. 1

3.7 ft. on tide staff at Ulak Island
7.4 ft. below B. M. 1

5.0 ft. on tide staff at Constantine Harbor
9.9 ft. below B. M. 1

Height of mean high water above plane of reference is 3.5 feet.

Condition of records satisfactory except as noted below:

E. C. McKay
Section
Chief, ~~Division~~ of Tides ~~and Currents.~~

U. S. GOVERNMENT PRINTING OFFICE 154227

GEOGRAPHIC NAMES

Survey No. H7049

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		
Adak Strait										1
~~AAA~~ Aleutian Islands (title only)										2
Amchitka Pass									USLB	3
										4
Kanaga Island									USLB	5
Tanaga Island									"	6
Gareloi Island									"	7
Amatignak Island									"	8
Amchitka Island									"	9
Delarof Islands										10
										11
										12
Andreanof Islands (title)										13
Rat Islands (for title only)				Names underlined on the approach by L. Heck 6/5/47						14
										15
										16
										17
Ogliuga I		(tide staff)							USLB	18
Ulak I		(" ")								19
Constantine Harbor		(" ")								20
										21
										22
										23
										24
										25
										26
										27

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H7049

Records accompanying survey:

Boat sheets 1....; sounding vols. 11...; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 1 envelope

special reports, etc. .....

.....

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

Number of positions on sheet		602
Number of positions checked		115
Number of positions revised		5
Number of soundings revised (refers to depth only)		0
Number of soundings erroneously spaced		0
Number of signals erroneously plotted or transferred		0
Topographic details	Time	2
Junctions	Time	----
Verification of soundings from graphic record	Time	10

Verification by Henry A. Curtis. Total time 137.. Date 4/15/47

Reviewed by P. F. Jordan Time ..11... Date 6/4/47..

M-2232-1

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY REGISTRY NO. H-7049

FIELD NO. SU 16145

Reconnaissance

Alaska, Aleutian Islands, Andreanof to Rat Islands
Surveyed in July to October, 1945 Scale 1:160,000
Project No. ----

Soundings:

Dorsey III Fathometer
NMC Fathometer

Control:

Sextant fixes on shore signals and natural objects.
Radar and dead reckoning

Chief of Party - C. D. Meaney
Surveyed by - C. D. Meaney
Protracted by - W. M. Martin
Soundings plotted by - W. M. Martin
Verified and inked by - H. A. Curtis
Reviewed by - G. F. Jordan, June 4, 1947
Inspected by - H. W. Murray

The hydrography on this small-scale reconnaissance survey extends from Adak Strait to Amchitka Island, and was obtained while enroute to and from the working grounds in this area. A complete report on the control of sounding lines is included in the Descriptive Report. A formal review of this survey is not considered necessary.

The smooth plotting by the Processing Office is described in detail in the Descriptive Report and is accepted as plotted. The depth curves have been left in pencil.

An inspection of this survey in relation to other surveys in the area shows an agreement of soundings varying from good to poor. Considering the differences in scales, a comparison with surveys in the Delarof Islands shows good agreement. However, in the vicinity of lat. 51° 34', long. 179° 43' E., present 250-to 350-fm. soundings are 600 fm. shoaler than soundings on a crossline on H-6906 (1935), a survey by the U. S. Navy. These Navy soundings are unreliable in this area and should be disregarded.

An inspection of soundings has been made in the overlaps with the following surveys:

H-7038 (1945)
H-7050 (1945)
H-7051 (1945)
H-6882 (1933) U. S. Navy
H-6906 (1935) U. S. Navy

Several reported shoal soundings fall within the limits of the present survey and are shown on chart 8863. The present reconnaissance survey is not sufficiently detailed to afford a disposition of these items at this time.

The position of the sea buoy at lat. 51° 25.6', long. 179° 21.6' E, was taken from H-7007 (1945). The buoy is equipped with a radar cage.

This reconnaissance survey will be superseded when basic surveys are made in this area.

I. E. Rittenburg
Chief, Nautical Chart Branch

Examined and approved:

C. M. Durgin
Chief, Division of Charts

K. G. Crosby
Chief, Section of Hydrography

C. K. Green
Chief, Division of Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. H7049

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
9/12/47	9107	K. Stegman	~~Before~~ After Verification and Review Partial application. Three sdgs added.
			Before After Verification and Review
10/8/47	9146	L.A. McGann	~~Before~~ (After) Verification and Review ✓
4/15/48	8863	L.A. McGann	~~Before~~ (After) Verification and Review
4/19/48	9145	L.A. McGann	~~Before~~ (After) Verification and Review ✓
1950	9107	Everett	~~Before~~ After Verification and Review Examined for reconstruction 9107
2/29/52	8864	L.A. McGann	~~Before~~ (After) Verification and Review Thru overlap with Chart 8863.
12/24/58	Record 8863	J.P. Walker	~~Before~~ After Verification and Review Completely superseded.
			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.