H10483

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Basic Hydrographic

Field No. PHP-5-1-93

Registry No. H-10483

LOCALITY

State Alaska

General Locality Bering Sea

Sublocality Alcan Harbor

1993

CHIEF OF PARTY
LT Guy T. Noll, NOAA

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DATE AUG 21 1995

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NOAA FORM 77-28 (11-72)

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

HYDROGRAPHIC TITLE SHEET

REGISTER NO.
H-10483

FIELD NO.
PHP-5-1-93

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

State: Alaska

General locality: Bering Sea

Locality: Alcan Harbor

Scale: 1:5,000 Date of survey: June 30 - July 28, 1993

Instructions dated: April 30, 1993 Project No.: S-Q903-PHP

Vessel: NOAA Launch 1102, EDP No. 0652

Chief of party: LT Guy T. Noll, NOAA

Surveyed by: LT R.A. Fletcher, LTJG D.W. Haines, E.O. Wernicke, L.K. Simmons

Soundings taken by echo sounder, hand lead, pole: Echosounder, Leadline

Graphic record scaled by: PHP Personnel

Graphic record checked by: PHP Personnel

Evaluation by: Bob Mihailov Automated plot by: PHS Xynetics Plotter

~~Protracted by~~

Verification by: R. Shipley, J. Stringham, B. Mihailov

Soundings in ~~fathoms~~ ~~feet~~ meters and decimeters at ~~MLW~~ MLLW

REMARKS: Position control meets 1:10,000 scale standards.

All times are UTC. North American Datum of 1983. Revisions and marginal notes in black are generated during office processing.

All separates are filed with the hydrographic data, as a result page numbering may be interrupted or non-sequential.

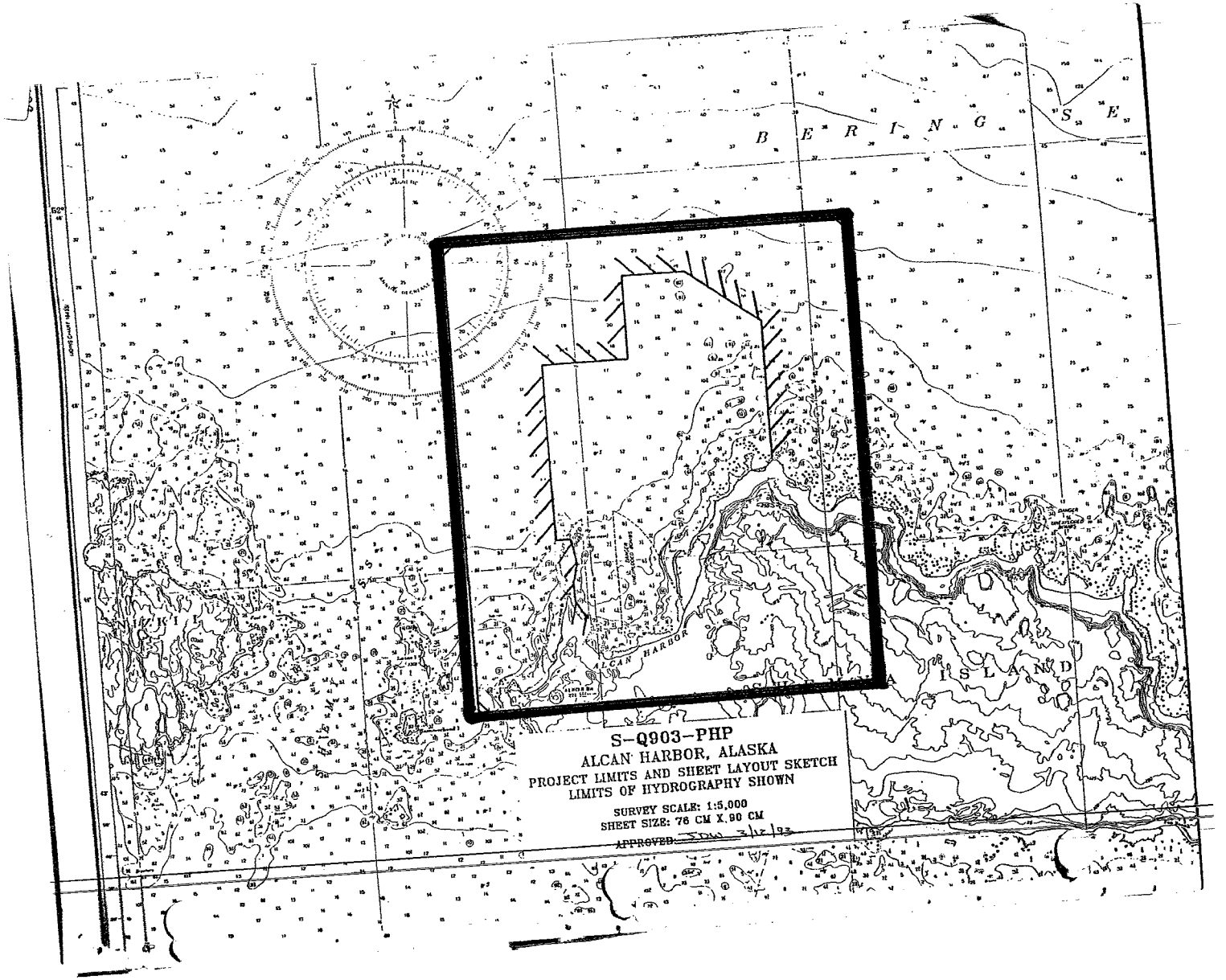
Surf/Anvois chk 9/28/95, mcR

11/27/97

AUG 21 1995

NOAA FORM 77-28 SUPERSEDES FORM C&GS-537.

U.S. GOVERNMENT PRINTING OFFICE: 1986 - 652-007/41215



S-Q903-PHP

ALCAN HARBOR, ALASKA

PROJECT LIMITS AND SHEET LAYOUT SKETCH
LIMITS OF HYDROGRAPHY SHOWN

SURVEY SCALE: 1:5,000
SHEET SIZE: 76 CM X 90 CM

APPROVED: SDW 3/12/93

Descriptive Report to Accompany Hydrographic Survey H-10483

Field Number PHP-5-1-93
Scale 1:5,000
1993

Pacific Hydrographic Party
Chief of Party: LT Guy T. Noll

A. PROJECT

This survey was conducted in accordance with Hydrographic Project Instructions S-Q903-PHP, Alcan Harbor, Shemya Island, Alaska, dated April 30, 1993.

The United States Air Force requested a hydrographic survey to determine the present condition of Alcan Harbor which is located on the north shore of Shemya Island, Alaska. The harbor is vital for the shipment of food, supplies, and fuel to Eareckson Air Force Station.

Shemya Island is in a geologically active area. There have been many quakes, two registering 7.5 and 7.3 on the Richter scale, since the last survey. The most recent basic hydrographic survey in Alcan Harbor was conducted in 1958. Contemporary hydrography from this project will update nautical charts covering the area.

This survey was conducted at 1:5,000 hydrographic standards with the exception of hydrographic position control which was conducted at 1:10,000 standards per section 6.3 of project instructions S-Q903-PHP.

B. AREA SURVEYED

See Eval Rpt, Section I

The area surveyed for H-10483 was from the 3 meter curve or the inshore limit of safe navigation to the 30 meter curve, and between latitude 52°43'30"N and latitude 52°45'30"N and from longitude 174°03'~~45~~36"E to longitude 174°05'40"E.

Hydrographic data acquisition was conducted from June 30, 1993 (DN 181) through July 28, 1993 (DN 209).

C. SOUNDING VESSELS

NOAA Launch 1102 (EDP No. 0652), a 21-foot SeaArk, was used for all hydrography and velocity casts.

Detached positions (DP) were taken with a remote antenna on July 12-13, 1993 (DN 193-194). The launch was trailered to several points on the wharf, the vicinity of the barge, and to the wreck of the OPTY. A 10 meter antenna cable was then run from the Ashtech receiver on the launch to a remote antenna that was placed on the ground close to or on the item to be positioned.

No other unusual vessel configurations were used.

D. AUTOMATED DATA ACQUISITION AND PROCESSING

An updated software version of the Hydrographic Data Acquisition and Processing System (HDAPS) for both the personal computer data acquisition system (PCDAS) and the Hewlett Packard data processing system (HPDPS) was used throughout this survey. The software systems were updated specifically for this project because the standard versions did not accommodate east longitudes. Program names and versions were submitted to Pacific Hydrographic Section (PHS) for inclusion in the separates.

The following non-HDAPS computer programs were used:

Program Name	Program Version	Version Date
VELOCITY	2.00	1992
NADCON	1.01	1989
INVERS3D	1.00	1991
INVERSE	1.20	1991
MONITOR	1.31	1993

The horizontal control GPS data collected with Trimble receivers were processed by Pacific Hydrographic Party (PHP) using proprietary Trimble software, versions unknown.

Duplicate fix numbers were accidently recorded on DN 205 (Fix's 2432-2435) and DN 207 (Fix's 2786-2787). The second of the repeated fix numbers were manually labeled with the suffix "B" on the echograms and data printouts. In both cases the first fix numbers were rejected data.

E. SONAR EQUIPMENT ✓

Side scan sonar (SSS) operations were conducted using an EG&G model 260 slant-range corrected SSS recorder and an EG&G 272-T dual-channel (single frequency) towfish. The towfish was operated on the 100 kHz frequency and was configured with a 20° beam depression.

The following sonar equipment was used throughout the survey:

Type	S/N
Towfish	015598
260 Recorder	015602

The SSS towfish was towed with a 50 meter EG&G lightweight towcable. The towfish was deployed manually from the starboard side of the launch. The towcable was deployed through a block mounted to a swing-arm davit on the starboard quarter. The length of towcable deployed was determined by measured markings on the towfish cable. The SSS towfish was maintained at a height off the bottom of 8 to 20 percent of the range scale. Three range scales were used 25-, 50-, 75-meters. SSS operations were conducted at a speed of 5 knots or slower.

Confidence checks were performed on a routine basis, primarily by noting changes in bottom texture on the outer edges of the sonargram. Confidence checks were also taken on a crab pot which was within the survey area.

Sonargrams were occasionally degraded from sea surface return, prop wash, and frequent towfish yawing due to a short scope when operating in depths less than 7 meters. All degraded sonargrams were rejected and rerun, or the acceptable swath width was adjusted. The SSS recorder gain setting was set for the best return for the prevalent bottom material.

The approach to the wharf, from latitude 52°44'37"N south to the south side of the pier, was surveyed with 100 percent sidescan coverage. All SSS contacts PHP found significant were investigated with echosounder. CONCUR

F. SOUNDING EQUIPMENT ✓

An Innerspace Model 448 thermal depth sounder recorder (SN: 263), modified with custom EPROMS for HDAPS, was used throughout this survey (DN 181 - DN 209). The Innerspace echosounder operates at 208 kHz and has an 8° conical beam pattern.

A metric leadline was made by PHP in accordance with HSG 69 with the following exception: the leadline is a 7/16-inch double-braided, dacron line with shrink tube markings secured with epoxy glue at one-meter intervals from 0 to 19 meters. This deviation from Hydrographic Survey Guideline (HSG) 69 makes for a more rugged leadline. Markings were calibrated with a steel surveyor's tape while the line was wet and under six pounds of constant tension. The throwing end is a standard six-pound lead shackled to a stainless steel thimble bent to the bitter end. Leadlines were used for depth comparisons with the echosounder. Calibration forms were submitted on June 3, 1993, to PHS for inclusion in the separates.*

G. CORRECTIONS TO SOUNDINGS

Soundings were recorded in meters, with an assumed speed-of-sound through water of 1500 m/sec.

Corrections for the speed of sound through the water column were computed from data obtained with an Applied Microsystems Laboratories (AML) Velocity of Sound Profiler (S/N 03042).

The AML instrument was calibrated by Northwest Regional Calibration Center on March 17, 1993. A copy of this calibration report was submitted to PHS for inclusion in the separates.*

The VELOCITY Program was used to determine the speed of sound correctors in accordance with Field Procedures Manual For Hydrographic Surveying. The version of Velocity used by PHP did not have historical data for that latitude and longitude and was unable to extend the velocity casts. PHP manually extended the cast number 2 corrector table before entering correctors into the HDAPS system. The correctors were applied to the data during post processing on the HPDPS. The following casts were used to determine the velocity correctors:

Cast	DN	Depth	DN Range	HDAPS Table	Cast Position Latitude	Longitude
1	180	31	181-187	1	52°45'15"N	174°03'45"E
2	195	37	195-196	2	52°45'30"N	174°04'00"E
3	205	38	205-209	3	52°45'30"N	174°04'00"E

Copies of all velocity cast data and HDAPS Velocity Corrector Tables were submitted to PHS for inclusion in the separates.*

Leadline comparisons were taken daily and are annotated on the echograms. No systematic drift or error in the digitized depths was observed.

* Filed with the hydrographic records.

Static draft for vessel number (VN) 0652 was determined on May 21, 1993 (DN 141). The depth of the transducer face from a reference mark on the hull was determined. Then the depth was measured from this reference mark to the launch's waterline with the launch in the water (fuel tanks half full and two crew aboard). A static draft of 0.4 meters was determined.

Settlement and squat measurements for VN 0652 were conducted in San Francisco Bay at the Tiburon Fisheries Laboratory on May 21, 1993 (DN 141). Field records were submitted to PHS for inclusion in the separates.*

Settlement and squat correctors are applied during post-processing using the REAPPLY program in HDAPS.

The tidal datum for this project is mean lower low water. The operating tide station at Adak, Alaska, (946-1380) served as control for datum determination at all subordinate stations. Approved Tide Note dated September 24, 1993 is attached.
Massacre Bay, Attu Island, Alaska, was the reference station for predicted tides. One zone was used for this survey; time and height correctors used are as follows:

	Time corrector	Height corrector ratio
High Tide	00:00	x1.03
Low Tide	-00:03	x1.03

The digitized soundings displayed online were compared in real time with the analog trace to ensure reasonable agreement. No on-line calibration adjustments were required for the Innerspace recorder.

Occasional breaks in the on-line echogram occurred when changes in range scale were required, especially where the bottom rose or fell steeply. These breaks are not considered significant unless greater than 6 mm at survey scale (Hydrographic Manual, Section 1.4.6) or they occurred over a shoal (potential missed peak), in which cases lines or sections of lines were re-surveyed. Data was analyzed during office processing and found no significant problems.
Depths encountered in the survey area ranged from ~~1.1~~ 0.9 meters to 45 meters based on ~~predicted tides~~. smooth tides.

* Filed with the hydrographic records.

H. CONTROL STATIONS ✓ See Eval Rpt, section 2

The horizontal control datum for this project is North American Datum of 1983 (NAD 83). A copy of the HDAPS Control Station Table is included in ~~the separates.~~ this report. Control stations were positioned using Trimble 4000SST receivers to third order class 1 standards. A separate horizontal control report for S-Q903-PHP was submitted to PHS on July 1, 1993 (see section U).*

I. HYDROGRAPHIC POSITION CONTROL ✓

Differential Global Positioning System (DGPS) was used for position control throughout this survey. H-10483 was surveyed using 1:10,000 position standards. Sheet 9 (1:10,000) was used by the PCDAS-HDAPS for all data collection. The processed data was plotted with HP-HDAPS on plotter sheet 1 (1:5,000). Smooth sheet was plotted at 1:5,000.

The DGPS reference station was installed as described in the Horizontal Control Report in accordance with FPM Section 3.4.6. The reference site was confirmed using program MONITOR. A hardcopy and digital copy of the scatter plot and outlier.sum file were submitted on July 21, 1993, to PHS for inclusion in the separates.*

PHP's version of Geoid93 was unable to calculate a geoidal height for eastern longitudes. The station COVE USE 1944 geoidal height of 7.29 meters, which was approximately 1000 meters from the center of the survey area, was used with the antenna height above the waterline to calculate the antenna height above the geoid for initializing the Ashtech GPS sensor.

Interpolation (smoothing) of positions along the survey track was conducted in accordance with FPM section 3.1.3.1. In cases where inadequate position control was in excess of 4 continuous centimeters at the scale of the survey, or where accurate positioning was not recoverable, the data were rejected and the lines, or sections of lines, were re-surveyed. There were no significant problems found during office processing.
DGPS performance checks were obtained at periodic intervals throughout the survey. Station 0256 A 1993 was positioned to Third Order, Class I standards and used for fixed point performance checks per FPM Section 3.4.4.1. All DGPS performance checks were successful.*

* Filed with the Hydrographic records.

The following GPS equipment was used:

Equipment Location	Type of Receiver/Antenna	Receiver Serial No.	Antenna Serial No.
SHEMYA Bldg. 615	Trimble 4000SST	2952A00459	3012A00123
(for geodetic work)	Trimble 4000SST	3135A02235	2951A0001
(for geodetic work)	Trimble 4000SST	3142A02366	3125A20081
VN 0652	Ashtech (Firmware 1E08D)	700417B1080	700378B0402
(for DP's DN 193-194)	Ashtech		700378A0272

The unique numbers for all equipment serial numbers are annotated on the daily master printout.*

On DN 193-194 DP's were taken using a detached antenna, reference section C. The antenna offset and layback were set to zero and the antenna height above the waterline was measured and entered into tables 2 and 4 which were applied during post procesing.

J. SHORELINE ✓ See Evsl Rpt, Section 2.

Shoreline verification was required only seaward of the three-meter curve per section 4.1.2.1 of project instructions S-Q903-PHP. No photogrammetric features were found seaward of the three meter curve or the foul areas which were inaccessible with NOAA launch 1102. Concur

Some changes to the shoreline were evident. Notes were taken in the field and recorded in a sounding volume.* All shoreline in the project area from chart revision print BP149139, with corrections applied, was submitted July 29, 1993 to PHS on a separate shoreline field sheet. The following changes were found:

Reference Number

1 The shoreline southwest of the point on the west side of Alcan Harbor from latitude 52°43'45"N longitude 174°03'43"E to Latitude 52°43'36"N longitude 174°03'39"E was observed on DN 203. The shoreline is a rocky beach, not a ledge as depicted on chart revision print BP149139. PHP recommends plotting a dashed line depicting a rocky shoreline as shown on the field sheet. Rocky beach notation added to the smooth sheet. Shoreline has been shown on the smooth sheet in brown from chart 16436 9th edition.

* Filed with the Hydrographic records.

2 The shoreline between the point on the west side of Alcan Harbor and the wharf, latitude 52°43'45"N longitude 174°03'48"E to latitude 52°43'56"N longitude 174°03'56"E, was observed on DN 203. The shoreline is a rocky beach, not a ledge as depicted on chart revision print BP149139. PHP recommends plotting a dashed line depicting a rocky shoreline as shown on the field sheet. rocky beach note added to the smooth sheet. Shoreline has been shown on the smooth sheet in brown from Chart 16436, 9th Edition.

3 The area centered at latitude 52°43'54"N longitude 174°03'48"E was observed throughout the project. The ledge depicted at that position on chart revision print BP149139 does not exist. There is a very thick kelp bed on a submerged breakwater at that position. PHP recommends the ledge depicted at latitude 52°43'54"N longitude 174°03'48"E on chart revision print B149139 not be transferred to NOS chart 16436. Concur, extend foul limit line to encompass ledge area and chart as foul with submerged debris. Chart area as depicted on smooth sheet.

4 The shoreline south of the south end of the sheet pile wharf from latitude 52°43'39"N longitude 174°03'55"E to latitude 52°43'36"N longitude 174°03'54"E, has been built up with rip rap. PHP recommends plotting on NOS chart 16436 an additional line as shown on the field sheet depicting the rip rap. rip rap notation added to smooth sheet. Chart this area as portrayed on the smooth sheet.

5 The shoreline from latitude 52°43'36"N longitude 174°03'56"E to latitude 52°43'35"N longitude 174°04'34"E was repositioned using taped distances from the barge after the barge position was verified. PHP recommends deleting that section of shoreline from NOS chart 16436 and re-plotting as submitted on the field sheet. Concur, chart area as shown on smooth sheet. Shoreline has been shown on the smooth sheet in dash red and is considered adequate to supersede the charted information.

The ledge centered at latitude 52°43'32"N longitude 174°04'09"E, along with four rocks were covered by the accretion of sand along the beach. PHP recommends deleting the four rocks from NOS chart 16436. The positions of the four rocks that have been covered are as follows:

	Latitude	Longitude
1)	52°43'34.0"N	174°04'08.0"E
2)	52°43'33.0"N	174°04'10.0"E
3)	52°43'34.0"N	174°04'12.0"E
4)	52°43'34.5"N	174°04'12.0"E

Concur, delete rocks and chart foul line as depicted on smooth sheet.

6 The area around latitude 52°43'50"N longitude 174°03'48"E was observed throughout the project. The ruins charted at that position were not found. The area is foul with kelp and the charted ruins symbol is located within the charted foul area. PHP recommends deleting the ruins plotted at latitude 52°43'50"N longitude 174°03'48"E from NOS chart 16436. Do not concur, see item 3. Chart area foul with submerged debris as depicted on smooth sheet.

7 The pier ruins south of the wharf centered at latitude 52°43'39"N longitude 174°03'56"E were verified visually on DN 185. The position was verified again with DP's (Fixes 2743-2746) on DN 207. The piles from an old pier uncover at low water. PHP recommends plotting the ruins centered at 52°43'39"N longitude 174°03'56"E on chart revision print BP149139, on NOS chart 16436. Concur, chart area as shown on smooth sheet.

Most of the near shore area within the survey area was inaccessible with the survey launch. The area was foul with kelp. A line of hydrography was surveyed along the edge of the kelp (KELP LINE) to delineate the foul area. PHP recommends moving the foul line on NOS chart 16436 out to the area delineated by the KELP LINE. Kelp notation has been added to the smooth sheet to reflect the general limits.

K. CROSSLINES ✓

A total of 7.4 nautical miles of crosslines were run, representing 9.7 percent of the hydrography on H-10483.

Crosslines generally showed good agreement with mainscheme lines. In area with low sloping topography the agreement was generally less than $^1/_2$ meter. In areas with steep topography some differences up to one meter were observed.

L. JUNCTIONS ✓ See Eval Rpt, Section 5

There were no contemporary surveys that junction with H-10483.

M. COMPARISON WITH PRIOR SURVEYS ✓ See Evaluation report Section 6.

Prior surveys were used by the field party to identify soundings or areas that should be developed. A cursory comparison between H-10483 and the prior surveys showed good agreement between general bottom features. Offshore soundings from H-10483 were generally very close to the depths found on prior surveys. The soundings from H-10483 in the inner harbor were generally deeper than the prior surveys. PHP believes that due to the deterioration of the breakwater on the west side of the harbor the fluid dynamics within the harbor have changed enough to alter the deposition characteristics within the harbor.

H-10483 was compared with the following surveys:

Registry Number	Scale	Date
H-6975	1:2400	1944
H-6987	1:10000	1944
H-6999	1:10000	1944
H-6873	1:2400	1945
H-7020 WD	1:10000	1945
FE-162	1:2500	1958

A more complete comparison with prior surveys will be conducted by PHS personnel after application of real tides. Numerous shoal sounding found on the priors were not developed by the hydrographer and have been transferred to the smooth. Refer to the evaluation report section 4.

N. ITEM INVESTIGATION REPORTS

No diving was conducted in conjunction with this survey per section 7.3 of project instructions S-Q903-PHP.

The following Item investigations were completed:

Reference Number	Item	Description
A-1	AWOIS 51993	Wreck of Scotia
A-2	AWOIS 51994	Area Believed to contain unexploded bombs
A-3	AWOIS 51995	750 meter pier ruins
A-4	AWOIS 51996	Fire Engine
A-5	AWOIS 51997	Wreck of Opty

Item investigation reports are included in this report ~~the separates~~.

The following sonar contact examinations were completed:

Reference Number	Contact Name	Description
C-1	2402.08S	Remnants of pier
C-2	2421.48S	Rocks
C-3	2425.42S	Man made object
C-4	2426.56S	Remnants of pier

Sonar contact Examination Records are included in the separates.*

* Filed with the hydrographic records.

O. COMPARISON WITH THE CHART See Evaluation report section 7.

This survey was compared to National Ocean Service (NOS) chart 16436, 1:20,000, 9th edition, April 18, 1992, and a stable-based 1:5,000-scale enlargement of the Alcan Harbor inset on NOS chart 16436.

The following changes were noted:

The barge depicted at latitude 52°43'32"N longitude 174°04'~~05"~~E on chart revision print BP149139 was verified on DN 194 (fix number 1626). The barge makes a good reference for vessels entering the harbor. PHP recommends plotting the barge on NOS chart 16436. CONCUR

The wharf was positioned on DN 193. The wharf's east side was found to be approximately 3 meters east and the north end to be approximately 10 meters south of their respective positions as shown on chart revision print BP149139. According to local Air Force personnel the wharf underwent extensive repairs in the late 1980's. PHP recommends plotting the wharf as positioned with fix numbers 1617-1624. CONCUR Wharf has been shown on the smooth sheet in red and is considered adequate to supersede BP149139.

In discussion with MSGT David, USAF the Chief, Weather Flight at Eareckson AFS the USAF no longer launches missiles for weather observations from Shemya Island. PHP attempted to contact the 6th Weather Wing at Andrews Air Force Base, referenced in navigation regulation 334.1290. The 6th Weather Wing no longer exists. For more information contact MSGT DAVID at (907) 392-3549. A copy of a the letter from MSGT David is included in ~~the separates~~ this report. PHP recommends the following changes to NOS charts:

Delete DANGER AREA and associated purple dashed lines plotted on the following NOS charts: — CONCUR

NOS Chart	Latitude	Longitude
16420	52°09.3'N	174°07.5'E
	52°23.7'N	174°41.6'E
16421	52°21.5'N	174°26.0'E
16436	52°38'00"N	174°11'12"E
	52°40'00"N	174°06'36"E
	52°40'13"N	174°15'12"E

P. ADEQUACY OF SURVEY ✓

This survey is a basic hydrographic survey, adequate to supersede all prior surveys of the common area. — CONCUR

Q. AIDS TO NAVIGATION ✓

No aids to navigation were in the survey area. Concur

R. STATISTICS ✓

Description	Quantities
Total Positions, VN 0652	1994
Total Detached Positions:	16
Total Nautical Miles of Hydrography	105.7
Square Nautical Miles of Hydrography	1.4
Velocity Casts	3
Days of Production	14
Bottom Samples	0
Tide stations	1

S. MISCELLANEOUS ✓

Large amounts of kelp lined much of the shoreline within the survey area. The survey platform used was unable to survey in areas of heavy kelp. Therefore the inshore limit of hydrography in these areas was the limit of safe navigation in accordance with section 1.7 of project instructions S-Q903-PHP.

Bottom samples were not obtained per section 6.7, Bottom Characteristics, of project instructions S-Q903-PHP.

No unusual magnetic variations were encountered in the survey area.

No unusual currents were encountered in the survey area.

Renovation of the wharf and seawall in the immediate vicinity of the wharf are planned for August 1993 and the summer of 1994. No significant change to the shoreline is planned.

T. RECOMMENDATIONS ✓

Any future surveys or investigations in Alcan Harbor should include diving operations so that wreckage and sonar contacts can be positively identified. Diving activities should be coordinated with the Navy EOD Explosive Safety Team (206-257-4460), Whidby Island, Washington; reference Item Investigation Report A-2. Concur

U. REFERRAL TO REPORTS ✓

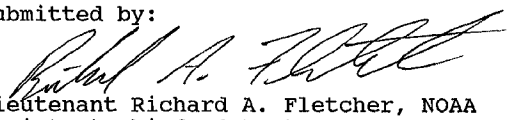
TITLE	DATE
Horizontal Control Report for S-Q903-PHP Alcan Harbor, Shemya Island, Alaska	June 28, 1993
Coast Pilot Report, S-Q903-PHP, H-10483 Alcan Harbor, Shemya Island, AK	July 26, 1993

No separate Electronic Control Report or Corrections to Echo Soundings Report is scheduled for submittal.

Reviewed by:

Lieutenant (junior grade) Donald W. Haines, NOAA
Staff Assistant, Pacific Hydrographic Section

Submitted by:



Lieutenant Richard A. Fletcher, NOAA
Assistant Chief of Party

Final Station List

Station Name	Four Char	PID #	Latitude	Longitude	Height(m)
~~MID USE 1943~~	~~MID~~	~~TT5870~~	~~52 43 15.20326N~~	~~174 06 30.37770E~~	~~65.3~~
~~GAS~~	~~GAS~~	~~TT5860~~	~~52 42 54.82846N~~	~~174 03 58.12462E~~	~~24.2~~
COVE USE 1944	COVE	TT5877	52 44 10.93293N	174 05 12.67029E	75.2
0256 A 1993	0256	NEW	52 43 39.12648N	174 03 53.14011E	11.5
DGPS Station	DGPS	NONE	52 43 43.60919N	174 06 04.11652E	77.0

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Coast and Geodetic Survey
Seattle, Washington 98115-0070
Pacific Hydrographic Party
Tiburon Fisheries Laboratory
3150 Paradise Drive
Tiburon, CA 94920-1211
(415) 435-9509

ADVANCE INFORMATION

August 2, 1993

Commander, Seventeenth Coast Guard District
Aids To Navigation Branch
P.O. Box 25517
Juneau, AK 99802-5517

Dear Sir:

While conducting hydrographic survey operations in Alcan Harbor, Shemya Island, Alaska, two rocks were found to have shallower depths than charted. The two rocks lie approximately 0.6 nautical miles north of the northernmost point of Shemya Island.

Differential GPS was used to determine the rocks' positions.

A copy of this letter and attachments have been forwarded to the following offices:

Chief, Nautical Charting Division, NOAA
Director, Defense Mapping Agency
Hydrographic/ Topographic Center

Sincerely

Lieutenant Richard A. Fletcher, NOAA
Assistant Chief of Party

Attachments

cc: N/CG2
DMAHTC

ADVANCE INFORMATION

HYDROGRAPHIC SURVEY REGISTRY NUMBER: H-10483

STATE: Alaska

GENERAL LOCALITY: Bering Sea

SUBLOCALITY: Alcan Harbor

PROJECT NUMBER: S-Q903-PHP

The following items are potential dangers to navigation which were found during hydrographic survey operations by the Pacific Hydrographic Party.

OBJECTS DISCOVERED: $3^1/_2$- and $4^1/_4$-fathom shoals.

The $4^1/_2$-fathom shoal charted at latitude 52°45'04"N longitude 174°05'26"E was found to cover to a depth of $3^1/_2$ fathoms (6.6m).

The 6-fathom shoal charted at latitude 52°45'00"N longitude 174°05'10"E was found to cover to a depth of $4^1/_4$ fathoms (7.8m).

All depths are corrected to MLLW using predicted tides.

AFFECTED NAUTICAL CHARTS:

Chart Number	Edition No.	Edition Date	Reported Depth	Chart Datum	Geographic Position Latitude	Geographic Position Longitude
16436	9th	4/18/92	$3^1/_2$ fm $4^1/_4$ fm	NAD 83	52°45'04.32"N 52°45'00.52"N	174°05'26.50"E 174°05'09.24"E
16420	8th	5/12/92	same	same	same	
16421	8th	11/5/83	same	same	same	
16423	(new chart)		same	same	same	

Questions concerning this report should be directed to the Pacific Marine Center, Pacific Hydrographic Section, Seattle, Washington at telephone number (206) 526-6835.

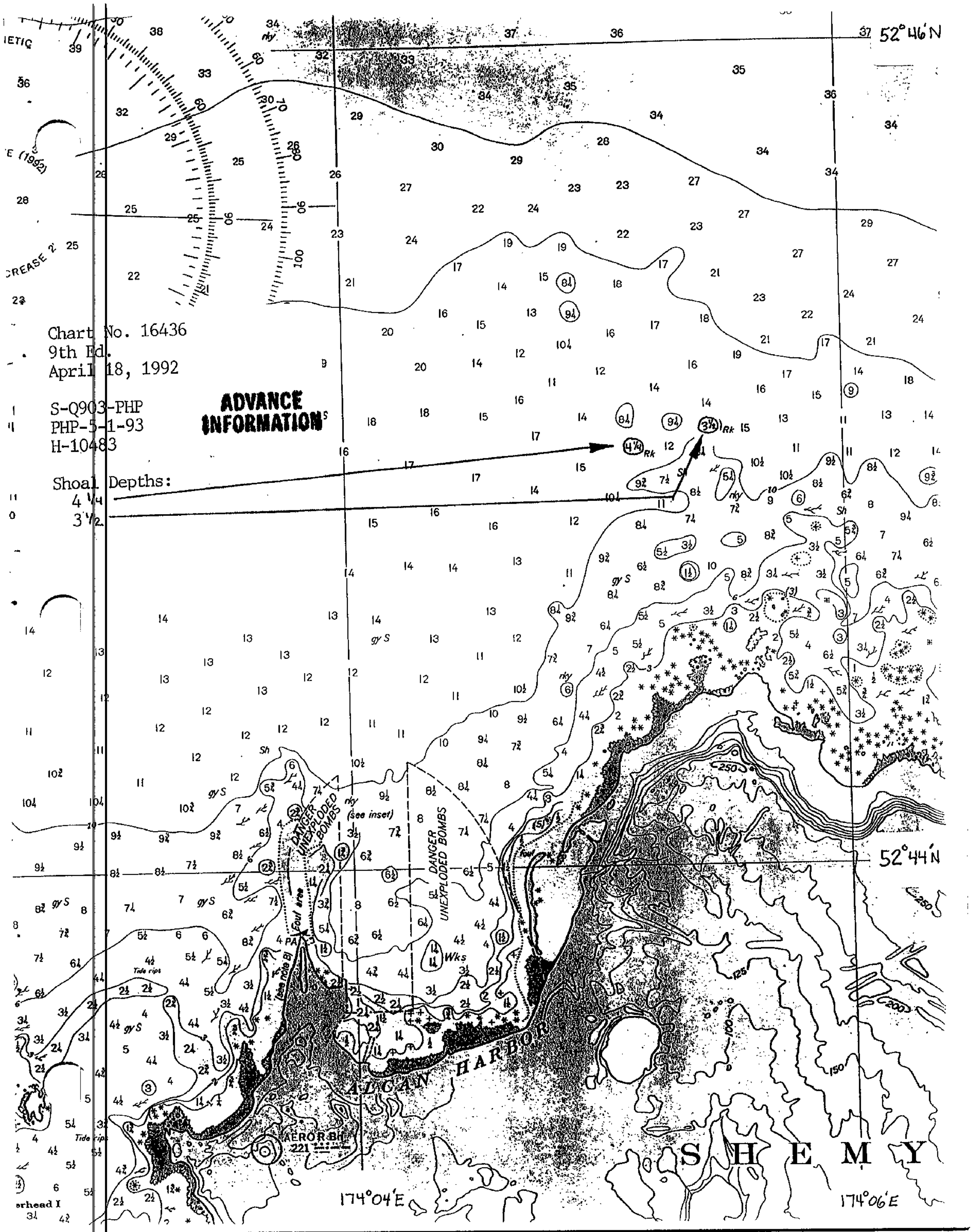


Chart No. 16436
9th Ed.
April 18, 1992
S-Q903-PHP
PHP-5-1-93
H-10483
Shoal Depths:
4 1/4
3 1/2
ADVANCE INFORMATION
52°46'N
52°44'N
174°04'E
174°06'E
DANGER UNEXPLODED BOMBS
DANGER UNEXPLODED BOMBS
(see inset)
Foul area
Tide rips
Wks
ALCAN HARBOR
AERO R Bn
221
S H E M Y

ITEM INVESTIGATION REPORT ✓✓

ITEM NO.:51993

CHART NO.:16436
EDITION:9th Ed.
CHART DATE: April 18, 1992

SURVEY:H-10483

SOURCE:H-6938/43, H-6873/45, FE-162/58

SOURCE POSITION:52/43/46.63 N 174/04/18.23 E (NAD 83)

BRIEF DESCRIPTION OF ITEM:

S.S. SCOTIA is a 253-ft cargo ship stranded on a 1-4/6-fathom reef on December 23, 1943. During a 1958 survey, the wreck was no longer visible and had a least depth of 8 feet. The wreck extended 75 meters in a north/northeast to south/southwest orientation.

METHOD OF INVESTIGATION: Assigned; echosounder, 200% side scan sonar or disproval by source documentation.

The large amount of kelp in the area prevented PHP from using the SSS for investigation on this AWOIS item. An echosounder investigation using 10-meter line spacing was conducted over the accessible portion of the search area. Five-meter splits were run in that portion where the more shoal depths were located. A least depth of 3.3 meters (Pos. No. 2923, DN 208) was found with the echosounder at latitude 52°43'46.64"N ✓ longitude 174°04'18.49"E. ✓ Because of thick patches of kelp in the area the depth was verified with leadline. Several other objects were found with the echosounder which may be wreckage of SCOTIA, however, a dive investigation is necessary for confirmation.

SUPPORTING POSITION NOS:

DN 205 Fixes 2432B to 2450
DN 205 Fixes 2453 to 2481
DN 207 Fixes 2782 to 2785
DN 207 Fixes 2786 to 2789
DN 208 Fix 2923

CHARTING RECOMMENDATION:

No change to "Wks" charted at latitude 52°43'47"N longitude 174°04'21"E. – CONCUR

Replace prior soundings on shoal charted at latitude 52°43'47"N longitude 174°04'18"E with depths from this survey. – do not CONCUR, chart area as depicted on smooth sheet. Retain least depths (24 Wk, 8ft) from prior survey FE-162 (1958). These prior soundings have been transferred to the smooth sheet.

A-2

ITEM INVESTIGATION REPORT ✓✓

ITEM NO.:51994

CHART NO.:16436
EDITION:9th Ed.
CHART DATE: April 18, 1992

SURVEY:H-10483

SOURCE:CL91/56

SOURCE POSITION:52/44/00.00 N 174/04/35.00 E (NAD 83)

BRIEF DESCRIPTION OF ITEM:

Commander, Alaska Sea Frontier, reports that Alcan Harbor is believed to contain quantities of unexploded bombs.

METHOD OF INVESTIGATION: Unassigned

The Safety Office on Eareckson Air Force Station on Shemya Island was contacted. They stated that they had no records to either confirm or disprove the existence of bombs in Alcan Harbor. PHP contacted MSGT Anderson with Explosive Ordnance Disposal (EOD) at Elmendorf Air Force Base (907-552-3217) who stated they must occasionally dispose of 250-lb. un-fused bombs that wash on shore. Captain Morsette (907-552-3389), a history enthusiast and author of "SHEMYA, If You've Seen One Pacific Island, You've Seen Them All" stated that a munitions barge sank between the SCOTIA wreck and the beach. Numerous objects were found in the vicinity of the SCOTIA grounding. PHP contacted the Navy EOD at Oak Harbor, WA, (206 257-4460). CWO clemens (206-257-4462) of the Navy EOD Explosive Safety Team said that they had no knowledge of ordnance in Alcan Harbor. The Explosive Safety Team frequently accompanies other diving activities in areas of military concern. Request for their services can be made through CINCPACFLT.

SUPPORTING POSITION NOS.: None

CHARTING RECOMMENDATION:

No change to chart. Leave area with warning "Danger Unexploded Bombs" as charted. - CONCUR

ITEM INVESTIGATION REPORT ✓ ✓

ITEM NO.:51995

CHART NO.:16436
EDITION:9th Ed.
CHART DATE: April 18, 1992

SURVEY:H-10483

SOURCE:H-6975/44, H-6873/45, FE-162/58

SOURCE POSITION:52/43/55.70 N 174/04/08.00 E (NAD 83)

BRIEF DESCRIPTION OF ITEM:

A pier that extended 750 meters into the harbor and had a width of 40 meters was depicted on survey H-6975/44. On FE-162 the pier was shown as ruins.

METHOD OF INVESTIGATION: Assigned; echo sounder, 200% side scan sonar.

Use of the SSS in water depths less than 7 meters proved to provide poor echosounder records. The portion of the search area deeper than 7 meters was searched with 100% SSS coverage. There was evidence of ruins on the side scan record in the near shore area. None of the ruins showed significant heights. An echosounder investigation of the contacts was conducted using 10- and 5-meter line spacing over portions of the near shore area and no ruins were seen. PHP recommends that a dive investigation be performed to determine the extent and heights of the ruins.

SUPPORTING POSITION NOS.:

Echosounder	Side Scan Sonar
DN 206 Fixes 2509 to 2512	DN 196 Fixes 2389 to 2403
DN 207 Fixes 2870 to 2887	DN 196 Fixes 2405 to 2413
DN 208 Fixes 2940 to 2942	DN 196 Fixes 2416 to 2429
DN 209 Fixes 2943 to 2977	DN 208 Fixes 2940 to 2942

CHARTING RECOMMENDATION:

Chart the ruins (foul area) as depicted on chart revision print BP149139. - concur, chart area as shown on smooth sheet.

ITEM INVESTIGATION REPORT ✓✓

ITEM NO.:51996

CHART NO.:16436
EDITION:9th Ed.
CHART DATE: April 18, 1992

SURVEY:H-10483

SOURCE: Conversation between local contacts and NOS personnel.

SOURCE POSITION:52/43/45.00 N 174/03/57.00 E (NAD 83)

BRIEF DESCRIPTION OF ITEM:

A 1980's fire truck is believed to have been dropped off the northern end of the pier while being unloaded from a barge.

METHOD OF INVESTIGATION: Assigned; echosounder, 200% side scan sonar or disproval by salvage documentation.

The area was searched with 200% side scan sonar coverage of all accessible sides of the pier. An echosounder development with 2.5 meter line spacing north of the pier and 5 meter line spacing east and south of the pier was conducted. The following contacts were found in the search area, none of which resembled a fire truck:

Contact Name	Contact Height	Remarks
2926.17P	0m	
2937.32P	0m	
2938.12P	1.2m	Possibly a crab pot. Out of navigable area for tugs and barges

Contact 2938.12P was located with echosounder. None of the contacts found is a danger to navigation. Further discussion with local personnel indicated that the event occurred in the late 1960's and no documentation or eyewitness could be found.

SUPPORTING POSITION NUMBERS:

Echosounder	Side Scan
DN 196 Fixes 2349 to 2363	DN 196 Fixes 2427 to 2493
DN 207 Fixes 2801 to 2815	DN 208 Fixes 2926 to 2927
	DN 208 Fixes 2934 to 2939

CHARTING RECOMMENDATION:

Do not chart an obstruction. CONCUR
Delete foul limit line from inset.

ITEM INVESTIGATION REPORT ✓✓

ITEM NO.:51997

CHART NO.:16436
EDITION:9th Ed.
CHART DATE: April 18, 1992

SURVEY:H-10483

SOURCE:CL969/91, BP-149139

SOURCE POSITION:52/43/48.00 N 174/03/48.00 E (NAD 83)

BRIEF DESCRIPTION OF ITEM:

Fishing vessel "OPTY" is a visible wreck grounded on a reef or on a ledge.

METHOD OF INVESTIGATION: Assigned; visual search or disproval by source documentation.

The fishing vessel was located aground on a rocky point. The vessel lies in an east-west orientation with the bow pointing west. The length overall is 47 meters and the beam is 12 meters. The highest point above the water is 12 meters.

A DP was taken with the launch on the trailer and the distance to the center of the wreck was taped. The center of the wreck is at position latitude 52°43'45.28"N longitude 174°03'46.67"E

SUPPORTING POSITION NOS:

DN 193 Fix 1625

CHARTING RECOMMENDATION:

Chart a hull* (F/V OPTY) as shown on the field sheet submitted to PHS on July 26,1993.

Delete wreck charted at latitude 52°43'51"N longitude 174°03'47"E.* chart visible wreck as shown on smooth sheet.

DEPARTMENT OF THE AIR FORCE
PACIFIC AIR FORCES

FROM: 673 OPS/WE 14 Jul 93

SUBJ: Meteorological Rocket Launching

TO: NOAA (Lt Fletcher)

1. The weather unit on Shemya island conducted rocket launches from 1975-1986. Our unit no longer conducts rocket operations of any kind as described in the "United States Coast Pilot". Further, I do not expect a meteorological rocket program to be started in the future.

2. Direct any questions on this matter to MSgt David at ext 3549.

BRUCE G. DAVID, MSgt, USAF
Chief, Weather Flight

APPROVAL SHEET

HYDROGRAPHIC SURVEY S-Q903-PHP
1993
PHP-5-1-93
H-10483

Surveying and processing procedures were conducted in accordance with Hydrographic Project Instructions S-Q903-PHP; Hydrographic Manual, Fourth Edition; Hydrographic Survey Guidelines; Field Procedures Manual for Hydrographic Surveying. Position and sounding accuracy meet the requirements specified in Hydrographic Project Instructions S-Q903-PHP; Hydrographic Manual, Fourth Edition; Hydrographic Survey Guidelines; Field Procedures Manual for Hydrographic Surveying.

The data for this survey were acquired and checked under my daily supervision. Field sheets and supporting data have been reviewed by me, and are complete and adequate for the intended purpose of delineating bottom topography, determining depths and identifying potential dangers to navigation.

The survey data and accompanying records are complete and adequate for the preparation of the smooth sheet.

Approved By:

Richard A. Fletcher
Lieutenant, NOAA
Assistant Chief of Party

Date:

August 17, 1993

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Ocean and Earth Sciences
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

ORIGINAL

DATE: September 24, 1993

MARINE CENTER: Pacific

HYDROGRAPHIC PROJECT: OPR-Q903-PHP

HYDROGRAPHIC SHEET: H-10483

LOCALITY: Alaska, Bering Sea, Alcan Harbor

TIME PERIOD: June 30 - July 28, 1993

TIDE STATION USED: 946-0256 Alcan Harbor, Shemya Island, Ak.
Lat. 52° 43.9'N Lon. 174° 3.9'E

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 7.68 ft.

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 3.4 ft.

REMARKS: RECOMMENDED ZONING

Zone times and heights direct on Alcan Harbor, Ak. (946-0256).

Note: Times are tabulated in Greenwich Mean Time.

William M. Stevenson
ACTING CHIEF, DATUMS SECTION

NOAA FORM 76-155 (11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER: H-10483

Name on Survey	Chart 16436	Chart 16421	Chart 16420							
ALASKA (TITLE)										1
ALCAN HARBOR	X	X								2
BERING SEA	X	X	X							3
SHEMYA ISLAND	X	X	X							4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
					Approved:					15
										16
					[signature]					17
					Chief Geographer - NCGRS					18
					APR 25 1994					19
										20
										21
										22
										23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

NOAA FORM 77-27(H) (9-83)

U.S. DEPARTMENT OF COMMERCE

REGISTRY NUMBER H-10483

HYDROGRAPHIC SURVEY STATISTICS

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	SMOOTH OVERLAYS: POS., ARC, EXCESS	
DESCRIPTIVE REPORT	1	FIELD SHEETS AND OTHER OVERLAYS	

DESCRIPTION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/ SOURCE DOCUMENTS	
ACCORDION FILES	1					
ENVELOPES						
VOLUMES						
CAHIERS						
BOXES				1		

SHORELINE DATA

SHORELINE MAPS (List):

PHOTOBATHYMETRIC MAPS (List):

NOTES TO THE HYDROGRAPHER (List):

SPECIAL REPORTS (List):

NAUTICAL CHARTS (List):

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	VERIFICATION	*EVALUATION*	*TOTALS*
POSITIONS ON SHEET			1751
POSITIONS REVISED			
SOUNDINGS REVISED			
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	*EVALUATION*	*TOTALS*
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	86.5		86.5
VERIFICATION OF SOUNDINGS	149.0		149.0
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	52.50		52.50
COMPARISON WITH PRIOR SURVEYS AND CHARTS		17.0	17.0
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		49.0	49.0
GEOGRAPHIC NAMES			
OTHER*			
*USE OTHER SIDE OF FORM FOR REMARKS — TOTALS	288.0	66.0	354.0

Pre-processing Examination by D. Haines	*Beginning Date* 6/30/93	*Ending Date* 8/17/93
Verification of Field Data by R.Shipley, J.Stringham, B.Mihailov	*Time (Hours)* 288.0	*Ending Date* 12/6/94
Verification Check by J. Stringham	*Time (Hours)* 24.0	*Ending Date* 12/6/94
Evaluation and Analysis by B. Mihailov	*Time (Hours)* 49.0	*Ending Date* 2/1/95
Inspection by B. Olmstead	*Time (Hours)* 20	*Ending Date* 7/26/94

EVALUATION REPORT

H-10483

1. INTRODUCTION

Survey H-10483 is a basic hydrographic survey accomplished by the Pacific Hydrographic Party under the following Project Instructions.

S-Q903-PHP, dated April 30, 1993

This survey was conducted in Alcan Harbor, along the north coast of Sheyma Island, Alaska. Shemya Island is located on the outer reaches of the Aleutian Islands. The surveyed area is bounded by latitude 52/45/40N to the north and latitude 52/43/30N to the south. The eastern limit is longitude 174/05/50E and the western limit is longitude 174/03/30E. Depths range from 0.9 meters along the shore to 45 meters. No bottom samples were obtained due to the possible existence of unexploded ordnance in Alcan Harbor as stipulated by the Project Instructions (section 6.7).

Depth curves depicted on the smooth sheet were selected from those authorized through HSG 69. However, instead of drafting all authorized curves only those curves considered necessary for the reasonable portrayal of the bottom were drafted. The selected curves were the 5, 10, 15 and 20 meter. A note was added to the smooth sheet to identify these values. A few supplemental depth curves have been added to the smooth sheet in brown as warranted.

Predicted tides for Massacre Bay, Attu Island, Alaska were used for the reduction of soundings during field processing. Approved hourly heights zoned from Shemya Island, Alcan Harbor Alaska, gage 946-0256, were used during office processing.

The field sheet parameters have been revised to center the hydrography on the smooth sheet and to change the projection to polyconic. NAD 83 is used as the horizontal datum for plotting and position computations. The offset values and velocity correctors are adequate. An accompanying computer printout contains the parameters and the correctors.

A digital file has been generated for this survey that includes categories of information required to comply with Hydrographic Survey Guideline No. 52, Standard Digital Data Exchange Format, April 15, 1986. Certain descriptive information, however, may not be in the digital record due to the restrictions of the presently available cartographic codes. The user should refer to the smooth sheet for complete information.

2. CONTROL AND SHORELINE

Sections H and I of the hydrographer's report contain adequate discussions of horizontal control and hydrographic positioning.

Additional detailed information on horizontal control is found in the Horizontal Control Report for S-Q903-PHP.

Differential GPS (DGPS) was used to control this survey. Periodic system checks were performed by fixed point comparisons of positions which confirmed the DGPS was operating properly. A horizontal dilution of precision (HDOP) not to exceed 3.75 was computed for survey operations. The quality of 3 positions exceeded the limit in terms of horizontal dilution of precision (HDOP). These positions are isolated and occur randomly throughout the survey area. A review of the data, however, indicates that none of these fixes are used to position dangers to navigation. The soundings located by these fixes are consistent with the surrounding information. These fixes are considered acceptable.

The positions of the horizontal control stations used during hydrography are field and published values based on NAD 83.

Geographic positions referred to the North American Datum of 1927 can be corrected using the following average values listed below.

Latitude: -5.816 seconds
Longitude:-10.975 seconds

The year of establishment of the control stations shown on the smooth sheet originates with the above mentioned horizontal control report and the hydrographer's signal list.

There is are no shoreline maps applicable to this survey. The shoreline depicted on the smooth sheet was compiled in brown from an enlarged copy of chart revision print BP149139 (Chart 16436, 9th edition, dated April 19, 1992).

MHWL extending from latitude 52/43/34N, longitude 174/03/55E to latitude 52/43/35N, longitude 174/04/35E was transferred from the final field sheet in dashed red, without supporting positional information. As there was no shoreline manuscript coverage of Alcan Harbor, revisions were based on a discrepancy with the chart enlargement and the shoreline as found on this survey. The revisions are considered adequate to supersede the common delineated shoreline.

MHWL located at latitude 52/43/44N, longitude 174/03/57E was transferred from the final field sheet in solid red line and is supported with positional information. As there was no shoreline manuscript coverage of Alcan Harbor, revisions were based on a discrepancy with the chart enlargement and the shoreline as found on this survey. This revision is considered adequate to supersede the common photogrammetrically delineated shoreline.

3. HYDROGRAPHY

Except as noted below, hydrography is adequate to:

a. delineate the bottom configuration, determine least depths, and draw the required depth curves;

b. reveal there are no significant discrepancies or anomalies requiring further investigation; and

c. show the survey was properly controlled and soundings are correctly plotted.

Authorized depth curves were adequately drawn and developed except the 0, 1 and 2 meters. The inshore limit as defined by the Project Instructions (section 1.7), is the 3-meter depth curve in steeply sloping areas.

4. CONDITION OF SURVEY

The hydrographic records and reports received for processing are adequate and conform to the requirements of the Hydrographic Manual, 4th Edition, revised through Change No. 3, the Hydrographic Survey Guidelines, and the Field Procedures Manual, March 1993 Edition except for the following.

Several significant depths originating from prior surveys were not investigated during survey operations. These depths are considerably shoaler that soundings found by the present survey and which mostly fall between lines of hydrography.

5. JUNCTIONS

There are no contemporary surveys that junction with survey H-10483.

6. COMPARISON WITH PRIOR SURVEYS

H-6873 (1945)	1:2400
H-6975 (1944)	1:2400
H-6987 (1944)	1:10,000
H-6999 (1944)	1:10,000

Survey H-6973, H-6975 and H-6999 cover the entire area of the survey area. Numerous shoreline changes have occurred during the last 51 years. These differences largely reveal that major pier structures existed during World War II and are no longer present. However, areas of submerged debris were still found to exist along the southwest portion of the survey area. Soundings in general from survey H-10483, tend to be deeper then those found on these prior surveys. These differences vary with location, and tend to be between 0.1 and 1 meter. AWOIS item 51995 originates with prior survey H-6975 and has been adequately discussed in the descriptive report.

Survey H-6987 (1944) covers the northern offshore portion of the survey area. Offshore soundings from survey H-6987 agree well with the present survey. There are no AWOIS items that originate from this prior survey. The following soundings were not verified or disproved during this survey and have been brought forward from prior survey H-6987 at the following positions.

Feature	LatitudeN	LongitudeE
16.9 meter sndg (9 1/4 fm)	52/45/21	174/04/56
15 meter sndg (8 1/4 fm)	52/45/05	174/05/08
16.9 meter sndg (9 1/4 fm)	52/45/04	174/05/19
10.0 meter sndg (5 1/2 fm)	52/44/46	174/05/16
6.4 meter sndg (3 1/2 fm)	52/44/47	174/05/22
2.7 meter sndg (1 1/2 fm)	52/44/43	174/05/22

H-7020WD (1945) 1:10,000

Survey H-7020WD (1945) covers the northern portion of survey H-10483. Two submerged rocks in fathoms (4 1/4 *Rk*, 6 *Rk*) shown on chart 16436, 9th Edition, dated 4/18/1992, originate from survey H-7020WD and are located at latitude 52/45/04.5N, longitude 174/05/26E and latitude 52/45/00N, longitude 174/05/09E respectively. Depths found on the present survey are shoaler than the depths described above. However, due to the constraints of the Project Instructions (section 7.3 and 7.3.1) least

depths on these features could not be taken. Recommend that the depths from survey H-10483 be charted with the note *"rky"*. There are no AWOIS items that originate from this prior survey. The following features were not verified or disproved during this survey and have been brought forward from prior survey H-7020WD at the following positions.

Feature	LatitudeN	LongitudeE
15 meter *Rk* (8 1/4 fm)	52/45/25	174/04/55
9.6 meter *rky* (5 1/4 fm)	52/44/57	174/05/32
9.1 meter sndg (5.0 fm)	52/44/47	174/05/35

FE-162 (1958) 1:2500

Field Examination 162 (1958) encompasses the southern portion of survey H-10483. Agreement between soundings is generally good, with the present survey revealing slightly shoaler depths. However, the area from 52/43/40N, longitude 174/04/00E to latitude 52/44/05N, longitude 174/04/20E is 3-5 meters deeper. The evaluator has no specific information as to why these differences exist. AWOIS item 51993 originates from prior survey FE-162 and has been adequately discussed in the descriptive report. The following sounding and features listed below were not verified or disproved during this survey and has been brought forward from prior survey FE-162 at the following positions.

Feature	LatitudeN	LongitudeE
3.2 meter sndg (1 3/4 fm)	52/44/03	174/03/57
2.4 meter *Wk* (1 1/4 fm) (AWOIS 51993)	52/43/48.5	174/04/18.0
2.4 meter *Wk* (1 1/4 fm) (AWOIS 51933)	52/43/47.0	174/04/18.5

With the exceptions noted above, survey H-10483 is adequate to supersede the prior surveys within the common area.

7. COMPARISON WITH CHART

Survey H-10483 was compared with the following chart.

Chart	Edition	Date	Scale	Datum
16436	9th	April 18, 1992	1:20,000	NAD 83

a. Hydrography

Charted hydrography originates with the above mentioned prior surveys and miscellaneous sources. Comparison with the prior surveys has been previously discussed in section 6 and requires no further discussion.

Several features could not be investigated thoroughly due to the restrictions of the project instructions (sections 1.7, 7.3, and 7.3.1). These features listed below should be retained as charted.

Feature	Latitude(N)	Longitude(E)
DANGER UNEXPLODED BOMBS (AWOIS 51994)	52/44/00N	174/03/46E
DANGER UNEXPLODED BOMBS (AWOIS 51944)	52/44/00N	174/04/20E
Wks	52/43/47N	174/04/21E
rky	52/44/53N	174/05/35E
rky	52/44/25N	174/04/50E
rky	52/44/10N	174/04/00E

Except as noted above, survey H-10483 is adequate to supersede charted hydrography within the common area.

b. AWOIS

AWOIS items 51994, 51996, and 51997 originate from miscellaneous sources and require no further discussion.

c. Controlling Depths

There are no channels with controlling depths located within the limits of survey H-10483.

d. Aids to Navigation

There are no fixed or floating aids to navigation located within the survey area.

The hydrographer recommends charting a beached barge as a landmark at latitude 52/43/32.19N, longitude 174/04/01.63E.

e. Geographic Names

Names appearing in the survey title and on the smooth sheet have been approved by the Chief Geographer.

f. Dangers to Navigation

The hydrographer reported two shoal sounding as dangers to navigation during the survey. These dangers to navigation were reported to the local United States Coast Guard District, DMAHTC and N/CG221. A copy of this report is attached.

8. COMPLIANCE WITH INSTRUCTIONS

Survey H-10483 adequately complies with the Project Instructions.

9. ADDITIONAL FIELD WORK

This is a good hydrographic survey. No additional work is recommended.

Bob Mihailov
Cartographer

APPROVAL SHEET
H-10483

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of the depth curves, development of critical depths, cartographic symbolization, comparison with prior surveys and verification or disproval of charted data. The digital data have been completed and all revisions and processing have been entered in the magnetic tape record for this survey. Final control, position and sounding printouts have been included with the survey records. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Bruce A. Olmstead Date: 7/26/95
Bruce A. Olmstead
Senior Cartographer, Cartographic Section
Pacific Hydrographic Branch

I have reviewed the smooth sheet, accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Kathy Timmons Date: 8/8/95
Kathy Timmons
Commander, NOAA
Chief, Pacific Hydrographic Branch

****

Final Approval

Approved:

Andrew A. Armstrong III Date: 8/16/95
Andrew A. Armstrong III
Captain, NOAA
Chief, Hydrographic Surveys Division

NOAA FORM 75-96
(10-83)

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

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10483

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
16423	14 Feb 96	DC Harpine	Full Part Before After Marine Center Approval Signed Via
			Drawing No. 2 Appd thru 16436
16421		DC Harpine	Full Part Before After Marine Center Approval Signed Via
	5 Feb 96		Drawing No. 16
16420	1-26-96	DC Harpine	Full Part Before After Marine Center Approval Signed Via
	8 Feb 96		Drawing No. 14
16436	3.1.96	John Hacet	Full Part Before After Marine Center Approval Signed Via
			Drawing No. 12 Applied h-drawing to 16436 thru CSC
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
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SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.