

8490

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. .... PF-05159  
Office No..... H-8490

LOCALITY

State ..... ALASKA  
General Locality ..... KODIAK ISLAND  
Locality ..... WOMENS BAY ENTRANCE CHANNEL

19 59

CHIEF OF PARTY  
IRA R. RUBOTTOM

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DATE ..... December 4, 1959

☆ U.S. GOV. PRINTING OFFICE: 1976-669-441

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8490

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-8490

Field No. PF-05159

State ALASKA

General locality ENTRANCE CHANNEL, WOMENS BAY Kodiak Island

Locality KODIAK ISLAND Women's Bay Entrance Channel

Scale 1:5,000 Date of survey 14-15 SEPTEMBER 1959

Instructions dated 17 JULY 1959

Vessel USC&GS Ship PATHFINDER

Chief of party IRA R. RUBOTTOM, CAPT, C&GS, COMDG

Surveyed by HARLEY D. NYGREN, PHILIP J. TAETZ, HAROLD E. McCALL

Soundings taken by fathometer, graphic recorder, hand lead, wire 808 type

Fathograms scaled by SHIP PERSONNEL,

Fathograms checked by Ship PATHFINDER OFFICERS

Protracted by CHARLES B. ELLIS

Soundings penciled by CHARLES B. ELLIS

Soundings in fathoms- feet at MLW MLLW

REMARKS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

*JEB*

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SURVEY H-8490(PF-05159) 1959

ENTRANCE CHANNEL, WOMENS BAY, KODIAK ISLAND, ALASKA

SCALE: 1:5000

IRA R. RUBOTTOM, CAPT, C&GS  
USC&GS Ship PATHFINDER

14-15 SEPTEMBER 1959

A. PROJECT:

This survey is Special Project 13-59, and the instructions were dated 17 July 1959, addressed to the Commanding Officer. This survey was requested by the US Navy after Navy soundings indicated a controlling depth of 26 feet in the dredged channel shown on C&GS Chart 8546 as "29 feet for width of 400 feet April 1956". The Navy desired their soundings verified before submitting a request for dredging. ✓

B. SURVEY LIMITS AND DATES:

The project limits were prescribed as follows:

NW corner	latitude	57° 44.75'	longitude	152° 27.55'W
NE	"	" 57° 44.60',N	"	152° 27.18'W
SW	"	" 57° 43.63',N	"	152° 29.50'W
S	"	" 57° 43.37'N,	"	152° 29.30'W

 ✓

These figures represent only the ends of the prescribed limits as furnished on C&GS Chart 8546 and the area roughly follows the contour of the channel, narrowing abeam of ZAIMKA ISLAND and then flaring out southwest. ✓

The area surveyed extends just north of a line from signal PEG (dolphin) to Buoy 21 and was extended on the Southwest end to just north of a line from signal YEL on BLODGETT ISLAND to signal ACE (dolphin).

The field work began 13 September 1959 and ended 15 September 1959. ✓

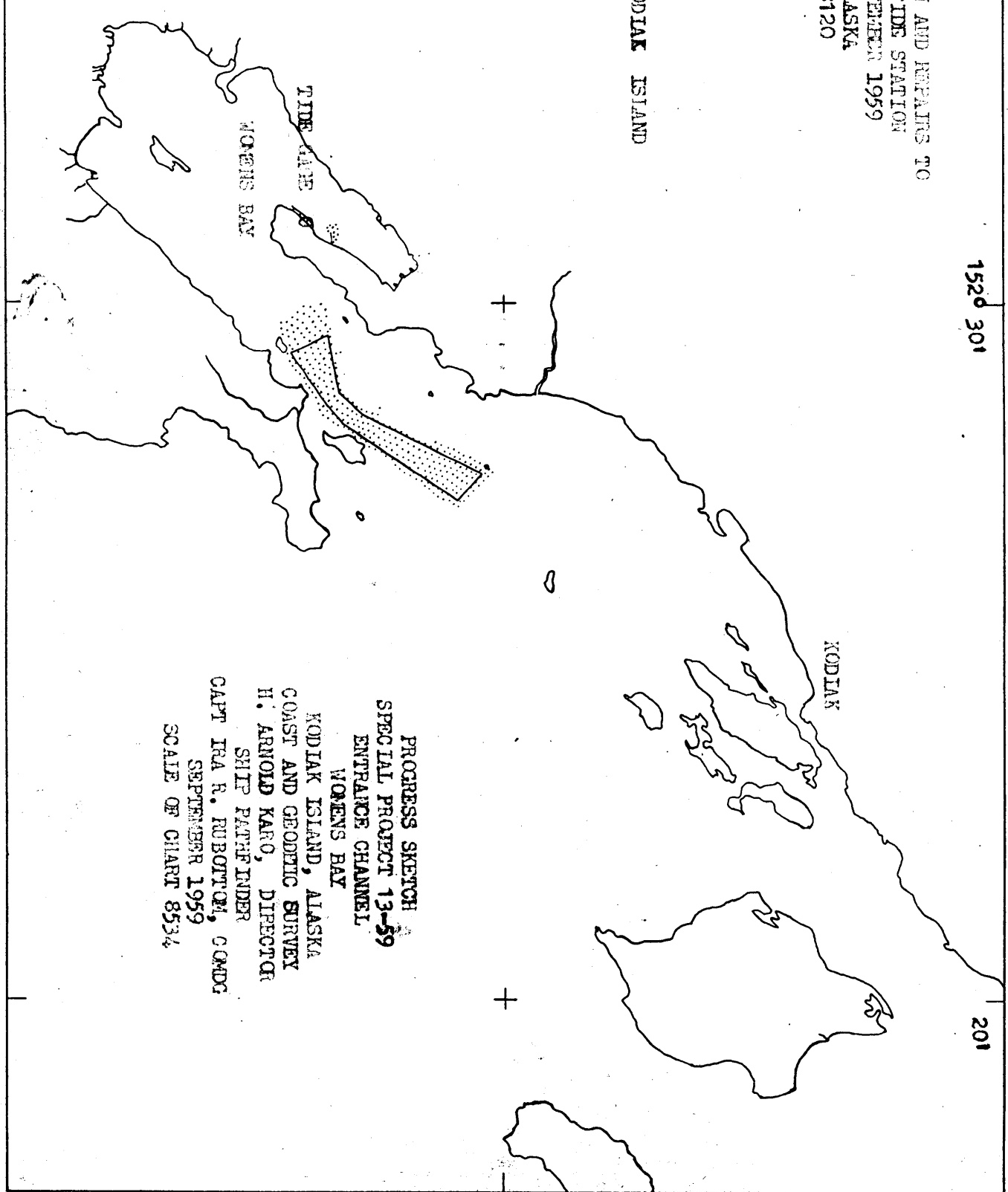
INSPECTION AND REPAIRS TO  
STANDARD TIDE STATION  
16-18 SEPTEMBER 1959  
SEWARD, ALASKA  
PROJECT 08120

1520 301

201

KODIAK ISLAND

KODIAK



580 451

PROGRESS SKETCH  
SPECIAL PROJECT 13-59  
ENTRANCE CHANNEL  
WOMEN'S BAY  
KODIAK ISLAND, ALASKA  
COAST AND GEODETIC SURVEY  
H. ARNOLD KARO, DIRECTOR  
SHIP PATROLLER  
CAPT IRA R. RUBOTTON, COMDG  
SEPTEMBER 1959  
SCALE OF CHART 8534

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B. SURVEY LIMITS AND DATES: cont'd

A Reconnaissance Survey requested by the local Naval personnel at Kodiak was made 14 September 1959 of the US Naval Fuel Pier area in Womens Bay. The Smooth Plot of this was forwarded to the Washington Office 3 October 1959. Sounding records and fathograms will be forwarded with this survey (H-8490).

C. VESSEL AND EQUIPMENT:

Hydrography was controlled by launches operating from the Ship PATHFINDER which was alongside the Fuel Pier in Womens Bay. Launches used 808-type graphic recorders numbered as follows: Launch #1 (blue day-letters), Recorder 74-S; Launch #2 (purple day-letters), Recorder 57-22; Launch #3 (green day-letters), Recorder 61. All fathometers were calibrated for 800 fathom/seconds, and all sounding was done on "a" or "b" scale.

All of the hydrography was run at reduced speed. Launches 1 and 2 ran lines in a general north-south direction while Launch 3 worked basically east-west at the south end of the area.

D. TIDES AND CURRENT STATIONS:

The Standard Tide Station at Womens bay served as the basic-control station. The station was inspected for satisfactory operation as per instructions and no discrepancies were found. Levels were not run. The Tide Staff was read direct every half hour during hydrography.

Smooth Tide Curves were drawn and all soundings reduced to MLLW, with no corrections for time or height differences.

No Current Stations were occupied.

E. SMOOTH SHEET:

The Smooth Sheet was hand-constructed and verified by Ship PATH-FINDER personnel. The shoreline was transferred from a film positive of (EX-05156) H-8284(1956). One additional signal was located by theodolite. ✓

F. CONTROL STATIONS:

The following Control Stations were utilized:

1. ABBERT, 1939(GCJ,1939; Nelson, 1956) Triangulation
2. EWE,1933(HBC, 1933; GEB, 1950) Triangulation
3. TRAP,1933(HBC, 1933; Nelson, 1956) Triangulation
4. ACE, dolphin - Recoverable Planetable position from H-8284 Desc. Report
5. BAG, rocky islet- " " " " " " "
6. DAW, rock - " " " " " " "
7. PEG, pile of dol. " " " " " " "
8. GAS, (USN)(d.m.) " " " " " " "
9. GABE, (SE gab be ho) " " " " " " "
10. YEL, (temp) " " " " " " "
11. JAP, ( " ) " " " " " " "
12. FAR, ( " ) " " " " " " "
13. ICE, ( " ) " " " " " " "
14. GAB, ( " ) " " " " " " "
15. LIT, (Womens Bay Entrance Channel Directional Light, 1959(IRR,1959) Womens Bay Entrance Channel Directional Light was located, computations made and all data forwarded to the Washington Office 2 October 1959. ✓

FRONT RANGE MARK(Daybeacon)(Navy Maint'd)- Planetable from H-8284(1956)  
-- not used ✓

REAR RANGE MARK(Daybeacon)(Navy Maint'd)- Planetable from H-8284(1956)  
-- not used ✓

All signals except Womens Bay Entrance Channel Directional Light, on the Smooth Sheet were those used in H-8284(1956) and were easily recovered and redressed. ✓

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G. SHORELINE AND TOPOGRAPHY:

The Shoreline was transferred from a film positive of (EX-05156) H-8284(1956), using orange transfer paper. There were no obvious discrepancies in the shoreline and no changes were made.

H. SOUNDINGS:

All soundings were taken and plotted in feet, using 808-type graphic recorder. Corrections were applied <sup>for</sup> bar checks and initial. No vertical casts were taken. See attached report on depth recorder corrections.

I. CONTROL OF HYDROGRAPHY:

All hydrography was controlled by sextant angles and no adjustment in horizontal position was required.

J. ADEQUACY OF SURVEY:

This survey is considered adequate and complete to supersede all previous surveys. Although some shoaling has occurred in the channel, there is still no danger to navigation if the Range is used when entering the channel.

K. CROSSLINES:

Crosslines comprised about 7% of the total sounding lines run. Crossings were excellent.

L. COMPARISON WITH PRIOR SURVEYS: (This is a boat sheet comparison)

See Review  
Par. 6.

A comparison was made with (EX-05156) H-8284(1956), Scale 1:5000. Although there has been some shoaling on the northwest edge of the dredged channel, there remains a controlling depth of 29 feet for 200 feet east of the Range line, south to Buoy 27 and 29 feet for 150 feet

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L. COMPARISON WITH PRIOR SURVEYS: cont'd

west of the Range line between Buoys N 22 and N 26. The shoal between latitudes  $57^{\circ} 43' 55''$  N,  $57^{\circ} 44' 50''$  N and longitude  $152^{\circ} 28' 00''$  W, of 18 feet to 22 feet restricts this controlling depth-width. The 24 foot depth curve, between latitudes  $57^{\circ} 44' 00''$  N,  $57^{\circ} 44' 25''$  N and along longitude  $152^{\circ} 28' 00''$  W appears to have shifted east toward the channel by as much as 50 feet. The 30 foot depth curve has shifted toward the channel a small amount, however, more closely spaced soundings lines in the 1959 survey provided more soundings from which to better delineate this curve.

Two shoal soundings from H-7874(1950) in the project area were investigated:

The 10 foot sounding at latitude  $57^{\circ} 43' 25.5''$  N, longitude  $152^{\circ} 29' 13''$  W was developed and plotted directly on the Smooth Sheet. The shoalest sounding found was  $10^6$  at latitude  $57^{\circ} 43' 25.9''$  N, longitude  $152^{\circ} 29' 14.0''$  W. This sounding should be retained for charting.

The 12 foot sounding area was developed and plotted on an overlay included in this report. No soundings were transferred from the overlay to the Smooth Sheet since the least depth was found in running the regular system of lines. The 12 foot depth was not found at the reported position which is surrounded by 13 and 14 foot soundings. It is believed this sounding does not exist and it is recommended it be removed from C&GS Charts 8545 and 8546 and be replaced with the least depth of  $13^7$  found at the reported position, latitude  $57^{\circ} 43' 42.4''$  N, longitude  $152^{\circ} 23' 16.0''$  W.



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L. COMPARISON WITH PRIOR SURVEYS: cont'd

A comparison was made with US Navy SK Drawing Number 33059-1, ✓  
dated 5/21/59, Scale 1:5,000, "Approach Channel to Womens' Bay", Kodiak,  
Alaska, furnished by the District Public Works Officer, 17th Naval Dis-  
trict. This survey was made by the USS LSM-161 in April 1959. All  
soundings disagree by 4-5 feet with the present survey H-8490(1959)  
and H-8284(1956). It is believed this discrepancy was caused by not  
using an accurate correction for tide or for not properly correcting  
for the draft of the vessel. This sheet was of no value for compara-  
tive purposes but has been forwarded with the survey records.

M. COMPARISON WITH CHART: This is a boat sheet comparison (See Review Part I.)

A comparison was made with C&GS Chart 8546, revised 10/20/58. ✓  
(new chart 16596)  
The 24 and 30 foot depth curves on the west side of the channel should  
be moved by as much as 50 feet in some places. All depth curves vary  
with those charted, however, none to such an extent as to affect navi-  
gation with the exception of the 24 foot curve, See Section L.

N. DANGERS AND SHOALS:

There are no dangers or shoals in the project area other than ✓  
those described in Sections L and M.

C. COAST PILOT INFORMATION:

The controlling depth-width for the Entrance Channel was described ✓  
in Section L.

The Womens Bay Entrance Channel Directional Light was located by ✓  
Theodolite and the position is: latitude  $57^{\circ} 43' 27.328''$ N, longitude  
 $152^{\circ} 28' 42.094''$ . This light is charted, see NM 4/59. This light is  
number 2767.5 USCG Light List, 1959.

The Front and Rear Ranges (daybeacons) are maintained by the US ✓

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O. COAST PILOT INFORMATION: cont'd

Navy and are in good <sup>c</sup>condition. These daybeacons are not listed in either the USCG Light List, 1959 or the Supplement (3 January 1959) to USCP 9, Alaska, Cape Spencer to Arctic Ocean. They ~~have~~ <sup>are</sup>, however, ✓ charted on C&GS Charts 8545 and 8546.

P. AIDS TO NAVIGATION:

The position of all aids to navigation, floating or fixed, were ✓ located with the exception of the Front and Rear Range Markers (daybeacons). The position of each buoy was determined and comparison of position made with H-8482(1956), C&GS Charts 8545 and 8546. All present positions differ with the previously reported positions. It should be noted that all of the buoys were renumbered in September 1959, See NM 38/59.

A tabulation follows:

<u>PRESENT NAME &amp; NUMBER</u>	<u>FORMER NO.</u>	<u>PRESENT DEPTH</u>	<u>LOCATION</u>	<u>POS. NO &amp; DATE</u>
ST PAUL HARBOR LIGHTED --BELL BUOY 21	15	32.8 feet	57°44'33.1" 152°27'08.1"	Launch 1 ✓ 127b 15 Sept
WOMENS BAY ENTRANCE CHANNEL -- --LIGHTED BELL BUOY 23	17	32.2 feet	57°44'22.2" 152°27'32.1"	128b 15 Sept ✓
---BUOY	25 19	19.9 feet	57°44'00.6" 152°27'55.0"	129b 15 Sept ✓
--LIGHTED BELL BUOY 27	19A	- -	57°43'48.2" 152°28'12.0"	130a 14 Sept ✓
--BUOY	29 21	30.4 feet	57°43'48.2" 152°28'32.0"	130b 15 Sept ✓
--BUOY (see pg 8) **	31 23	32.4 feet	57°43'36.5" 152°29'15.1"	131b 15 Sept ✓
--LIGHTED BUOY	33 25	31.2 feet	57°43'14.7" 152°30'02.0"	132b 15 Sept ✓

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PRESENT NAME & NUMBER FORMER NO. PRESENT DEPTH LOCATION POS NO & DATE

WOMENS BAY ENTRANCE CHANNEL

LAUNCH NO 3

—BUOY	22	14	28.0 feet	57°44'27.0" 152°27'44.2"	121b 15 Sept ✓
—BUOY	26	16	32.5 feet	57°43'50.0" 152°28'20.0"	122b 15 Sept ✓
—LIGHTED BUOY	28	18	29.1 feet	57°43'43.3" 152°28'34.4"	123b 15 Sept ✓
—BUOY	34	20	25.0 feet	57°43'19.3" 152°30'20.6"	124b 15 Sept ✓

\*\*This buoy replaced after the survey by:

WOMENS BAY ENTRANCE CHANNEL LIGHTED BUOY 31, painted black and showing a flashing white light every 4 seconds, flash 0.4 seconds, of 90 candlepower. Approximately: 57°43'28"N, 153°29'17"W. See NM 41/59. ✓

This buoy position should not be 153° as listed in NM 41/59 but 152°.

Q. LANDMARKS FOR CHARTS:

No additional landmarks. ✓

R. GEOGRAPHIC NAMES:

No investigation was made of the Geographic Names in this area. ✓  
However, see comment on attached list of names used for this survey.

S. SILTED AREAS:

No bottom samples were taken during this survey. It is believed that ✓  
the shoaling areas discussed in Section L are caused by shifting sediments and debris from the dumping area (see Section T, line 6), the survey H-8284(1956) indicates SHELLS and SAND in these areas and apparently this, too, is shifting.

T. BY\*PRODUCT INFORMATION:

There are three Dumping Areas shown on US Navy SK Drawing 33059-1, ✓  
none of which is shown on either C&GS Charts 8545 or 8546. Dumping Area #1 covers a portion of the channel northwest of BLODGETT ISLAND. It is believed

T. BY-PRODUCT INFORMATION: cont'd

that the use of these areas for dumping may be a contributing factor to the changes along the fringes of the channel.

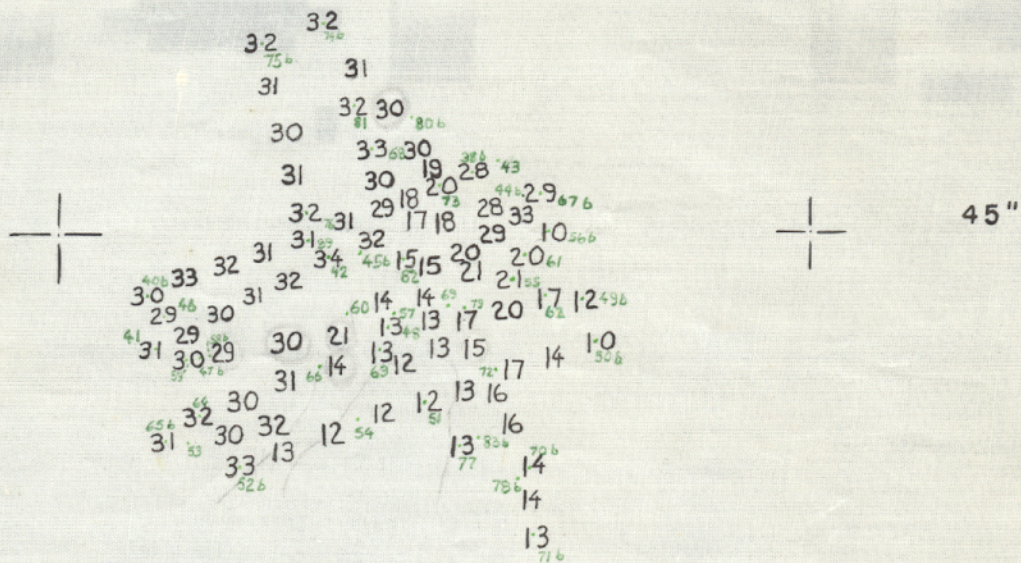
Dumping Areas #2 and #5 pose no <sup>th</sup>reat to the dredged channel even if heavily used. However, the dumping area in latitude 57°44', longitude 152° 28' 30" shown on charts 8545 and 8546 is in a shoaling area and there is a possibility that currents are shifting the debris southward toward Buoys 26 and 28. This Dumping Area is not shown on the US Navy SK Drawing and may have been discontinued. This survey party, (H-8490 - 1959), did not investigate these dumping areas.

U-Y. MISCELLANEOUS:

There were several "strays" recorded by Launches 1, 2 and 3, particularly on "a" day. All strays have been tentatively identified and marked on the fathogram or referred to the note in Vol 2 "b" day (Launch 2) which states:

"One hour spent examining strays recorded on "a" day (Launch 2) fathograms. Controlled development run to insure coverage of area. No additional verification at previous strays found and no evidence of recurrence of strays. Fixes plotted on attached overlay (in Vol 2, "b" day, Launch 2) were not recorded. No new data found. Conclusion is that traces do not represent returns from topographical details.  
H. D. Nygren, LCDR".

It was noted that strays occurred in most part where ever the



+ + +  
 152° 28' 15"      57° 43' 30"

OVERLAY TO ACCOMPANY HYDROGRAPHIC SURVEY

H-8490 (PF-05159) 1959

USC&GS Ship PATHFINDER

IRA R. RUBOTTOM, CAPT.

U-Y MISCELLANEOUS:

Launch was approaching steep sides of the dredged channel. Other strays ✓  
were in areas marked as kelp by H-8284(1956) survey although no kelp  
was seen by H-8490(1959) party. It is also thought that the strays were  
caused by submerged floating objects, possibly being routed out from the  
charted dumping area.

Z. TABULATION OF APPLICABLE DATA:


1. Smooth Tide Curves and Tide Record of Observations ✓
2. Location data for WOMENS BAY ENTRANCE CHANNEL DIRECTIONAL  
LIGHT, 1959 - Forwarded to Washington Office 2 October 1959 ✓
3. Fathometer Report and Abstract of Fathometer Corrections ✓
4. Statistics ✓
5. Tide Report ✓
6. Geographic Names Report ✓

24 November 1959

*Charles B. Ellis*  
CHARLES B. ELLIS  
CQS, C&GS

APPROVAL SHEET TO ACCOMPANY  
HYDROGRAPHIC SURVEY H-8490 (PF-05159) 1959  
USC&GS Ship PATHFINDER  
1959

The sheet and records for Survey H-8490 have been examined  
and are approved.

  
IRA R. RUBOTTOM, CAPT, C&GS  
COMDG, SHIP PATHFINDER

DEPTH RECORDER CORRECTIONS FOR  
HYDROGRAPHIC SURVEY H-8490(PF-05159) 1959

USC&GS Ship PATHFINDER

1959

All launch depth recorders were 808 fathometers, calibrated for a velocity of sound of 800 fathoms per second. In accordance with Section 822 (Revised) of the HYDROGRAPHIC MANUAL, no velocity corrections were computed. Initial settings were maintained at 2.0 feet, however, occasional errors were found and corrections were entered as separate items in the Sounding Records. The basic correction was derived from the 12 foot bar check readings, taken with conventional equipment. A phase comparison was made by Launch 2 and Launch 3 and corrections were entered in the sounding volumes.

RPM checks were made daily, and reed tachometers were carefully watched to insure operation at the proper speed. Paper travel tests were also run to verify the calibration

All stylus arm lengths were checked by comparison of the fix marks with a standard template.



ABSTRACT OF FATHOMETER CORRECTIONS FOR  
 HYDROGRAPHIC SURVEY H-8490(PF-05159) 1959

USC&GS Ship PATHFINDER

1959

<u>LAUNCH NUMBER</u>	<u>FATHOMETER NUMBER</u>	<u>DAY</u>	<u>BAR CHECK</u> <u>"A" PHASE</u>	<u>A-B PHASE</u> <u>COMPARISON</u>
1	74 S	"a"	0.0	none taken
		"b"	0.0	none taken
2	57-22	"a"	<del>-0.5</del> <sup>mistaken #</sup> -0.4	-0.6
		"b"	0.0	-0.6
3	61	"a"	-0.4	0.0
		"b"	0.0	+0.2

TIDE REPORT FOR  
HYDROGRAPHIC SURVEY H-8490(PF-05159) 1959  
USC&GS Ship PATHFINDER  
1959

The Standard Tide Station on the marginal pier in Womens Bay served as the tide control station. Commander F.X. Popper inspected the station for any malfunctions. The station is manned by US NAVY personnel of the Fleet Weather Control Central, Kodiak. The station was in good condition, operating properly and operating personnel were well informed on the operation as well as the importance of this Tide Station. Levels were not run.

Before hydrography began on 14 September 1959 a member of the ship's crew was stationed at the staff and instructed to take readings each half hour and record them in Form 277 Tides. Smooth curves were drawn and reducers tabulated each evening.

The plane of MLLW on the Staff as furnished by the Washington Office is 5.2 feet. No time or height corrections were applied.

All tide records including the smooth curves used have been forwarded.

GEOGRAPHIC NAMES FOR  
HYDROGRAPHIC SURVEY H-8490(PF-05159)

USC&GS Ship PATHFINDER

1959

1. BLODGETT ISLAND
2. CLIFF ISLAND
3. KODIAK ISLAND, ALASKA
4. WOMENS BAY ENTRANCE CHANNEL
5. ZAIMKA ISLAND

The US NAVY SK Drawing 33059-1 refers to ZAIMKA ISLAND as HIGH ISLAND. It is assumed this is an obsolete name since the USCP 9, Cape Spencer to Arctic Ocean, carries this name in parenthesis following the charted name. The same drawing refers to the WOMENS BAY ENTRANCE CHANNEL as "APPROACH CHANNEL TO WOMEN'S BAY".

STATISTICS FOR HYDROGRAPHIC SURVEY

H-8490(PF-05159) 1959

USC&GS Ship PATHFINDER

1959

<u>LAUNCH</u>	<u>VOL</u>	<u>DAY</u>	<u>DATE</u>	<u>NO. POSITIONS</u>	<u>NAUTICAL MILES</u>
1	1	"a"	14 Sept	130	12.6
	1	"b"	15 Sept	132	12.3
2	2	"a"	14 Sept	254	21.9
	"	"b"	15 Sept	60	4.9
3	3	"a"	14 Sept	168	10.7
	3	"b"	15 Sept	124	5.9
				<hr/> 868	<hr/> 68.3





GEOGRAPHIC NAMES  
Survey No. H-8490

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
Alaska <sup>b</sup>			(title)								1
<u>Kodiak Island</u> ✓			"						BGN		2
<u>Womens Bay Entrance Channel</u>			(Title)"								3
<u>Blodgett Island</u> ✓									BGN		4
<u>Zaimka Island</u> ✓ (see below)									"		5
<u>Cliff Island</u> ✓									"		6
											7
											8
											9
Tide station off sheet:											10
<u>Womens Bay</u>									BGN		11
											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

Names approved 12-17-59  
L. Heck

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8490....

Records accompanying survey:

Boat sheets .3...; sounding vols. 4....; wire drag vols. ....; bomb vols. ....; graphic recorder rolls 2-Envelopes special reports, etc. 1-Smooth sheet, 1-Descriptive report and 1-U.S.Navy Sk. Drawing 33059-1.....

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

Number of positions on sheet		868
Number of positions checked		21
Number of positions revised		0
Number of soundings revised (refers to depth only)		132
Number of soundings erroneously spaced		16
Number of signals erroneously plotted or transferred		0
Topographic details	Time	7
Junctions	Time	.....
Verification of soundings from graphic record	Time	109

Verification by *KARIN MALYCKE*..... Total time *113 hrs* Date *8/7/74*

Reviewed by *Lisa Quinlan*..... Time *58* Date *17 MAR 75*

*Insp. by Fannie B. Powers* 26 hrs. 4-4-75  
*✓ Engle* 12 12-6-77



H-8490

Information for Future Presurvey Reviews

The bottom in this area appears to be fairly stable both in depth and bottom configuration except where differences are due to dredging, dumping, and drifting sediments.

<u>Position Index</u>		<u>Bottom Change Index</u>	<u>Use Index</u>	<u>Resurvey Cycle</u>
<u>Lat.</u>	<u>Long.</u>			
574	1523	2	2	50 years



### 3. Hydrography

- a. Depths at crossings are in good agreement.
- b. The usual depth curves were adequately delineated. The 3-, 24-, and 36-foot depth curves were added to correspond with charting practice and to further define the bottom configuration.
- c. The development of the bottom configuration is considered adequate.

### 4. Condition of Survey

The field work, sounding records, Descriptive Report, and smooth plotting are adequate and conform to the requirements of the Hydrographic Manual, except the hydrographer was unable to verify the least depth on the rock in latitude  $57^{\circ}43.43'$ , longitude  $152^{\circ}29.22'$  with a hand lead and no bottom samples were obtained.

### 5. Junctions

There are no contemporary junctional surveys adjoining the present survey. Soundings at the limits of the present survey are in harmony with charted depths.

### 6. Comparison with Prior Surveys

a.	H-2929	(1907)	1:20,000	H-6479	(1939)	1:5,000
	H-5440	(1933)	1:20,000	H-6481	(1939)	1:10,000
	H-5441a	(1933)	1:10,000			

---

These early surveys have been compared with and were superseded by the surveys discussed in the following paragraphs. Further consideration is not necessary in the present review.

b.	H-5441b	(1933)	WD	1:10,000
	H-6480	(1939)	WD	1:5,000

---

These wire-drag surveys cover most of the present survey area. Several conflicts are found between the effective drag depths and the present depths. Most conflicts occur in areas where deposits of silt shoaled the channel area. The 10-foot submerged rock in latitude  $57^{\circ}43.43'$ , longitude  $152^{\circ}29.22'$  from H-7874 supported by a present survey depth of 10.6 feet conflicts with an 11-foot drag depth on H-6840. The prior clearance depths should be disregarded where they conflict with the shoaler depths on the present survey.

- c. H-7874 (1950) 1:5,000  
H-8284 (1956) 1:5,000

These prior surveys cover the area of the present survey. A comparison between the prior and present depths reveals much of the bottom has remained unchanged since 1950. However, there is evidence of minor shoaling of 1-2 feet. The controlling depth for Womens Bay Channel was 27 feet on the prior surveys, compared to 29 feet on the present survey. These changes are attributed to dredging and shifting sediments.

Several soundings and bottom samples are carried forward from the prior surveys to supplement the present survey.

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

7. Comparison with Chart 8546 (latest print date, March 10, 1973)

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys which require no further consideration, supplemented by the partial application of depths from the boat sheet and verified smooth sheet of the present survey.

The 10-foot sounding charted in latitude 57°43.43', longitude 152°29.22' from H-7874 should be accompanied with the legend "RK" in accordance with the final smooth sheet information.

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

b. Controlling Depths

The charted controlling depth for Womens Bay Entrance Channel is based on U.S. Navy Chart Letter Number 1029 of 1959 to reflect the present survey information.

c. Aids to Navigation

The aids to navigation presently charted adequately mark the features intended.

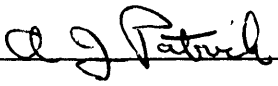
8. Compliance with Instructions

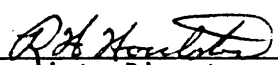
This survey adequately complies with the project instructions.

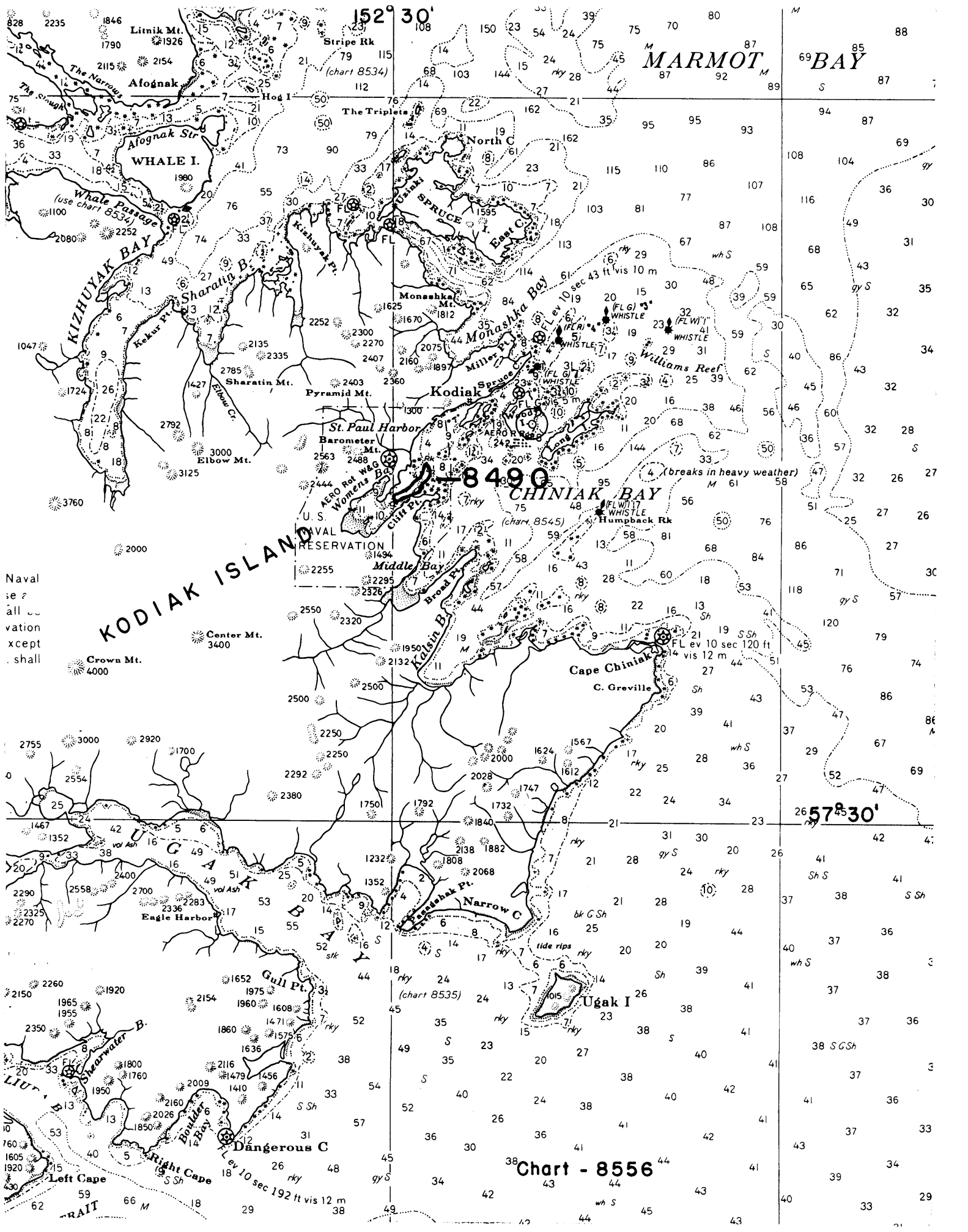
9. Additional Field Work

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

Examined and Approved:

  
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Chief  
Marine Surveys Division

  
\_\_\_\_\_  
Associate Director  
Office of Marine Surveys  
and Maps



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Chart - 8556

# NAUTICAL CHARTS BRANCH

SURVEY NO. H-8490

## Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
1/14/60	<sup>16580</sup> 8556	J. H. EATON	Exam - No crit corrections. Before <del>After</del> Verification and Review
1/30/60	<sup>16596</sup> 8546	J. H. EATON	Partially Applied. Before <del>After</del> Verification and Review
3-21-60	<sup>16594</sup> 8534	R. K. DeLauder	Part. appl. Before <del>After</del> Verification and Review thru chit 8546 dwg # 10
12/29/60	8545	J. R. McGinnis	Before <del>After</del> Verification and Review Part applied.
1/22/62	<sup>16593</sup> 8535	R. S. House	Before <del>After</del> Verification and Review Part. appl thru chit 8546 & 8534
2/10/75	8534	T. W. Alexander	<del>Before</del> After Verification and Review <sup>before</sup> Inspection Examined; No corrections at this stage
2/10/78	<sup>16596</sup> 8546	M. J. Fries	Before After Verification and Review Inspection, Signature
7/18/78	<sup>16593</sup> 8535	Mark J. Fries	Consider hydro fully Appl'd after signature Before After Verification and Review Insp. & Signature
7/24/78	<sup>16594</sup> 8534	Mark J. Fries	Consider hydro fully appl'd after signature thru Chit. 8546 Before After Verification and Review Insp. & Signature Consider hydro fully appl'd after signature thru Chit. 8546
5/12/82	<sup>16595</sup> 8545	L. A. Simmons	Consider hydro fully appl'd - Superseded by H-9763
3/3/88	16580	J. M. Perkins	Considered fully applied - Superseded by H9763

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.