

9191

Diag. Cht. No. 8102-3.

NOAA FORM 76-35A  U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY  <b>DESCRIPTIVE REPORT</b> (HYDROGRAPHIC)	
<i>Type of Survey</i> .....	HYDROGRAPHIC
<i>Field No.</i> .....	PF-10-1-71
<i>Office No.</i> .....	H-9191
<b>LOCALITY</b>	
<i>State</i> .....	ALASKA
<i>General Locality</i> .....	CLARENCE STRAIT
<i>Locality</i> .....	UNION BAY
<hr/> 1971	
CHIEF OF PARTY. H. R. Lippold Jr.	
<b>LIBRARY &amp; ARCHIVES</b>	
<b>DATE</b> .....	12/10/74

9191

HYDROGRAPHIC TITLE SHEET

H-9191

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

FIELD NO.

PF-10-1-71

State Alaska

General locality Clarence Strait

Locality Union Bay

Scale 1:10,000 Date of survey April 1971

Instructions dated January 19, 1971 Project No. OPR-465-PF-71

Vessel NOAA Ship PATHFINDER, Motor Launches 1, 2, 3, 4, 6, and SB#5

Chief of party Capt. H.R. Lippold Jr.

Cdr. S.C. Miller, Lt. R.K. Matsushige, Lt. D.E. Nortrup, Ltjg. G.B. Mills,

Surveyed by Ltjg. R.L. Baker, Ltjg. R.C. Roush, Ltjg. R. Louis, Ltjg. L.J. Oliver,

Ens. K.G. Baldwin, Ens. A.P. Vonderohe, Ens. R.T. Beaupre', Ens. K.D. Coon.

Soundings taken by echo sounder, ~~hand lead, pole~~ Raytheon 723 Echo Sounder, PFR

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Personnel

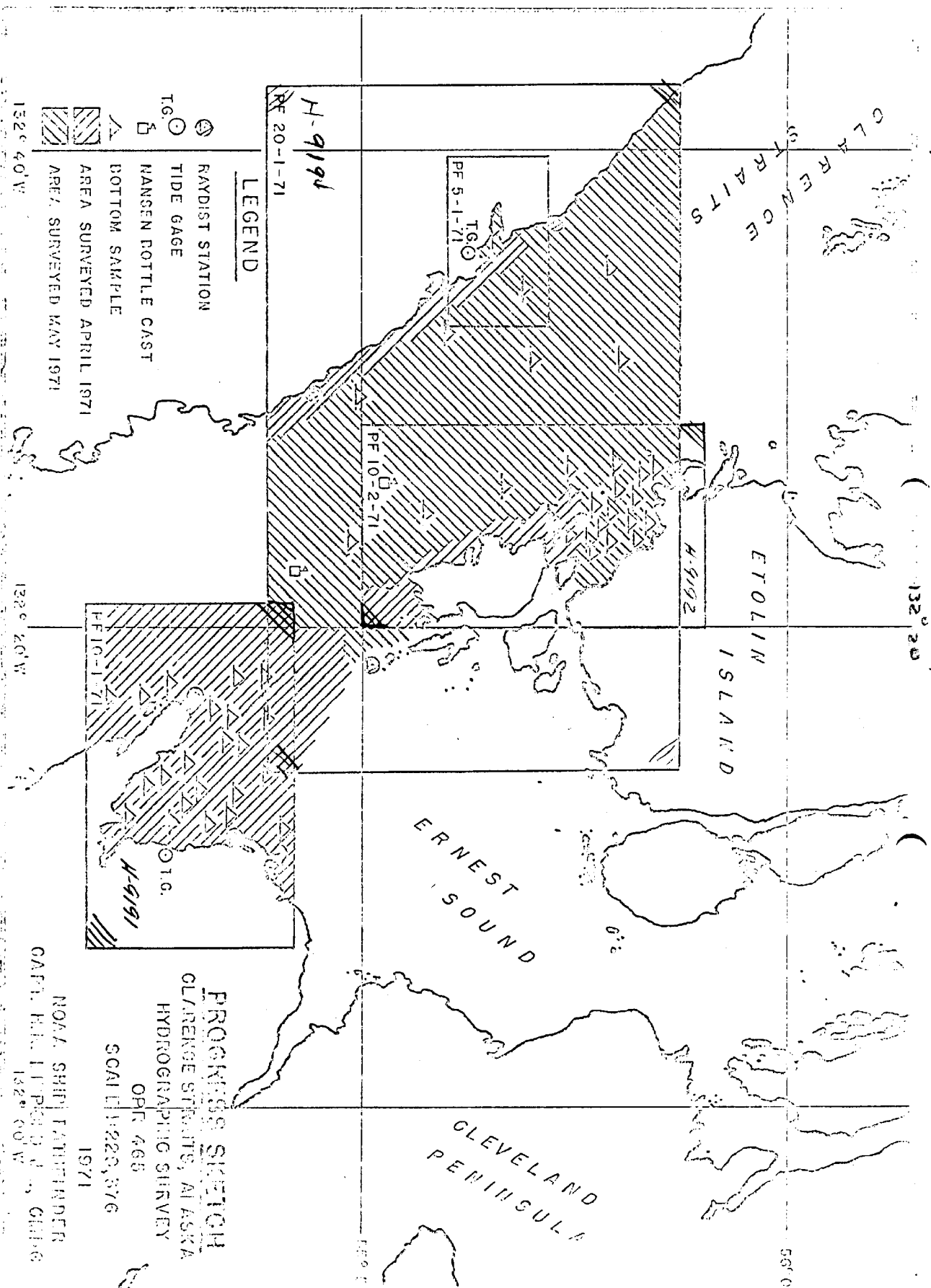
Protracted by Ship's Personnel Automated plot by Pacific Marine Center

Soundings ~~plotted~~ <sup>inked</sup> by Ship's Personnel

Soundings in fathoms ~~feet~~ at ~~XXXX~~ MLLW

REMARKS:

*Applied to slide 1/16/75*  
*SLT*



- LEGEND**
- RAYDIST STATION
  - T.G. TIDE GAGE
  - NANSEN POTTLE CAST
  - △ BOTTOM SAMPLE
  - ▨ AREA SURVEYED APRIL 1971
  - ▧ AREA SURVEYED MAY 1971

132° 40' W

132° 20' W

132° 00' W

**PROKEFS SECTION**  
 CLARENCE STRAITS, ALASKA  
 HYDROGRAPHIC SURVEY  
 OPR 468  
 SCALE 1:122,376  
 1971

NOAA SHIP FATHINDER  
 CAPT. H.L. LIPPOLD, JR., CDR  
 132° 00' W

H-9194  
 PF 20-1-71

PF 5-1-71  
 T.G.

PF 10-2-71

PF 10-1-71

T.G.

H-9191

CLARENCE STRAITS

ETOLIN ISLAND

ERNEST SOUND

CLEVELAND PENINSULA

132° 20'

56° 00'

Descriptive Report to Accompany  
Hydrographic Survey H-9191  
Field No. PF-10-1-71  
Scale 1:10,000

NOAA Ship PATHFINDER  
Capt. H. R. Lippold, Jr., Comdg.

A. PROJECT

The hydrography for this survey was completed in accordance with project instructions OPR-465-71, Clarence Strait, Southeast Alaska, ✓ dated January 19, 1971.

B. AREA SURVEYED

This is a basic hydrographic survey of Union Bay, Alaska. The sheet ✓ limits are:

North:	Latitude	55° 48' N
South:	Latitude	55° 44' N
East:	Longitude	132° 02' W
West:	Longitude	132° 20' W

The hydrography began April 5, 1971, and ended April 24, 1971. This survey makes a junction on the west with FA-20-4-69 (H-9092).

C. SOUNDING VESSEL

The hydrography was completed using the following vessels (position ✓ number color in parentheses):

Ship	PATHFINDER	(Green)
ML#	1	(Violet)
ML#	2	(Brown)
ML#	3	(Red)
ML#	4	(Blue)

D. SOUNDING EQUIPMENT

DE 723 Raytheon Fathometers were used for almost all the survey, with the PFR when the Ship ran. Serial numbers of the fathometers used are: 140, 141, 940, 551, 145, 557, 935, and 552. PFR Serial 001, Model 195-1 was used when the Ship ran. ✓

Depths measured ranged from 0 to <sup>314</sup>~~295~~ fathoms. Echo sounder corrections were determined by daily bar checks and velocity corrections by water sample casts.

P.S.R.#

Shown as reef at lat. 55°46.07' long 132°16.22'

10. The rock is there at fix 014 and 015 on the field edit ozalid, which showed it 2 ft. below water at 0940 13 April 1971 (120° W Time Zone). *originates CL 87 68304*
11. There is just one rock that bares at MHW and other parts of the same rock baring at various lower tides. The extent of the rock is drawn on the field edit ozalid. *One other rock baring 2 ft. at MLLW is shown at the northern most part of the ledge. originates CL 389 (1923)*
12. The extent of the reef is shown on the field edit ozalid. The boat sheet shows that 5 fathoms can be carried through the passage, favoring the Cleveland Peninsula side to avoid the reef. *originates CL 814 (1931)*
13. The position of the rock is plotted by fix 006 and 007 on the field edit ozalid, with its high point baring 2 ft. at 0844 13 April 1971. *originates CL 715 (1929) and CL 814 (1931)*
14. The shoal sounding was found to be 2.8 fathoms at 0925 24 April 1971, (pos. 2894 of launch #4) (120° W Time Zone). *Rock located at Lat. 55°44.41' Long. 132°15.44' 1.5 originates CL 814 (1931)*

Soundings from this survey compared favorably with (FA-20-4-69) H-9092 (a60).

K. COMPARISON WITH CHARTS

The largest scale chart of this area is C&GS Chart 8124, 7th Ed. Sept 2, 1968, which was compiled from surveys dating from 1885 to 1922. The soundings were in fair agreement. The shoal soundings on the Chart were found to be there, displaced slightly. The bottom characteristics remained much the same; shoal waters (less than 50 fathoms) being rocky and deeper waters having a muddy characteristic.

The 3 fathom shoal at latitude 55° 48.<sup>18</sup>' N longitude 132° 15.<sup>04</sup>' W is a shoal of 2.59 fathoms located at latitude 55° 48.13' N longitude 132° 15.05' W and a 3.04 fathoms located at latitude 55° 48.10' N, longitude 132° 15.15' W.

The 7.5 fathom shoal at latitude 55° 47.25' N, longitude 132° 15.20' W and the 7-9 fathom shoal at latitude 55° 46.9' N, longitude 132° 14.6' W are really several shoals; an 8.69 fathom shoal at latitude 55° 46.92' N, longitude 132° 14.53' W, a 9.88 fathom shoal at latitude 55° 46.93' N, longitude 132° 14.82' W, and a 8.56 fathom shoal at latitude 55° 47.75' N, longitude 132° 15.25' W. See the boatsheet for discrepancies involving soundings of 15 fathoms or greater.

L. ADEQUACY OF SURVEY

The survey is adequate for charting.

M. AIDS TO NAVIGATION

The buoy R "2" BELL, F1 6 sec at McHenry Ledge is correctly plotted on Chart 8124. The light called Meyers Chuck, F1 4 sec 22 ft. and buoy C "1" is also correctly located.

#### E. SMOOTH SHEET

Data tapes have been completed by personnel of the Ship PATHFINDER in anticipation of the smooth sheet being plotted by the electronic plotter at the Pacific Marine Center. ✓

#### F. CONTROL

Raydist electronic control was used for the majority of the sheet. Visual control was used for the coast line from Myers Chuck to Lemesurier Pt. ✓

Raydist station Green was located on SLOW/<sup>1966</sup> a first order triangulation station that is unadjusted. Raydist station Red was located by ground survey methods at Lat. 55° 46' 58.54" N, Long. 132° 11' 19.68" W. Later, Raydist station Red was relocated as an off set of LEM 1916, and redesignated as Raydist station Blue.

Operation frequencies of the base stations and the mobile units are as follows: SLOW (Green)--1653.425 KHz; (Red) and (Blue)--1653.015 KHz; Set #1--3306.465; Set #2--3306.500; Set #3--3306.400. See the accompanying Raydist Note for more details.

#### G. SHORELINE

The shoreline was drawn using T-sheets numbers 12373, 12374, 12377, and 12378. Visual hydro signals were located photogrammetrically. All shorelines have been field edited. Refer to the field edit of T-sheets for details. ✓

#### H. CROSSLINES

Ten percent of all the hydrography on this sheet were crosslines. Crosslines compared very favorably with the majority of the work. There were several discrepancies in the work done west of LEM Pt. The bottom in this area drops off drastically resulting in poor fathometer traces. ✓

#### I. JUNCTIONS

Junction with <sup>H-9092 (1969)</sup> (FA-20-4-69) varies from fair to good. Junctions between launches were good. ✓

#### J. COMPARISON WITH PRIOR SURVEYS

Pre-survey review questions from prior survey charts dated 1885 to 1922 have been investigated by photo and hydro parties. All discrepancies have been answered. Questions of concern for this area are 10 thru 14, found on sheet 3 of 7, Pre-survey Review, Clarence Strait. ✓

## N. STATISTICS

	No. of positions	Linear Nautical Miles
ML# 1	498	50.1
ML# 2	498	77
ML# 3	46	6.4
ML# 4	911	158.3
Ship	102	10.6
Area Surveyed	27 s.n.m.	
Bottom Samples	23	
Water Sample Cast	2	

## O. MISCELLANEOUS

There were a few poor ties in the area west of LEM Pt. By examining the fathograms, it was noted that the bottom characteristics are very irregular; dropping very quickly from shoal depths. The traces on fathograms are poor at the questionable depths. It was decided that the Ship's fathogram (from PFR) read correctly.

Problems arose with the Raydist sets and DE 723 Fathometers. The Fathometer gave poor results for depths greater than 100 fathoms. In an attempt to overcome this, the transducers were replaced with reconditioned units, and this improved the quality. The other causes of poor traces were sea swells, vibration, and poor ground connections on the launches.

Raydist problems began with the strip charts (minor ones), and went on to a major break down in the Green station set. All problems have since been solved.

Trouble was experienced in operation of ML#2 for Raydist operations. The cause was found to be a combination of poor wiring and poor grounding of equipment. Grounding of all the electronic equipment and the shaft greatly improved operations so that satisfactory data was possible.

Because of the depth, bottom samples were taken with the Ship PATHFINDER. The water sample cast was taken mid-way between LEM Pt. and ERN Pt. See the Oceo Report for more details.

For a report of ML# 3, the new automated launch aboard the PATHFINDER, see the special report.

Weather was not a hindering factor for the majority of the survey, although snow flurries caused erratic operation of the Raydist equipment.

P. RECOMMENDATIONS

It is suggested that a fathometer that reads the steep sloping bottom better than the DE 723 be obtained for future surveys of this area. ✓

Q. REFERENCE TO REPORTS

Field Edit of T-sheets 12373, 12374, 12377, and 12378.  
Special Report "ML#3 and its electronics" 1971.

Respectfully submitted,

*Roy K. Matsushige*

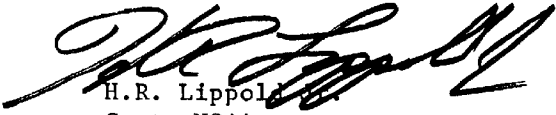
Roy K. Matsushige  
LT, NOAA



APPROVAL SHEET

REGISTRY NO. H-9191

This Descriptive Report has been examined and approved.

  
H.R. Lippold  
Capt. NOAA  
NOAA Ship PATHFINDER

HORIZONTAL CONTROL

List of Stations on H-9191 (PF-10-1-71)

<u>SIGNAL NAME</u>	<u>ORIGIN OF POSITION</u>	
	<u>Photo</u>	<u>Triangulation Station</u>
#001 (LIL)	T- 12377	LIL 1922 ✓
#002	T- 12377	
#003	T- 12377	
#004	T- 12377	
#005	T- 12377	
#006 (MIS)	T- 12377	MIS 1915 ✓
#007	T- 12373	
#008	T- 12373	
#009	T- 12373	
#010	T- 12373	
#011	T- 12377	
#012	T- 12377	
#013	T- 12377	
#014	T- 12377	
#015	T- 12377	
#016	T- 12377	
#017	T- 12377	
#018	T- 12373	
#019 (BEE)	T- 12373	
#020 (LEM) OFFSET	T- 12373	LEM <del>1922</del> ✓

HORIZONTAL CONTROL

List of Stations on H-9191 (PF-10-1-71)

<u>SIGNAL NAME</u>	<u>ORIGIN OF POSITION</u>	
	<u>Photo</u>	<u>Triangulation Station</u>
#021	T- 12374	
#022	T- 12374	
#023	T- 12374	
#024	T- 12374	
#025 (TRAP)	T- 12373	
#026 (MATT)	T- 12377	
#027 (CC)	T- 12377	
#028 (TRAC)	T- 12373	
#029 (FISH)	T- 12374	
#030 (DRAG)	T- 12374	DRAG 1916 ✓
#031 (FANG)	T- 12374	FANG 1966 ✓
#032 (ANT)	T- 12374	<del>ANT 1971</del> ✓
#033	T- 12374	
#035 (LOOK)	T- 12374	LOOK 1922 ✓
#036	T- 12374	
#037	T- 12374	
#038 (MEYERS CHUCK LIGHT)	T- 12377	MEYERS CHUCK LIGHT ✓ SEE LIGHT LIST

S I G N A L P L O T T E R C A R D S

H-NO.					LATITUDE	LONGITUDE	X	Y		
09191	001	225	01.0	71	55434863	132152051	06222	00605	139	001 LIL, 1922
09191	002	000	02.0	71	55440142	132153066	06035	01021		002
09191	003	000		71	55441390	132154533	05767	01426		003
09191	004	090		71	55443508	132155199	05646	02114		004
09191	005	225		71	55444986	132161043	05308	02594		005
09191	006	045		71	55445228	132163634	04834	02673	139	006
09191	007	000		71	55445979	132164282	04715	02917		007
09191	008			71	55451251	132165332	04523	03330		008
09191	009	000		71	55452968	132165195	04549	03887		009
09191	010			71	55450753	132161261	05268	03168		010
09191	011	1		71	55445468	132154861	05708	02750		011
09191	012	225	.8	71	55444494	132154242	05821	02434		012
09191	013	045	1.0	71	55443718	132154156	05837	02182		013
09191	014	045	02.0	71	55443408	132152327	06172	02081		014
09191	015		01.0	71	55442541	132151954	06240	01800		015
09191	016			71	55441898	132152843	06077	01591		016
09191	017	000	01.5	71	55441943	132145439	06701	01605		017
09191	018		01.5	71	55455448	132170115	043#1	04693		018
09191	019			71	55454200	132170688	04276	04288		019
09191	020			71	55460293	132165220	04545	04967		020
09191	021			71	55472218	132105314	11116	07540		021
09191	022		01.0	71	55471743	132105939	11002	07386		022
09191	023		01.5	71	55470773	132110746	10874	07070		023
09191	024	135	01.5	71	55470456	132111354	10743	06967		024
09191	025			71	55452202	132163859	04793	03638		025
09191	026	225	1.5	71	55442564	132153267	059#9	01807		026
09191	027	330		71	55443298	132151049	06406	02046		027
09191	028	225	01.0	71	55453796	132151474	06329	04155		028
09191	029	225	01.5	71	55442771	132152356	08364	01874		029
09191	030		02.0	71	55442315	132115158	10049	01726	139	030DRAG, 1918
09191	031			71	55454443	132105907	11010	04366	139	031FANG, 1966
09191	032	000	04.0	71	55465854	132111968	10631	06772	254	032
09191	033			71	55471106	132112576	10519	07178		033
09191	035		01.0	71	55473007	132111791	10663	07796	139	035LOOK, 1922
09191	036			71	55474252	132105372	11105	08200		036
09191	037			71	55480834	132110425	10912	09039		037
09191	038	270	02.0	71	55443359	132153984	05868	02065		038

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## RAYDIST NOTE

This report describes the use of the Raydist DRS system used on OPR-465-PF-71, Clarence Strait, Alaska, during the year 1971.

The launches carried the DRS Raydist system made by Hastings Raydist Co. The launch installation consisted of a ZA-67A navigator, a TA96 transmitter, a strip chart recorder and a 10-15 foot fiberglass whip antenna mounted on the house. The Raydist equipment was powered by the launch battery banks which were charged by the launch alternator. Ground consisted of a copper plate on the launch hull.

All shore stations were one piece self-contained units which were sealed to withstand foul weather. The installations consisted of antennas of various heights constructed from 10 foot aluminum Tabet tower sections with a 20 foot whip antenna on top (the whip antenna was variable in length). The whole tower acted as an antenna and rested on an insulated base plate. Four sections of guys made of 3/8" polypropylene line were spaced at 90° intervals around the tower. A ground plane consisting of #18 insulated copper wire radials spread at equal intervals was constructed outward from the antenna base. Both stations were driven by Raydist Base Stations model AA6C. The Green base station was serial #15 and the Red station was serial #14.

The shore stations were operated on 24 V.D.C. Eight 12 volt heavy duty 90 ampere-hour batteries operated the stations at low power for 8-10 days. These batteries were replaced by freshly charged batteries from the Ship when they were expended or charged at the station site with a portable gasoline powered generator. Except for replacing batteries, the stations were left unattended. Motorola FM receivers operating on 34-98 MHZ (the same frequency as the Ship's base station) were set up at each station site. These receivers were equipped with a filter which passed only a single tone and operated a relay to turn the stations on and off remotely at the end of each day of hydrography. The single tone was generated by an oscillator fed into the base station of the Ship and was of the order of 2 KHZ. These units extended the time between shore station replenishments.

Each unit operated as a set consisting of a transmitter and navigator. These units were shifted between launches and the Ship as the need arose.

Set #1	Set #2	Set #3
TA96 #20	TA96 #22	TA96 #34
ZA67A #26	ZA67A #47	ZA67A #54
3306.465 KHZ	3306.500 KHZ	3306.400 KHZ

Lane width 45.316 meters

Green Base Station  
AA60 #15  
1653.425 KHZ

Red Base Station  
AA60 #14  
1653.015 KHZ

Raydist shore stations were located as follows:

1. ANT (located by ground survey) "RED"  
Latitude 55° 46' 58.54"N Longitude 132° 11' 19.68"W
2. SLOW (triangulation station) "GREEN"  
Latitude 55° 50' 22.963"N Longitude 132° 18' 33.537"W
3. LEM OFFSET (offset of LEM 1916) "BLUE"  
Latitude 55° 46' <sup>90.93m</sup>02.934"N Longitude 132° 16' <sup>909.85m</sup>52.197"W
4. SAL 1915, 1922 (triangulation station) "GREEN"  
Latitude 55° 48' 54.401"N Longitude 132° 29' 49.895"W
5. ALE (offset of RATZ 1915, 1922) "RED"  
Latitude 55° 54' 32.832"N Longitude 132° 36' 53.874"W

Calibration was done in two ways; by calibration tower and by visual fixes on signals located by ground survey methods. The calibration towers were located by ground survey methods and checked by launches that had known Raydist counts. Visual fixes taken with sextants were radioed into the Ship and the exact position of the launch and the exact lane count were determined with the WANG Advanced Programming Calculator. For the program used, see the 1971 special report on the WANG.

The Raydist equipment operated satisfactorily and except for one breakdown, the shore stations were relatively trouble free. The sets on the launches experienced various breakdown due to vibration on the launches, poor grounding, poor connections, and minor electric breakdown. All Raydist failures have since been resolved.

VELOCITY CORRECTORS  
PF 10-1-71

TABLE #1 (A)	ML #1
0.0 - 1.8	-0.1
1.9 - 86	0.0
86.1 - 101	0.1
101.1 - 150	0.0
150.1 - 325	1.0
325.1 - 400	2.0

TABLE #2 (B)	ML #2
0.0 - 86	0.0
86.1 - 101	0.1
101.1 - 150	0.0
150.1 - 325	1.0
325.1 - 400	2.0

TABLE #3 (C)	ML #3
0.0 - 4.5	0.0
4.6 - 8.0	0.1
8.1 - 86	0.0
86.1 - 101	0.1
101.1 - 150	0.0
150.1 - 325	1.0
325.1 - 400	2.0

TABLE #4 (D)	ML #4
0.0 - 86	0.0
86.1 - 101	0.1
101.1 - 150	0.0
150.1 - 325	1.0
325.1 - 400	2.0

TABLE #12	PATHFINDER
0.0 - 86	0.0
86.1 - 101	0.1
101.1 - 150	0.0
150.1 - 305	1.0
305.1 - 400	2.0

#### TIDE NOTE

The standard tide gage at Ketchikan served as the reference station for the project. The accuracy of approximation cycle was 0.0010. Time correction for highs was +13 minutes and for lows +18 minutes. Correction to highs was 1.1 feet and to lows 0.0. The range ratio applied to highs was 1.0000 and to lows 1.0000.

The predicted tides thus corrected were used on Boatsheets PF-10-1-71, PF-10-2-71, PF-20-1-71, and PF-5-1-71.

Two Bubbler Tide Gages were installed to control the survey. One located at Union Bay, latitude  $55^{\circ} 45.8'N$ , longitude  $132^{\circ} 11.1'W$ , and the other located in Ratz Harbor, latitude  $55^{\circ} 52' 47''N$ , longitude  $132^{\circ} 35' 47''W$ . Operation at both sites was satisfactory.



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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center

12/17/72

Hourly heights are approved for

Tide Station Used (NOAA form 77-12): Union Bay, Alaska

Period: April 7, 1971 - May 13, 1971

HYDROGRAPHIC SHEET: H-9194, H9192, H9191

OPR: 465

Locality: Clarence Strait, S.E. Alaska

Plane of reference (mean lower low water): 4.6 feet  
which is feet on tide staff.

Height of Mean High Water above Plane of Reference is 15.1 ft.

Remarks:

All corrections made to new Hourly Heights tape.  
1-8-73 JH

*Robert A. Cumming*

Chief, Tides Branch

GEOGRAPHIC NAMES

Survey No.

H-9191

Name on Survey

	On Chart No.	On previous survey	On U. S. Quadratic Maps	From local information	On local maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List		
	A	B	C	D	E	F	G	H	K	
CLARENCE STRAIT ✓										1
CLEVELAND PENINSULA ✓										2
ERNEST SOUND ✓										3
LEMESURIER POINT ✓										4
<sup>CH</sup> LEMLY ROCKS ✓										5
MAGNETIC POINT ✓										6
MC HENRY LEDGE ✓										7
Meyers Chuck (cove) ✓										8
MEYERS CHUCK (locality) ✓										8
MEYERS ISLAND ✓										9
MISERY ISLAND ✓										10
UNION BAY ✓										11
UNION POINT ✓										12
Meyers Stream ✓										13
										14
										15
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										22
										23
										24
										25
										26

Approved  
 Chas. E. Harrington  
 Staff Geographer  
 5 Feb. 1975

APPROVAL SHEET

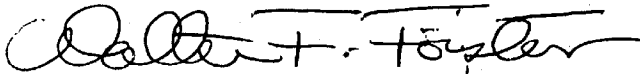
The smooth sheet has been inspected, is complete, and meets the requirements of the General Instructions for automated surveys and the Hydrographic Manual. (Note: All exceptions are listed in the Verifier's Report)

Examined and approved,



James S. Green  
Supervisory Cartographic Technician

Approved and forwarded,



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

HYDROGRAPHIC SURVEY STATISTICS  
HYDROGRAPHIC SURVEY NO. H-9191

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET & PNO		1	BOAT SHEETS		4	
DESCRIPTIVE REPORT		1	OVERLAYS		4	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES	1		1			
CAHIERS	<del>1</del> 1					
VOLUMES	18					
BOXES			1 & Misc. Data.			
T-SHEET PRINTS (List) <del>10000, 10100, 10200, 10300</del>						
SPECIAL REPORTS (List)						

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				2469
POSITIONS CHECKED		1,942	/	
POSITIONS REVISED		78	10	
DEPTH SOUNDINGS REVISED		265	73	
DEPTH SOUNDINGS ERRONEOUSLY SPACED			/	
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED			/	
	TIME (MANHOURS)			
Verification of Control		12	/	
Verification of Positions		200	20	
Verification of Soundings		280	50	
Smooth Sheet Compilation		120		
ALL OTHER WORK			165	
TOTALS		612	235	
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY Robert Montemayor <i>Robert Montemayor</i>	Feb. 18, 1973		Nov. 11, 1974	
REVIEW BY <i>J. Baumgardner</i>	July 1, 1975		Sept 12, 1975	

Reg. No. H-9191

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

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

CARDS CORRECTED

DATE \_\_\_\_\_ TIME REQ'D \_\_\_\_\_ INITIALS \_\_\_\_\_

REMARKS:

Reg. No. \_\_\_\_\_

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

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

MAGNETIC TAPE CORRECTED

DATE \_\_\_\_\_ TIME REQ'D \_\_\_\_\_ INITIALS \_\_\_\_\_

REMARKS:

H-9191

Items for Future Presurvey Reviews

No significant changes have occurred since the prior surveys. The bottom is considered adequately developed but future surveys should determine the least depth on the 5<sup>6</sup> fathoms in latitude 55°46.72', longitude 132°18.22'.

<u>Position Index</u>		<u>Bottom Change Index</u>	<u>Use Index</u>	<u>Resurvey Cycle</u>
<u>Lat.</u>	<u>Long.</u>			
554	1322	0	1	50 years

OFFICE OF MARINE SURVEYS AND MAPS

MARINE SURVEYS DIVISION

MODIFIED HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-9191

FIELD NO. PF-10-1-71

Alaska, Clarence Strait, Union Bay

SURVEYED: April 5-24, 1971

SCALE: 1:10,000

PROJECT NO.: OPR-465

SOUNDINGS: DE-723, PFR, and Ross 200A  
Depth Recorders

CONTROL: Raydist (Range-  
Range Mode)  
Sextant Fixes on  
Shore Signals

Chief of Party ..... H. R. Lippold, Jr.  
Surveyed by ..... S. C. Miller, R. K. Matsushige  
..... D. E. Nortrup, G. B. Mills  
..... R. L. Baker, R. C. Roush  
..... R. Louis, L. J. Oliver  
..... K. G. Baldwin, A. P. Vonderohe  
..... R. T. Beaupre, K. D. Coon  
Automated Plot by ..... Gerber Digital Plotter (PMC)  
Verified by ..... R. Montemayor  
Reviewed by ..... S. Baumgardner  
Date: September 12, 1975  
Inspected by ..... R. W. DerKazarian

1. Control and Shoreline

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

The shoreline originates with Class I, unreviewed photogrammetric manuscripts T-12373 and T-12374 of 1963-71; and Class III photogrammetric manuscripts T-12377 and T-12378 of 1963-69. Both these Class III maps have had a partial field edit. T-12377 is field edited north to latitude 55°44'; above this latitude the mean high water line has been inked on the smooth sheet although some low water features have been left in pencil. T-12378 has been field edited except for a small area in the vicinity of Meyers Stream where the shoreline has also been inked on the present survey.

A small islet shown in red located in latitude 55°45.97', longitude 132°17.00' has been carried forward from the boat sheet.

The mean high water line is shown for guidance only; the true position is shown on the topographic surveys mentioned above.

## 2. Hydrography

A. Depths at crossings are in good agreement.

B. The usual depth curves were adequately delineated except in steep inshore areas.

C. The development of the bottom configuration and the investigation of least depths are considered adequate. However, hand lead verification of least depth developments would have been desirable.

## 3. Condition of Survey

The sounding records, smooth plotting, various sounding printouts, and the Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual supplemented by the Instruction Manual - Automated Hydrographic Surveys, except for the following:

A. The symbols for the electronic control stations were properly plotted on the smooth sheet during the time of review.

B. The floating aid at McHenry Ledge was plotted during the time of review from field observations.

## 4. Junctions

Adequate junctions were effected with H-9287 (1972) on the northeast, H-9288 (1972) on the north, and H-9092 (1969) on the west. A junction with H-9194 (1971) on the northwest will be discussed in the review of that survey.

## 5. Comparison with Prior Surveys

A. H-1649b (1885) 1:80,000  
H-1653b (1885) 1:20,000

The sparsity of soundings and the small scale of these prior surveys preclude a detailed comparison with the present survey.

With the addition of a shoal sounding brought forward from H-1653b, the present survey is adequate to supersede the prior surveys within the common area.



B.	H-3793 WD	(1915-16)	1:40,000
	H-3810 WD	(1915-16)	1:40,000
	<u>H-3935 WD</u>	<u>(1916)</u>	<u>1:20,000</u>

There are no conflicts between the hydrography on the present survey and the effective depths on these prior wire-drag surveys.

However, on H-3935 WD a detached sounding in latitude 55°46.92', longitude 132°14.50' of 55 feet exists in an area where the effective cleared depth is shown as 63 feet. The reliability of this portion of the drag is questionable because the present survey verifies an 8.9-fathom sounding in the same location. No effort was made to rectify the prior work.

Several detached soundings have been carried forward to the present survey.

C. H-4253 (1922) 1:20,000

This survey covers a portion of the present survey area. The sparsity of soundings precludes a detailed comparison with the present survey. However, in general, a comparison reveals no significant differences in depths within the common area.

Several rocks awash, soundings, and bottom characteristics have been carried forward to supplement the present survey information.

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

6. Comparison with Chart 8124 (latest print date November 4, 1972)

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 of the present survey.

The pier charted in latitude 55°44.42', longitude 132°15.30' from CL 378 (1970) falls in an area where the field edit is not complete and should be retained on the chart; removal of the yellow tint is recommended.

The 2 1/2 charted in latitude 55°48', longitude 132°15.08' originates with the boat sheet of the present survey and is superseded by the smooth sheet value of 2.9 fathoms.

Presurvey Review items charted in the area of the present survey are discussed in Paragraph J, "Comparison with Prior Surveys," of the Descriptive Report.

Except as noted above, the present survey is adequate to supersede the charted information within the common area.

B. Aids to Navigation

Meyers Chuck Light and McHenry Ledge Lighted Bell Buoy 2 on the present survey are in substantial agreement with their charted positions and adequately mark the features intended.

Meyers Chuck Buoy #1 was not located during the present survey, although reference was made in the Descriptive Report in paragraph M that it was correctly charted on chart 8124.


7. Compliance with Instructions

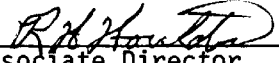
This survey adequately complies with the Project Instructions.

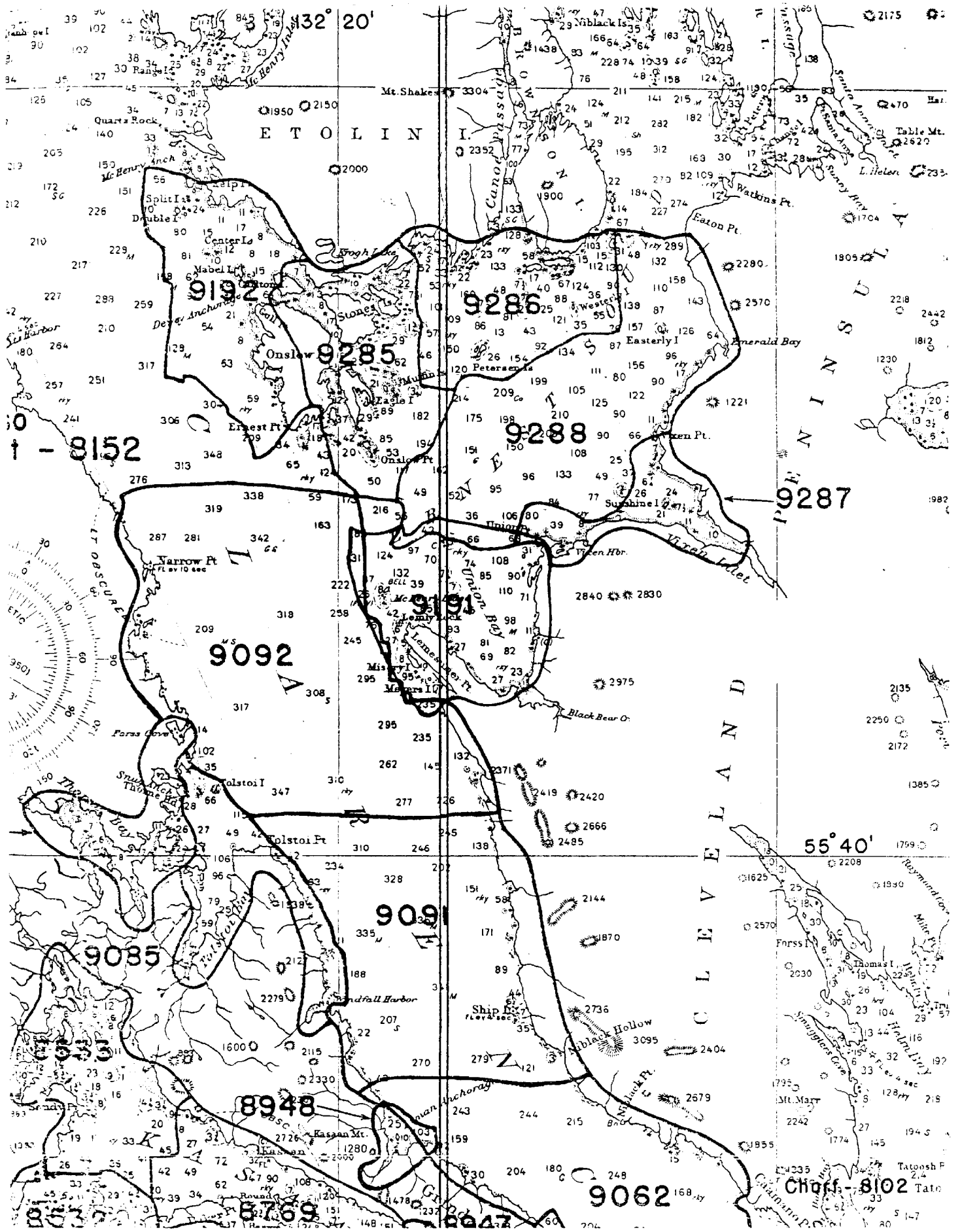
8. Additional Field Work

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

Examined and Approved:

  
\_\_\_\_\_  
Chief  
Marine Surveys Division

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



**RECORD OF APPLICATION TO CHARTS**

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9191

**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
8124	1/27/75	<i>B. Mastj</i>	Full Part <del>Before</del> After Verification Review Inspection Signed Via Drawing No. <i>Examined for Notice to Mariners.</i> <i>Notices recommended in pencil on Aid Proof only.</i> <del>Full Part Before</del> After Verification Review Inspection Signed Via
8124	1-29-75	<i>H. Borawski</i>	Drawing No. <i>Examined for Critical Corrections</i> <i>Only! Added Several Shoal Snags + Rocks Aush</i>
8161	1-29-75	<i>H. J. Borawski</i>	<del>Full Part Before</del> After Verification Review Inspection Signed Via Drawing No. <i>App'd Several Shoal Snaggs + Rocks</i> <i>Aush Vis Chl. 8124! Critical Corrections Only</i> <del>Full Part Before</del> After Verification Review Inspection Signed Via
802	8/7/75	<i>H. J. Borawski</i>	Drawing No. <i>App'd misc corrections</i> <i>from Chl. 8161 Dwg. #14</i> <del>Full Part Before</del> After Verification Review Inspection <i>Not signed</i> <del>Signed Via</del>
8124	11/11/76	<i>H. J. Borawski</i>	Drawing No. <i>Added Numerous Shoal Soundings, Misc</i> <i>Revisions Made To Depth Curves</i>
8124	2/18/77	<i>M. J. Friese</i>	<del>Full Part Before</del> After Verification Review Inspection Signed Via Drawing No. <i>Examined - Recommend U. to M. for 120 x<sup>15</sup>,</i> <i>42 fm, 44 fm, 104 fm, revision of 24 to 12 RM and X to 15 ft (4)</i>
8161	2/18/77	<i>M. J. Friese</i>	<del>Full Part Before</del> After Verification Review Inspection Signed Via Drawing No. <i>Examined - Recommend X for U. to M.</i> <i>Ø 55°48'00", 2 132°11'00"</i>
8261	3/19/77	<i>M. Sayer</i>	<del>Full Part Before</del> After Verification Review Inspection Signed Via Drawing No. <i>APPLIED MISC CORRECT <del>THRU CHART 8161</del></i>
8161	5/19/77	<i>K. AMIS</i>	<del>Full Part Before</del> After Verification Review Inspection Signed Via Drawing No. <i>Applied directly</i>
7360	4/9/79	<i>Naitok</i>	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No. <i>28 thru 8161</i>
17420	9/8/78	<i>H. Borowski</i>	<i>Full after signature</i> <i>Dwg 28</i>