

# 12220

12220

NOAA FORM 76-35	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
<b>DESCRIPTIVE REPORT</b>	
<i>Type of Survey</i> .Shoreline.(Photogrammetric)..	
<i>Job No.</i> PH-6206 .....	<i>Map No.</i> T-12220 .....
<i>Classification No.</i> Field Edited	<i>Edition No.</i> .....
<b>LOCALITY</b>	
<i>State</i> .Alaska .....	
<i>General Locality</i> .Keku Strait .....	
<i>Locality</i> .Skiff Island .....	
<hr/> 181 TO 1970	
Alfred C. Holmes, Director, AMC	
<b>REGISTRY IN ARCHIVES</b>	
<b>DATE</b> .....	

MAP NOT INSPECTED IN QUALITY CONTROL PRIOR  
TO REGISTRATION

DESCRIPTIVE REPORT - DATA RECORD  
T-12220

OBJECT NO. (II): PH-6206		
FIELD OFFICE (III): None	CHIEF OF PARTY	
PHOTOGRAMMETRIC OFFICE (III): Atlantic Marine Center, Norfolk, VA	OFFICER-IN-CHARGE Alfred C. Holmes, Director, AMC	
INSTRUCTIONS DATED (II) (III): OFFICE SUPPLEMENT III December 19, 1967 OFFICE " IV April 14, 1970		
METHOD OF COMPILATION (III): Wild B-8 Stereo Plotter		
MANUSCRIPT SCALE (III): 1:10,000	STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III): 1:20,000 Pantographed To 1:10,000	
DATE RECEIVED IN WASHINGTON OFFICE (IV):	DATE REPORTED TO NAUTICAL CHART BRANCH (IV):	
APPLIED TO CHART NO.	DATE:	DATE REGISTERED (IV): Sept. 4, 1975
GEOGRAPHIC DATUM (III): N.A. 1927	VERTICAL DATUM (III): <del>MEAN SEA LEVEL</del> HIGH WATER EXCEPT AS FOLLOWS: Elevations shown as (25) refer to mean high water Elevations shown as (5) refer to sounding datum i.e., <del>mean low water</del> or mean lower low water	
REFERENCE STATION (III): Spit 1927		
LAT.: 56°31'10.137" (313.5M)	LONG.: 133°41'06.677 (114.2M)	<input checked="" type="checkbox"/> ADJUSTED <input type="checkbox"/> UNADJUSTED
PLANE COORDINATES (IV): y = 1,711,661.40 Ft.      x = 2,681,903.67 Ft.	STATE: Alaska	ZONE: 1
MAN NUMERALS INDICATE WHETHER THE ITEM IS TO BE ENTERED BY (II) FIELD PARTY, (III) PHOTOGRAMMETRIC OFFICE, OR (IV) WASHINGTON OFFICE. WHEN ENTERING NAMES OF PERSONNEL ON THIS RECORD GIVE THE SURNAME AND INITIALS, NOT INITIALS ONLY.		

DESCRIPTIVE REPORT - DATA RECORD

T-12220

FIELD INSPECTION BY (II):  None		DATE:
MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION):  Air Photo Compilation		
PROJECTION AND GRIDS RULED BY (IV):  J. Dempsey - Coradomat		DATE April 10, 1970
PROJECTION AND GRIDS CHECKED BY (IV):  E. Homick - Coradomat		DATE April 10, 1970
CONTROL PLOTTED BY (III):  Aerotriangulation - Coradomat Triangulation - F. P. Margiotta		DATE June 4, 1970 July 7, 1970
CONTROL CHECKED BY (III):  Aerotriangulation - Coradomat Triangulation - B. Wilson		DATE June 4, 1970 July 7, 1970
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):  Robert E. Fisher		DATE Feb. 19, 1970
STEREOSCOPIC INSTRUMENT COMPILATION (III):	PLANIMETRY By: L.O. Neterer, Jr. Reviewed By: A.C. Rauck, Jr.	DATE June 29, 1970 June 29, 1970
	CONTOURS Inapplicable	DATE
MANUSCRIPT DELINEATED BY (III):  F.P. Margiotta		DATE July 22, 1970
SCRIBING BY (III):  R.R. White		DATE Jan. 13, 1972
PHOTOGRAMMETRIC OFFICE REVIEW BY (III):  Compilation: L.L. Graves		DATE August 3, 1970
REMARKS:  Field Edit By: LCDR. F.T. Smith		DATE: June-Oct. 1970

DESCRIPTIVE REPORT - DATA RECORD  
T-12220

CAMERA (KIND OR SOURCE) (III):

Wild RC-8 "E" & W

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
69-E-(c)-957	Aug. 5, 1969	12:02	1:40,000	4.5 ft. above MLLW
69-E-(c)-958	"	"	"	"
*61-W-9537 thru 61-W-9540	July 16, 1961	10:33	1:20,000	0.0
*61-W-9631 thru 9634	"	11:32	"	1.1 "

Predicted TIDE (III)

Diurnal

	RATIO OF RANGES	MEAN RANGE	<del>SPRING RANGE</del>
REFERENCE STATION: Ketchikan, Alaska		13.0	15.4
SUBORDINATE STATION: Monte Carlo Island		10.3	12.5
SUBORDINATE STATION:			

Atlantic Marine Center  
~~WASHINGTON OFFICE REVIEWED BY (IV):~~ C.H. Bishop

DATE:  
April 1973

PROOF EDIT BY (IV):

DATE:

NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (III):

RECOVERED:

IDENTIFIED:

NUMBER OF BM(S) SEARCHED FOR (III):

None

RECOVERED:

None

IDENTIFIED:

None

NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):

None

NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III):

None

REMARKS:

\*Centers not on manuscript, used only for MLLW line and ledges.

T-12220

COMPILATION RECORD

COMPLETION DATE

REMARKS

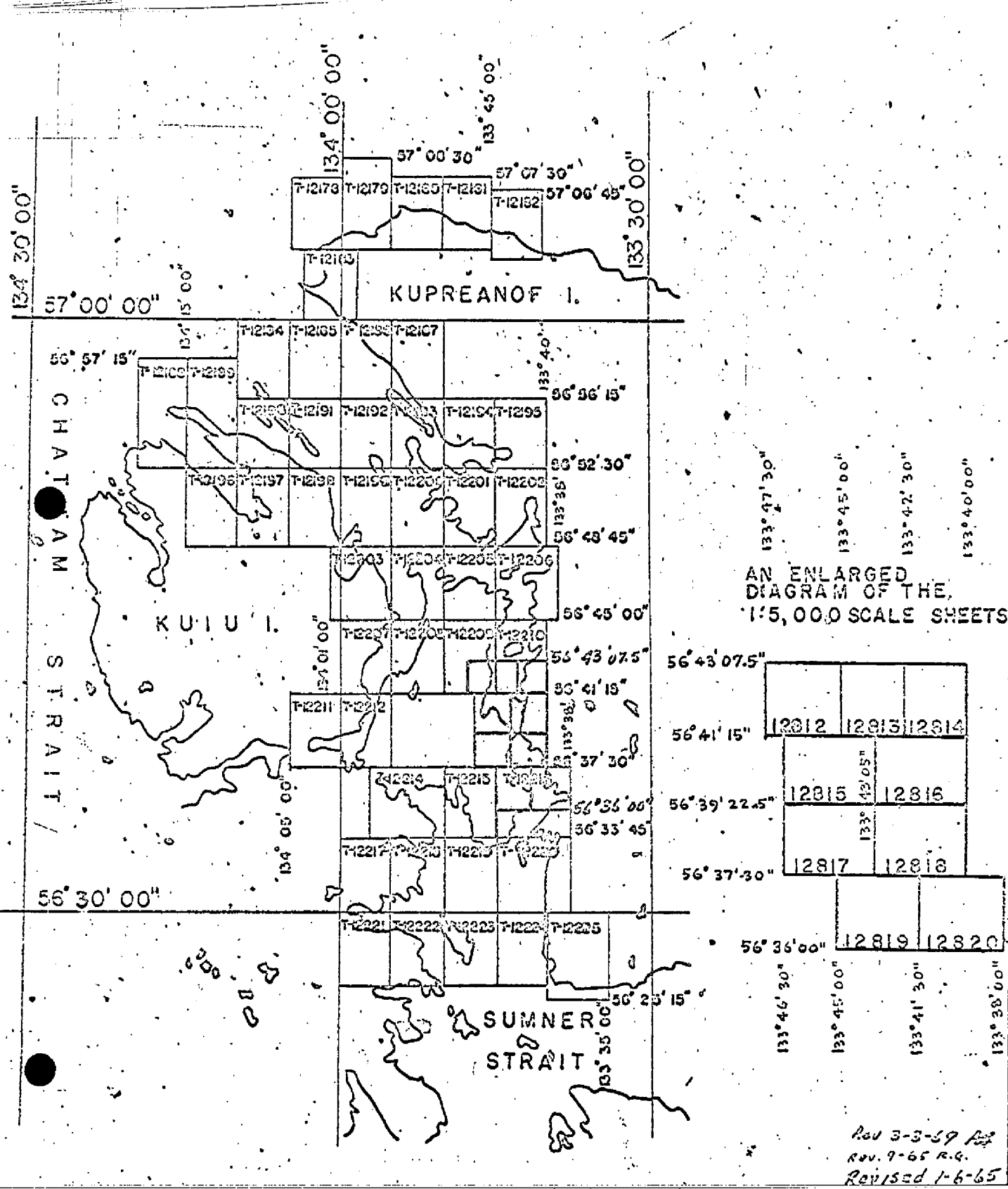
Compilation Complete Pending Field Edit	July 1970	Superseded
Field Edit Applied	July 1971	Superseded
Final Review	April 1973	

# SHORELINE MAPPING PROJECT

Ph-6206

## KEKU STRAITS, ALASKA

### SCALE 1:10,000



SUMMARY TO ACCOMPANY  
DESCRIPTIVE REPORT T-12220

This 1:10,000 scale shoreline manuscript is one of 53 maps that comprise Project PH-6206, Keku Strait, Alaska. The project diagram indicates the location of T-12220 in the project.

There was no field work before compilation, except the identification of horizontal control for aerotriangulation. Compilation was by Wild B-8 plotter with control based on a stereoplanigraph bridge using color photographs taken in August 1969. Panchromatic photographs taken in July 1961 near low water were used to compile graphically the mean lower low water line, rocks, and reefs. Stable transparent copies of the map manuscript, ozalids, and specially prepared photographs were furnished for transfer of shoreline to the boat sheet, location of photo-hydro signals, and field edit.

Field edit was done in conjunction with hydrography in 1970. After application of field edit data to the map, it was scribed and reproduced on cronaflex.

Final review was done at the Atlantic Marine Center in April, 1973.

The compilation manuscript was a vinylite sheet 3 minutes 45 seconds in latitude by 7 minutes in longitude.

A cronaflex copy of the final reviewed manuscript and a negative have been forwarded for record and registry.



FIELD INSPECTION REPORT

Project PH-6206

T-12220

There was no field inspection prior to compilation.

Aerotriangulation Report  
PH-6206  
Keku Strait, Alaska

February 19, 1970

21. Area Covered

This project covers areas in the vicinity of Keku Strait -  
Kuiu Island, Alaska. T-sheets covered are as follows:

T-12203 thru T-12225  
all T-sheets are at 1:10,000 scale

22. Method

Five strips were bridged to provide horizontal positions  
of pass points needed for compilation. Strip #12 was  
bridged in two parts, 12a and 12b, because of open water.  
Strip #14 was not bridged due to satisfactory pass point  
coverage from Strips 13, 15 and 16.

Strip #11 was bridged on the C-5. Strips 12a, 12b, 13, 15  
and 16 were bridged on the C-8. All were adjusted by  
electronic computer.

Strip #11 used seven control points and a tie-point in  
a third degree adjustment.

Strip #12a used a first degree adjustment with two control  
points. One tie point was available for a check.

Strip #12b used a third degree adjustment with five control  
points.

Strip #13 used three control points in a second degree  
adjustment.

Strips 15 and 16 used four control points in third degree  
adjustments.

All pass points, except one in Strip #16, were drilled.

Corresponding tie point values were averaged.

This project was tied through common control stations with  
the 1966 project in this area.

-2-

### 23. Adequacy of Control

Horizontal control was adequate in all strips. However station "SPIT 1927" and its subpoint appearing in both Strip #11 of this project and in Strip #1 of the adjacent "Sumner Strait" project had residual errors on the order of 15 feet in X. These errors were similar in direction and magnitude for both points and in both strips. The reason for not obtaining a better check with these points is not known.

Many control stations in this project were recovered in 1965 and pricked on 1964, 1:20,000 scale photography. The 1970 bridge was run with new 1:40,000 scale photography, therefore, much of the old control was not visible in these bridges. All 1969 identified control used in this project was targeted.

The RMS errors in fit to control for the 1969 identified control, (except "SPIT 1927") and including the 1965 identified control "ALL 1927" and "CEN 1927" were 2.5 feet in X and 1.2 feet in Y. The maximum errors were 6.8 feet in X and 3.3 feet in Y.

### 24. Supplemental Data

U. S. Geological Survey quadrangles were used to provide elevations for vertical adjustment of the bridges.

### 25. Photography

Photography was satisfactory with regards to coverage, overlap and definition.

Submitted by,

*John P. Bertram Jr. for*  
Robert E. Fisher  
Cartographer (Photo)

Approved and forwarded,

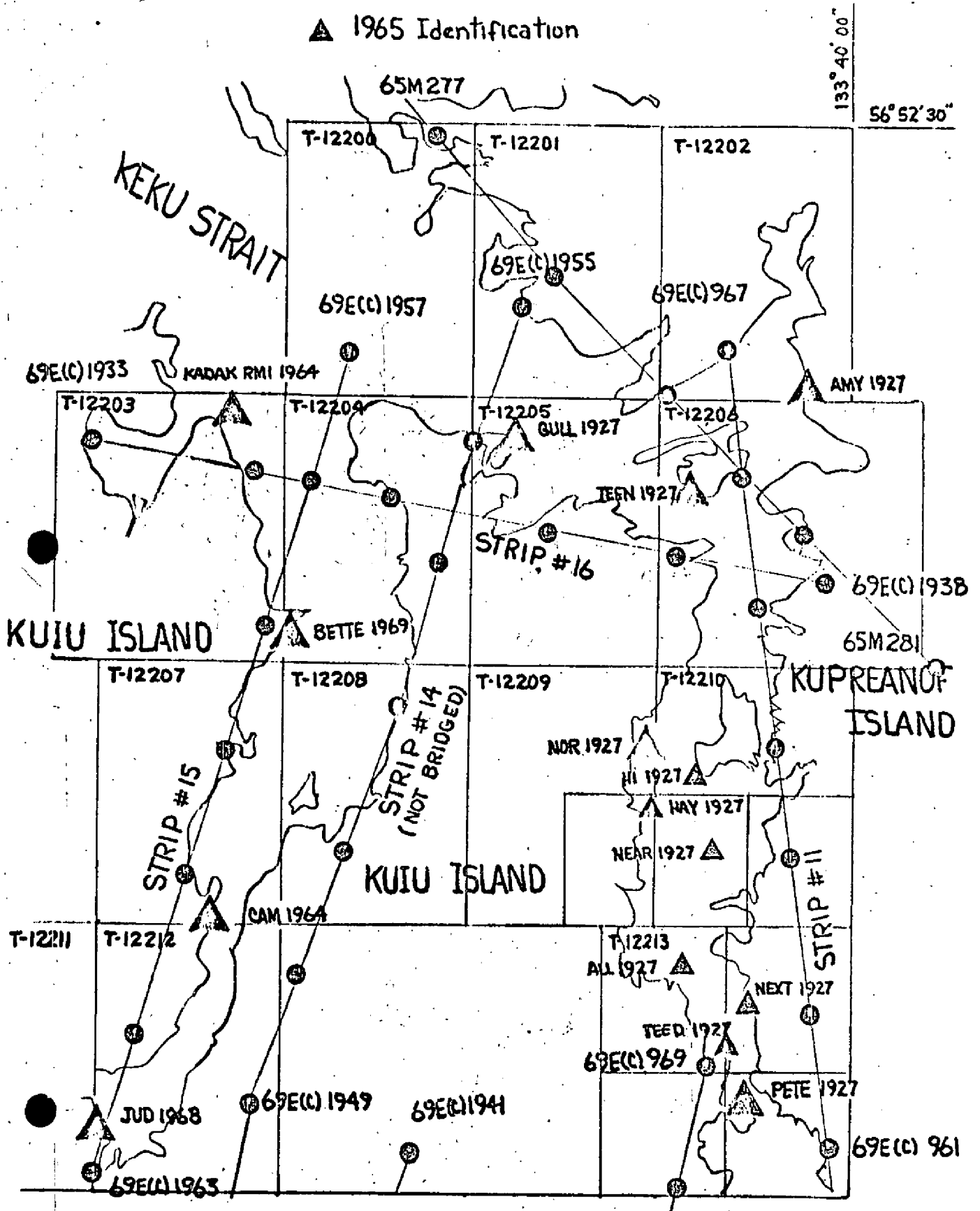
*Henry P. Eichert*  
Henry P. Eichert  
Chief, Aerotriangulation  
Section

# KEKU STRAIT ALASKA

PH 6206 FEB 1970

▲ 1969 Identification

▲ 1965 Identification



# KEKU STRAIT ALASKA

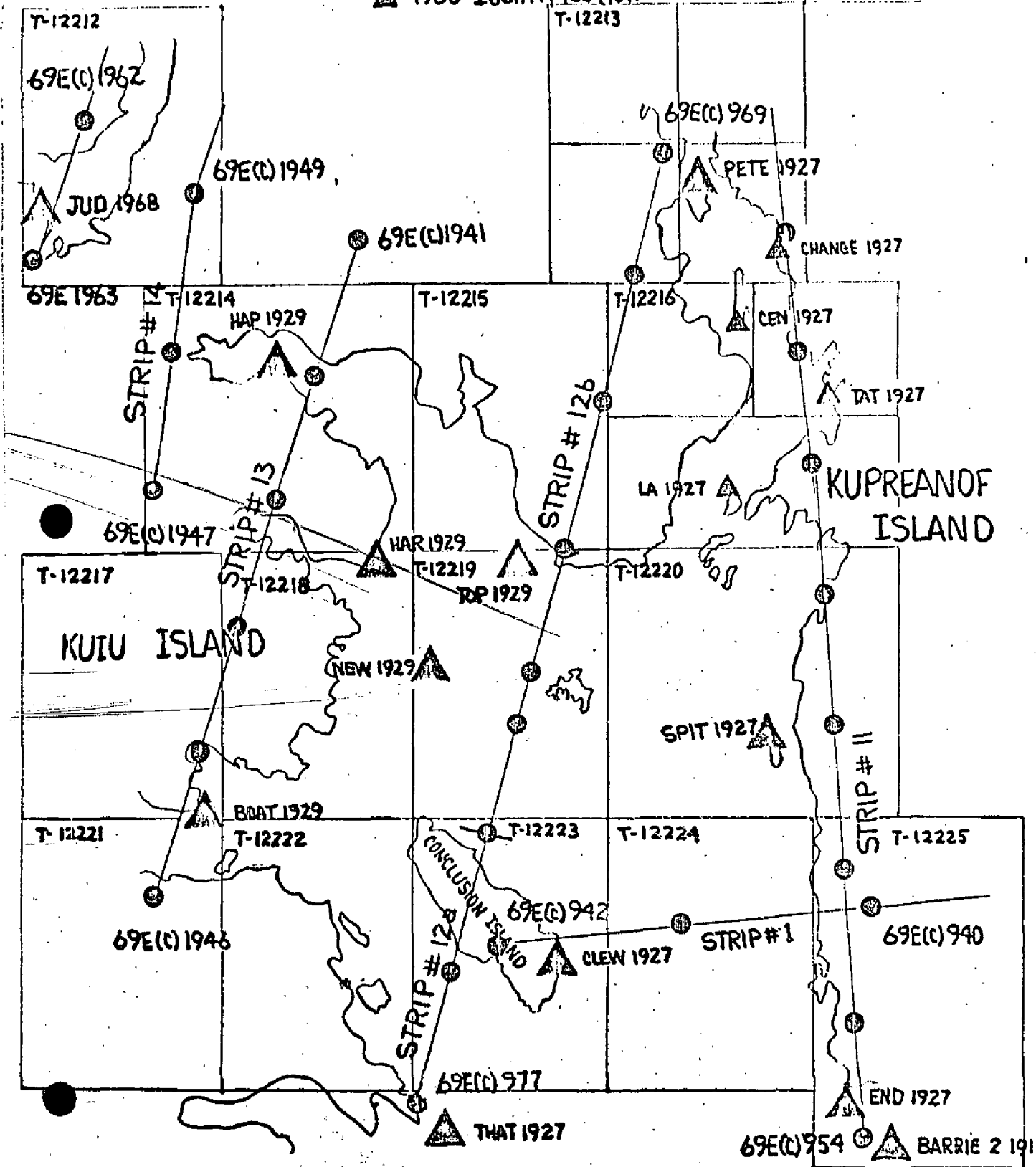
PH 6206

▲ 1969 Identification

▲ 1965 Identification

133°40'00"

56°41'15"





## COMPILATION REPORT

PH-6206

T-12220

31. DELINEATION

Delineation was by the B-8 plotter. There was no field inspection prior to compilation. Photographic coverage was adequate.

Ratios from 69E color photography were lacking in quality; blemishes and other imperfections confused the detail of the prints.

Photograph ratios from 1961 panchromatic photography was used to delineate ledge, foul and reef areas in addition to the MLLW line. Their clarity was excellent, however there was a large difference of scale between the ratio photographs and the manuscript.

32. CONTROL

See Aerotriangulation Report, dated February, 19, 1970.

33. SUPPLEMENTAL DATA

None

34. CONTOURS AND DRAINAGE

Contours are inapplicable. Drainage was delineated from office interpretation of 1969 E color photography.

35. SHORELINE AND ALONGSHORE DETAILS

The shoreline was delineated from office interpretation of the 1969 E color photography.

The MLLW Line, ledge, reef and foul areas were delineated from office interpretation of the 1961 panchromatic photography.

36. OFFSHORE DETAILS

Many small islands, reefs and foul areas were delineated from both 69E color and 1961 panchromatic photography. Many areas were questionable. The areas in question were applied to the FIELD EDIT OZALID for field investigation.

37. LANDMARKS AND AIDS

None

38. CONTROL FOR FUTURE SURVEYS

None

39. JUNCTIONS

Junctions were made with T-12224 and T-12225 to the south, T-12219 to the west and T-12216 to the north. There is no contemporary survey to the east.

40. HORIZONTAL AND VERTICAL ACCURACY

No statement.

41-45 Not used.

46. COMPARISON WITH EXISTING MAPS

Comparisons were made with USGS Quadrangles, PETERSBURG (C-5), Alaska, dated 1951 with minor revisions in 1965, scale 1:63,360 and PETERSBURG (C-6), Alaska, dated 1948 with minor revisions in 1963, scale 1:63,360.

Also a comparison was made with Registered Survey No. 4330, dated October 15, 1927, scale 1:20,000.

47. COMPARISON WITH NAUTICAL CHARTS

Comparisons have been made with Charts 8272, (KEKU STRAIT), dated October 17, 1966, 3rd Edition, scale 1:20,000 and 8201 scale 1:217,828 and dated November 15, 1969 (corrected through Notice To Mariners 46/69) scale 1:217,828.



ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD

None

Submitted by:

*Charles H. Bishop*

for L. L. Graves  
Cartographic Technician  
August 4, 1970

Approved and forwarded:

*Melvin J. Umbach*  
Melvin J. Umbach, CDR, NOAA  
Chief, Coastal Mapping Division, AMC

Approved:

*Alfred C. Holmes*  
Alfred C. Holmes  
RADM, NOAA  
Director, Atlantic Marine Center

August 28, 1972

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6206

T-12220

Keku Strait

Kuiu Island

Kupreanof Island

Skiff Island

Approved by:

A. J. Wright  
A. Joseph Wraight  
Chief Geographer

Prepared by:

F. W. Pickett (by A. J. W.)  
Frank W. Pickett  
Cartographic Technician

FORM C&GS-1002 (9-66)		U.S. DEPARTMENT OF COMMERCE ESSA COAST AND GEODETIC SURVEY	
PHOTOGRAMMETRIC OFFICE REVIEW T-12220			
1. PROJECTION AND GRIDS LLG	2. TITLE LLG	3. MANUSCRIPT NUMBERS LLG	4. MANUSCRIPT SIZE LLG
<b>CONTROL STATIONS</b>			
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY LLG	6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations) XX	7. PHOTO HYDRO STATIONS XX	
8. BENCH MARKS XX	9. PLOTTING OF SEXTANT FIXES XX	10. PHOTOGRAMMETRIC PLOT REPORT Rockville Science Center	11. DETAIL POINTS LLG
<b>ALONGSHORE AREAS (Nautical Chart Data)</b>			
12. SHORELINE LLG	13. LOW-WATER LINE LLG	14. ROCKS, SHOALS, ETC. LLG	15. BRIDGES XX
16. AIDS TO NAVIGATION XX	17. LANDMARKS XX	18. OTHER ALONGSHORE PHYSICAL FEATURES LLG	19. OTHER ALONGSHORE CULTURAL FEATURES LLG
<b>PHYSICAL FEATURES</b>			
20. WATER FEATURES LLG	21. NATURAL GROUND COVER LLG		22. PLANETABLE CONTOURS XX
23. STEREOSCOPIC INSTRUMENT CONTOURS XX	24. CONTOURS IN GENERAL XX	25. SPOT ELEVATIONS XX	26. OTHER PHYSICAL FEATURES LLG
<b>CULTURAL FEATURES</b>			
27. ROADS XX	28. BUILDINGS LLG	29. RAILROADS XX	30. OTHER CULTURAL FEATURES XX
<b>BOUNDARIES</b>			
31. BOUNDARY LINES XX		32. PUBLIC LAND LINES XX	
<b>MISCELLANEOUS</b>			
33. GEOGRAPHIC NAMES		34. JUNCTIONS LLG	35. LEGIBILITY OF THE MANUSCRIPT LLG
36. DISCREPANCY OVERLAY LLG	37. DESCRIPTIVE REPORT	38. FIELD INSPECTION PHOTOGRAPHS XX	39. FORMS
40. REVIEWER L.L. Graves 8/4/70		SUPERVISOR, REVIEW SECTION OR UNIT A. C. Rauck, Jr.	
41. REMARKS (See attached sheet)			
FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT			
42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.			
COMPILER Frank P. Margiotta 7/21/71		SUPERVISOR	
Reviewed By: C.E. Blood 7/30/71			
43. REMARKS  Field Edit Applied From: Field Edit Ozalids T-12219-T-12220, Field Edit Photographs 69-E-957 & 69-E-958. Because of their clearness and stage of tide 61-W-9537 thru 9540 and 61-W-9633 were used to aid in applying the field edit.			

FIELD EDIT REPORT :  
 Keku Strait  
 Southeast Alaska  
 OPR-448

June - October 1970

INTRODUCTION

Field edit reports are attached for the following maps:

T-12205	(TP-00205)
T-12206	(TP-00206)
T-12209	(TP-00209)
T-12210	
T-12216	
T-12220	
T-12224	
T-12225	

Field photographs and copies of the field edit ozalids were taken into the field. The mean high water line was verified by visual inspection of the shoreline and ozalids in the field. Isolated rocks, high points of ledges, ledge limits, and some shoreline were located by three-point fixes with check angles. Fixes were plotted on boat sheets:

DA-10-4-70  
 DA-10-5-70  
 DA-10-6-70  
 DA-10-7-70

and then transferred to the T-sheets and ozalids for comparison.

Notes have been made in red on the field photographs and have been cross referenced on the Field Edit Ozalids by photograph number. All times are based on 105° West meridian. Individual reports by manuscripts are attached.

TIDE NOTES

The following tide stations were used for hydrography in the Keku Strait area:

Pup Island  
 High Island  
 Eagle Island  
 Monte Carlo Island

Manuscripts T-12201 and T-12202 were inspected. Since no field edit was requested by the compilers the inspection was to check the manuscript in general. The manuscripts agreed quite well with the field inspection.

FIELD EDIT REPORT  
MAP T-12220  
Southeast Alaska  
Keku Strait-Skiff Island

The field edit was performed by LCdr. F.T. Smith. Field work was performed in a small boat.

METHOD

Field photographs and a copy of the field edit ozalid were taken into the field. All verification was done by visual observations. The specific items of question, as listed on the ozalid were visited for verification. The MHW line was checked by pacing from photo-identifiable objects. There were no landmarks or fixed aides to navigation on this map.

Notes have been made in red-violet on the field photographs and cross referenced to the field edit ozalid. Determination of rocks awash, reefs and extent of foul areas was extremely difficult with the 69 E photographs because of the stage of the tide and the inability to use the photos in stereo. Pocket stereo glasses are of little use on these large photographs. Also the large photos are extremely difficult to use in the rainy weather which prevails in Southeast Alaska. The manuscripts compiled from the 1961 photos appear to be better than the 1969 photos for reefs and rocks awash. Due to the extent of the foul areas those rocks awash off shore which were most critical to navigation were concentrated on.

Field edit notes are on photographs 69 E 957 and 69 E 958.

ADEQUACY OF COMPILATION

The compilation of the map appears to be adequate.

RECOMMENDATIONS

It is recommended that the manuscript be revised in accordance with the notes on the ozalid and photographs and that the map be accepted as an advance manuscript.

Respectfully submitted,



F.T. Smith  
LCdr. NOAA

APPROVAL SHEET FOR FIELD EDIT

The field edit of the following manuscripts was accomplished under my supervision:

- T-12205.....TP-00205
- T-12206.....TP-00206
- T-12209.....TP-00207
- T-12210
- T-12216
- T-12220
- T-12224
- T-12225

Inspection of the work was made.

*Ray E. Moses*  
Ray E. Moses  
CDR. NOAA  
Commanding Officer  
NOAA Ship DAVIDSON

## REVIEW REPORT T-12220

## SHORELINE

April 16, 1973

61. GENERAL STATEMENT

See Summary which is page 6 of this Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

A comparison was made with Survey No. 4330, 1:10,000 scale, dated September 1 - October 15, 1927. Differences between these surveys are shown in blue on the comparison print. T-12220 supersedes all previous surveys for nautical chart construction purposes.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

A visual comparison was made with U.S.G.S. Quadrangles PETERSBURG (C-5) and (C-6), ALASKA, scale 1:63,360, dated 1948. No significant differences were noted.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

A comparison was made with a copy of the boat sheet for Survey H-9160, scale 1:10,000, dated 1970. The source of H-9160 shoreline was not known to the final reviewer. It did not agree with Incomplete or Class I shoreline and was probably from the Preliminary Manuscript. Shoreline on the final reviewed manuscript is final. Differences between H-9160 and T-12220 are indicated in purple on the comparison print.

65. COMPARISON WITH NAUTICAL CHARTS

A comparison was made with Chart 8272, scale 1:20,000, 4th edition, dated 21 November 1971. Significant differences were noted in red on the comparison print.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

This survey complies with job instructions and meets the requirements of the National Standards for Map Accuracy.

Reviewed by:

*Charles H Bishop*

Charles H. Bishop  
Cartographer

Approved for forwarding:

*Melvin J. Umbach*  
Melvin J. Umbach, CDR, NOAA  
Chief, Coastal Mapping Division  
AMC

Approved:

*Alfred C. Holmes*  
Alfred C. Holmes  
RADM, NOAA  
Director, Atlantic Marine Center

Approved:

Chief, Photogrammetric Branch    Chief, Coastal Mapping Division



133°45'00" x=2,670,000 FT.

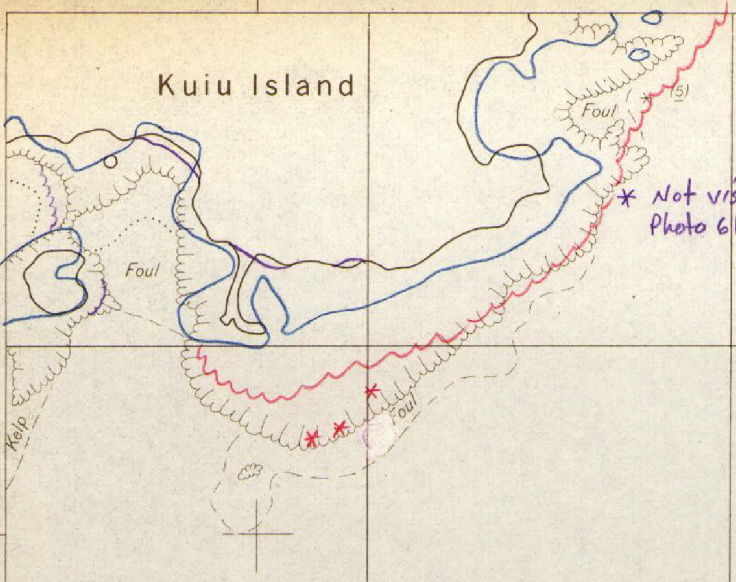
44'30"

44'00"

43'30" y=2,670,000 FT.

56°33'45"

### Kuiu Island



\* Not visible on Photo 61 W 9631-32

33'30"

33'30"

y=1,725,000 FT.

#### COMPARISON PRINT

- Purple = H-9160
- Blue = T-4330
- Red = Chart 8272

33'00"

33'

y=1,720,000 FT.

32'30"

56°32'30"

T-12220  
1:10,000

44'00"

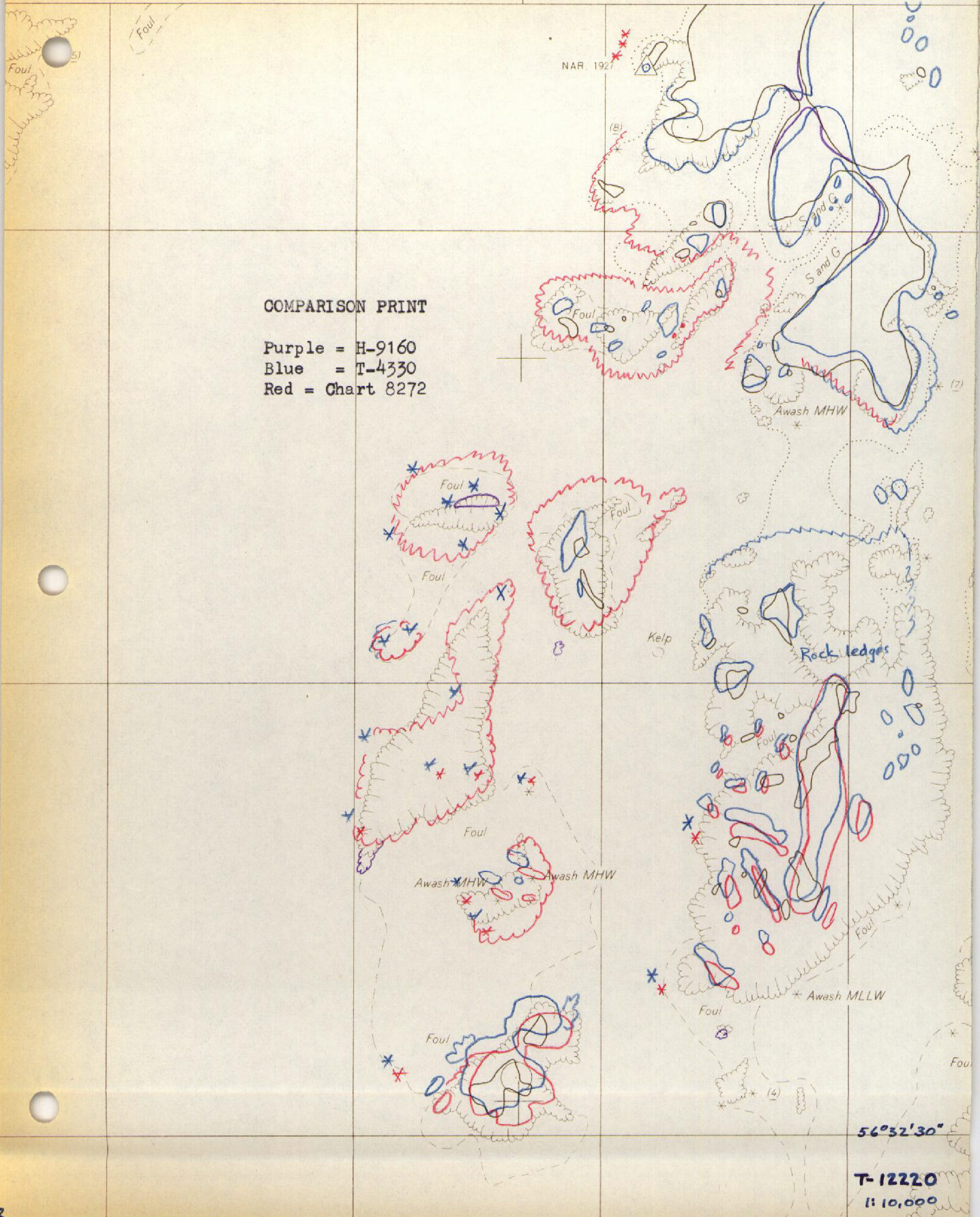
43'30"  $x=2,675,000$  FT.

133°43'00"

42'30"

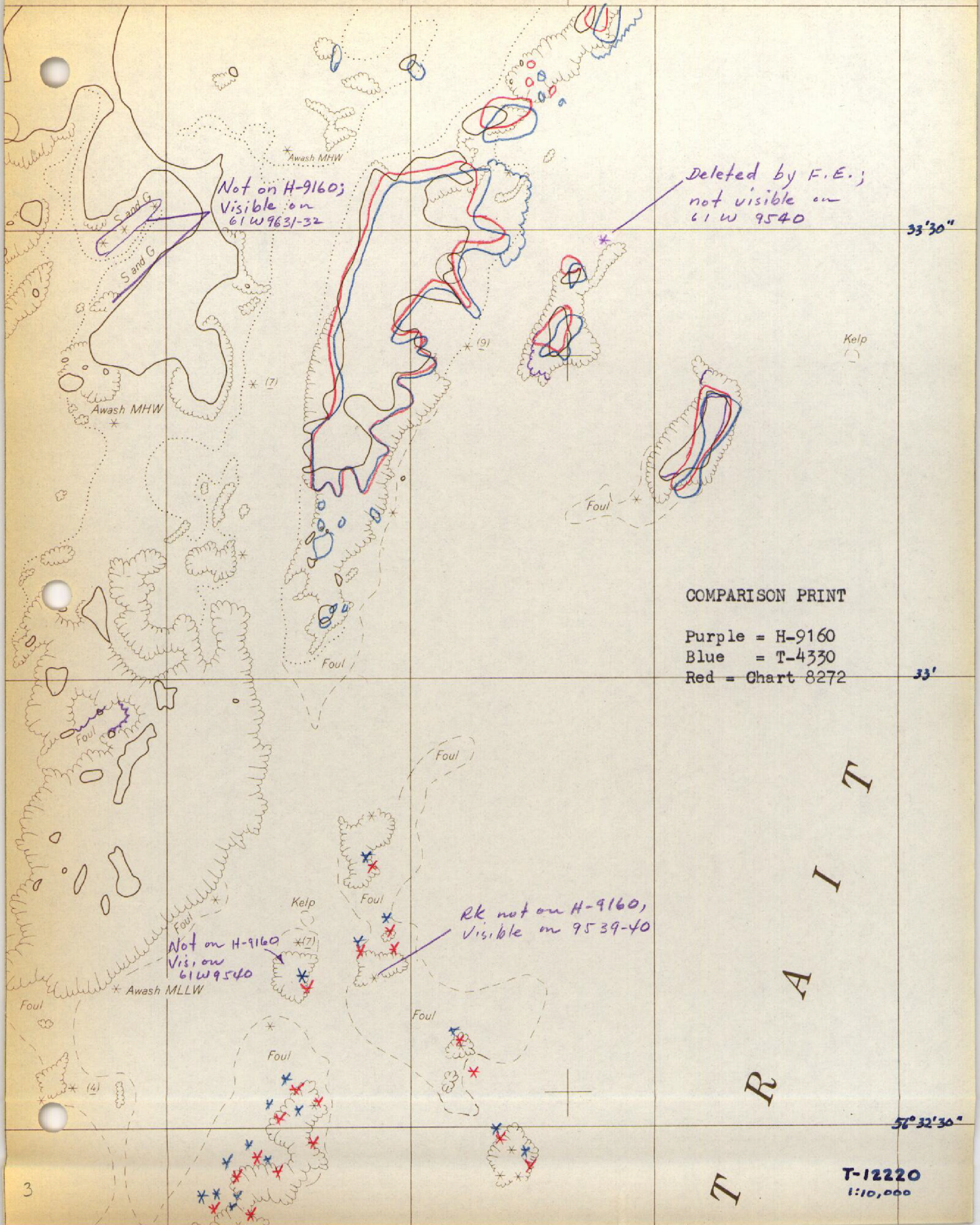
COMPARISON PRINT

Purple = H-9160  
Blue = T-4330  
Red = Chart 8272



56°32'30"

T-12220  
1:10,000

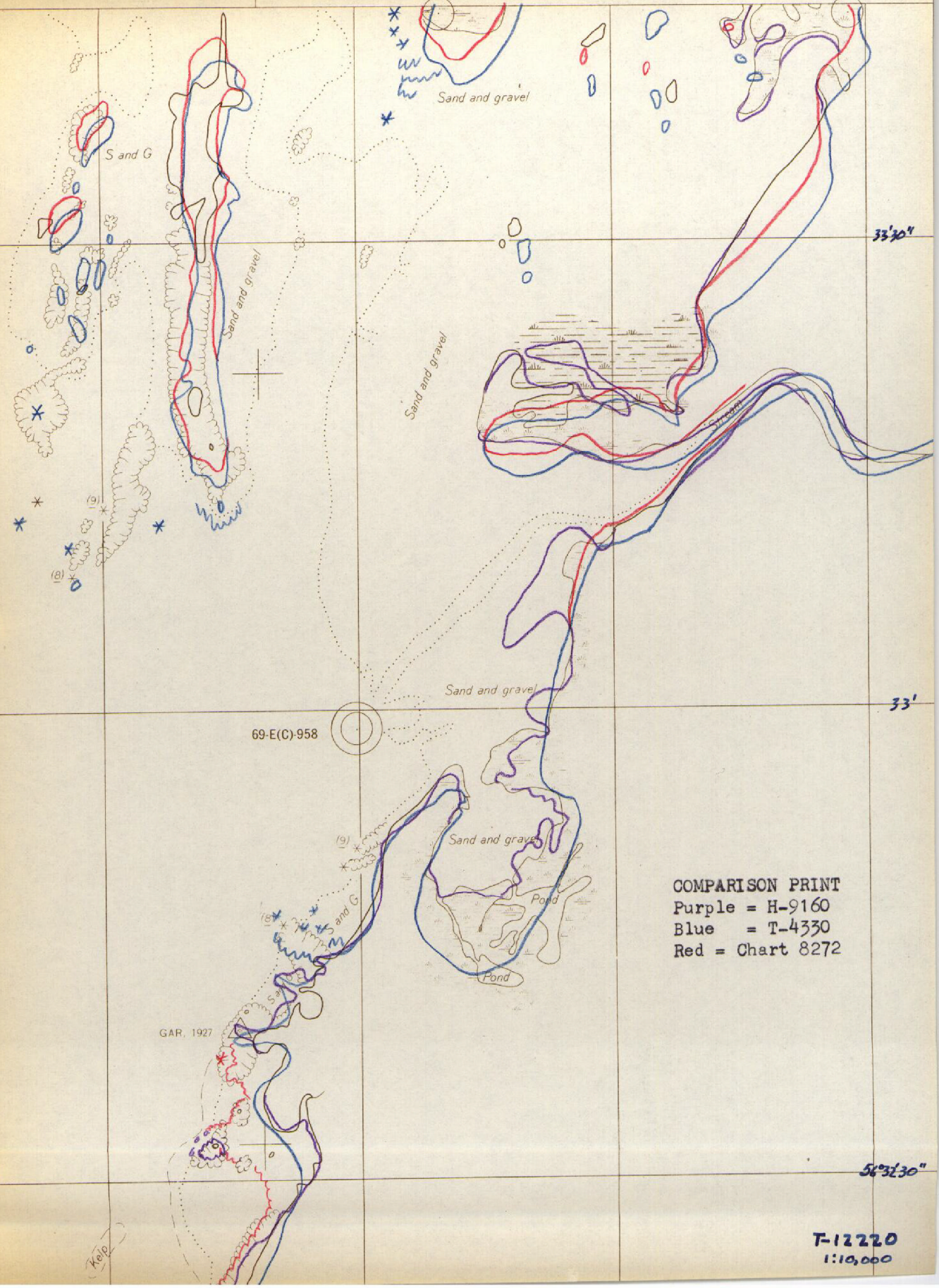


40'30" x = 2,685,000 FT.

40'00"

39'30"

26  
133° 39' 00" x = 2



COMPARISON PRINT  
 Purple = H-9160  
 Blue = T-4330  
 Red = Chart 8272

T-12220  
 1:10,000

133° 44'00"

27

Reef on 61W 9631-32 appears to be more extensive than shown on T-9160.

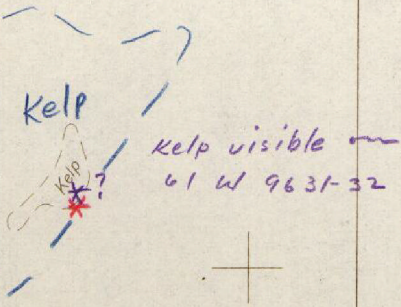


Field edited as kelp.

56°32'00"

56°32'00"

y=1,715,000 FT.



31'30"

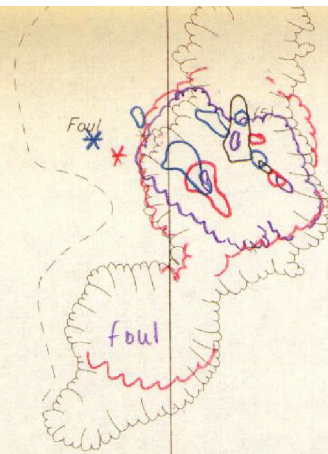
COMPARISON PRINT

- Purple = H-9160
- Blue = T-4330
- Red = Chart 8272

56°31'00"

T-12220  
1:10,000

133°42'00"



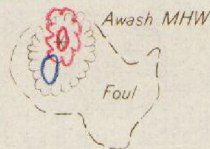
56°32'00"

U

K

E

K



COMPARISON PRINT

Purple = H-9160  
 Blue = T-4330  
 Red = Chart 8272

NOTE:

"The photogrammetric location and delineation of features offshore from the mean high-water line on this survey may not be complete or final. The contemporary rewed hydrographic survey of the area where available, should be consulted for the final delineation."

T-12220

1:10,000

133°40'00"

K U P

32'00"

I

31'30"

COMPARISON PRINT

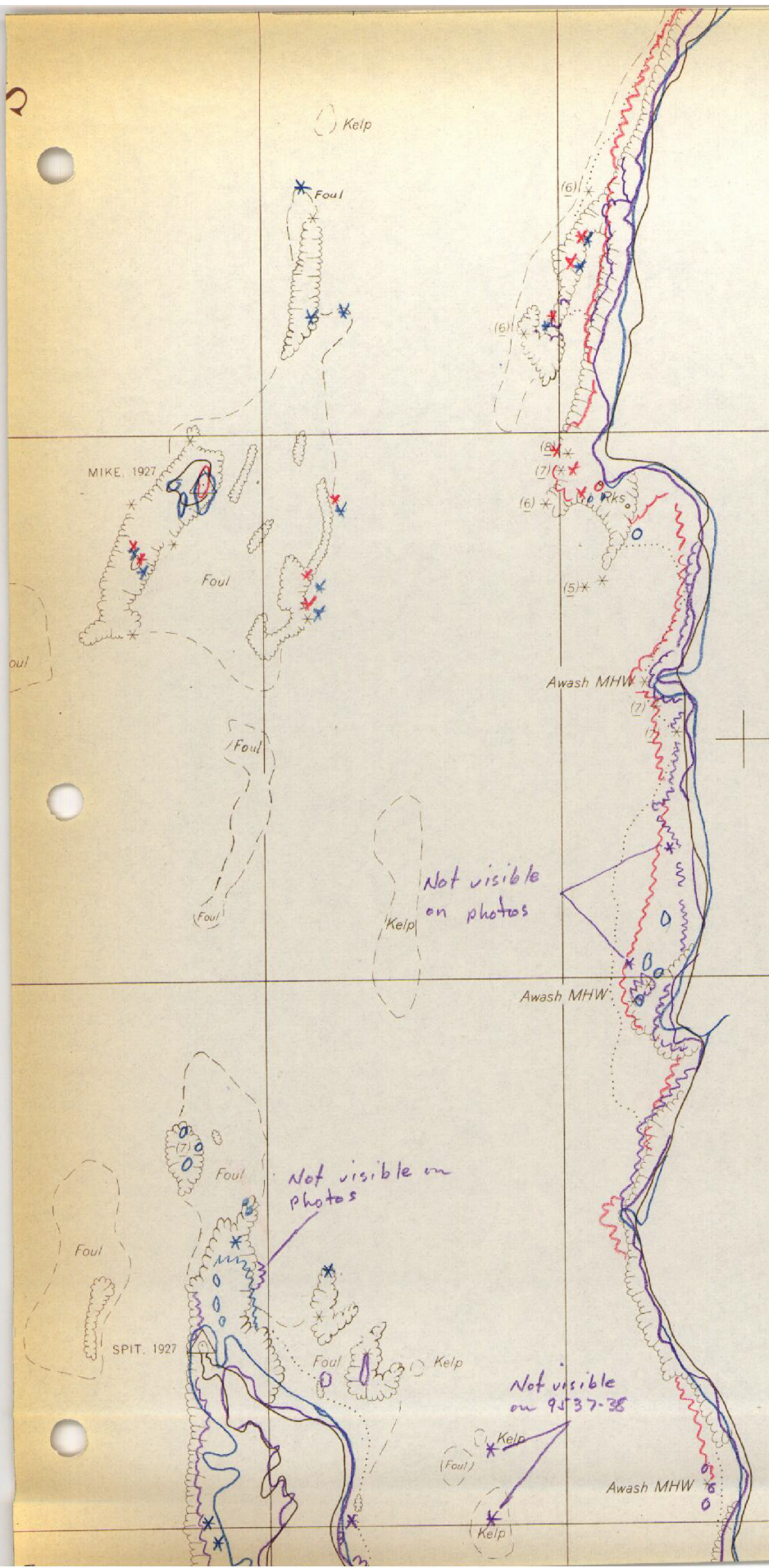
Purple = H-9160  
Blue = T-4330  
Red = Chart 8272

69-E(C)-957



T-12220  
1:10,000

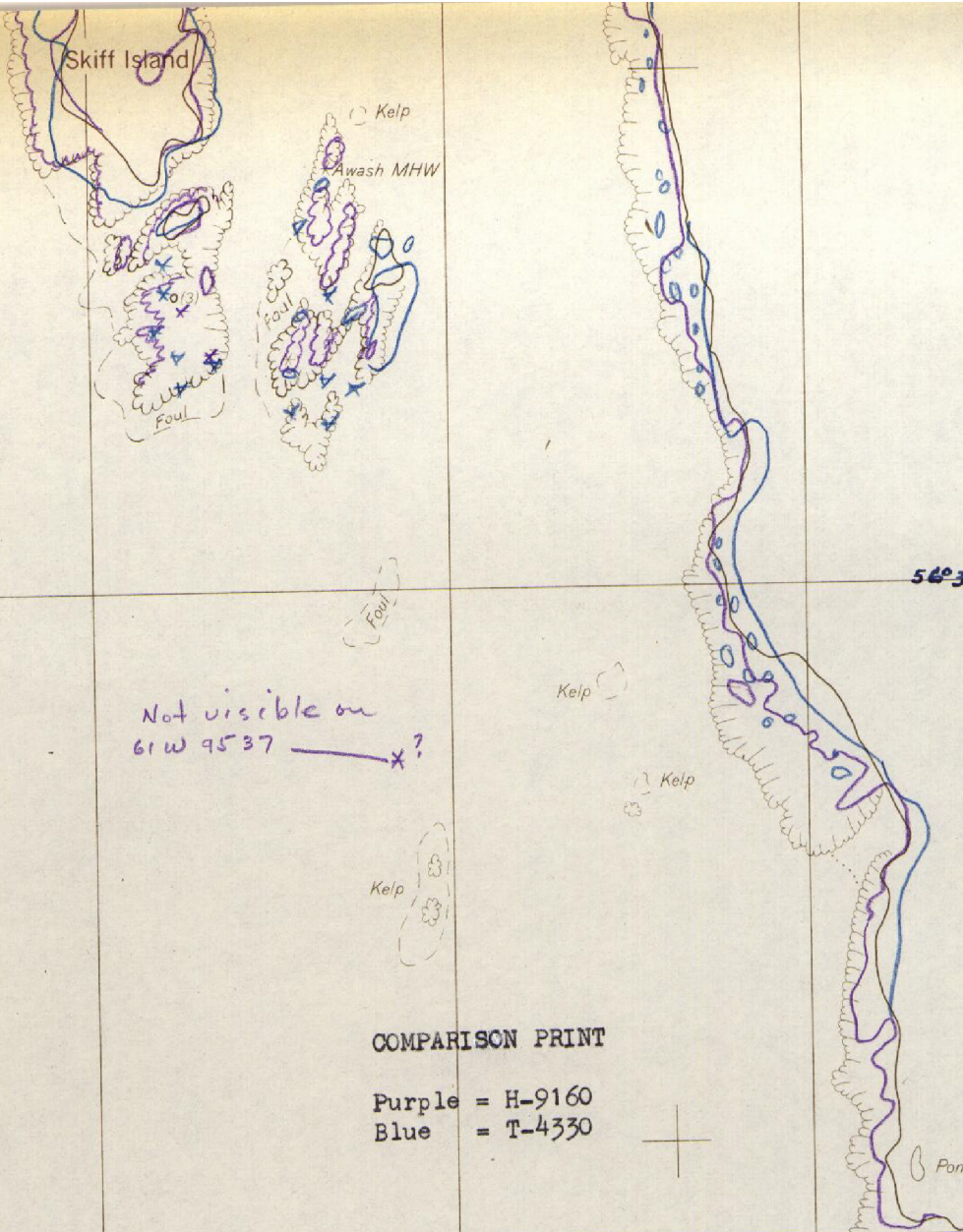
56°31'00"



Not visible on photos

Not visible on photos

Not visible on 9537-38



Not visible on  
61W 9537 — x?

COMPARISON PRINT

Purple = H-9160  
Blue = T-4330




41'30"



41'00"

40'30" x=2,685,000 FT.

133°40'00"

LEGEND

-  Rock ledge
-  Marsh
-  Grass in water

-  Recoverable horizontal control station of third-order or higher
-  Approximate mean lower low-water line
- The light shoreline defines the outer limits of vegetation approximate mean high water.
- The heavy shoreline defines the approximate mean high water.
- Compiled by photogrammetric methods, from aerial photographs
- Date of Photography July 1961 Aug. 1969
- Date of Field Inspection None
- Date of Field Edit July 1971
- Date of Final Compilation Jan. 1972
- Date of Final Review April 1973

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1:10,000