

9830

Diag. Cht. No. 8502-2 & 8551-3

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. DA-40-2-79

Office No. H-9830

LOCALITY

State Alaska

General Locality ... Gulf of Alaska

Locality Northeast of Wessels Reef

1979

CHIEF OF PARTY
C. W. Hayes

LIBRARY & ARCHIVES

DATE September 8, 1980

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

9830

AKFA-6

Charts

- 500 ✓
- 520 ✓
- 530 ✓
- 16013 ✓
- 16200 ✓

16909
16016

DESCRIPTIVE REPORT
TO ACCOMPANY
BASIC HYDROGRAPHIC SURVEY
DA-40-2-79 (H-9830)

SCALE:	1:40,000
YEAR:	1979
VESSEL:	NOAA Ship DAVIDSON
CHIEF OF PARTY:	C. W. Hayes, CDR, NOAA

HYDROGRAPHIC TITLE SHEET

H-9830

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.

DA-40-2-79

State Alaska

General locality Gulf of Alaska

Locality Northeast of Wessels Reef

Scale 1:40,000 Date of survey July 15-30, 1979

Instructions dated Apr 2, 1979, Chg No. 1, Jun 7, 1979 Project No. OPR-P132-DA-79

Vessel NOAA Ship DAVIDSON S331

Chief of party CDR C. William Hayes, Commanding

Surveyed by CDR A.N. Bodnar, LT B. Mezger, LTjg L. Haas, ENS T. Peasley,
LTjg W. Latimer

Soundings taken by echo sounder, hand lead, pole Ross Finline, Model 5000

Graphic record scaled by N/A

Graphic record checked by Ship's personnel

Positions verified by R.N. Mihailov

Automated plot by PMC Xynetics Plotter

Soundings verified by R.N. Mihailov

Soundings in fathoms ~~feet~~ at MHW MLLW

REMARKS:

Survey Time Zone: GMT

Survey is complete.

Misc. items have been removed from this D.R. and are filed in the cahier with the field records

Applied to state 4/2/81
CAS

A. PROJECT

Survey DA-40-2-79 (H-9830) was accomplished in accordance with Project Instructions OPR-PI32-DA-79, Cape St. Elias to Montague Island, Alaska, dated 2 April 1979, and Change No. 1, dated 7 June 1979. ✓

B. AREA SURVEYED

The area surveyed for this sheet is in the Gulf of Alaska east of Wessels Reef, bounded by lines joining the following four points:

Southeast - 59°42'15"N, 145°45'00"W

Southwest - 59°51'00"N, 146°06'00"W ✓

Northwest - 59°58'50"N, 145°53'15"W

Northeast - 59°50'20"N, 145°33'00"W

Hydrography was begun 15 July 1979 (JD 196) and was completed 30 July 1979 (JD 211).

C. SOUNDING VESSELS

The Ship DAVIDSON (Vessel #3130) was used as sounding platform for this survey. The color black characterizes all raw data recording and preliminary computer plots. ✓

D. SOUNDING EQUIPMENT

The DAVIDSON employed a Ross Fineline Fathometer, Model 5000, in the collection of soundings ranging in depth from 42 to 61 fathoms. Serial numbers are as follows: ✓

Fathometer

Digitizer

Transceiver

1080

1048

1081

Phase calibrations from 0 - 150 fathoms, at 10 fathom intervals, were conducted when fathometer paper was renewed. All fathograms were scanned and compared to digitized depths. Additions (peaks and deeps) and corrections were either edited into the master data tape or included on a separate corrector tape.

Soundings have been corrected for transducer depth and predicted tides. The TRA was determined by preliminary settlement-squat tests and frequent draft readings. (See Corrections to Echo Sounders Report). Tide correctors were computed from daily predicted tides for Cordova, Alaska corrected to Middleton Island, Alaska (#1645, TIDE TABLES 1979). Correctors were computed at 0.2 fathom intervals and were used to correct both "on line" and final smooth-plotted soundings. Bubbler tide gages were installed by the DAVIDSON at Cape Hinchinbrook, Middleton Island, and Cape St. Elias for control of this survey. The Field Tide Report (appended) details the trials and tribulations of these gages. ✓

Soundings on the Final Field Sheet have not been corrected for velocity. Velocity corrections were computed from Nansen casts taken on 27 June and on 12 July. (See Corrections to Echo Sounders Report). These corrections should be applied to soundings from this survey during final plotting.

E. HYDROGRAPHIC SHEETS

The field sheets for this survey were prepared using the HYDROLOT system aboard the DAVIDSON. A PDP 8/e computer (S/N 10744) and a Complot DP 3 plotter (S/N 5445-6) were used for computations and plotting. The survey has been plotted as a single 1:40,000 scale field sheet, referred to as DA-40-2-79. ✓

F. CONTROL STATIONS

Nine existing first and third-order triangulation stations were recovered for hydrographic control of this survey. In addition, two third-order stations were established for use as Raydist sites, one on Cape St. Elias and one on Middleton Island. These are as follows, listed by number from the master signal list for the project: ✓

- 001. CABANA 1979 (RM 2 used as Raydist site)
- 002. HINCH 1965 (RM 1 used as Raydist site)
- 003. CAPE 1979 (RM 2 used as Raydist site)
- 004. MIDDLETON ISLAND H-MARKER MAST 1965
- 005. MIDDLETON ISLAND RCA-G TOWER NO. 1 1965
- 006. AIRPORT BEACON, MIDDLETON ISLAND AIRPORT 1966
- 007. ARAB 1967
- 008. IDLE 1967
- 009. SEAL ROCKS LIGHT 1977
- 010. SCHOONER ROCK LIGHT 1977
- 011. CAPE HINCHINBROOK LIGHT 1965

The two new stations were established by third-order traverse methods. All computations are based on the 1927 North American Datum, using read-justed positions following the 1964 earthquake in the vicinity. See the appended Horizontal Control Report and Master Signal List.

G. HYDROGRAPHIC POSITION CONTROL

All hydrography for this survey was controlled using a Hastings Raydist DR-S medium range electronic navigation system, operated in the range-range mode. The mean frequency of the system on board the DAVIDSON is 3306.40 KHz with a lane width of 45.317 m. The Raydist receiving equipment on board the DAVIDSON is as follows: ✓

Transmitter	171
Navigator	54
Strip Chart	15
Panalagic Interface	04

Shore transmitters were used at three different sites during the project, on Cape Hinchinbrook (HINCH RM 1 1965), Cape St. Elias (CAPE RM 2 1979), and Middleton Island (CABANA RM 2 1979). Each station was equipped with a 105-foot tower and whip antenna and a 75-foot radius ground plane. For all of this survey, the red transmitter (S/N 234) was used on CAPE RM 2 (elevation 10 m) and the green (S/N 15) was used on CABANA RM 2 (elevation 11 m). ✓

Calibration of the Raydist system was accomplished every few days as ship logistics and support work allowed. Two different calibration areas were used, one on the west side of Middleton Island and the other at Hinchinbrook Entrance. In each area calibrations were done by three-point sextant fix, either from the flying bridge directly under the Raydist antenna or from a bridge wing with a computed antenna offset. During each calibration, observed rates were compared with those computed from the sextant angles via RK 561 (Geodetic Calibration, ver. 2/19/75). Pattern correctors from successive calibrations were meaned for the hydrography run between the calibrations. ✓

The only time the Middleton Island calibration area was used during this survey (JD 197) was following the loss of the green signal from CABANA RM 2 on Middleton Island at 0014Z on JD 197. Normally the range was too close to the green transmitter to allow a good calibration. However, the circuit breaker for the shore power supply at the station tripped sometime prior to the loss of the signal and the green signal gradually weakened as the storage batteries ran down. The signal was finally lost on JD 197. By calibrating at Middleton Island prior to servicing the shore station, both patterns were strong enough to calibrate and final partial lane correctors for the preceding hydrography were obtained. ✓

The only other Raydist problem encountered during this survey was some interference with Pattern 1 (red) at 0700Z on JD 209. No lanes were lost and the interference only lasted a few minutes. It did not affect the positions of the soundings taken during the period, so no changes to the rates were made. ✓

See the appended Electronic Control Report for additional information on the Raydist system and calibrations.

H. SHORELINE

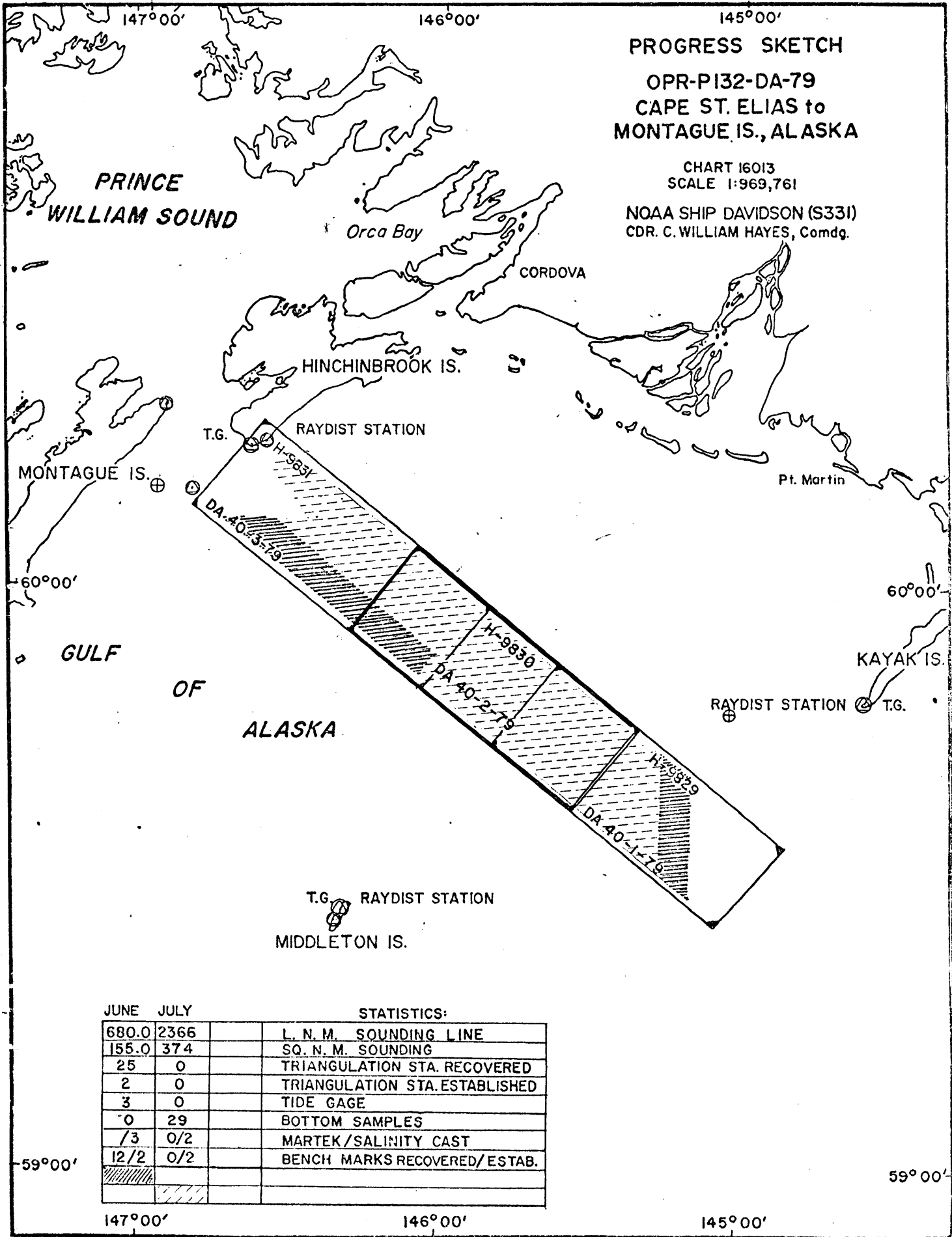
There is no shoreline within the limits of this survey. ✓

I. CROSSLINES

Crosslines comprise 8.0% of the hydrography for this survey. They are plotted in red on the final field sheet. They are in excellent agreement with the mainscheme hydrography, differing by one fathom or less throughout the survey area. ✓

J. JUNCTIONS

This survey junctions to the northwest with Survey H-9831 (DA-40-3-79) and to the southeast with Survey H-9829 (DA-40-1-79). There are no contemporary surveys to the northeast or southwest of the survey area. No junction soundings appear on the final field sheet. The junctions with both surveys ✓



PROGRESS SKETCH
OPR-PI32-DA-79
CAPE ST. ELIAS to
MONTAGUE IS., ALASKA

CHART 16013
 SCALE 1:969,761

NOAA SHIP DAVIDSON (S331)
 CDR. C. WILLIAM HAYES, Comdg.

JUNE	JULY	STATISTICS:
680.0	2366	L. N. M. SOUNDING LINE
155.0	374	SQ. N. M. SOUNDING
25	0	TRIANGULATION STA. RECOVERED
2	0	TRIANGULATION STA. ESTABLISHED
3	0	TIDE GAGE
0	29	BOTTOM SAMPLES
1/3	0/2	MARTEK/SALINITY CAST
12/2	0/2	BENCH MARKS RECOVERED/ESTAB.

are excellent, with differences of one fathom or less throughout the junction area.

K. COMPARISON WITH PRIOR SURVEYS

Soundings from H-3024 (1909, Scale 1:200,000) were inked on the boat-sheet in green. These soundings are in excellent agreement with soundings from DA-40-2-79, considering the age of the prior survey and the difference in scale. In all cases, the few discrepancies involve soundings from H-3024 that are slightly deeper than soundings from the present survey. *See Verifiers Report*

L. COMPARISON WITH THE CHART

Chart 16700 (19th Ed., Feb 18, 1978, Scale 1:200,000) is the largest scale chart of the northwestern portion of the survey area. The southeastern portion of DA-40-2-79 is covered by Chart 16013 (21st Ed., April 8, 1978, Scale: 1:969,761). Charted soundings agree well with soundings from the present survey. *See Verifiers Report*

M. ADEQUACY

This survey is considered complete and adequate to supersede all prior surveys in this area. No further field work is deemed necessary. ✓

N. AIDS TO NAVIGATION

There were no aids to navigation located within the project area.

O. STATISTICS

Number of Positions83 ³	
Nautical Miles Sounding Lines743.9	
Nautical Miles Cross Lines.	65.1	✓
Square Nautical Miles117.0	
Nansen Casts.2	
Bottom Samples.6	

P. MISCELLANEOUS

None

Q. RECOMMENDATIONS

None ✓

R. AUTOMATED DATA PROCESSING

Programs used for data acquisition and processing are as follows:

(See next page for listing)

(Automated Data Processing Programs)

<u>#</u>	<u>Program Name</u>	<u>Version</u>
RK 111	Range-Range Real Time Hydroplot	1/30/76
RK 201	Grid, Signal, and Lattice Plot	4/18/75
RK 211	Range-Range Non Real Time Hydroplot	1/15/76
RK 300	Utility Computations	2/05/76
RK 407	Geodetic Inverse - Direct Computation	10/23/75
RK 409	Geodetic Utility Package	9/15/73
AM 500	Predicted Tides Generator	11/10/72
RK 561	H/R Geodetic Calibration	2/19/79
AM 602	Elinore (Line Oriented Editor)	5/20/75

S. REFERENCES TO REPORTS

Horizontal Control Report
Field Tide Report
Correction to Echo Sounders Report
Electronic Control Report

SUBMITTED BY:

Ellen McDougal

Ellen McDougal
LT(jg), NOAA

Linda F. Haas

Linda F. Haas
LT(jg), NOAA

APPROVED AND FORWARDED BY:

C. William Hayes

C. William Hayes
CDR, NOAA
Commanding Officer

EM/LH/jf

FIELD TIDE REPORT

OPR-P132-DA-79

Cape St. Elias to Montague Island, Alaska

INTRODUCTION

Field tide reduction of soundings was based on predicted tides for Cordova, Alaska, corrected to Middleton Island, Alaska (TIDE TABLES 1979, #1645), in accordance with Project Instructions dated 7 June 1979. Interim values were interpreted using a PDP-8/e computer and Program AM-500. The time zone used throughout the survey was ^{based on} Greenwich Mean Time. Three tide stations, one 30-day minimum gage and two 3-day minimum "Time of Hydro" gages, were established in support of this survey.

<u>Name and Number of Station</u>	<u>Position</u>	<u>Type Gage</u>	<u>Period of Operation</u>
Cape Hinchinbrook 945-4329	60°14.3'N 146°38.9'W	0-20 Ft. Bristol Bubbler	46 Days 21 June - 26 June 28 June - 07 Aug.
Middleton Island * 945-4224	59°27.7'N 146°18.6'W	0-20 Ft. Bristol Bubbler	33 Days 29 June - 01 Aug.
Cape St. Elias 945-3849	59°47.8'N 144°35.8'W	0-20 Ft. Bristol Bubbler	23 Days 30 June - 22 July

* Denotes 30-Day Minimum Gage

CAPE HINCHINBROOK

The Cape Hinchinbrook Bubbler Gage (SN 66A17554) and staff were initially installed on 14 June. The 0-10 ft. scale staff was bolted to the concrete base of the westernmost piling of the U.S. Coast Guard, Cape Hinchinbrook Light Station Pier. The upper portion of the staff was securely wired to the metal portion of the piling for further support against surf and kelp. The gage was originally placed on the end of the pier, but the tubing took too much strain and broke. On 20 June, the gage was moved to the concrete apron abutting the pier, and the tubing was led along a conduit pipe and anchored to it with wire at frequent intervals. The weighted orifice was wired to the same pipe in water sufficiently deep to cover it at all stages of tide. The tubing parted at a connector on 26 June. It was repaired and no further problems were experienced with the gage. The second page of the Pressure Tide Gage Record (17 July - 07 August) was destroyed by rain, but was reconstructed from data recorded on the marigram.

On the basis of 38 gage/staff comparisons, the gage was found to read 4.4 ft. higher than the staff.

Levels at Cape Hinchinbrook:

The tide staff at Cape Hinchinbrook was initially leveled to three historic bench marks on 14 June. Bench mark No. 1, 1972, set in a five-ft. square concrete block, was found to have moved considerably since it was set. Surf action has washed sand out from under the block, tilting it considerably to seaward. This mark was destroyed before the final level run, and two new marks (4329-F, 1979 and 4329-G, 1979) were set. The final level loop was run from the staff to the five existing bench marks. No staff movement was indicated. Below is an abstract of pertinent leveling data.

<u>Historic Marks</u>	<u>1972</u>	<u>14 June 1979</u>	<u>07 August 1979</u>	<u>Δ (From Historic)</u>
1→2	2.482 Ft.	3.524 Ft.	(Destroyed)	1.042 Ft.
2→3	1.489 Ft.	1.522 Ft.	1.519 Ft.	0.031 Ft.
3→5	3.660 Ft.		3.675 Ft.	0.015 Ft.
2→5	2.171 Ft.		2.156 Ft.	0.015 Ft.

MIDDLETON ISLAND

The Middleton Island Bubbler Gage (SN 63A17966) was installed on 16 June. The gage itself was placed inside the Middleton Island "Country Club" Building. The orifice was weighted with a 50-lb. anchor of half-inch plate (measuring approximately 4-Ft. square). The underside of the anchor was studded with short sections of metal rod which, when driven into the hard-pan bottom, were intended to further prevent movement of the orifice. The tubing leading from the orifice to the gage was secured in a variety of ways. Offshore, metal stakes were driven into the hard bottom and wired to the tubing. In the surf zone, the tubing was buried in a trench 12-18 inches deep after having been wrapped with chain and wired to stakes as previously described. Tubing on the beach was also buried 12-18 inches deep and secured by stakes and rocks. Despite all precautions, the tubing snapped at the orifice during a storm soon after installation. The orifice was repaired and good data was obtained from 29 June until the removal of the gage on 01 August, though sections of tubing had to be reweighted and reburied each time the gage was checked by ship's personnel.

A contract observer was engaged by the DAVIDSON to make the necessary tide observations and to inform the ship as soon as possible of gage malfunctions. The observer appeared to be doing an acceptable job until the marigram was removed and scanned at the end of the project. It was found that, though the Pressure Tide Gage Record Form had been faithfully filled out, no tick marks or information of any kind had been recorded on the marigram itself, with the exception of those occasions when DAVIDSON personnel had checked the gage. Neither did the contract observer note differences between his watch time and gage time. Time corrections were made only when the gage was checked by the DAVIDSON. However, the observer did note readings of the tide height. These were used to compute the corresponding times of observation. The computed times of observation are incorporated (in red and in parentheses) into the two pages of reconstructed Pressure Tide Gage Records included with the data package, along with an explanation of how the times were derived. The computed times agree well with the times noted during the DAVIDSON gage checks.

The tide staff consisted of three five-foot sections of two-inch galvanized pipe. The first section was driven as far as possible into the sand and pebble beach. The upper two sections together comprised a scale of from 10.0 to 20.0 Ft. in 1/10 foot graduations. Originally, the staff was braced against surf action with 2X4's. A storm on 26 July destroyed the staff.

The new staff was installed in the same manner but was braced by 3/4-inch pipe and lasted until the gage was removed on 01 August.

Levels at Middleton Island:

Initially, the first staff was leveled to five historic bench marks on 29 June. The second levels were run to two bench marks as a check for staff movement on 14 July. An apparent downward staff movement of 0.3 ft. was noted. Gage/staff comparisons indicate that the staff movement occurred soon after installation. The mean of the first nine gage/staff differences (taken during the first two days of operation) equals 3.9 ft.; the mean of the remaining 19 gage/staff differences equals 3.5 ft. The first staff was destroyed on 26 July. The second staff was installed and leveled to two historic bench marks on 28 July.

The present FAA Station at Middleton Island is to be torn down in 1980. Part of the tear-down will involve the removal of all concrete foundations, several of which contain historic bench marks. For this reason, the DAVIDSON established five new bench marks (CABANA, 1979; CABANA RM 1 and CABANA RM 2; 4224-L and 4224-M) before the final levels. Comparison of the 1979 level data with historic data showed no apparent movement in the historic bench marks. The final set of levels was run from the staff to five new marks and to four of the five historic marks. Comparison of the two level runs indicates an apparent upward staff movement of 0.03 ft. The mean of the 10 staff/gage comparisons on the second staff equals 1.7 feet. This corresponds to a 3.5 foot difference when converted to the first staff, which agrees perfectly with the observed staff/gage relationship of 3.5 feet on the first staff after the initial movement.

CAPE ST. ELIAS

The Cape St. Elias Bubbler Gage (SN 67A10286) was installed on 13 June. The 0-10 Ft. scale staff was bolted to a large boulder near the seaward end of the rough small boat channel leading to the U.S. Coast Guard Cape St. Elias Light Station. The gage was placed near the remains of the light station tramway. The tubing ran along the edge of the small boat channel and was wired to rocks at frequent intervals. Problems with the tubing (first an obstruction and later a break in the line) prevented the collection of good data until 30 June. After this time, continuous good data was obtained until 22 July, at which time someone or something knocked the gage on its side. It was reinstalled on 27 July, but, due to logistics, was not checked until 02 August, when it was found to be three hours fast. Eleven sprocket jumps (@ approximately 22 minutes each) were easily identified. As the time advance does not agree with the number of sprocket jumps found, data from 27 July - 02 August is not considered valid except for datum determination. The average of 30 gage/staff comparisons indicates that the gage read 1.0 ft. higher than the staff.

Levels at Cape St. Elias:

Two new bench marks were established at Cape St. Elias (No. 4, 1979, and No. 5, 1979) and three historic marks were recovered. The initial levels were run on 12 and 13 June and the final levels on 02 August. No bench mark movement was indicated. An apparent downward staff movement of 0.03 ft. was noted.

ZONING RECOMMENDATIONS

Tide data collected during OPR-PI32-DA-79 reveals no need to deviate from

the tidal zoning scheme supplied with the Project Instructions. However, consideration might be given to using the Cape Hinchinbrook station as the tertiary control station, since the quality of that station's data was significantly better than that at Middleton Island.

MI SCELLANEOUS

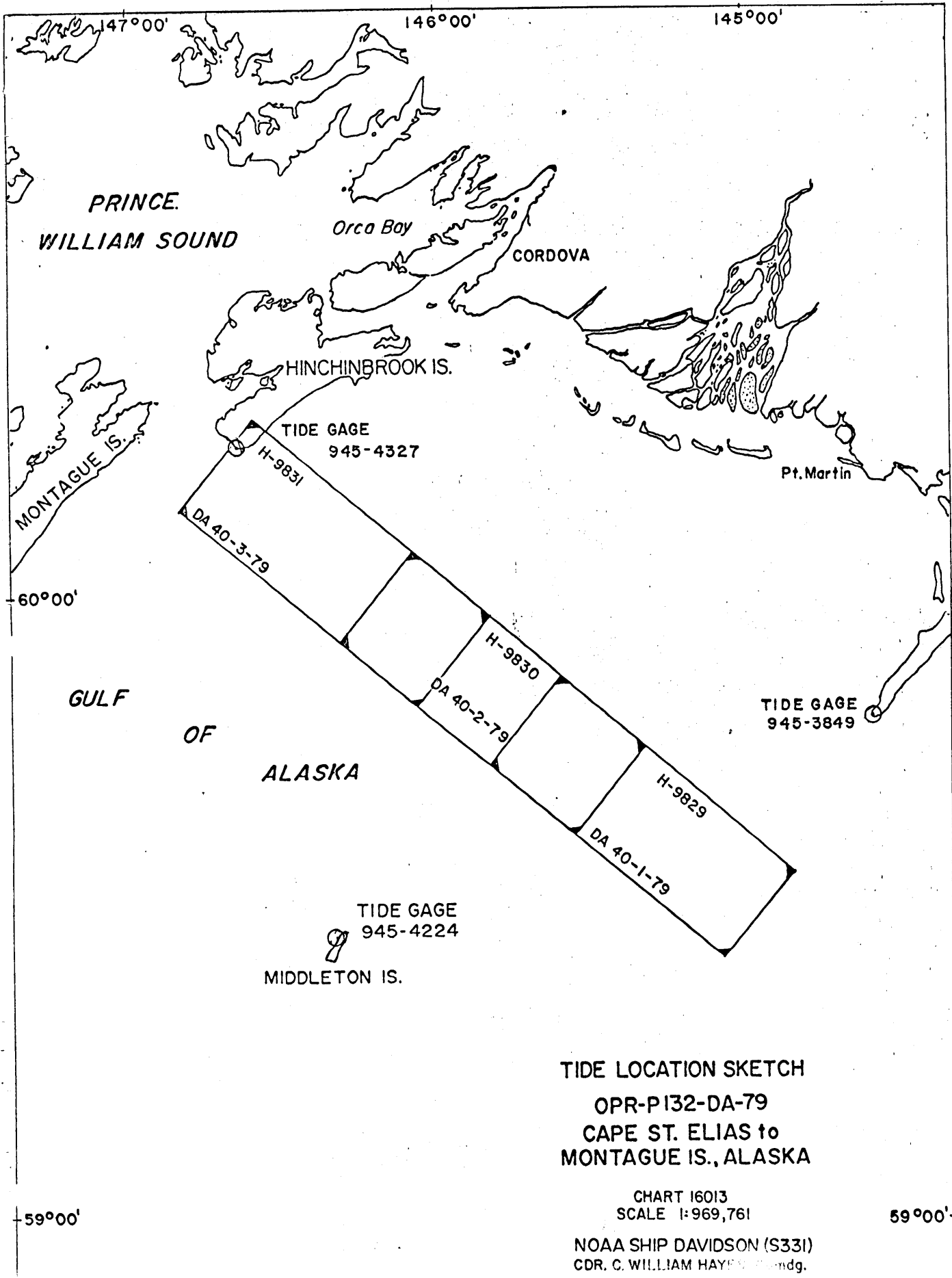
Gage problems experienced during this project were aggravated by the distances involved; approximately 60 miles between stations and no transportation other than the ship, available. Contract observers were not available at the two most widely spaced tide stations, Cape Hinchinbrook and Cape St. Elias. Also, all stations were located on the open ocean in an area of frequent storms. To mitigate the problems of difficult staff readings due to waves and infrequent visits, multiple staff/gage readings were made at each visit.

Submitted by:

Ellen McDougal
Ellen McDougal
LTJG, NOAA

Approved and Forwarded by:

C. William Hayes
C. William Hayes
CDR, NOAA
Commanding Officer



TIDE LOCATION SKETCH
OPR-P132-DA-79
CAPE ST. ELIAS to
MONTAGUE IS., ALASKA

CHART 16013
 SCALE 1:969,761
 NOAA SHIP DAVIDSON (S331)
 CDR. C. WILLIAM HAYES, Commandg.

CORRECTION TO ECHO SOUNDERS REPORT
OPR-P132-DA-79
Cape St. Elias to Montague Island, Alaska

Two Nansen casts were made during the working period to correct hydrography run for OPR-P132-DA-79. In addition, eight Plessey XSTD probes were expended, both for comparison to the Nansen cast standard and to supplement the Nansen data. Nansen casts were made on 12 July (JD 193) and 27 July (JD 208) at the eastern and western ends of the project area respectively. Three XSTD probes were used on 21 June (JD 172), two on 30 June (JD 181), and three on 27 July (JD 208). The final set of three on 27 July were expended at the same time as the Nansen cast.

Only the two Nansen casts were used to determine velocity corrections for all hydrography. All the usable data sets (the two Nansen casts and four of the eight XSTD probes) produced nearly identical sound velocity curves for the entire working period and the entire working area. Therefore, only two tables were made and the hydrography was divided chronologically as follows:

Table 1.	JD 172-194 DA-40-1-79 (H-9829) and DA-40-3-79 (H-9831)
Table 2.	JD 195-213 DA-40-2-79 (H-9830) and DA-40-3-79 (H-9831)

The TRA for the ship was determined from periodic draft readings and settlement/squat data from March 1978. Leadline comparisons in April and November 1978 showed the Ross fathometer transducer depth to be the same as hull draft markings indicated. Therefore, the static draft readings taken before and after each leg of hydrography were combined with settlement/squat corrections to determine the ship TRA. A copy of the settlement/squat data for March 1978 is appended.

In general the XSTD casts compared favorably with the Nansen cast data. Successive probes on the same day were very consistent, producing nearly identical temperature (blue) and sound velocity (red) profiles. However, there were problems with several probes. None of the three used on 21 June were usable as the traces were erratic and full of noise. One probe (S/N 04294) malfunctioned and did not record any temperature or conductivity data. On 27 July, two of the three casts had "pen problems" and did not record the data in the first few meters before the surface. This is a critical area for hydrography since sound velocity usually varies most near the surface.

Other problems with the XSTD system developed during the Bathymetric Swath Survey System calibration conducted in Port Valdez in early June 1979. The system was found to be unable to compute accurate sound velocities in areas of high fresh water or glacial runoff. The system's conductivity sensor is designed for open ocean work and will not detect salinities less than thirty parts per thousand. Because most coastal areas, especially in Alaska, have surface salinities lower than this, a system designed to measure sound velocity directly with depth would be more effective in determining sound velocity corrections to hydrography.

All XSTD data printouts are appended. The red and blue traces are sound velocity and temperature respectively. All parameters are plotted on the largest scale possible; depths are taken from the pen initials, not necessarily the zero-point of the scale. The first and last printouts are annotated for scales used.

Submitted by:

Linda F. Haas

Linda F. Haas
LT(jg), NOAA

Approved and forwarded by:

C. William Hayes

C. William Hayes
CDR, NOAA
Commanding Officer

<u>Correction</u>	<u>To depth (actual)</u>
+0.0 fm	4.7 fm
0.1	10.1
0.2	15.7
0.3	21.5
0.4	27.8
0.5	33.4
0.6	39.9
0.7	46.7
0.8	56.0
0.9	73.8
1.0	90.5
1.1	104.1
1.2	117.8
1.3	131.3
1.4	145.0

<u>Correction</u>	<u>To depth (actual)</u>
+0.0 fm	4.4 fm
0.1	10.8
0.2	18.1
0.3	26.2
0.4	35.1
0.5	56.4
0.6	75.8
0.7	93.7
0.8	108.9
0.9	123.8
1.0	137.6
1.1	151.5

OPR-P-132-DA-79

VELOCITY TAPE PRINTOUT

DA 40-1-79, DA-40-2-79, DA 40-3-79

TABLE #1: *JD 172-194*

000047	0	0000	0001	001	3130	000000
000101	0	0001				
000157	0	0002				
000215	0	0003				
000278	0	0004				
000334	0	0005				
000399	0	0006				
000467	0	0007				
000560	0	0008				
000738	0	0009				
000905	0	0010				
001041	0	0011				
001178	0	0012				
001313	0	0013				
001450	0	0014				

TABLE #2: *JD 195-213*

000044	0	0000	0002	001	3130	000000
000108	0	0001				
000181	0	0002				
000262	0	0003				
000351	0	0004				
000561	0	0005				
000758	0	0006				
000937	0	0007				
001089	0	0008				
001238	0	0009				
001376	0	0010				
001515	0	0011				

VESSEL =DAVIDSON

DATE =12 JULY 1979 JD 193

TIME =1900 Z

LATITUDE = 059/49/00.00

LONGITUDE = 145/02/00.00

TYPE OF OBSERVATION =NANSEN CAST

CAST-DEPTH (SURFACE) (M)	TEMP (DEG C)	SALINITY (0/00)	SND VEL (M/SEC)
0000.0	11.82	28.78	1489.05
0010.0	11.56	29.17	1488.77
0022.5	11.60	30.12	1490.31
0031.5	10.74	30.74	1488.16
0053.9	10.21	31.12	1487.07
0082.5	08.90	31.97	1483.76
0100.0	06.73	32.18	1475.91
0125.0	05.26	32.38	1470.63
0175.0	05.37	33.07	1472.82

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

CORRECTIONS IN FEET, FATHOMS

10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190

DEPTHS IN FATHOMS

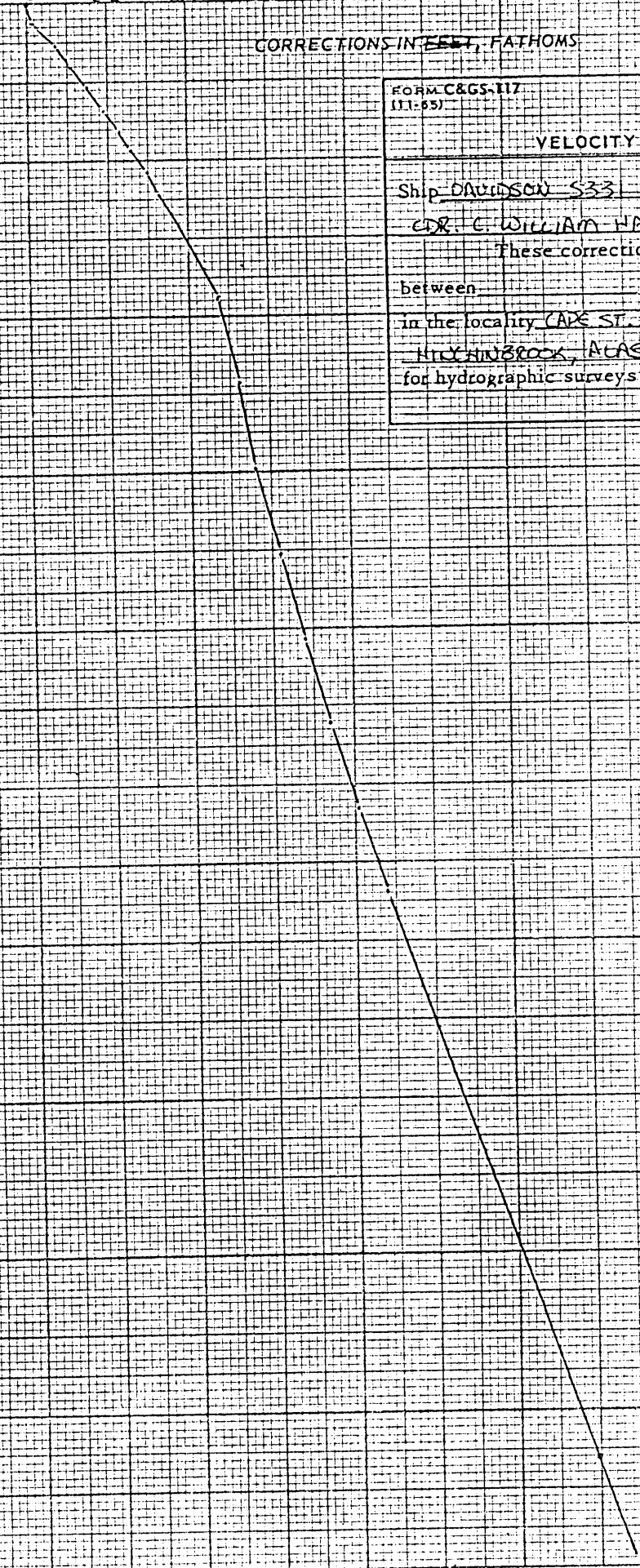
(For deep water add a 0 to these figures)

FORM C&GS-117
(11-55)

U.S. DEPARTMENT OF COMMERCE
ESSA
COAST AND GEODETIC SURVEY

VELOCITY CORRECTIONS

Ship DAVIDSON S33
Comdr. CDR. E. WILLIAM HAYES
These corrections are to be used
between 1979 and 1979
in the locality CAPE ST. ELIAS TO CAPE
HITCHINBROOK, ALASKA 07 JULY 1979
for hydrographic surveys Nos. OPR-PT32-DA-79



MID-DEPTH (M)	SND VEL. (M/SEC)	LAYER THICKNESS (M)
0002.50	1488.98	0005.00
0007.50	1488.84	0005.00
0012.50	1489.08	0005.00
0017.50	1489.69	0005.00
0022.50	1490.31	0005.00
0027.50	1488.93	0005.00
0032.50	1488.00	0005.00
0037.50	1487.45	0005.00
0042.50	1487.17	0005.00
0047.50	1487.08	0005.00
0060.00	1487.04	0020.00
0080.00	1484.53	0020.00
0100.00	1475.91	0020.00
0120.00	1470.07	0020.00
0140.00	1471.29	0020.00
0160.00	1472.17	0020.00

VELOCITY CORRECTION TABLE OPTIONS:

- 0) NO TABLE
- 1) IN FEET
- 2) IN FATHOMS
- 3) IN METERS

2
DRAFT = 2.0

ACTUAL DEPTH (SURFACE) MINUS VELOCITY CORRECTION (FM)	VELOCITY CORRECTION (FM)
0002.72	0000.01
0005.41	0000.06
0008.09	0000.11
0010.78	0000.16
0013.46	0000.21
0016.15	0000.26
0018.83	0000.31
0021.52	0000.35
0024.21	0000.40
0026.90	0000.44
0037.66	0000.62
0048.43	0000.78
0059.27	0000.88
0070.16	0000.93
0081.03	0000.99
0091.90	0001.06

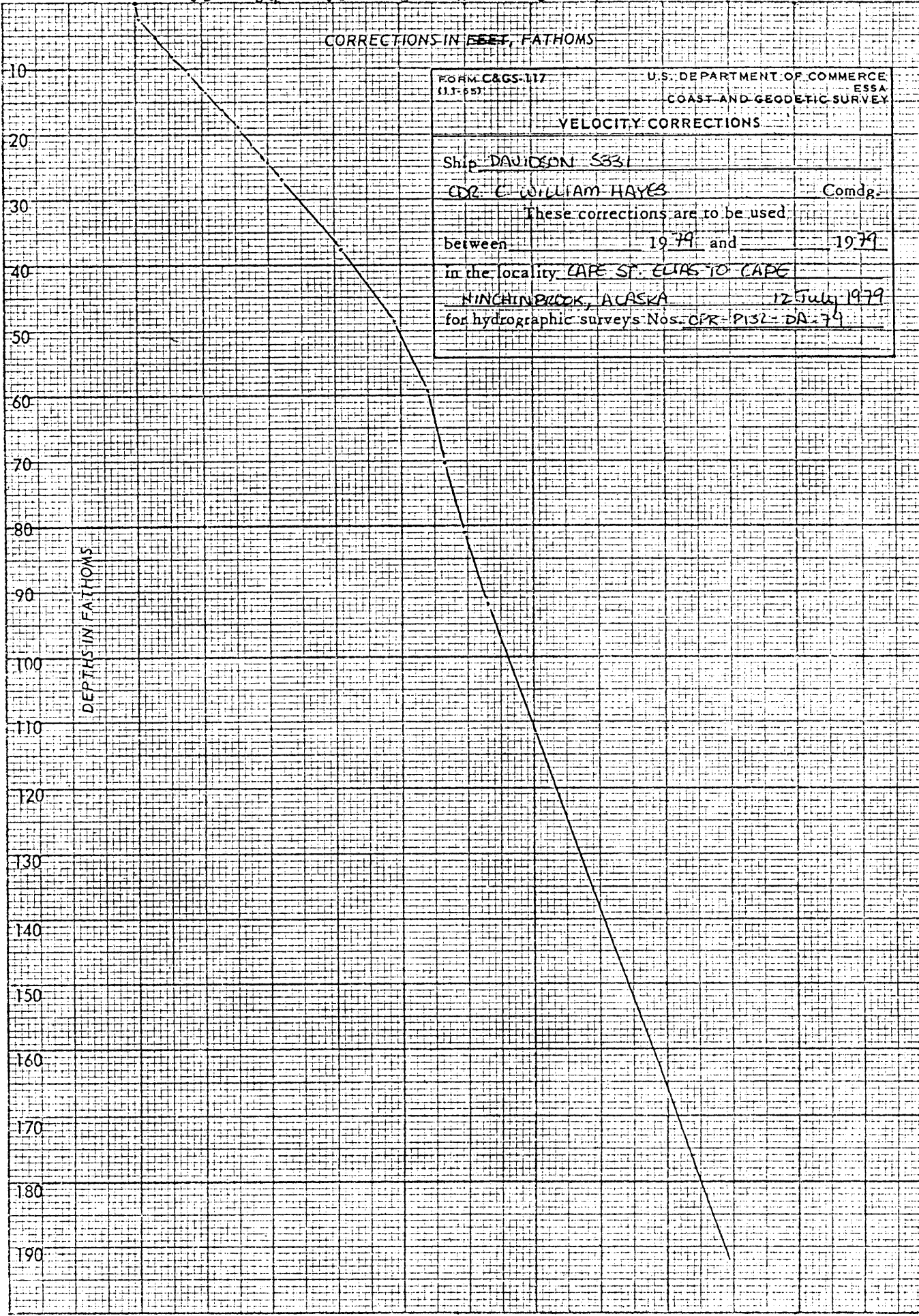
0.0 (Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.) 2.0

CORRECTIONS IN FEET, FATHOMS

FORM C&GS-117 11-1-65	U.S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY
VELOCITY CORRECTIONS	
Ship <u>DAVIDSON S331</u>	
Comd. <u>DR. E. WILLIAM HAYES</u>	
These corrections are to be used	
between	19 <u>79</u> and 19 <u>79</u>
in the locality <u>CAPE ST. ELIAS TO CAPE</u>	
<u>NINCHINBROOK, ALASKA</u>	
for hydrographic surveys Nos. <u>OPR-1132-DA-79</u>	
12 July 1979	

(For deep water add a 0 to these figures)

DEPTHS IN FATHOMS



VESSEL = DAVIDSON

DATE = 27 JULY 1979

TIME = 2330 Z

LATITUDE = 060/14/18.00

LONGITUDE = 146/51/24.00

TYPE OF OBSERVATION = NANSENCAST

CAST-DEPTH (SURFACE) (M)	TEMP (DEG C)	SALINITY (0/00)	SND VEL (M/SEC)
0000.0-	13.60-	27.03-	1493.05
0010.0-	11.76-	28.87-	1489.11
0020.0-	09.75-	30.06-	1483.48
0030.0-	09.22-	30.46-	1482.18
0059.7-	07.67-	31.26-	1477.75
0075.0-	05.13-	31.93-	1468.68
0107.0-	05.13-	32.26-	1469.65
0153.0-	05.34-	32.43-	1471.49
0210.4-	05.31-	32.66-	1472.61

14H

MID-DEPTH
(M)

SND VEL
(M/SEC)

LAYER THICKNESS
(M)

0002.50	1492.70	0005.00
0007.50	1490.59	0005.00
0012.50	1487.53	0005.00
0017.50	1484.58	0005.00
0022.50	1482.78	0005.00
0027.50	1482.24	0005.00
0032.50	1482.12	0005.00
0037.50	1481.94	0005.00
0042.50	1481.58	0005.00
0047.50	1480.96	0005.00
0060.00	1477.64	0020.00
0080.00	1468.79	0020.00
0100.00	1469.39	0020.00
0120.00	1470.16	0020.00
0140.00	1470.98	0020.00
0160.00	1471.74	0020.00
0180.00	1472.33	0020.00
0200.00	1472.62	0020.00

VELOCITY CORRECTION TABLE OPTIONS:

- 0) NO TABLE
- 1) IN FEET
- 2) IN FATHOMS
- 3) IN METERS

2

DRAFT = 2.0

ACTUAL DEPTH (SURFACE) MINUS VELOCITY CORRECTION (FM)	VELOCITY CORRECTION (FM)
0002.72	0000.01
0005.40	0000.07
0008.09	0000.11
0010.78	0000.15
0013.48	0000.19
0016.18	0000.23
0018.88	0000.26
0021.58	0000.30
0024.28	0000.33
0026.98	0000.36
0037.80	0000.47
0048.70	0000.52
0059.59	0000.56
0070.47	0000.62
0081.35	0000.68
0092.22	0000.74
0103.08	0000.81
0113.95	0000.88

OPR-P132-DA-79

SIGNAL LIST DA 40-1-79, DA 40-2-79, DA 40-3-79

001	2	59	27	43271	146	18	26967	250 ⁴	0011	330640	CABANA RM 2, 1979
002	2	60	14	19016	146	38	43728	250	0064	330640	HINCH RM 1, 1965
003	2	59	47	58822	144	35	52850	250 ⁴	0010	330640	CAPE RM 2, 1979
004	2	59	27	40866	146	18	06832	139	0000	000000	MIDDLETON I. H MARKER MAST, 1965
005	2	59	27	35652	146	18	14239	139	0000	000000	MIDDLETON I. RCA-G SITE TWR 1, 1965
006	2	59	27	18044	146	18	05699	139	0000	000000	AIRPORT BCN MIDDLETON I. APT., 1966
007	2	59	26	17754	146	19	31734	139	0032	000000	ARAB, 1967
008	2	59	25	26762	146	21	06829	139	0035	000000	IDLE, 1967
009	1	60	09	48885	146	50	10373	139	0000	000000	SEAL ROCKS LIGHT, 1977
010	3	60	18	24653	146	54	21117	139	0000	000000	SCHOONER ROCK LIGHT, 1977
011	2	60	14	17033	146	38	40371	139	0000	000000	CAPE HINCHINBROOK LIGHT, 1965
012	1	60	14	17870	146	38	40021	139	0000	000000	CAPE HINCHINBROOK RADAR TOWER, 1972
013	1	60	14	11109	146	36	27296	139	0000	000000	PIN 1902

SURVEY APPROVAL SHEET

H-9830

- A. Amount and degree of personal supervision of field work and frequency of record and sheet inspection:

Daily.

- B. State whether the survey is complete and adequate or if additional field work is recommended:

Complete and adequate to supersede prior surveys.

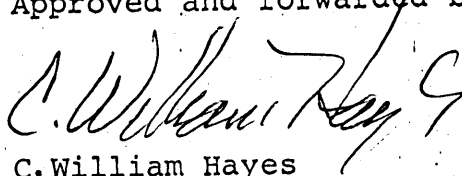
- C. Cite additional information or references that may be of assistance for verifying and reviewing the survey:

None

- D. Signed statement of approval of the field sheet and all accompanying records:

DATE: 9/26/79

Approved and forwarded by:



C. William Hayes
CDR, NOAA
Commanding Officer

March 6, 1980

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center:

Hourly heights are approved for Form 362

Tide Station Used (NOAA Form 77-12): 945-4329 Cape Hinchinbrook, AK

Period: July 15-28, 1979

HYDROGRAPHIC SHEET: H-9830

OPR: P132

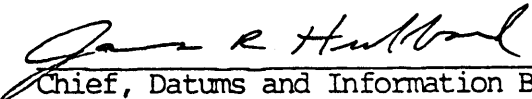
Locality: Cape St. Elias to Montague Island, Alaska

Plane of reference (mean lower low water): 5.0 ft.

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

REMARKS: Recommended zoning:

Apply range ratio x0.98.


Chief, Datums and Information Branch

GEOGRAPHIC NAMES

H-9830

Name on Survey	<div style="display: flex; justify-content: space-between;"> <div style="width: 10%;">A</div> <div style="width: 10%;">B</div> <div style="width: 10%;">C</div> <div style="width: 10%;">D</div> <div style="width: 10%;">E</div> <div style="width: 10%;">F</div> <div style="width: 10%;">G</div> <div style="width: 10%;">H</div> <div style="width: 10%;">K</div> </div>										
	ON CHART NO.	ON PREVIOUS SURVEY NO.	ON U.S. QUADRANGLE MAPS	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP	RAND McNALLY ATLAS	U.S. LIGHT LIST			
Gulf of Alaska	X										1
WESSELS REEF (TITLE)											2
											3
											4
											5
											6
											7
											8
											9
											10
											11
											12
											13
											14
											15
										Approved:	16
										<i>Chas. E. Harrington</i>	17
										Chief Geographer - C3x5	18
										1 Oct. 1980	19
											20
											21
											22
											23
											24
											25

HYDROGRAPHIC SURVEY STATISTICS

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET		1	BOAT SHEETS & PRELIMINARY OVERLAYS		144	
DESCRIPTIVE REPORT		1	SMOOTH OVERLAYS: POS. & ARC, EXCESS		2	
DESCRIP- TION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES						
CAHIERS	1- with raw printouts & misc. data					
VOLUMES						
BOXES			1- Smooth			

T-SHEET PRINTS (List)

SPECIAL REPORTS (List) 1- tide plot & 1- contour plot

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	PRE- VERIFICATION	VERIFICATION	TOTALS
POSITIONS ON SHEET			833
POSITIONS CHECKED		833	
POSITIONS REVISED		8	
SOUNDINGS REVISED		62	
SOUNDINGS ERRONEOUSLY SPACED		0	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		0	

TIME - HOURS

CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	3		
VERIFICATION OF CONTROL		2	
VERIFICATION OF POSITIONS		8	
VERIFICATION OF SOUNDINGS		78	
COMPILATION OF SMOOTH SHEET		33	
APPLICATION OF TOPOGRAPHY		N/A	
APPLICATION OF PHOTOBATHYMETRY		N/A	
JUNCTIONS		3	
COMPARISON WITH PRIOR SURVEYS & CHARTS		16	
VERIFIER'S REPORT		24	
OTHER		8	
TOTALS	3	172	175

Pre-Verification by J.S. Green	Beginning Date 10-5-79	Ending Date 10-5-79
Verification by R.N. Mihailov	Beginning Date 4-8-80	Ending Date 6-20-80
Verification Check by A.E. Eichelberger, J.S. Green	Time (Hours) 31	Date 6-24-80
Marine Center Inspection by HIT	Time (Hours) 9	Date 8-8-80
Quality Control Inspection by K.W. Wellman	Time (Hours) 14 hrs.	Date 9-29-80
Requirements Evaluation by D.J. Hall	Time (Hours) 1	Date 1/27/81

H. Myers 1st 12/10/80

REGISTRY NO. _____

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 REQUIRED _____ INITIALS _____

REMARKS:

REGISTRY NO. H-9830

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 REQUIRED _____ INITIALS _____

REMARKS:

No alterations or annotations of the smooth plotted data were effected during quality control inspection.

PACIFIC MARINE CENTER
VERIFIER'S REPORT

REGISTRY NO. H-9830

FIELD NO. DA-40-2-79

Alaska, Gulf of Alaska, Northeast of Wessels Reef

SURVEYED: 15 July - 30 July 1979

SCALE: 1:40,000

PROJECT NO. OPR-P132-DA-79

SOUNDINGS: Ross Fineline Fathometer
Model 5000

CONTROL: Range/Range
Raydist

Chief of Party.....CDR C.W. Hayes
Surveyed by.....CDR A.N. Bodnar, LT B.
Mezger, LTJG L. Haas, ENS
T. Peasley, LTJG W. Latimer

Automated plot by.....PMC Xynetics Plotter
Verified by.....Robert N. Mihailov
20 June 1980

1. INTRODUCTION

NOAA Ship DAVIDSON (S331) conducted this basic hydrographic survey in the Gulf of Alaska, northeast of Wessels Reef, Alaska, during the period from 15 July to 30 July 1979

Projection parameters used to prepare the field sheet have been revised for the smooth sheet. Parameters used by PMC are appended in the smooth printout.

Field tide reductions were based on Cordova, Alaska, predicted tides, corrected to Middleton Island, Alaska. Approved tides from the temporary tide gage at Cape Hinchinbrook were used to reduce the smooth soundings.

2. CONTROL AND SHORELINE

Horizontal control is adequately described in sections F and G of the Descriptive Report. There is no shoreline within the limits of this survey.

The signal list submitted in the Descriptive Report is an OPR-P132 composite. Stations used to control hydrography or utilized for electronic calibrations for this survey are contained in the control file of the position printout.

3. HYDROGRAPHY

a. Main scheme sounding lines and crosslines are in good ^{intersection} agreement. Differences between soundings at points of ~~coincidence~~^{intersection} are within one fathom in waters ranging from 42 fathoms to 61 fathoms.

b. Standard depth curves ~~were~~ ^{are} adequately drawn. (See Q.C. Report-item 1)

c. The hydrography in this survey is adequate to delineate the bottom configurations and to determine least depths.

d. There are 6 bottom samples consisting mainly of gray mud.

4. CONDITION OF SURVEY

The ~~field~~ ^{smooth} sheet, accompanying overlays, hydrographic records, and reports ^{are} adequately ^{and} conform to the ^{requirements of the} Hydrographic Manual.

5. JUNCTIONS

H-9830 junctions with the following contemporary surveys:

a. H-9831, 1:20,000 (1979), junctions to the northwest. No problems were encountered in making the junction and this survey is currently being verified. Depth curves have been inked on both surveys.

b. H-9829, 1:20,000 (1979), junctions to the southeast. This survey is currently being verified and a junction has been accomplished. No problems were encountered in making a junction. Depth curves have been inked on both surveys.

The adjoining surveys were not available during the Q.C. inspection of the present survey.

There are no contemporary surveys to the north or south. Depth curves are shown in pencil on H-9830 in the junction areas.

6. COMPARISON WITH PRIOR SURVEYS

H-3024, 1:200,000 (1909). H-3024 covers the entire survey area of H-9830. Prior survey soundings are generally deeper, differences ranging from a minimum of exact agreement to a maximum of 7 fathoms.

Two soundings in the prior survey are shoaler: A 51-fathom at Latitude 59°50.9'N, Longitude 146°04.0'W is 1 fathom shoaler than H-9830. A 51-fathom at Latitude 59°50.8'N, Longitude 146°01.1'W is 2 fathoms shoaler than H-9830.

Due to the age, scale and survey methods employed to obtain soundings on the prior survey, and the nature of the bottom configuration, H-9830 is adequate to supersede H-3024 within the area of common hydrography.

There are no PSR items within the limits of this survey.

7. COMPARISON WITH CHARTS

16700, 19th Edition, February 18, 1978, Scale: 1:200,000. (See Q.C. Report-item 2)
16013, 21st Edition, April 8, 1978, Scale: 1:969,761.

a. Hydrography

(1) The charted soundings originate ^{with} ~~from~~ the prior survey H-3024 (1909) which is described in section 6 of the Verifier's Report. Also, see enclosed chartlets. ~~The chartlets were removed and are filed with the field records.~~

(2) Chart 16700, the largest scale available of the area contains all soundings included within the hydro limits of H-9830. Chart 16013, contains 2 soundings within the projection limits of H-9830, but outside of the hydro area. This chart does not display any additional information not included on 16700.

(3) H-9830 is considered adequate to supersede charted soundings within the limits of the survey.

b. Aids to Navigation

There are no aids to navigation within the limits of this survey.

8. COMPLIANCE WITH INSTRUCTIONS

H-9830 complies with the following project instructions and changes: OPR-P132-DA-79, Cape St. Elias to Montague Island, April 2, 1979, and Change No. 1, Supplement to Instructions, June 7, 1979.

9. ADDITIONAL FIELD WORK

No additional field work is recommended.

This survey was verified under the supervision of A.E. Eichelberger, Supervisory Cartographic Technician.

Respectfully submitted,

A.E. Eichelberger

for

Robert N. Mihailov
Cartographic Technician
June 20, 1980

Examined and approved:

J. S. Green

James S. Green
Chief, Verification Branch

APPROVAL SHEET

FOR

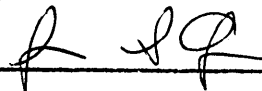
SURVEY H- 9830

- A. All revisions and additions made on the smooth sheet during verification have been entered in the magnetic tape records for this survey. A new final position print-out has been made. A new final sounding print-out has been made.
- B. The verified smooth sheet has been inspected, is complete, and meets the requirements of the Hydrographic Manual. Exceptions are listed in the verifier's report.

Date: _____

8/4/80

Signed: _____




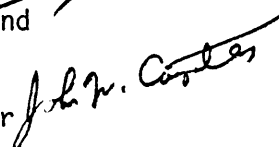
Title: Chief, Verification Branch



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102


August 12, 1980

OA/CPM3/JWC

TO: OA/CPM - Charles K. Townsend 
FROM: OA/CPM3 - John W. Carpenter 
SUBJECT: PMC Hydrographic Inspection Team Report for Survey H-9830

This survey is a basic hydrographic survey of Northeast of Wessels Reef, Gulf of Alaska. This survey was conducted by NOAA Ship DAVIDSON in 1979 in accordance with Project Instructions OPR-P132-DA-79 dated April 2, 1979 and Change No. 1 dated June 7, 1979.

The following item was noted:

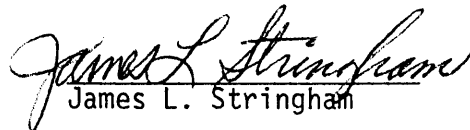
Sections K, L, and R of the Descriptive Report should have been expanded in content to include specific comparisons and to include all data processing programs. 

The inspection team finds H-9830 to be a basic survey adequate to supersede common areas of prior surveys and charted hydrography. Administrative approval is recommended.


John W. Carpenter


Pamela R. Chelgren

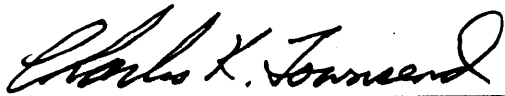

James W. Steensland


James L. Stringham

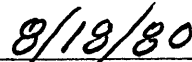


ADMINISTRATIVE APPROVAL
H-9830

The smooth sheet and reports of this survey have been examined and the survey is adequate for charting and to supersede common areas of prior surveys.



Charles K. Townsend, Captain, NOAA
Acting Director
Pacific Marine Center



Date



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

OA/C352:KWW

September 29, 1980

TO: Glen R. Schaefer *G.R.S.*
Chief, Hydrographic Surveys Division

THRU: Chief, Quality Control Branch *gm*

FROM: K. W. Wellman *K.W. Wellman*
Quality Evaluator

SUBJECT: Quality Control Report for H-9830 (1979), Alaska, Gulf of Alaska,
Northeast of Wessels Reef

A quality control inspection of H-9830 was accomplished to monitor the survey for adequacy with respect to data acquisition, delineation of the bottom, determination of least depths and navigation hazards, decisions and actions by the verifier, and cartographic presentation of data.

In general, the present survey was found to conform to National Ocean Survey standards and requirements except as discussed in the HIT Report and as follows:

1. Reference section 3 of the Verifier's Report:

The supplemental 60-fathom depth curve was delineated on the smooth sheet during verification. A suitable reference to the supplemental depth curve should have been included in section 3.b of the Verifier's Report.

Section 3.b of the Verifier's Report is supplemented by the following:

A 60-fathom supplemental depth curve has been added to the smooth sheet to improve the delineation of the bottom configuration.

2. Reference section L of the Descriptive Report and section 7 of the Verifier's Report:

It is noted that a later edition of chart 16700 (20th edition dated May 19, 1979) was available as of the date of commencement of field work on the present survey. A comparison between the 19th and 20th editions of chart 16700 reveals no differences within the area of the present survey development. Accordingly, the chart supersession statement included in section 7.a of the Verifier's Report can be considered to apply equally to the common area of the 20th edition of chart 16700.

CC:
OA/C351





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

MAR 10 1981

OA/C351:D

TO: OA/CPM - Charles K. Townsend

FROM: ~~F/~~OA/C3  Roger F. Lanier

SUBJECT: H-9830 (1979), OPR-P132, Alaska, Gulf of Alaska, Northeast of
Wessels Reef, Report of Compliance with Project Instructions

The smooth sheet and Descriptive Report for the subject survey have been examined. This survey, except as noted in the Quality Control Report, dated September 29, 1980 (copy attached), and the Hydrographic Survey Inspection Team Report, dated August 12, 1980, is complete and adequate for the purposes intended and is in compliance with Project Instructions OPR-P132-DA-79, dated April 2, 1979.

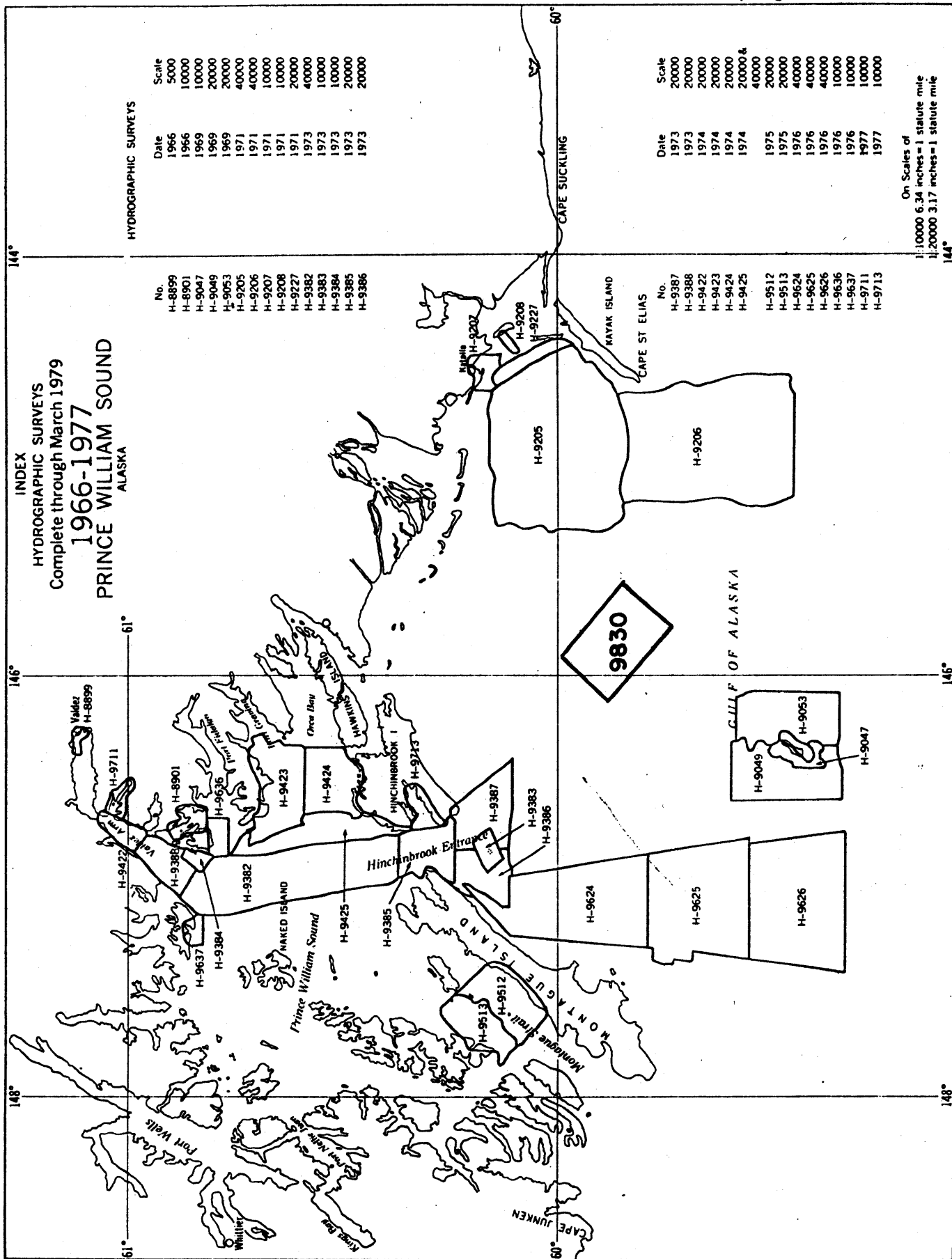
Attachment

cc:
OA/C352 w/o att.



10TH ANNIVERSARY 1970-1980

RESPONSIBLE PERSONNEL		ORIGINATOR	
TYPE OF ACTION	NAME	<input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)	
OBJECTS INSPECTED FROM SEAWARD		FIELD ACTIVITY REPRESENTATIVE	
POSITIONS DETERMINED AND/OR VERIFIED		OFFICE ACTIVITY REPRESENTATIVE	
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		<input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE	
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64)			
OFFICE I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	FIELD (Cont'd) B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982		
FIELD I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75	III. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75		
**FIELD POSITIONS are determined by field observations based entirely upon ground survey methods. **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.			



INDEX
HYDROGRAPHIC SURVEYS
Complete through March 1979
1966-1977
PRINCE WILLIAM SOUND
ALASKA

HYDROGRAPHIC SURVEYS

Date	Scale
1966	5000
1966	10000
1969	10000
1969	20000
1969	20000
1971	40000
1971	40000
1971	10000
1971	10000
1971	20000
1973	40000
1973	10000
1973	10000
1973	20000
1973	20000

No.
H-8899
H-8901
H-9047
H-9049
H-9053
H-9205
H-9206
H-9207
H-9208
H-9227
H-9382
H-9383
H-9384
H-9385
H-9386

Date	Scale
1973	20000
1973	20000
1974	20000
1974	20000
1974	20000
1974	20000
1974	20000
1974	20000
1974	20000
1975	20000
1975	20000
1976	40000
1976	40000
1976	40000
1976	10000
1976	10000
1977	10000
1977	10000

No.
H-9387
H-9388
H-9422
H-9423
H-9424
H-9425
H-9512
H-9513
H-9624
H-9625
H-9626
H-9636
H-9711
H-9713

On Scales of
1:10000 6.34 inches = 1 statute mile
1:20000 3.17 inches = 1 statute mile

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9830

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
			<i>Fully applied</i>
16700	4-8-81	C.S. Forbes	Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>24</i> Exam for NM only - no corrections
16013	4-8-81	C.S. Forbes	Full Part Before After Verification Review Inspection Signed Via Drawing No. Exam for NM only - no corrections
531	4-8-81	C.S. Forbes	Full Part Before After Verification Review Inspection Signed Via Drawing No. Exam for NM only - no corrections
530	4-8-81	C.S. Forbes	Full Part Before After Verification Review Inspection Signed Via Drawing No. Exam for NM only - no corrections
500	4-8-81	C.S. Forbes	Full Part Before After Verification Review Inspection Signed Via Drawing No. Exam for NM only - no corrections
16013			<i>OC</i>
16013	12/10/81	R.S. House	Full Part Before After Verification Review Inspection Signed Via Drawing No. 26 thru chart 16700, DRWG. 24 and direct
531	12/10/81	R.S. House	Full Part Before After Verification Review Inspection Signed Via Drawing No. 17, thru chart 16013, DRWG. #26
500	9/13/82	M. Sayer	Full Part Before After Verification Review Inspection Signed Via Drawing No. 5 thru chart 531 DRWG. #18 No Correction
530	4/25/84	J. Bailey	Full Part Before After Verification Review Inspection Signed Via Drawing No. 32 NO corr. Exam. thru chart 531 DRWG. # 18. Full Part Before After Verification Review Inspection Signed Via Drawing No.