

# 10050

NOAA FORM 76-35A

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

## DESCRIPTIVE REPORT

Type of Survey ... Hydrographic .....  
Field No. .... DA-10-4-82 .....  
Office No. .... H-10050 .....

### LOCALITY

State ..... Alaska .....  
General Locality ... Chatham Strait .....  
Locality ..... Bay of Pillars .....

1982

CHIEF OF PARTY  
CDR J.M. Wintermyre

### LIBRARY & ARCHIVES

DATE ..... May 9, 1984 .....

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AREA 6

CATS

17320

17370

} to sign off see  
Record of Application

## HYDROGRAPHIC TITLE SHEET

H-10050

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-10-4-82

State AlaskaGeneral locality Chatham StraitLocality Bay of PillarsScale 1:10,000Date of survey September 18-November 1, 1982Instructions dated June 15, 1981Project No. OPR-0353-DA-81Vessel 3131, 3132Chief of party CDR J. M. WintermyreLT D. Dreves, LTJG N. Bogue, ENS E. Hawk, ENS J. Duggan, ENS J. Waddell,  
Surveyed by and Ship's personnel.Soundings taken by echo sounder, hand lead, pole Ross Fineline, Model 5000 and lead lineGraphic record scaled by Ship's PersonnelGraphic record checked by Ship's Personnel

Verification

~~Reviewed~~ by C. Russel DaviesAutomated plot by PMC Xynetics PlotterEvaluation Gordon E. Kay~~Verification~~ bySoundings in fathoms ~~Xfex~~ at ~~XXXX~~ MLLWREMARKS: Revisions and marginal notes in black were made in either evaluation  
or quality control at the Pacific Marine Center, Seattle, Washington.STANDARDS CK'D 5-11-84C. LoyAWOIS checked 8/16/84 SJJ

134°30'

134°20'

134°10'

134°00'

56°50'

# PROGRESS SKETCH

## OPR-0353-DA-81

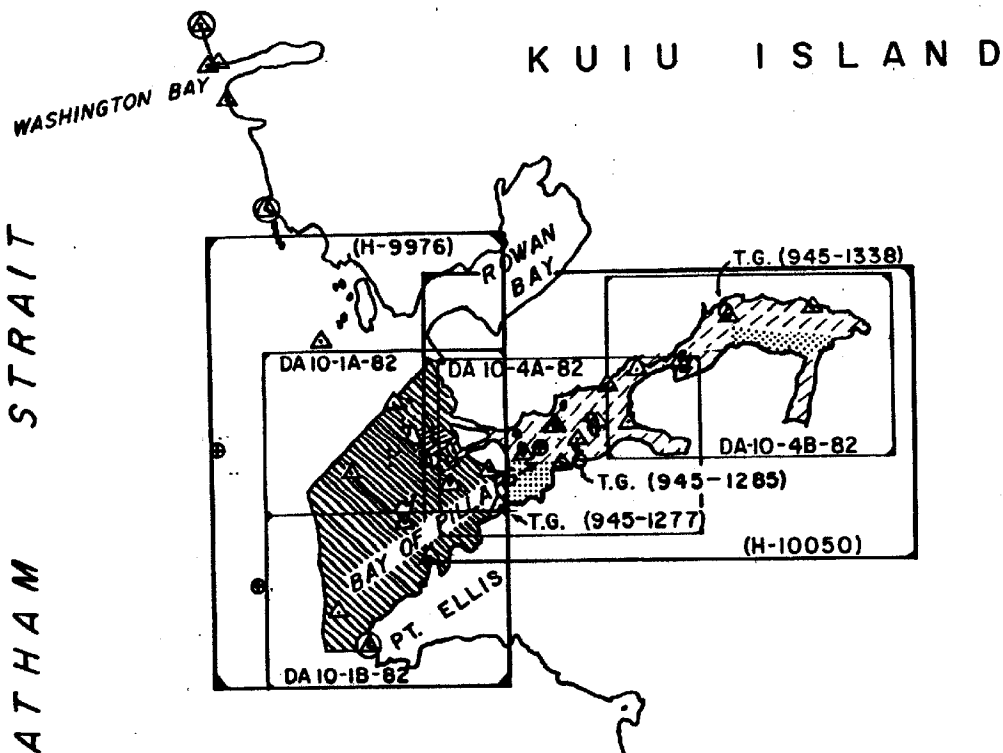
### ROWAN BAY, ALASKA

#### SCALE: CHART 17320

#### NOAA SHIP DAVIDSON (S-331)

#### CDR JAMES M. WINTERMYRE Comdg.

#### MAY-JUNE, SEPT.-NOV., 1982



56°40'

56°30'

MAY JUNE		STATISTICS	SEPT OCT/NOV	
219.0	14.3	L. N. M. SOUNDING LINE	47.4	136.1
12.5	0.2	SQ. N. M. SOUNDING	3.1	11.4
11	1	TRIANGULATION STA. RECOVERED	0	0
9	9	TRIANGULATION STA. ESTABLISHED	2	0
2	0	TIDE GAGE INSTALLED	3	0
26	15	BOTTOM SAMPLES	0	30
4	1	NANSEN CAST /SOUND VELOCITY CAST	1	3
8/0	0	BENCH MARKS RECOVERED/ESTAB.	12/3	0
0	22	DIVE INVESTIGATIONS	2	3



134°00'

DESCRIPTIVE REPORT  
H-10050  
(OPR-0353-DA-81)  
BAY OF PILLARS, ALASKA

A. PROJECT

Survey operations were conducted in accordance with Project Instruction OPR-0353-DA-81 dated 15 June 1981, Change No. 1 dated 1 July 1981, Change No. 2 dated 11 March 1982, and Change No. 3 dated 26 August 1982. Registry No. H-10050 was assigned 1 October 1982. ✓

B. AREA SURVEYED

Operations were begun 18 September 1982 and completed 1 November 1982. The area surveyed is the Bay of Pillars located on the east side of Chatham Strait, Alaska. The survey extended from a western limit of 134°15'45" to the easternmost extension of the bay. Its north-south boundaries were determined by the 2 fathom curve or the limits of safe launch navigation. The survey areas are indicated on the appended sketch. The morphology of the bottom is predominantly rugged, irregular, and rocky. ✓

C. SOUNDING VESSELS

Sounding vessels were survey Launches DA-1 (3131) and DA-2 (3132). For ease of identification, raw data records were annotated in red ink for DA-1 and blue ink for DA-2. No unusual sounding vessel configurations were used or problems encountered. ✓

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

Both launches were equipped with Ross 5000 Fineline Fathometers for recording all soundings. Serial numbers of the sounding equipment used by both launches are listed below:

<u>LAUNCH</u>	<u>FATHOMETER S/N</u>	<u>DIGITIZER S/N</u>	<u>TRANSCIVER S/N</u>	<u>JD</u>
DA-1	1077	1081	1081	265-305
DA-2	1080	1048	1036	265-305

Daily stylus belt tension checks and phase calibrations were conducted at 10-fathom intervals at 50 fathoms. Fathometers were monitored continuously during survey operations and the fathogram initial was maintained at zero. Fathograms were scanned and the analog record compared to digitized depths. Digitizer errors, missed depths, and peak/deep insertions were identified and corrected according to the fathogram trace. Changes were entered on the edited master tape or via the corrector tape and noted on the raw data printout and fathogram. ✓

Soundings on the final field sheet have been corrected for transducer draft, velocity, and predicted tides. Bar checks were generally made twice daily. A TRA of 0.3 fathoms was applied to all launch depths appearing on the final field sheet. Corrections for settlement and squat were determined for both survey launches in Bay of Pillars, Alaska. The results can be found in the Corrections to Echo Sounding Report. Settlement and squat corrections were not applied to soundings on the final field sheet because they were determined to be negligible.

The DAVIDSON conducted 3 sound velocity casts during the project to determine velocity correctors. Velocity corrections from a mean velocity correction curve were applied to soundings on the final field sheet. See appended Corrections to Echo Soundings Report. ✓

Four Bristol Bubbler-type gages were installed at three sites. Two gages (S/N's 67A10292 and 64A11030) were installed at the Chatham Strait tide station (945-1277), located at 56/36/34 N, 134/17/15 W. This ensured a continuous tide record in the event of a gage failure. Lower Bay's tide gage (945-1285, S/N 67A16201) was located at 56/36/38 N, 134/12/58 W. Upper Bay's tide gage (945-1338, S/N 67A10294) was located at 56/38/50.7 N, 134/08/47.8 W. Recorded water levels for Chatham Strait and lower Bay of Pillars are representative of the area. Times of tidal extrema in the upper Bay of Pillars lagged behind predicted tides, based on the Sitka reference station, by approximately 0.5 hours. The Field Tide Note contains details of the installations and locations of the gages and staff, as well as leveling results.

#### E. HYDROGRAPHIC SHEETS

Field sheets were prepared at a scale of 1:10,000 using DAVIDSON's PDP8/e Complot system and standard NOS software. The field sheet was divided into two sections referred to as DA-10-4A-82, covering the Upper Bay region of Bay of Pillars, and DA-10-4B-82, covering the southern and western approaches to Bay of Pillars as far west as longitude 134°15'45". All data were submitted to PMC Processing Division for verification. ✓

#### F. CONTROL STATIONS

Control was established for OPR-0353-DA-81 from May to June, 1982, and from September to October, 1982. All stations were generally located by traverse to at least third order, class 1 accuracy. All stations shown in the list below are monumented and described except NEWTON and STAKE. Station NEWTON was located by resection, while station STAKE by measured distances and observed directions from two known stations. Reference can be made to the Horizontal Control Reports for OPR-0353-DA-81 - May to June 1982, and September to October 1982. No unconventional methods were used. There were no anomalies in control adjustment, closures, or ties. ✓

<u>STATION</u>	<u>SIGNAL NUMBER</u>	<u>USE</u>
CHITON	010	R/R, R/Az
SURGE RM2	040	R/R, R/Az
STRAW RM2	028	R/R
FRESH RM2	038	R/R
COLUMN RM1	060	R/R
BACK RM1	062	R/R
VIEW RM2	065	R/R
RIPE RM1	034	R/R
SALT RM1	057	R/R
PILE RM1	056	R/R
SPRUCE	046	R/R
SAW RM2	058	R/R
CLEAR	050	R/R, R/Az
BIRD	052	R/R, R/Az
COOK	066	R/R
GAUSS	067	R/R, R/Az
LIMPET	053	R/R, R/Az
ALGAE	054	R/R
VIEW	051	R/R, R/Az
NEWTON (Temp)	072	R/R, R/Az
CHANCE	070	R/R, R/Az
STAKE (Temp)	071	R/Az
SALT RM1	057	R/Az
BACK	048	R/Az
PILE	056	R/R
TINKER	068	R/Az
EVERS	069	R/Az

For further information consult the appended Signal List, Electronic Control Report and Horizontal Control Report.

G. HYDROGRAPHIC POSITION CONTROL

Sounding line position control was accomplished by range-range or range-azimuth techniques using Motorola MiniRanger III and Wild T-2 theodolites. The serial numbers of MiniRanger consoles, receiver/transceiver (RT) units and transponders are listed below:

<u>VESSEL</u>	<u>MR CONSOLE S/N</u>	<u>RT UNIT S/N</u>	<u>JULIAN DAYS</u>
DA-1	710 713166	M409 1545	265-280 303-304
DA-2	707	SM314	265-305

The MiniRanger transponder codes, their serial numbers, stations, days of operation, correctors, signal numbers, control types and position numbers are appended.

The presence of numerous small wooded islands throughout the survey area made it necessary to change control stations frequently

since microwave signals were often blocked as the survey progressed. Because of this problem of islands interfering with the line of sight, intersection angles slightly less than 30° but greater than 25°, were accepted on occasion if no other control was available. Range-azimuth control was used only where satisfactory range-range control was not possible.

Beginning and ending MiniRanger system checks were performed daily, using the baseline transit method. Days involving trouble with opening or closing systems check can be found in the Electronic Control Report. MiniRanger signal strengths during survey operations were good. Minimum acceptable signal strengths were established for each of the seven transponder codes based on the latest MiniRanger baseline calibration preceding hydrography. The minimum acceptable signal strengths were not violated. ✓

MiniRanger baseline calibrations were performed on JD's 263, 284, and 306. Calibrations on JD 263 and 306 were performed at the working grounds, whereas the calibration on JD 284 was completed in Juneau, Alaska. Baseline correctors are listed in the appended MiniRanger Baseline Corrector Abstract. The most recent correctors available were used in preparation of the preliminary field sheet. In preparing the final field sheet, correctors to the MiniRanger were the mean of the correctors derived from the baseline calibrations bracketing the hydrography.

#### H. SHORELINE

Discrepancies between actual and charted shorelines were detected when comparing known geographical positions. The actual geographical positions show a westerly shift relative to that charted.

The charted shoreline (Chart 17370) was obtained from surveys T-2303 and T-2298, both dated 1897. Shoreline for these surveys was determined by plane table using a local datum, which was subsequently transformed to the North American Datum of 1927. It is presumed that errors in the original survey and in the transformation process contributed to the discrepancies observed.

The shoreline details for survey reference were obtained from 1:10,000 blow-ups of chart 17370. A 1:10,000 blow-up of the 1:63,360 USGS quad map for the Bay of Pillars (Port Alexander, C-1, Alaska, 1948) was also obtained. Shoreline data for this map were obtained from 1948 aerial photography. A shoreline delineation was not put on the final field sheet, due to the discrepancies, between actual and charted shorelines. It is strongly recommended that the shoreline revision photography flown in this area be incorporated into the new edition of Chart 17370. ✓

#### I. CROSSLINES

Crosslines comprise 18.4% of the total sounding line mileage. All crosslines were scanned, and agreement with main scheme soundings was good. Specific comparisons were made between 66 randomly selected

crossline and main scheme soundings with the following results: Exact agreement was seen in 32 (48%) of the soundings, 25 (38%) agreed within one fathom, and 11 (14%) disagreed by two or more fathoms. Differences are attributed to the irregular bottom topography where the variance in depths can result from slight horizontal displacements. Inspection of the fathogram record showed very abrupt changes in depth in the eleven cases where the soundings disagree. The criteria for the above comparisons can be found in Section 1.1.2 Part B.11.1 of the Hydrographic Manual. ✓

J. JUNCTIONS

This survey junctions with H-9976. Irregular bottom relief in the area made junctioning difficult, but results were satisfactory. Specific comparisons between 20 randomly selected soundings were compared from the junction overlap zone of H-9976 with H-10050. A consistent trend of sounding depths was observed with no major discrepancies. ✓

K. COMPARISONS WITH PRIOR SURVEYS

PSR Item #12 was reported as a sunken rock charted at 56/37/21 N, 134/13/22 W. After a visual search, a rock was discovered in the vicinity of 56/37/19 N, 134/12/13 W (Position No. 0001, JD 163, Sounding Volume #2). The area around this rock was foul with kelp. The depth of the rock was determined using an oar and calibrated tape. This rock is believed to be PSR Item #12. The location of the rock on the chart is P.A. We recommend that the discovered position be charted in lieu of that reported. *Ps. # 4314/5 0.22K* ✓

PSR Item #13 was reported as a sunken rock charted at 56/37/21 N, 134/12/08 W. After a visual search in the area, a rock was discovered in the vicinity of 56/37/19 N, 134/12/13 W (Position No. 0002, JD 163, Sounding Volume #2). Its highest point was determined as 3.0' by using a hand-level. This rock was the only one noted in the vicinity and is believed to be PSR Item #13. The location of the rock on the chart is P.A. We recommend that the discovered position be charted in lieu of that report. *concur*

*see resolution Report section 6*  
PSR Item #14 was reported as a sunken rock charted at 56/37/58 N, 134/11/12 W located southwest of station SPRUCE. The area was investigated on JD 305 with an uncontrolled fathometer search. Soundings were generally 8 to 9 fathoms. Divers descended to 40 feet and searched the area by making two sweeps across the channel, then one down the channel in the reported vicinity. The divers remained 30 feet apart at all times during the search. Underwater visibility was 40 to 50 feet. There was no indication of a rock. A rock was observed (Position Nos. 3007 and 3008, Sounding Volume #3) in the channel east of the charted location at 56/37/59.6 N, 134/11/01.9 W. An attempt was made to get a leadline depth, but swift currents prevented it. A depth of 13 feet was observed at 2225 GMT on the diver's depth gauge and fathogram. With predicted tides, this rock bares 1.2' at MLLW. Its observed position should be charted. *concur*

*(A) concur with preceding*



The survey was compared with prior survey H-2334, 1:20,000 scale, 1897. Sounding agreement criteria was taken from Appendix Q in PMC ORDER. A total of 64 specific comparisons were made. Agreement was good in the lower bay. A consistent trend was observed with no major discrepancies. Agreement in the upper bay was satisfactory despite the problem of the westerly shift of the prior survey's. The satisfactory agreement between the soundings is due to the relative flat bottom. Six to nine fathom discrepancies were noted in the following vicinities: 1) 56/38/45 N, 134/08/20 W, and 2) 56/38/30 N, 134/09/15 W. This is believed to be due to the irregularity of the prior and present survey's shoreline. ✓

General agreement between prior and present survey soundings is good and depth differences can be ascribed to the rugged and irregular bottom profile. Due to major shoreline discrepancies soundings from H-10050 should be given preference over prior sounding data and charted in lieu of the latter. ✓

#### L. COMPARISON WITH THE CHART

The largest scale chart of the area is Chart No. 17370, 7th Edition, July 16, 1977, at 1:20,000 scale. The charted soundings in and around approaches to Bay of Pillars originate from survey H-2334 (1897). A 1:10,000 scale blow-up of Chart 17370 was provided for comparison with the chart. Comparisons were made by coinciding the latitude and longitude grids. *The following features have been reduced to soundings. The smooth sheet for publication and printing of these features.*  
The following detached positions taken on non-sounding features during this survey were determined as not being hazards to navigation. For this reason, a separate Hazards to Navigation Report was not submitted.

*Pos. sta 12*  
An uncharted rock at 56/37/19.84 N, 134/13/19.00 W, (Position No. 0001, JD 163, Sounding Volume #2) bares 5.5' at MLLW. It should be charted.

*Pos. sta 13*  
An uncharted rock at 56/37/19.8<sup>1</sup> N, 134/12/13.00<sup>1</sup> W, (Position No. 0002, JD 163, Sounding Volume #2) bares 3.0' at MLLW. It should be charted. \* (3)

An uncharted rock at 56/37/06.1<sup>3</sup> N, 134/11/31.13 W, (Position No. 0003, JD 163, Sounding Volume #2) bares ~~2.5~~<sup>3.0</sup> at MLLW. It should be charted.

An uncharted rock at 56/36/18.3<sup>1</sup> N, 134/14/00.0<sup>1</sup> W, (Position No. 0004, JD 163, Sounding Volume #2) is submerged ~~1.8~~<sup>0.2 RK</sup> at MLLW. It should be charted.

An uncharted shoal at 56/38/18.5<sup>79</sup> N, 134/06/45.01<sup>44.71</sup> W, (Position No. 2157, JD 271, Sounding Volume #3) bares ~~8.6~~<sup>10.0</sup> at MLLW. It should be charted. (10)

An uncharted rock at 56/38/54.67N, 134/05/54.17 W, (Position No. 2201, JD 274, Sounding Volume #3) bares 13.2' at MLLW. It should be charted. *Reported position use Pos# 2845*

An uncharted rock at 56/38/58.<sup>16</sup>~~73~~ N, 134/08/35.<sup>36</sup>~~19~~ W, (Position No. 2440, JD 275, Sounding Volume #3) bares ~~10.4'~~<sup>-7.2</sup> at MLLW. It should be charted. ~~NA~~ \* (7)

An uncharted rock at 56/39/02.<sup>18</sup>~~24~~ N, 134/08/32.<sup>50</sup>~~23~~ W, (Position No. 2441, JD 275, Sounding Volume #3) bares ~~10.0'~~<sup>-6.5</sup> at MLLW. It should be charted. ~~NA~~ \* (6)

An uncharted reef at 56/38/23.<sup>9</sup>~~81~~ N, 134/06/01.<sup>00.74</sup>~~03~~ W, (Position No. 2495, JD 276, Sounding Volume #3) bares ~~1.6'~~<sup>-1.0</sup> at MLLW. It should be charted. ~~NA~~ \* (2)

An uncharted rock at 56/38/56.<sup>55.53</sup>~~12~~ N, 134/06/11.<sup>10.95</sup>~~75~~ W, (Position No. 2498, JD 276, Sounding Volume #3) bares ~~3.2'~~<sup>-2.1</sup> at MLLW. It should be charted. ~~NA~~ \* (3)

An uncharted rock at 56/39/05.<sup>15</sup>~~22~~ N, 134/08/15.<sup>18</sup>~~04~~ W, (Position No. 2502, JD 276, Sounding Volume #3) bares ~~6.8'~~<sup>-4.3'</sup> at MLLW. It should be charted. ~~NA~~ \* (4)

An uncharted rock at 56/38/23.<sup>7</sup>~~78~~ N, 134/08/28.<sup>92</sup>~~77~~ W, (Position No. 2503, JD 276, Sounding Volume #3) bares ~~2.1'~~<sup>-4.6'</sup> at MLLW. It should be charted. ~~NA~~ \* (5)

An uncharted rock at 56/38/14.<sup>0</sup>~~62~~ N, 134/09/33.<sup>5</sup>~~18~~ W, (Position No. 2838, JD 280, Sounding Volume #3) bares ~~5.6'~~<sup>-5.3</sup> at MLLW. It should be charted. ~~NA~~ \* (5)

An uncharted reef at 56/38/15.51 N, 134/09/34.81 W, (Position No. 2839, JD 280, Sounding Volume #3) bares ~~2.8'~~<sup>-2.1</sup> at MLLW. It should be charted. ~~NA~~ \* (2)

An uncharted reef at 56/37/59.52 N, 134/11/01.90 W, bares 0.2' at MLLW. Its limits can be found at Position Nos. 3007 and 3008, JD 305, Sounding Volume #3. It should be charted. ~~NA~~ \* (0)

An uncharted rock at 56/38/13.<sup>3</sup>~~74~~ N, 134/09/34.<sup>3</sup>~~91~~ W, (Position No. 2840, JD 280, Sounding Volume #3) bares ~~4.6'~~<sup>-4.3</sup> at MLLW. It should be charted. ~~NA~~ (4) \*

An uncharted reef at 56/38/17.<sup>13</sup>~~22~~ N, 134/09/35.<sup>59</sup>~~2~~ W, (Position No. 2841, JD 280, Sounding Volume #3) bares ~~1.1'~~<sup>-0.3</sup> at MLLW. It should be charted. ~~NA~~ \* (0)

An uncharted reef at 56/38/18.<sup>7</sup>~~06~~ N, 134/09/38.<sup>2</sup>~~22~~ W, (Position No. 2842, JD 280, Sounding Volume #3) is submerged ~~3.0'~~<sup>+0.6</sup> at MLLW. It should be charted. ~~NA~~ <sup>0.6</sup> RK

An uncharted rock at 56/38/10.<sup>3</sup>~~68~~ N, 134/09/31.<sup>19</sup>~~71~~ W, (Position No. 2843, JD 280, Sounding Volume #3) bares ~~5.0'~~<sup>-4.5</sup> at MLLW. It should be charted. ~~NA~~ (4) \*

An uncharted rock at 56/38/13.74 N, 134/09/34.91 W, (Position No. 2844, JD 280, Sounding Volume #3) bares ~~7.0'~~<sup>-4.0</sup> at MLLW. It should be charted. ~~NA~~ \* (4)

*✓ same as Post # 2201*  
An uncharted rock at 56/38/54.<sup>52</sup>~~47~~<sup>52</sup> N, 134/05/54.<sup>7</sup>~~38~~<sup>7</sup> W, (Position No. 2845, JD 280, Sounding Volume #3) bares ~~11.6~~<sup>11.6</sup> at MLLW. It should be charted. *as a \* (10)* <sup>-10.3</sup>

An uncharted reef at 56/38/54.<sup>3</sup>~~80~~<sup>3</sup> N, 134/06/05.<sup>4</sup>~~28~~<sup>4</sup> W, (Position No. 2846, JD 280, Sounding Volume #3) bares ~~3.2~~<sup>3.2</sup> at MLLW. It should be charted. *as a \* (2)* <sup>-2.4</sup>

An uncharted rock at 56/39/03.96 N, 134/07/49.<sup>8</sup>~~58~~<sup>8</sup> W, (Position No. 2923, JD 280, Sounding Volume #3) bares ~~12.2~~<sup>12.2</sup> at MLLW. It should be charted. *as a \* (10)* <sup>-9.6</sup>

An uncharted rock at 56/39/05.06 N, 134/07/46.25 W, (Position No. 2924, JD 280, Sounding Volume #3) bares ~~9.7~~<sup>9.7</sup> at MLLW. It should be charted. *as a \* (7)* <sup>-7.3</sup>

An uncharted rock at 56/38/06.38 N, 134/09/16.9 W, (Position No. 2925, JD 280, Sounding Volume #3) bares 10.2' at MLLW. It should be charted. *Portion reported during Vexpection*

*Continue to chart from source*  
An uncharted reef at 56/38/06.27 N, 134/09/14.58 W, (Position No. 2926, JD 280, Sounding Volume #3) bares 8.8' at MLLW. It should be charted. *Portion reported during Vexpection*

*Continue to chart from source*  
An uncharted rock at 56/35/55.38 N, 134/14/42.77 W, (Position No. 4073, JD 266, Sounding Volume #1) bares ~~9.1~~<sup>9.1</sup> at MLLW. It should be charted. *as a \* (8)* <sup>-8.4</sup>

An uncharted ledge at 56/35/55.69 N, 134/14/38.52 W, (Position No. 4074, JD 266, Sounding Volume #1) bares 6.2' at MLLW. It should be charted. *as a \* (6)*

An uncharted reef at 56/36/17.<sup>93</sup>~~82~~<sup>93</sup> N, 134/15/39.<sup>30</sup>~~11~~<sup>30</sup> W, (Position No. 4084, JD 271, Sounding Volume #1) bares ~~9.5~~<sup>9.5</sup> at MLLW. It should be charted. *as a \* (9)* <sup>9.1</sup>

An uncharted ledge at 56/36/20.<sup>70</sup>~~64~~<sup>70</sup> N, 134/15/33.<sup>89</sup>~~63~~<sup>89</sup> W, (Position No. 4085, JD 271, Sounding Volume #1) bares ~~5.5~~<sup>5.5</sup> at MLLW. It should be charted. *as a \* (5)* <sup>-5.2</sup>

An uncharted ledge at 56/37/10.<sup>4</sup>~~48~~<sup>4</sup> N, 134/13/50.<sup>13</sup>~~58~~<sup>13</sup> W, (Position No. 4156, JD 271, Sounding Volume #1) bares ~~7.0~~<sup>7.0</sup> at MLLW. It should be charted. *as a \* (6)* <sup>-6.3</sup>

An uncharted reef at 56/37/07.<sup>08.12</sup>~~88~~<sup>08.12</sup> N, 134/13/17.<sup>18.20</sup>~~94~~<sup>18.20</sup> W, (Position No. 4204, JD 271, Sounding Volume #1) bares ~~5.0~~<sup>5.0</sup> at MLLW. It should be charted. *as a \* (4)* <sup>-4.0</sup>

An uncharted reef at 56/37/31.<sup>95</sup>~~72~~<sup>95</sup> N, 134/13/13.<sup>7</sup>~~29~~<sup>7</sup> W, (Position No. 4339, JD 274, Sounding Volume #1) bares ~~7.0~~<sup>7.0</sup> at MLLW. It should be charted. *as a \* (7)* <sup>-6.9</sup>

An uncharted ledge at 56/37/<sup>01.85</sup>~~82.87~~ N, 134/12/<sup>.04</sup>~~42.22~~ W, (Position No. 4369, JD 274, Sounding Volume #1) bares <sup>0</sup>~~9.0~~ at MLLW. It should be charted. *wa \* (8)* <sup>-7.9</sup>

An uncharted reef at 56/37/57.<sup>0</sup>~~42~~ N, 134/11/43.<sup>1</sup>~~56~~ W, bares 6.4' at MLLW. Its limits can be found at Position Nos. 4436, 4437, and 4438, JD 275, Sounding Volume #1. It should be charted. *wa \* (7)*

An uncharted rock at 56/37/38.<sup>86</sup>~~61~~ N, 134/12/54.<sup>32</sup>~~28~~ W, (Position No. 4439, JD 275, Sounding Volume #1) bares <sup>5.7</sup>~~5.7~~ at MLLW. It should be charted. *wa \* (5)* <sup>5.2</sup>

An uncharted rock at 56/36/58.<sup>78</sup>~~84~~ N, 134/11/<sup>24.02</sup>~~23.86~~ W, (Position No. 4537, JD 276, Sounding Volume #1) bares <sup>11.8</sup>~~11.8~~ at MLLW. It should be charted. *wa \* (2)* <sup>-12.0</sup>

An uncharted rock at 56/37/33.02 N, 134/13/16.34 W, (Position No. 4538, JD 276, Sounding Volume #1) bares 2.1' at MLLW. It should be charted. *wa Chart Code 70*

The eastern limit of an uncharted reef located at Position No. 4339 is at 56/37/31.93 N, 134/13/11.19 W (Position No. 4539, JD 276, Sounding Volume #1).

An uncharted ledge at 56/37/23.02 N, 134/12/30.60 W, (Position No. 4540, JD 276, Sounding Volume #1) bares <sup>7.2</sup>~~7.2~~ at MLLW. It should be charted. *wa \* (6)* <sup>-6.0</sup>

An uncharted reef at 56/37/14.07 N, 134/11/49.92 W, (Position No. 4541, JD 276, Sounding Volume #1) is submerged <sup>4.8</sup>~~4.8~~ at MLLW. It should be charted. *Long O'Pe* <sup>4.1</sup>

An uncharted ledge at 56/36/53.5<sup>1</sup>~~52~~ N, 134/11/49.5<sup>1</sup>~~54~~ W, (Position No. 4574, JD 276, Sounding Volume #1) bares 2.6' at MLLW. It should be charted.

The easternmost corner of three wrecked scows on a beach is located at 56/36/33.4<sup>1</sup>~~44~~ N, 134/12/39.<sup>79</sup>~~79~~ W. They are all approximately 10 m x 25 m and lie in a line side by side. See Position No. 4645, JD 276, Sounding Volume #1. It should be charted. *wa Visible bars (6)*

An uncharted ledge at 56/36/55.<sup>21</sup>~~53~~ N, 134/13/06.5<sup>1</sup>~~54~~ W, (Position No. 4646, JD 277, Sounding Volume #1) is ~~awash~~ at MLLW. It should be charted. *wa \* (6)* <sup>4.03</sup>

An uncharted rock at 56/36/54.2<sup>5</sup>~~20~~ N, 134/13/05.<sup>22</sup>~~16~~ W, (Position No. 4647, JD 277, Sounding Volume #1) bares <sup>3.0</sup>~~3.0~~ at MLLW. It should be charted. *wa \* (2)* <sup>-1.8</sup>

An uncharted reef at 56/36/43.18 N, 134/12/59.53 W, (Position No. 4648, JD 277, Sounding Volume #1) bares <sup>2.0</sup>~~2.0~~ at MLLW. It should be charted. *wa \* (1)* <sup>-1.5</sup>

The least depth observed on a reef located at 56/36/54 N, 134/12/48 W (Position No. 4717, JD 278, Sounding Volume #1) is 10.2' at MLLW. It should be charted. *was single 17' x +1.7 fathom*

An uncharted reef at 56/37/15.87 N, 134/13/09.38 W, (Position No. 4727, JD 278, Sounding Volume #1) bares 14.0' at MLLW. It should be charted. *(4) islet -3.7 MHW*

An uncharted rock at 56/37/12.02 N, 134/14/38.33 W, (Position No. 4794, JD 279, Sounding Volume #1) bares 8.0' at MLLW. It should be charted. *was \* (8) 11.92 .87 -8.7*

An uncharted rock at 56/36/34.86 N, 134/15/04.70 W, (Position No. 4795, JD 279, Sounding Volume #1) bares 5.0' at MLLW. It should be charted. *was \* (6) .88 -5.7*

An uncharted ledge at 56/36/36.58 N, 134/15/05.56 W, (Position No. 4796, JD 279, Sounding Volume #1) bares 14.0' at MLLW. It should be charted. *(3) islet .45 .72 -2.9 MHW*

An uncharted rock at 56/36/38.41 N, 134/15/03.68 W, (Position No. 4797, JD 279, Sounding Volume #1) bares 5.0' at MLLW. It should be charted. *was \* (1) .30 .88 -5.8*

An uncharted rock at 56/36/38.15 N, 134/15/02.46 W, (Position No. 4798, JD 279, Sounding Volume #1) bares 2.0' at MLLW. It should be charted. *was \* (3) .01 .71 -3.0*

An uncharted rock at 56/36/25.98 N, 134/15/04.18 W, (Position No. 4799, JD 279, Sounding Volume #1) bares 3.0' at MLLW. It should be charted. *was \* (4) .82 .33 -4.4*

An uncharted rock at 56/36/29.83 N, 134/15/05.69 W, (Position No. 4800, JD 279, Sounding Volume #1) bares 3.0' at MLLW. It should be charted. *was \* (4) .69 .81 -3.9*

An uncharted ledge at 56/36/30.76 N, 134/15/05.76 W, (Position No. 4801, JD 279, Sounding Volume #1) bares 8.0' at MLLW. It should be charted. *was \* (10) .62 .93 -9.6*

An uncharted ledge at 56/36/43.58 N, 134/15/04.38 W, (Position No. 4802, JD 279, Sounding Volume #1) bares 5.0' at MLLW. It should be charted. *was \* (5) .7 .1 -5.1*

An uncharted rock at 56/36/40.59 N, 134/15/05.98 W, (Position No. 4803, JD 279, Sounding Volume #1) bares 4.0' at MLLW. It should be charted. *was \* (5) .46 .06.20 -5.5*

An uncharted reef at 56/36/53.04 N, 134/15/14.69 W, (Position No. 4804, JD 279, Sounding Volume #1) bares 8.0' at MLLW. It should be charted. *was \* (9) .52.74 .15.34 -9.0*

An uncharted rock at 56/36/50.58 N, 134/15/12.92 W, (Position No. 4805, JD 279, Sounding Volume #1) bares 7.0' at MLLW. It should be charted. *was \* (7) .30 .13.41 -7.4*

An uncharted rock at 56/37/03.24 N, 134/15/18.42 W, (Position No. 4806, JD 279, Sounding Volume #1) bares 7.0' at MLLW. It should be charted. *was \* (8) .54 -7.9*

An uncharted ledge at 56/37/01.88<sup>1</sup> N, 134/15/19.09<sup>.24</sup> W, (Position No. 4807, JD 279, Sounding Volume #1) bares 15.0' at MLLW. It should be charted. *(4) islet* <sup>-4.4</sup> <sup>MLLW</sup>

An uncharted rock at 56/37/04.80<sup>.69</sup> N, 134/15/17.44<sup>.72</sup> W, (Position No. 4808, JD 279, Sounding Volume #1) bares 5.0' at MLLW. It should be charted. *islet # (6)* <sup>-1.5</sup>

The uncharted northeastern<sup>25.98</sup> corner of a submerged piling group at 56/35/59.34 N, 134/14/26.12<sup>12</sup> W (Position No. 9000, JD 305, Sounding Volume #1) bares 16.5' at MLLW. It should be charted.

The uncharted southeast corner of the pier ruins occurs at 56/35/58.58<sup>24</sup> N, 134/14/28.01<sup>26.90</sup> W (Position No. 9002, JD 305, Sounding Volume #1) *islet*

An uncharted rock at 56/36/57.96 N, 134/13/26.62 W, (Position No. 9003, JD 305, Sounding Volume #1) bares 20.0' at MLLW. It should be charted. *islet (9)* <sup>-8.7</sup> <sup>MLLW</sup>

An uncharted rock at 56/37/05.86<sup>5</sup> N, 134/13/23.07 W, (Position No. 9004, JD 305, Sounding Volume #1) bares 27.0' at MLLW. It should be charted. *islet (16)* <sup>-15.6</sup> <sup>MLLW</sup>

An uncharted rock at 56/37/05.12<sup>9</sup> N, 134/13/17.04 W (Position No. 9005, JD 305, Sounding Volume #1) bares 20.6' at MLLW. It should be charted. *islet (8)* <sup>-8.4</sup> <sup>MLLW</sup>

A foul line was run around the kelp in the following vicinities:  
1) 56/37/05 N, 134/13/20 W, and 2) 56/37/20 N, 134/13/45 W. The area inside these foul lines is thick with kelp and declared unsafe for navigation due to the presence of numerous rocks.

A declared hazard to navigation was found as an uncharted rock covered by 0.3 fathoms at MLLW (Position No. 4, JD 163, Sounding Volume #2). The rock is located at 56/36/18.30 N, 134/14/00.01 W, and is 3.8 nautical miles bearing 050 degrees true from Point Ellis, Kuiu Island. A copy of the Dangers to Navigation message to the Chart Information Branch and report to the U.S. Coast Guard are appended to this report. *0.2 fathoms*

#### M. MISCELLANEOUS

MiniRanger rates, which were less than the recommended 100 meters found in Appendix S, Section 1 of the PMC OORDER, were used for range azimuth hydrographic control in the region around station EVERS. Sounding positions compared favorably with data from the same area which used distances greater than 100 meters. It is recommended that data with less than 100 meter distance should be retained based on strong signal strengths and true plotting. ✓

Later in the field season, a current meter was deployed from the ship at the working site. Current data acquisition proved unsuccessful due to weather conditions.

N. ADEQUACY OF SURVEY

This survey is sufficiently complete and adequate within its boundaries to supersede the prior survey for charting, with the recommendations noted in the previous section. ✓

O. AIDS TO NAVIGATION

There are no aids to navigation in the survey area. ✓

P. STATISTICS

Number of Positions:	1989
Total Nautical Miles of Sounding Lines:	2209
Square Miles of Sounding Lines:	136.1
Bottom Samples:	11.4
Velocity Casts:	30
Tide Stations Occupied:	3
Dive Investigations:	3
	2

Q. RECOMMENDATIONS

It is the opinion of the hydrographer that despite hydrography done around station TINKER, soundings should remain uncharted as indicated on Chart No. 17370. It is suggested that this area be declared foul due to numerous rocks, and depths less than required by the project instructions. *Use Smooth Sheet for final portrayal of area!*

The shoreline revision photography flown this summer should be applied to the next edition of Chart 17370 to correct apparent shoreline discrepancies between the present survey and the chart.

R. AUTOMATED DATA PROCESSING

The following programs were used for automated data acquisition and processing during this survey:

<u>PROGRAM NUMBER</u>	<u>PROGRAM NAME</u>	<u>VERSION DATE</u>
RK 112	Range-Range Real Time HYDROLOT	3/19/81
FA 181	Range-Azimuth Logger	2/23/78
RK 201	Grid, Signal and Lattice Plot	4/18/75
RK 211	Range-Range Non-Real Time Plot	2/02/81
RK 212	Visual Station Table Load	4/01/74
RK 216	Range-Azimuth Non-Real Time Plot	2/09/81
RK 300	Utility Computations	10/21/80
RK 300	Reformat and Data Check	5/04/76
RK 407	Geodetic Inverse/Direct Computation	9/25/78
RK 409	Geodetic Utility Package	9/20/78
AM 500	Predicted Tide Generator	11/10/72
AM 602	Elinore (Line Oriented Editor)	5/20/75

Geodetic computations were made using the geodetic and triangulation programs written for the HP-9815A calculator.

S. REFERRAL TO REPORTS

Horizontal Control Report  
Field Tide Note  
Electronic Control Report  
Corrections of Echo Soundings Report  
Field Geographic Names  
Coast Pilot Report  
Shoreline Verification Report

Respectfully submitted,

*Gerald E. Wheaton*

*for*

James E. Waddell, Jr.  
ENS, NOAA

Approved and forwarded

*James M. Wintermyre*  
James M. Wintermyre, CDR, NOAA  
Commanding Officer  
NOAA Ship DAVIDSON



OPR-0353-DA-81  
DA-10-4-82(H-10050)  
PARAMETER TAPE PRINTOUT

DA-10-4A-82  
FEST=22000  
CLAT=6264000  
CMER=134/20/00  
GRID=30  
PLSCL=10000  
PLAT=56/35/15  
PLON=134/17/00  
VESNO=3131  
YR=82  
ANDIST=00.0

SKEW: 0, 21.75,32

DA-10-4B-82  
FEST=22000  
CLAT=6264000  
CMER=134/20/00  
GRID=30  
PLSCL=10000  
PLAT=56/36/42  
PLON=134/12/00  
VESNO=3131  
YR=82  
ANDIST=00.0

SKEW: 0, 20,34

FIELD TIDE REPORT  
OPR-0353-DA-82  
H-10050 DA-10-4-82  
BAY OF PILLARS, KUIU ISLAND, ALASKA

Field tide reduction of soundings on H-10050 is based on daily predicted tides for Sitka, Alaska (Reference Station 945-1600) corrected for predicted times and heights as described in the Project Instructions. Tide correctors of -6 minutes were applied to the daily predicted times of high and low waters and a height ratio of 1.25 was applied to the predicted heights for use in preliminary zoning.

Program AM 500, "Predicted Tides Generator" (11/10/72 version) was used to produce ASCII and BINARY Predicted Tide Tapes at 0.1 fathom intervals for use in the field and preliminary plotting. Soundings on the final field sheet submitted to PMC were plotted using predicted tides at 0.1 fathom intervals.

The Sitka primary tide reference station served as control for this survey. Bristol bubbler-type tide recording gages (Model No. 1G3X628-15) were installed in Chatham Strait and Bay of Pillars (upper and lower bay) to provide data for the survey. The bubbler gages were operated on UTC and inspected every two to three days by DAVIDSON personnel.

The criteria for gage and tide staff site selection were 1) proximity to the survey area, 2) location in a zone of tidal flow representative of the survey area, 3) accessibility for servicing and inspections, 4) protection from the elements, 5) access to a vertical or steep rock face next to deep water to facilitate securing of the staff and ensure the orifice did not go dry on extreme low tides.

Project Instructions for OPR-0353-DA-82 dated 15 June 81 called for the installation of two tide stations to control hydrography at the entrance and inside the Bay of Pillars. DAVIDSON requested and obtained permission on 24 May 82 to install an additional tide station (945-1285) in the lower bay to ensure a more complete representation of tidal flow in the survey area.

<u>SITE</u>	<u>REFERENCE STATION</u>	<u>GAGE S/N</u>	<u>LAT/LONG</u>	<u>DAYS OF OPERATION</u>
Sitka, AK	Primary 945-1600	L-S ADR 82527-77 M/C 7623838228	57°03'06"N 135°20'30"W	Year round
Chatham Strait	Tertiary 945-1277	1) 67A10292 2) 64A11030	56°36'34"N 134°17'15"W	21 Sept-7 Oct 29 Oct-2 Nov 82
Upper Bay of Pillars	Tertiary 945-1338	67A10294	56°38'51"N 134°08'48"W	" "
Lower Bay of Pillars	Tertiary 945-1285	67A16201	56°36'38"N 134°12'58"W	" "
<u>Sitka (945-1600)</u>				

The Sitka primary tide reference station is located within a partially

enclosed 5'x7'x9' area inside the oil storage building on Conway Dock, behind Sitka Sound Seafoods, Sitka. The two gages within, a Leupold and Stevens modified ADR and a Metercraft gas-purge model, are maintained by a contracted observer. The tide station was inspected and the staff leveled to third-order standards at the beginning and end of hydrographic data acquisition for H-10050. Leveling results agreed with historic elevation data, with the exception of the Primary Benchmark (No. 16) which had been disturbed by construction in the area. Pacific Tides Party was notified about the disturbed mark on 27 September 1982. A copy of the letter is appended.

#### Chatham Strait (945-1277)

The Chatham Strait tide station was located on the southeast tip of a small unnamed island approximately 3 nm NNE of Point Ellis, Kuiu Island. The staff and orifice were installed in a deep and narrow channel approximately 1 nm northwest of the entrance to Bay of Pillars. Third-order levels to 5 permanent benchmarks were performed at the times of staff installation and removal. Results were consistent with historic data. There was no evidence of staff or crustal movement. The site was first occupied in the fall, 1981. Two gages were installed at this site to provide redundancy in the event of gage failure. To distinguish between the gages, records for gage S/N 67A10292 were annotated in red ink while records for gage S/N 64A11030 were annotated in blue ink. Based on 11 staff-to-gage comparisons for gage S/N 67A10292, including a mean value for the 3-hour gage installation test, a marigram reading of  $5.0 \pm 0.1$  ft. (one standard deviation) corresponds to a staff reading of 0.0 feet. Based on 11 staff-to-gage comparisons for gage S/N 64A11030, including a mean value for the 3-hour gage installation test, a marigram reading of  $2.4 \pm 0.1$  ft. corresponds to a staff reading of 0.0 feet. Both gages kept accurate time and functioned properly.

#### Upper Bay of Pillars (945-1338)

The upper Bay of Pillars gage was located on the northeast point of a small, densely wooded island approximately 0.01 miles square centrally located in the western half of the upper bay. The staff was mounted on a steep rock face about 200 meters north of Station BACK, 1982. Third-order levels were performed at the times of staff installation and removal to a permanent benchmark and two newly established temporary benchmarks. Opening and closing level runs were in good agreement. There was no evidence of staff or crustal movement. Based on 12 staff-to-gage comparisons including a mean value for the 3-hour gage installation test a marigram reading of  $8.1 \pm 0.1$  ft. corresponds to a staff reading of 0.0 feet. Aside from having to reset the gage time frequently, the gage functioned properly.

#### Lower Bay of Pillars (945-1285)

The lower Bay of Pillars gage was located on the western side of a small wooded point of land approximately 1.6 nm northwest of the abandoned cannery on the southern shore of the bay. Third-order levels to three temporary benchmarks performed at the times of staff installation and removal were consistent with historic elevation data. There was no evidence of staff or crustal movement. On the basis of 13 staff-to-gage comparisons including a mean value for the 3-hour gage installation test a marigram reading of  $8.0 \pm 0.1$  ft. corresponds to a staff reading of 0.0 feet. The time on this gage had to be reset frequently. Additionally, the spring-actuated recording chart roll take-up mechanism malfunctioned,

causing the paper to jump sprocket holes on two occasions. When abstracting hourly heights of tides from the marigrams of tertiary tide stations, time errors caused by fast or slow gage clock mechanisms or jumped sprocket holes were distributed linearly throughout the period between observations.

#### Zoning

Recorded water levels for Chatham Strait and lower Bay of Pillars agree with the corrected predicted tides for the area, whereas times of tidal extrema in the upper Bay of Pillars lagged behind corrected predicted tides by approximately 40 minutes. Twenty-nine comparisons of the differences between the times of high and low tides recorded by the gages in upper and lower Bay of Pillars between September 23 - November 1 indicate a delay of  $39.6 \pm 15$  minutes (one standard deviation) in the times of tidal extrema in the upper bay. The narrow passage between the two bodies acts as a bottleneck impeding the free flow of water into and out of the upper bay. One can predict from this that tidal maxima will be lower and tidal minima will be higher in the upper bay than in the lower bay.

Respectfully submitted,



Eric G. Hawk, ENS, NOAA  
NOAA Ship DAVIDSON

Approved and forwarded,



James M. Wintermyte, CDR, NOAA  
Commanding Officer  
NOAA Ship DAVIDSON

JMW/EGH:jaf

OPR-0353-DA-81

DA-10-4-82(H-10050)

PREDICTED TIDES CORRECTOR TAPE PRINTOUT

SITKA, ALASKA

ROWAN BAY

56 38 134 20 -0.06 -0.06 0.0 0.0 1.25 1.25

000

FM

0.1

## GEOGRAPHIC NAMES

H-10050

Name on Survey	ON CHART NO. 17370									
	A	B	C	D	E	F	G	H	K	
	ON PREVIOUS SURVEY	CON U.S. QUADRANGLE MAPS	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP	GRAND MCNALLY ATLAS	U.S. LIGHT LIST			
ALASKA (Title)										1
CHATHAM STRAIT (Title)	X									2
BAY OF PILLARS	X									3
KUIU ISLAND	X									4
										5
										6
										7
										8
										9
										10
										11
										12
										13
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										21
										22
										23
										24
										25

Approved:

*Charles E. Harrington*

Chief Geographer - N/C 425

11 OCT. 1983

OPR-0353-DA-81  
DA-10-4-82(H-10050)  
VELOCITY TAPE PRINTOUT

TABLE 1:

000045	0	0000	0001	001	000000	010050
000133	0	0001				
000220	0	0002				
000310	0	0003				
000395	0	0004				
000475	0	0005				
000555	0	0006				
000684	0	0007				

TABLE 2:

000000	0	0000	0002	001	000000	010050
000684	0	0000				

<div> <div>OPR -0353-DA-81</div> <div>DA-10-4-82</div> </div> <div> <div>SOUNDING CORRECTION ABSTRACT</div> <div>Fathometer No. 1077</div> </div> <div> <div>FIELD NO.</div> <div>REGISTRY NO. H-10050</div> </div>									
VESSEL 3131									
Julian Date	From Time (GMT)	To Time (GMT)	Velocity Corr Table No.	(Note: TRA Corr. is the algebraic sum of these columns)					Remarks
				Draft Corr	Instrument Error Corr	Initial Corr	S&S Corr	TRA Corr ft/fm	
271	175400		1	0.03fm	0.0	0.0	0.0	0.3fm	
271	224105		2	0.0	0.0	0.0	0.0	0.0	
271	225708		1	0.3fm	0.0	0.0	0.0	0.3fm	
274	163206		1	0.3fm	0.0	0.0	0.0	0.3fm	
275	000144		1	0.3fm	0.0	0.0	0.0	0.3fm	
275	185904		2	0.0	0.0	0.0	0.0	0.0	
275	200407		1	0.3fm	0.0	0.0	0.0	0.3fm	
275	210006		2	0.0	0.0	0.0	0.0	0.0	
276	162926		2	0.0	0.0	0.0	0.0	0.0	
276	201520		1	0.3fm	0.0	0.0	0.0	0.3fm	
277	182221		1	0.3fm	0.0	0.0	0.0	0.3fm	
279	164038		2	0.3fm	0.0	0.0	0.0	0.3fm	
280	173200		1	0.3fm	0.0	0.0	0.0	0.3fm	
280	200013		2	0.0	0.0	0.0	0.0	0.0	





3132

Julian Date	From Time (GMT)	To Time (GMT)	Velocity Corr Table No.	(Note: TRA Corr. is the algebraic sum of these columns)					Remarks
				Draft Corr	Instrument Error Corr	Initial Corr	S&S Corr	TRA Corr ft/fm	
266	200037		1	0.3fm	0.0	0.0	0.0	0.3fm	
266	212200		2	0.0	0.0	0.0	0.0	0.0	
266	220542		1	0.3fm	0.0	0.0	0.0	0.3fm	
271	173934		1	0.3fm	0.0	0.0	0.0	0.3fm	
271	175828		2	0.0	0.0	0.0	0.0	0.0	
271	181652		1	0.3fm	0.0	0.0	0.0	0.3fm	
271	205248		2	0.0	0.0	0.0	0.0	0.0	
271	205846		1	0.3fm	0.0	0.0	0.0	0.3fm	
271	231752		2	0.0	0.0	0.0	0.0	0.0	
271	233026		1	0.3fm	0.0	0.0	0.0	0.3fm	
272	001032		1	0.3fm	0.0	0.0	0.0	0.3fm	
274	182500		2	0.0	0.0	0.0	0.0	0.0	
274	184310		1	0.3fm	0.0	0.0	0.0	0.3fm	
275	000200		1	0.0	0.0	0.0	0.0	0.0	

<div style="display: flex; justify-content: space-between;"> <div> VESSEL <u>3131</u> </div> <div> OPR <u>0353-DA-81</u> </div> <div> FIELD NO. <u>DA-10-4-82</u>  REGISTRY NO. <u>H-10050</u> </div> </div>									
SOUNDING CORRECTION ABSTRACT Fathometer No. <u>1080</u>									
Julian Date	From Time (GMT)	To Time (GMT)	Velocity Corr Table No.	(Note: TRA Corr. is the algebraic sum of these columns)					Remarks
				Draft Corr	Instrument Error Corr	Initial Corr	S&S Corr	TRA Corr Ft/fm	
275	001708		1	0.3fm	0.0	0.0	0.0	0.3fm	
276	000004		1	0.3fm	0.0	0.0	0.0	0.3fm	
276	001000		2	0.0	0.0	0.0	0.0	0.0	
276	165917		1	0.3fm	0.0	0.0	0.0	0.3fm	
277	163000		2	0.0	0.0	0.0	0.0	0.0	
277	172130		1	0.3fm	0.0	0.0	0.0	0.3fm	
278	170847		1	0.3fm	0.0	0.0	0.0	0.3fm	
278	171800		2	0.0	0.0	0.0	0.0	0.0	
278	172213		1	0.3fm	0.0	0.0	0.0	0.3fm	
278	204951		2	0.0	0.0	0.0	0.0	0.0	
278	211053		1	0.3fm	0.0	0.0	0.0	0.3fm	
279	161315		1	0.3fm	0.0	0.0	0.0	0.3fm	
279	171200		2	0.0	0.0	0.0	0.0	0.0	
279	210740		1	0.3fm	0.0	0.0	0.0	0.3fm	

3132

[illegible]

1

Monark skiff (3133)

Fathometer No.

DA-TU-4-02

FIELD NO.

REGISTRY NO. H-  
10050

[illegible]

## ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 3131

SHEET : DA-10-4-82

TIME	DAY	PATTERN 1	PATTERN 2
175400	271	+0000 <sup>23</sup>	-00001
<del>163206</del>	<del>274</del>	<del>+00001</del>	<del>-00001</del>
<del>000144</del>	<del>275</del>	<del>+00001</del>	<del>00001</del>
<del>105004</del>	<del>275</del>	<del>+00001</del>	<del>00001</del>
231800	275	-00003	-00001
235839		-00001	+0000 <sup>71</sup>
000125	276	+00000	+00000
162926	276	+0000 <sup>23</sup>	+00001
165658		+00001	-00001
201520		-00001	+0000 <sup>23</sup>
213709		+0000 <sup>23</sup>	-00001
182221	277	-00001	+0000 <sup>23</sup>
195401		+0000 <sup>23</sup>	-00001
<del>214242</del>		<del>-00001</del>	<del>+00001</del>
173200	280	+00000	+00000
182718	303	+0000 <sup>22</sup>	+00007
193342		+00007	+00007
203207		+0000 <sup>22</sup>	+00007
212340		+00007	+00007
181837	304	+0000 <sup>22</sup>	+00007
185449		+00007	+00007
200650		+0000 <sup>22</sup>	+00007
201438		+00007	+00007
203000		+0000 <sup>22</sup>	+00007
205208		+00007	+0000 <sup>22</sup>
211642		+0000 <sup>22</sup>	+00007

# RANGE-AZIMUTH CORRECTOR ABSTRACT

VESSEL : 3131

SHEET : DA-10-4-82

TIME	DAY	PATTERN 1	PATTERN 2
164038	279	+0000 <del>23</del>	} NO CORRECTIONS
200013	280	-00001	
222500	305	-0000 <del>12</del>	

211053

278

-000022

-000020

161315

279

-000022

-000022

171200

279

+00000

+00000

165122

303

-00002

+000020



## ELECTRONIC CORPECTOP ABSTRACT

VESSEL : 3132

SHEET : DA-10-4-82

TIME	DAY	PATTEPN 1	PATTEPN 2
200037	266	-000020	-000012
202453		-000020	+000003
211638		-000012	+000003
173934	271	-000012	-000020
221345		-000013	-000012
<del>001032</del>	<del>272</del>	<del>000013</del>	<del>000012</del>
002634		-000012	-000020
162656	272	+000003	-000012
165728		+000003	-000013
174648		-000012	-000020
183635		+000003	-000013
184839		-000012	-000020
190540		+000003	-000013
200241		-000012	+000003
214907		+000003	-000012
184310	274	-000012	-000020
222343		-000020	-000012
001708	275	-000012	-000020
195527	275	-000012	-000020
<del>222710</del>		<del>000012</del>	<del>000010</del>
000004	276	-000001	-000001
164000	276	-000012	-000012
180445		-000020	-000012
181411		-000012	-000012
181819		-000012	-000020
185420		-000012	-000012
220407		-000012	-000020
230100		+000002	+000000
163000	277	+000002	+000020
172130		-000012	-000012
<del>172114</del>		<del>000012</del>	<del>000012</del>
174312		-000010	-000012
170847	278	-000020	-000012
171800		+000000	+000000
172213		-000020	-000012
180119		-000012	-000012
185633		-000020	-000020
190643		-000012	-000020
191516		-000020	-000012

# RANGE-AZIMUTH CORRECTOR ABSTRACT

VESSEL : 3132

SHEET : DA-10-4-82

TIME	DAY	PATTERN 1	PATTERN 2
210740	279	-00000 <sup>12</sup>	} NO CORRECTIONS
164434	280	-00000 <sup>12</sup>	
181000	303	+00000 <sup>12</sup>	
170340	304	+00000 <sup>10</sup>	
232730	305	+000006	

OPR-0353-DA-81  
DA-10-4-82(H-10050)  
SIGNAL TAPE PRINTOUT

047	6	56	36	21264	134	10	35084	139	0006	000000	SPRAY 1981
012	4	56	35	32237	134	10	01935	139	0005	000000	BERRY 1981
028	5	56	36	12606	134	16	40093	250	0004	000000	STRAW No. 2 1981
030	4	56	35	04715	134	17	25459	179	0006	000000	POST 1982
034	7	56	35	49060	134	15	25144	250	0005	000000	RIPE No. 1 1982
036	0	56	36	12485	134	15	39604	139	0004	000000	FRESH 1982
038	3	56	36	12451	134	15	39169	250	0004	000000	FRESH No. 2 1982
043	0	56	36	24570	134	15	05887	139	0004	000000	BOP 1982
044	1	56	36	39987	134	14	34337	139	0004	000000	PILE 1982
045	4	56	37	00405	134	17	39774	179	0004	000000	COLUMN 1982
046	4	56	37	57865	134	11	16024	250	0004	000000	SPRUCE 1982
047	1	56	38	14193	134	10	00474	250	0004	000000	RIVER 1982
048	1	56	38	44713	134	08	46565	250	0004	000000	BACK 1982
049	7	56	36	30488	134	13	30708	139	0005	000000	SALT 1982
050	1	56	37	30254	134	13	16393	250	0006	000000	CLEAR 1982
051	2	56	39	02672	134	06	25178	250	0003	000000	VIEW 1982
052	4	56	37	12045	134	11	34701	250	0005	000000	BIRD 1982
053	3	56	37	13058	134	12	28052	250	0004	000000	LIMPET 1982
054	1	56	37	47162	134	12	14900	250	0003	000000	ALGAE 1982
055	1	56	34	01471	134	10	57210	179	0007	000000	POINT ELLIS LT"8" 1982
056	1	56	36	40163	134	14	34327	250	0004	000000	PILE No. 1 1982
057	7	56	36	30751	134	13	31081	250	0005	000000	SALT No. 1 1982
058	6	56	36	54814	134	13	13439	250	0004	000000	SAW No. 1 1982
060	1	56	37	00552	134	17	39704	250	0004	000000	COLUMN No. 1 1982
061	6	56	36	54938	134	13	13456	250	0004	000000	SAW 1982
062	1	56	38	44545	134	08	47048	250	0004	000000	BACK No. 1 1982
063	1	56	38	45158	134	08	46552	179	0004	000000	BACK No. 2 1982
064	2	56	39	02927	134	06	25215	250	0003	000000	VIEW No. 1 1982
065	2	56	39	02474	134	06	24760	179	0003	000000	VIEW No. 2 1982
066	6	56	38	20638	134	05	56745	250	0003	000000	COOK 1982
067	6	56	38	24194	134	08	03297	250	0003	000000	GAUSS 1982
068	6	56	37	50944	134	10	00781	250	0004	000000	TINKER 1982
069	6	56	38	09298	134	10	17280	250	0004	000000	EVERS 1982
070	6	56	38	21503	134	10	03894	250	0004	000000	CHANCE 1982
071	6	56	38	09840	134	06	26744	254	0005	000000	STAKE (Temp. Pt.)
072	6	56	36	02983	134	14	04385	254	0004	000000	NEWTON (Temp. Pt.)
073	0	56	36	12620	134	16	40430	179	0005	000000	STRAW 1981
200	1	56	35	59150	134	14	31170	252	0000	000000	DOLPHIN (Temp. Pt.)

ABSTRACT OF POSITIONS  
DA-10-4-82 (H-10050)

Launch DA-1 (3131)

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>S1</u>	<u>M</u>	<u>S2</u>	<u>REMARKS</u>
279	2723-2744	112	071	--	R/Az.	Shoreline
279	2746-2751	112	071	--	R/Az.	Shoreline
279	2754-2762	112	071	--	R/Az.	Mainscheme
279	2764-2828	112	071	--	R/Az.	Mainscheme
279	2831-2837	112	071	--	R/Az.	Crossline
280	2838-2843	042	048	--	067	DP's
280	2845-2846	042	067	--	048	DP's
280	2847-2855	112	048	--	R/Az.	Mainscheme
280	2856-2863	112	048	--	R/Az.	Shoreline
280	2865-2913	112	048	--	R/Az.	Shoreline
280	2914-2919	112	048	--	R/Az.	Center Channel line
280	2920-2922	112	048	--	R/Az.	Shoreline
280	2923	042	048	--	067	DP
303	2930-2933	042	056	--	072	Splits
303	2934-2937	042	056	--	072	Development
303	2938-2943	042	056	--	060	Development
303	2944-2951	042	056	--	060	Channel line
303	2952-2957	042	056	--	060	Splits
303	2958-2966	042	046	--	058	Mainscheme
303	2967-2980	042	052	--	053	Development
304	2985	042	058	--	072	DP
304	2986-2989	042	058	--	034	Inshore Mainscheme
304	2990-2994	042	056	--	072	BS
304	2995	042	058	--	072	BS
304	2996	042	056	--	072	BS
304	2997	042	072	--	056	BS
304	3001-3002	042	058	--	072	BS
304	3003	042	056	--	058	BS
304	3004-3005	042	058	--	060	BS
304	3006	042	060	--	050	BS
305	3007-3008	112	050	--	R/Az.	Dive DP

ABSTRACT OF POSITIONS  
DA-10-4-82 (H-10050)

Launch DA-1 (3131)

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>S1</u>	<u>M</u>	<u>S2</u>	<u>REMARKS</u>
271	2001-2018	042	062	--	064	Shoreline
271	2020-2032	042	062	--	064	Shoreline
271	2033-2067	042	062	--	064	Mainscheme
271	2069-2094	042	062	--	064	Mainscheme
271	2103-2110	042	062	--	064	Mainscheme
271	2114-2153	042	062	--	064	Mainscheme
271	2154-2156	042	062	--	064	Split
271	2157	042	062	--	064	DP
271	2159-2161	042	062	--	064	Mainscheme
271	2163-2172	042	062	--	064	Mainscheme
274	2173-2180	042	066	--	067	Crossline
274	2182-2191	042	066	--	067	Crossline
274	2192-2200	042	066	--	067	Shoreline
274	2201	042	066	--	067	DP
274	2202-2219	042	066	--	067	Shoreline
274	2223-2235	042	066	--	067	Shoreline
274	2257-2263	042	066	--	067	Mainscheme
274	2265-2293	042	066	--	067	Mainscheme
274	2295-2312	042	066	--	067	Mainscheme
274	2313-2363	042	066	--	067	Mainscheme
274-5	2366-2434	042	066	--	067	Mainscheme
275	2433-2437	042	066	--	067	Shoreline
275	2440-2441	042	066	--	067	DP's
275	2442-2462	042	066	--	067	Development
275	2463-2476	042	066	--	067	Splits
275	2477-2487	042	066	--	067	BS
275	2488-2492	042	053	--	054	BS
275	2493-2494	042	054	--	052	BS
276	2495, 2498	042	067	--	051	DP's
276	2502-2503	042	051	--	067	DP's
276	2507-2510	042	067	--	051	Inshore line
276	2514-2516	042	067	--	051	Splits
276	2518-2520	042	067	--	051	Development
276	2521-2529	042	067	--	051	Development
276	2530-2532	042	066	--	062	Shoreline
276	2534-2542	042	066	--	062	Shoreline
276	2543-2545	042	066	--	062	Shoreline
276	2546-2552	042	067	--	062	Fill-in
277	2553-2585	042	062	--	067	Mainscheme
277	2586-2597	042	067	--	070	Mainscheme
277	2598-2620	042	067	--	070	Mainscheme
277	2623-2629	042	067	--	070	Shoreline
277	2631-2642	042	070	--	062	Shoreline
277	2643-2645	042	070	--	062	Mainscheme
277	2648-2661	042	070	--	062	Mainscheme
277	2663-2665	042	070	--	062	Mainscheme
279	2667-2670	112	051	--	R/Az.	Mainscheme
279	2673-2692	112	051	--	R/Az.	Mainscheme
279	2695-2704	112	051	--	R/Az.	Shoreline
279	2706-2718	112	051	--	R/Az.	Shoreline

ABSTRACT OF POSITIONS  
DA DA-10-4-82 (H-10050)

Launch DA-2 (3132)

DAY	POSITIONS	CNTRL	S1	M	S2	REMARKS
266	4001-4021	042	028	--	038	Mainscheme
266	4022-4040	042	028	--	060	Mainscheme
266	4041-4069	042	038	--	060	Mainscheme
266	4070-4072	042	038	--	060	Split
266	4073-4076	010	---	VIS	--	DP's
271	4077-4083	042	057	--	034	Mainscheme
271	4084-4085	042	057	--	034	DP's
271	4087-4155	042	057	--	034	Mainscheme
271	4156	042	057	--	034	DP
271	4157-4176	042	057	--	034	Mainscheme
271	4177-4199	042	056	--	060	Mainscheme
271	4200-4203	042	056	--	060	Foul line
271	4204	042	056	--	060	DP
271	4205-4210	042	056	--	060	Mainscheme
271	4211-4218	042	056	--	060	Shoreline
272	4219-4225	042	056	--	060	Crossline
272	4226-4231	042	057	--	034	Crossline
272	4233-4241	042	038	--	060	Shoreline
272	4244-4259	042	038	--	056	Shoreline
272	4260-4270	042	057	--	034	Shoreline
272	4272-4278	042	038	--	056	Crossline
272	4279-4283	042	057	--	034	Crossline
272	4284-4296	042	038	--	056	Development
272	4297-4305	042	028	--	038	Shoreline
272	4306-4308	042	046	--	058	Mainscheme
272	4314-4316	042	046	--	058	Mainscheme
272	4317-4320	042	046	--	058	Splits
272	4321-4331	042	046	--	058	Mainscheme
272	4333-4336	042	046	--	058	Development/Split
272	4337-4338	042	046	--	058	Mainscheme
274	4340-4364	042	060	--	050	Mainscheme
274	4365-4368	042	060	--	050	Shoreline
274	4369	042	060	--	050	DP
274	4370-4381	042	060	--	050	Shoreline
274	4382-4385	042	060	--	050	Mainscheme
274	4388-4389	042	052	--	058	Mainscheme
274	4391-4400	042	052	--	058	Mainscheme
274	4401-4402	042	052	--	058	Shoreline
274	4405-4407	042	052	--	058	Shoreline
274	4409-4415	042	052	--	058	Development
274	4416-4420	042	052	--	058	Shoreline
275	4421-4427	042	046	--	052	Crossline
275	4428-4435	042	046	--	052	Shoreline
275	4436-4438	010	---	VIS	--	DP's
275	4439	042	046	--	052	DP
275	4440-4442	042	046	--	052	Mainscheme
275	4443-4448	042	046	--	052	Shoreline
275	4449-4454	042	046	--	052	Mainscheme
275	4459-4485	042	046	--	052	Mainscheme
275	4487-4489	042	046	--	052	Mainscheme

ABSTRACT OF POSITIONS  
DA-10-4-82 (H-10050)

Launch DA-2 (3132)

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>S1</u>	<u>M</u>	<u>S2</u>	<u>REMARKS</u>
275	4490-4519	042	054	--	052	Mainscheme
275	4520-4528	042	053	--	054	Mainscheme
275	4530-4531	042	053	--	054	Around Rock
275-6	4532-4536	042	053	--	054	Mainscheme
276	4537	042	053	--	054	DP
276	4538-4541	010	---	VIS	--	DP's
276	4542-4553	042	053	--	054	Shoreline
276	4557-4560	042	052	--	053	Crossline
276	4561-4563	042	053	--	054	Crossline
276	4564-4565	042	054	--	052	Crossline
276	4567-4573	042	054	--	052	Crossline
276	4575-4576	042	053	--	054	Split
276	4577-4584	042	053	--	054	Inshore Mainscheme
276	4585-4596	042	053	--	054	Development
276	4597-4615	042	053	--	054	Mainscheme
276	4516-4621	042	053	--	054	Crossline
276	4622-4625	042	053	--	052	Shoreline
276	4626-4634	042	060	--	052	Mainscheme
276	4635-4643	042	060	--	052	Shoreline
276	4644	042	061	--	054	DP
276	4645	042	050	--	052	BS
277	4646-4648	042	060	--	050	DP's
277	4549-4650	042	060	--	052	Crossline
277	4653-4655	042	060	--	050	Crossline
277	4656-4658	042	050	--	052	Crossline
277	4659-4660	042	050	--	052	Mainscheme
277	4662-4668	042	050	--	052	Mainscheme
278	4669-4671	042	060	--	050	Mainscheme
278	4672-4683	042	060	--	050	Development
278	4685-4691	042	060	--	052	Shoreline
278	4692-4697	042	050	--	052	Mainscheme
278	4698-4701	042	060	--	050	Crossline
278	4702-4704	042	052	--	060	Crossline
278	4705-4716	042	060	--	050	Splits
278	4719-4726	042	060	--	058	Splits
278	4727	010	---	VIS	--	DP
278	4728-4752	042	058	--	072	Mainscheme
278	4753-4763	042	058	--	072	Channel line
278	4765-4770	042	058	--	072	Shoreline
278	4774-4778	042	058	--	072	Shoreline
279	4779-4780	042	057	--	072	Shoreline
279	4782-4783	042	057	--	072	Mainscheme
279	4785-4786	042	057	--	072	Shoreline
279	4791-4793	042	057	--	072	Shoreline
279	4794, 4808	042	057	--	072	DP's
279	4816-4831	112	072	--	R/Az.	Mainscheme
280	4833-4855	112	072	--	R/Az.	Mainscheme
280	4856	112	072	--	R/Az.	DP
280	4857-4862	112	072	--	R/Az.	Splits
280	4863-4872	112	072	--	R/Az.	Crossline

ABSTRACT OF POSITIONS  
DA DA-10-4-82 (H-10050)

Launch DA-2 (3132)

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>S1</u>	<u>M</u>	<u>S2</u>	<u>REMARKS</u>
280	4875-4904	112	053	--	R/Az.	Mainscheme
280	4905-4914	112	053	--	R/Az.	Crossline
280	4915-4922	112	053	--	R/Az.	Fill- in
303	4923-4946	042	070	--	048	Development
303	4947-4952	042	070	--	048	Development
303	4955-4957	042	070	--	048	Development
303	4958-4965	042	070	--	048	Splits
303	4966-4973	112	048	--	R/Az.	Mainscheme
303	4975-4995	112	048	--	R/Az.	Mainscheme
303	4997-5004	112	048	--	R/Az.	Crossline
303	5051-5064	112	047	--	R/Az.	Crossline
304	5067, 5069	112	050	--	R/Az.	DP's
304	5070-5082	112	070	--	R/Az.	Mainscheme
304	5083-5090	112	070	--	R/Az.	Crossline
304	5091-5095	112	070	--	R/Az.	Split
304	5096-5099	112	068	--	R/Az.	Inshore
304	5100-5114	112	068	--	R/Az.	Crossline
304	5115-5146	112	050	--	R/Az.	Channel lines
304	5147-5149	112	050	--	R/Az.	Crossline
304	5150-5159	112	069	--	R/Az.	Channel line
304	5160-5169	112	069	--	R/Az.	Center of Channel
304	5170-5180	112	069	--	R/Az.	Channel line
304	5183-5187	112	069	--	R/Az.	Channel line
304	5188-5190	112	069	--	R/Az.	Shoreline
305	5191-5201	112	069	--	R/Az.	Channel line



ABSTRACT OF POSITIONS  
DA-10-4-82 (H-10050)

Monark Skiff (3133)

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>S1</u>	<u>M</u>	<u>S2</u>	<u>REMARKS</u>
163	0001-0004	010	--	VIS	--	DP's
305	9000	010	--	VIS	--	DP
305	9002-9005	010	--	VIS	--	DP's

NOAA FORM 75-44  
(11-72)

**OCEANOGRAPHIC LOG SHEET - M  
BOTTOM SEDIMENT DATA**

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

[illegible]

Use more than one line per sample if necessary.

★ U.S. G.P.O. 1972-769-565/530 REG. #6



**Use more than one line per sample if necessary.**

[illegible]



**U.S. DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
**NATIONAL OCEAN SURVEY**

NOAA Ship DAVIDSON S331  
1801 Fairview Avenue East  
Seattle, Washington 98102

Ref: CPM331/101-3M  
Ser 8-7

8 August 1982

Commander  
U.S. Coast Guard District 17  
P.O. Box 3-5000  
Juneau, Alaska 99802

Sir:

The following Dangers to Navigation were discovered during recent hydrographic survey operations near the Bay of Pillars, off Chatham Strait, Alaska.

1. Rock bares 0.3 fathoms at MLLW discovered; Chart 17370, Lat.  $56^{\circ}34'21.73''$  N; Long.  $134^{\circ}19'38.67''$  W; distance 0.6 nautical mile, bearing 341 degrees true from Point Ellis, Kuiu Island. This rock is presently charted as "Reported Submerged Rock".
2. Uncharted rock covered by 0.3 fathoms at MLLW discovered; Chart 17370; Lat.  $56^{\circ}36'18.30''$  N; Long.  $134^{\circ}14'00.01''$  W; distance 3.8 nautical miles bearing 050 degrees true from Point Ellis, Kuiu Island.
3. Uncharted rock covered by 1.7 fathoms at MLLW discovered; Chart 17370; Lat.  $56^{\circ}36'17''$  N, Long.  $134^{\circ}17'08''$  W; distance 2.8 nautical miles bearing 025 degrees true from Point Ellis, Kuiu Island.
4. Uncharted rock covered 3.5 fathoms at MLLW discovered; Chart 17370; Lat.  $56^{\circ}35'11''$  N, Long.  $134^{\circ}19'03''$  W; distance 1.4 nautical miles bearing 004 degrees true from Point Ellis, Kuiu Island.
5. Uncharted rock covered 2.6 fathoms at MLLW discovered; Chart 17370; Lat.  $56^{\circ}35'13''$  N, Long.  $134^{\circ}18'37''$  W; distance 1.5 nautical miles bearing 014 degrees true from Point Ellis Kuiu Island.



# SURVEY APPROVAL SHEET

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

A large portion of this survey was done under the supervision of the Executive Officer and Field Operations Officer when I was on leave. The daily supervision continued under the Field Operations Officer. Upon returning from leave I was briefed and inspected the sheets daily. Random checks of the records were made.

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


Survey is complete and adequate for superseding previous charted data.

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

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

Date: 12/17/82

Approved and forwarded by:

  
J. M. Wintermyre  
CDR, NOAA  
Commanding Officer

## HYDROGRAPHIC SURVEY STATISTICS

H-10050

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

RECORD DESCRIPTION		AMOUNT		RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET		1		BOAT SHEETS & PRELIMINARY OVERLAYS		2	
DESCRIPTIVE REPORT		1		SMOOTH OVERLAYS: POS. ARC, EXCESS		7	
DESCRIP- TION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS	
ENVELOPES							
CAHIERS			2				
VOLUMES							
BOXES			1				

T-SHEET PRINTS (List)

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	TOTALS
POSITIONS ON SHEET			1989
POSITIONS CHECKED		1989	1989
POSITIONS REVISED		6385	6385
SOUNDINGS REVISED		294	294
SOUNDINGS ERRONEOUSLY SPACED		-0-	-0-
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		-0-	-0-
TIME - HOURS			
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	2		2
VERIFICATION OF CONTROL		2	4
VERIFICATION OF POSITIONS		62	70
VERIFICATION OF SOUNDINGS		72	86
COMPILATION OF SMOOTH SHEET		45	53
APPLICATION OF TOPOGRAPHY		-0-	-0-
APPLICATION OF PHOTOBATHYMETRY		-0-	-0-
JUNCTIONS		2	3
COMPARISON WITH PRIOR SURVEYS & CHARTS		-0-	30
VERIFIER'S REPORT		9	24
OTHER (Digitization)			16
TOTALS	2	192	288

Pre-Verification by James Stringham, William Wert	Beginning Date 3-30-83	Ending Date 3-30-83
Verification by C. Russel Davies	Beginning Date 5-5-83/2-20-84	Ending Date 12-27-83/3-13-84
Evaluated by Gordon E. Kay	Time (Hours) 49	Date 3-20-84
Verification Check by James Stringham, James Green	Time (Hours)	Date
Marine Center Inspection by	Time (Hours)	Date
Quality Control Inspection by	Time (Hours)	Date
Requirements Evaluation by	Time (Hours)	Date



PACIFIC MARINE CENTER  
EVALUATION REPORT

REGISTRY NO: H-10050

FIELD NO: DA-10-4-82

Alaska, Chatham Straits, Bay of Pillars

SURVEYED: September 18 - November 1, 1982

SCALE: 1:10,000

SOUNDINGS: Ross Fineline Model 5000

Leadline

Diver's Depth Gauge

PROJECT NO: OPR-0353-DA-81

CONTROL: Motorola Mini-

Ranger III

Range/Range

Range/Azimuth

Chief of Party.....Cdr. J. M. Wintermyre

Surveyed By.....Lt. D. Dreves

Ltjg. N. Bogue

Ens. E. Hawk

Ens. J. Duggan

Ens. J. Waddell

Automated Plot By.....PMC Xynetics Plotter

Verified By.....C. Russel Davies

Evaluated By.....Gordon E. Kay

1. INTRODUCTION

H-10050 (1982) is a Navigable Area Survey (N.A.S.) conducted by the NOAA Ship DAVIDSON (S-331) in accordance with the following:

- o Project Instructions OPR-0353-DA-81, Rowan Bay, Alaska, dated June 15, 1981.
- o Change No. 1 dated July 1, 1981
- o Change No. 2 dated March 11, 1982
- o Change No. 3 dated August 26, 1982

H-10050 is situated in Bay of Pillars located just off of the eastern shore of Chatham Strait, Alaska, and joins H-9976 (1981 - 82).

During verification, the following data were changed:

- a. Projection parameters were changed to center the hydrography on the smooth sheet and to change the projection to polyconic.
- b. Tide level corrections used on H-10050 are from observed tides, (see Tide Note for Hydrographic Sheet (H-10050) attached).
- c. Electronic control positioning correctors were changed to reflect the mean of the baseline calibration correctors.

2. CONTROL AND SHORELINE

Horizontal control and hydrographic positioning are discussed in paragraph F and G of the Ship's Descriptive Report and in the Electronic and Horizontal Control Report for OPR-0353-DA-82.

The smooth sheet was plotted using preliminary adjusted field positions from the Horizontal Control Report for OPR-0353-DA-82 on the North American Datum of 1927.

Shoreline for orientation purposes is not shown on H-10050 because of conflict with the nautical chart enlargement (in accordance with Hydrographic Survey Guideline #17, section 6). See enclosed N/MOP211: WAW letter on recommendation for revision photography.

### 3. HYDROGRAPHY

Soundings at crosslines are in good agreement. The hydrography contained in the survey, H-10050, is adequate to determine the bottom configuration and least depths, with the following exception:

The least depths were not obtained on three shoals, they are located as follows:

<u>Depth (fathoms)</u>	<u>Position number</u>	<u>Latitude North</u>	<u>Longitude West</u>
1.7	4982/1	56°38'05.60" <i>Superseded by L-348/84</i>	134°09'25.88" ✓
3.9	4514/6	56°37'05.95" ✓	134°11'49.05" ✓
4.1	4468/2	56°37'43.56" ✓	134°12'14.84" ✓

Standard depth contours were adequately drawn and developed with the exception of the 0-fathom, 1-fathom, and 2-fathom depth contour, where hydrography was terminated at the limits required by N.A.S.

### 4. CONDITION OF SURVEY

The hydrographic records adequately conform to the requirements of the Hydrographic Manual, 4th Edition, revised through change 3, with the following exceptions.

a. Many rocks which were located during this survey are not shown on the final field sheets. The Hydrographic Manual, section 4.2.1, states "...the field sheet must portray neatly and legibly... all aids and hazards to navigation, particularly rocks, shoals, reefs, ledges, wrecks, piling, dolphins, pipes and breakwater with their elevations, or depths as appropriate."

b. Section L of the Descriptive Report contains five and a half pages of detailed listings of "uncharted" rocks found during this survey. Slight horizontal adjustments to the data show that most of these "uncharted" rocks confirm rocks already charted. Therefore, the listing of most of these features was unnecessary. Problems relating to a shift in the horizontal datum are discussed by the hydrographer in section H of the Descriptive Report and further commented on in the Preprocessing Critique (copy attached) dated May 5, 1983. Furthermore, charted rocks not found during this survey, for example, the rock awash charted at latitude 58°38'53"N, longitude 134°08'16"W falling in 18 fathoms, were not discussed and no disposition was recommended.

5. JUNCTIONS

<u>Survey</u>	<u>Year</u>	<u>Scale</u>	<u>Note</u>	<u>Color</u>	<u>Joins on</u>
H-9976	1982	1:10,000	Joins	red	West

The junction is adequate.

6. COMPARISON WITH PRIOR SURVEY

H-10050 was compared to H-2334 (1897) 1:20,000. Differences are of slight magnitude ( $\pm 1$  to 2 fathoms generally), and are attributed to data acquisition techniques on the prior survey. Two reefs and one rock have been carried forward from H-2334 and are shown on H-10050 in violet. These features are centered at the following locations:

<u>Feature</u>	<u>Latitude N</u>	<u>Longitude W</u>
reef	56°36'42" ✓	134°15'01" ✓
reef	56°35'56" ✓	134°15'00" ✓
rock	56°37'20" ✓	134°12'58" ✓

The present survey, H-10050, should supersede H-2334 over its common area.

7. COMPARISON WITH CHART

H-10050 was compared to the following:

<u>Chart Number</u>	<u>Scale</u>	<u>Edition</u>	<u>Date</u>
17370	1:20,000	7th	July 16, 1977

a. Hydrography Most present charted information comes from the before mentioned prior survey. H-10050 when compared to the chart appears to be shifted, producing different geographic positions for charted and like features on H-10050. This is believed to be caused by the prior survey (H-2334) being produced on a local datum (the chart in this area reflects the prior). The situation is further complicated by the fact that the ship's chart comparison references all found features to the correct datum (North America 1927). This produced a long list of "uncharted" features, but when a slight datum adjustment is made (to the chart) most of these "uncharted" features (reference Descriptive Report, paragraphs K and L) are in fact confirmed by the chart.

1. A 1.4Rk charted at latitude 56°38'03"N, longitude 134°10'50"W is in the general area of two sunken rock symbols on H-2334. This feature is not confirmed by hydrography on this survey and its actual location is probably beyond the limits of this navigable area survey. The 1.4 Rk should continue to be charted from its source.

2. A rock awash charted at latitude 56°38'53"N, longitude 134°08'16"W originates from an unknown source. Present survey depths exceed 11 fathoms.

As the existence of this rock is doubtful, its charting source should be reviewed and the feature disposed of as appropriate.

There are three presurvey items located within the limits of H-10050 (12, 13, 14, as listed in the "Wreck and Obstruction Information System Printout" dated March 1, 1982). Items 12 and 13 are adequately disposed of in paragraph K of the Descriptive Report. Item 14 is a reported sunken rock at latitude 56°37'58"N, longitude 134°11'12"W. The field conducted a fathometer and a divers search of the area and no rock was found. This feature should be removed from the chart.

Dangers to navigation have been identified and were submitted as follows:

<u>Source</u>	<u>Date</u>	<u>Reference Number</u>
NOAA Ship DAVIDSON	August 8, 1982	C/L 909/82
NOAA Pacific Marine Center	May 4, 1983	C/L 516/83
*NOAA Pacific Marine Center	April 1984	

\* The geographic coordinates supplied in this chart letter are referenced to the charted projection which is different from that shown on H-10050 (see problem in Hydrography above). The chart compiler is advised to shift the chart projection as required to prevent duplicate charting of rocks at different positions.

H-10050 is adequate to supersede chart 17370 over their common areas.

b. Controlling Depths - There are no controlling depths within the limits of H-10050.

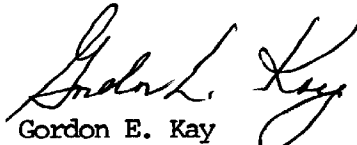
c. Aids-to-Navigation - There are no fixed aids or floating aids to navigation contained within the limits of H-10050.

#### 8. COMPLIANCE WITH INSTRUCTIONS

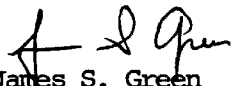
H-10050 complies with the project instructions and changes listed in section 1 of this report.

#### 9. ADDITIONAL FIELD WORK

H-10050 is a good Navigable Area Survey. Additional field work is recommended to determine the least depths over the three peaks identified in section 3 of this report.

  
 Gordon E. Kay  
 Cartographer - Evaluation  
 March 14, 1984

This survey has been verified and evaluated. I have examined this survey and it meets charting and Geodetic Services survey standards and requirements for use in nautical charting. This survey is recommended for approval.

  
James S. Green  
Supervisory Cartographer



U.S. DEPARTMENT OF COMMERCE  
~~National Oceanic and Atmospheric Administration~~

National Ocean Service  
Pacific Marine Center  
1801 Fairview Avenue East  
Seattle, Washington 98102

May 5, 1983

TO: N/MOP - Charles K. Townsend *KWG*

FROM: N/MOP21 - Ned C. Austin *Ned C. Austin*

SUBJECT: Preprocessing Examination for H-10050

I. SURVEY INFORMATION

A. Field No. DA-10-4-82 Registry No. H-10050

B. State Alaska

General Locality Chatham Strait

Sublocality Bay of Pillars

C. Project Instructions: OPR-0353-DA-81

Original dated June 15, 1981

Change No. 1 dated July 1, 1981

Change No. 2 dated March 11, 1982

Change No. 3 dated August 26, 1982

D. Date:

Field Work Commenced September 18, 1982

Field Work Completed November 1, 1982

plus 6 weeks = December 10<sup>3</sup>, 1982

Data Received at Marine Center December 17, 1982

plus 1 month = January 17, 1983

Examination critique transmitted to field May 5, 1983

Target for completion of Marine Center processing November 1, 1983



## II. Preprocessing Examination Critique Items

### A. Danger to Navigation Reports

Six dangers to navigation were noted during the preprocessing examination of the final field sheet. These dangers were reported to the Seventeenth Coast Guard District by letter dated May 4, 1983. A copy of the letter will be attached to the Descriptive Report and an additional copy forwarded to N/CG222 to satisfy requirements in sections 1.6.4 and 5.9 of the Hydrographic Manual (see Attachment A).

### B. Compliance With Instructions

The inshore limits of hydrography prescribed in section 1.2 of the project instructions were not met in several areas identified on Attachment A as holidays.

Correspondence authorizing the deviation from basic tide station requirements specified in section 5.8.2 of the project instructions was not included with the survey records. The termination of the operation of the Chatham Strait tertiary gage (945-1277) with less than 30 days of operation and the installation of the Lower Bay of Pillars tertiary gage (945-1285) are changes to the original instructions that should have been supported by appropriate documentation.

### C. Final Field Sheet

#### 1. Legibility

The legibility of the final field sheet is compromised in selected areas because of sounding congestion, plotting of position numbers and the drafting of rock symbols on top of soundings. Useful guidance is found in Appendix Q, PMC OPODER. See Attachment A for notable problem areas.

#### 2. Shoreline

Although this survey was conducted under the navigable area concept and the HWL was not developed it is clearly evident that a significant discrepancy exists in the location of the shoreline relative to the charted projection. As the hydrographer assumes, it is possible that the problem relates to a datum shift.

This possibility was previously addressed in a memorandum, Apparent Shoreline Discrepancies on H-9977, Rowan Bay, Alaska, dated October 25, 1982 from N/CG24 to N/MOP21. In this memo it was noted that Chart 17370 was originally compiled without benefit of a projection and that the projection subsequently added in 1953 should be shifted approximately 24 meters east. This shift, however, does not correct for an increasingly large discrepancy apparent farther east on the chart within the Bay of Pillars. This variable discrepancy results in a condition whereby a single datum correction cannot be applied to the charted grid to allow a reasonable comparison of the present survey to the chart. The hydrographer's recommendation to resolve the problem utilizing aerial photography is endorsed. Action in this regard has been initiated through the draft Survey

Schedule 1983 through 1987, dated April 4, 1983 originating from N/CG2. In this document it will be recommended that a shoreline mapping project of the Rowan Bay and Bay of Pillars area be conducted as soon as possible in order that reconstruction of the chart can be accomplished in the near future.

Despite the fact that the apparent datum shift was detected in the field, the hydrographic records indicate that the shift was not taken into account when comparing the survey to the chart for the purpose of making charting recommendations. This resulted in six pages of recommendations in the Descriptive Report for new features, a significant number of which are presently charted. Attachment B indicates that chart and survey comparison was accomplished by registering grid lines. However, when comparing with prior survey H-2334 (1897) it is apparent that the surveys were shifted as required to compensate for apparent shoreline discrepancies. This assumption is supported by the hydrographer's statement that agreement is good (see Attachment B). This same shifting procedure should have been employed when comparing to the chart and would have resulted in a significant reduction in the number of apparent discrepancies.

#### D. Descriptive Report

The investigation and discussion of PSR Items 12, 13 and 14 is generally very good with two exceptions. The discussion of Item 12 should include mention of the reduced depth over the observed rock (reference section 5.3.4(K), Hydrographic Manual and Appendix Q, PMC OPORDER) and the method of least depth determination over Item 14, a rock reportedly uncovering, is unacceptable. In this investigation a diver's depth gage was used in lieu of a leadline or echo sounder. This type of gage has not been approved for least depth determination. Problems involving the use of this gage relate to the sensitive nature of the mechanism and the need for periodic calibration which, of course, should be documented. There is no indication that the gage used for this investigation was calibrated. With or without a gage, the use of divers is a recommended procedure which should result in the placing of a leadline over a shoal peak or directing a survey launch to an area where extensive drift soundings can be obtained. (Reference section 4.5.9, Hydrographic Manual.) In this case, the echo sounder depth of 2 fathoms reduced to 0.8 fathoms is considered a more conservative depth to report for this feature and precludes problems associated with the use of unapproved survey techniques (see Attachments C and D).

Annotations for 12 bottom samples were not entered on Form 75-44, Oceanographic Log Sheet M as required by section 4.7 of the Hydrographic Manual and section 8.1 of the Project Instructions. In addition, there is no indication that samples were submitted to the Smithsonian Institution as required by the above references (see Attachment E).

Chart 17370 indicates extensive kelp growth throughout the survey area; however, the field sheet has no kelp annotations, the lack of which possibly can be interpreted to mean charted kelp no longer exists. In such a case, the Descriptive Report should mention that an extensive change from charted conditions has occurred and that the change has been thoroughly investigated; i.e., charted kelp has been disproved. The Descriptive Report addresses only two areas of observed kelp and contains no statement regarding conditions throughout the survey area.



A similar lack of disposition exists regarding the charted anchorage at latitude 56°36'47"N, longitude 134°12'41"W which is considered neither verified nor disproved.

Two shoal investigations should have been more completely documented. Position 4717 locates a 1.7-fathom least depth at latitude 56°36'54"N, longitude 134°12'48"W. Although this information is recorded in a sounding volume as well as the Descriptive Report, the field sheet shows a rock awash at this location. The rock awash symbol is unsupported and it is recommended that the 1.7-fathom sounding be considered the least depth for this feature described as a reef.

Position 4541 locates a 0.8-fathom least depth on a reef at latitude 56°36'14.1"N, longitude 134°11'49.9"W. Again, despite recorded documentation, the field sheet depiction is different, this time by omitting the depth. Furthermore, this reported location is in proximity to a 0.1-fathom depth which is evidently part of the same reef but which is not recorded as such. It will be recommended that hydrography developing the area be thoroughly examined during processing to insure that the limits of the reef are adequately shown. A danger to navigation letter has been written reporting the features as a reef covered 1.7 fathoms and reef covered 0.1 fathoms, respectively.

Although the Descriptive Report was generally complete and typographically accurate, Attachments G-K document a few random errors in recordkeeping.

#### E. Echograms

A spot check of echograms indicates that they are generally adequate. Annotations are well done and the scanning and interpretation are complete and accurate.

#### M. General Comments

The item investigation report form originated in the field possibly could be improved if space were provided to indicate position numbers pertinent to the investigation. Also, the category, "approximate position" is somewhat ambiguous since it is not known whether the referenced position is a preliminary field position or a position scaled from another document such as a chart. The consistent use of final field positions would reduce the possibility of confusion and could be incorporated in the form in a similar manner to that shown in Figures 4-55 and 4-56 of the Hydrographic Manual (see Attachment F).

#### N. Survey Acceptance

The preprocessing examination for H-10050 was conducted under the time constraints described in Hydrographic Survey Guideline No. 15. All comments contained herein are based on a spot check of the data, and it is likely that some problem areas have not been addressed.

Except for the items noted in the critique, H-10050 is in compliance with project instructions, and I recommend that it be accepted for Nautical Chart Branch processing.

Prepared by:

A handwritten signature in cursive script, appearing to read "Dennis J. Hill".

Dennis J. Hill



U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration

National Ocean Service  
Pacific Marine Center  
1801 Fairview Avenue East  
Seattle, Washington 98102-3767

April 2, 1984

N/MOP211:JG

Commander (OAN)  
Seventeenth Coast Guard District  
P. O. Box 3-5000  
Juneau, Alaska 99802

Dear Sir:

During final office review of hydrographic survey H-10050, Bay of Pillars, Chatham Strait, Alaska, changes affecting charts 17370 and 17320 were noted. Questions concerning the survey may be directed to Lt. Cdr. David W. Yeager, Chief, Nautical Chart Branch, telephone (206) 527-6835.

The following statements are recommended for inclusion in the Local Notice to Mariners:

a. A 1.7 fathom sounding at MLLW was found at latitude  $56^{\circ}38'08''\text{N}$ , longitude  $134^{\circ}09'18''\text{W}$ ; distance 800 meters, bearing 71 degrees true from the charted projection intersection of latitude  $56^{\circ}38'\text{N}$ , longitude  $134^{\circ}10'\text{W}$ .

b. A 2.2 fathom sounding at MLLW was found at latitude  $56^{\circ}36'39''\text{N}$ , longitude  $134^{\circ}13'33''\text{W}$ ; distance 1300 meters, bearing 21 degrees true from charted projection intersection of latitude  $56^{\circ}36'\text{N}$ , longitude  $134^{\circ}14'\text{W}$ .

Sincerely,

Charles K. Townsend  
Rear Admiral, NOAA  
Director, Pacific Marine Center

cc: N/CG24



National Ocean Service  
Pacific Marine Center  
1801 Fairview Avenue East  
Seattle, Washington 98102

May 4, 1983

Commander (OAN)  
Seventeenth Coast Guard District  
P. O. Box 3-5000  
Juneau, Alaska 99802

Dear Sir:

A review of unverified hydrographic survey H-10050, Bay of Pillars, Alaska, indicates the following changes affecting NOAA Chart 17370. The indicated depths are reduced to MLLW based on predicted tides.

1. A reef covered 1.7 fathoms should be charted at latitude 56°36'54"N, longitude 134°12'47"W. This depth supersedes the 2-fathom charted depth.
2. A reef covered 0.1 fathoms should be charted at latitude 56°37'16"N, longitude 134°11'42"W.
3. A 4.0-fathom depth should be charted at latitude 56°37'06"N, longitude 134°11'45"W.
4. A sunken rock reported which is charted at latitude 56°37'21"N, longitude 134°12'08"W should be superseded by a rock uncovering 3 feet at latitude 56°37'20"N, longitude 134°12'08.5"W.
5. A sunken rock reported which is charted at latitude 56°37'21"N, longitude 134°13'22"W should be superseded by a rock covering 0.3 fathoms at latitude 56°37'20"N, longitude 134°13'17"W.
6. A rock covering 0.8 fathoms should be charted at latitude 56°38'02.5"N, longitude 134°10'54"W.

Any questions regarding the above items may be directed to Cdr. Ned C. Austin, Chief, Nautical Chart Branch, telephone (206) 442-4764.

Sincerely,

*K.W. Jaff*  
Charles K. Townsend  
Rear Admiral, NOAA  
Director, Pacific Marine Center

bc: N/CG222

1604-17



**U.S. DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
National Ocean Service  
Pacific Marine Center  
1801 Fairview Avenue East  
Seattle, Washington 98102-3767

October 11, 1983

N/MOP211:WAW

TO: N/CG2 - C. William Hayes

FROM: *Charles K. Townsend*  
N/MOP - Charles K. Townsend

SUBJECT: Shoreline Discrepancies on H-10050, Bay of Pillars, Chatham Strait, Alaska

During verification of Navigable Area Hydrographic Survey H-10050, shoreline discrepancies of up to two hundred meters were noted between the contemporary hydrographic survey findings and the charted shoreline originating from NOAA Chart 17370, 7th Edition, July 16, 1977.

The source of the charted shoreline originates with H-2334, 1:20,000 scale, 1897. Shoreline for this survey was determined by plane table using a local datum, which was subsequently transformed to NAD 1927. The shoreline discrepancies increase in an easterly direction and vary between sixty meters at the western limit of hydrography to two hundred meters at the eastern limit of hydrography. The contemporary survey indicates a westerly shift of the shoreline relative to the charted shoreline.

In accordance with Hydrographic Survey Guideline No. 17, Section B, Number 6, shoreline will not be shown on the smooth sheet.

NOAA Ship DAVIDSON recommended in the Descriptive Report that shoreline revision photography be flown in this area and incorporated into the new edition of NOAA Chart 17370. Based on a review of the preliminary sounding sheet for H-10050 by the PMC Nautical Chart Branch, I strongly concur with the DAVIDSON's recommendation.



DATE: April 19, 1983

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Marine Center: Pacific

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): 945-1278 Chatham Strait #2, AK  
945-1285 Lower Bay of Pillars, AK  
945-1338 Upper Bay of Pillars, AK

Period: June 12 - November 2, 1982

HYDROGRAPHIC SHEET: H-10050

OPR: 0353

Locality: Bay of Pillars, AK

Plane of reference (mean lower low water): 945-1278=2.28 ft. (May-June 1982)  
945-1278=2.19 ft. (September-November, 1982)  
945-1285=9.4 ft.  
945-1338=11.1 ft.

Height of Mean High Water above Plane of Reference is  
945-1278=11.8 ft. (May-November 1982)  
945-1285=11.5 ft.  
945-1338=11.1 ft.

REMARKS:

Recommended Zoning:

1. East of  $134^{\circ}09.5'$  zone direct on 945-1338
2. West of  $134^{\circ}09.5'$  to  $134^{\circ}10.1'$  zone on 945-1338 and apply -10 minute time correction.
3. West of  $134^{\circ}10.1'$  to a line formed by  
 $56^{\circ}38.0'$   $56^{\circ}37.5'$   
 $134^{\circ}12.0'$   $134^{\circ}11.0'$

Zone on 945-1285 and apply +20 minute time correction.

4. West of the previous line to a line formed by 2 points located at  
 $56^{\circ}38.0'$   $56^{\circ}36.0'$   
 $134^{\circ}13.0'$   $134^{\circ}11.0'$

Zone on 945-1285 and apply +10 minute time correction.

*James R. Hubbard*  
Chief, Tidal Datums Section, Tides & Water  
Levels Branch

April 19, 1983

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

TIDE NOTE FOR HYDROGRAPHIC SHEET  
OPR-0353 H-10050

5. West of the previous line to  $134^{\circ}14.0'$  zone direct on 945-1285.
  6. West of  $134^{\circ}14.0'$  to  $134^{\circ}16.0'$  zone on 945-1278 and apply x0.98 range ratio.
  7. West of  $134^{\circ}16.0'$  zone direct on 945-1278.
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9/9/83

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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): 945-1278 Chatham Straits #2, AK.

Period: June 12-13, 1982

HYDROGRAPHIC SHEET: H-10050

OPR: 0353

Locality: Bay of Pillars, Alaska

Plane of reference (mean lower low water): 2.28 feet

Height of Mean High Water above Plane of Reference is 11.8 feet

REMARKS: Recommended Zoning:

\* Additional Tides

1. For J Day 162-163 when the gage at 945-1285 Lower Bay of Pillars, AK was inoperative, zone on 945-1278 Chatham Straits #2 and apply +15 minute time correction and x0.92 range ratio.

*James R. Hubbard*  
Chief, Datums and Information Branch



ATTACHMENT TO DESCRIPTIVE REPORT FOR H-10050


I have reviewed the smooth sheet, accompanying data, and reports of this hydrographic survey. Except as noted in the Evaluation Report, the hydrographic survey meets or exceeds Charting and Geodetic Services (C&GS) standards, complies with instructions, and is accurately and completely represented by the smooth sheet and digital data file for use in nautical charting.

 4/10/84  
Chief, Nautical Chart Branch (Date)

CLEARANCE:

N/MOP2:LWMordock

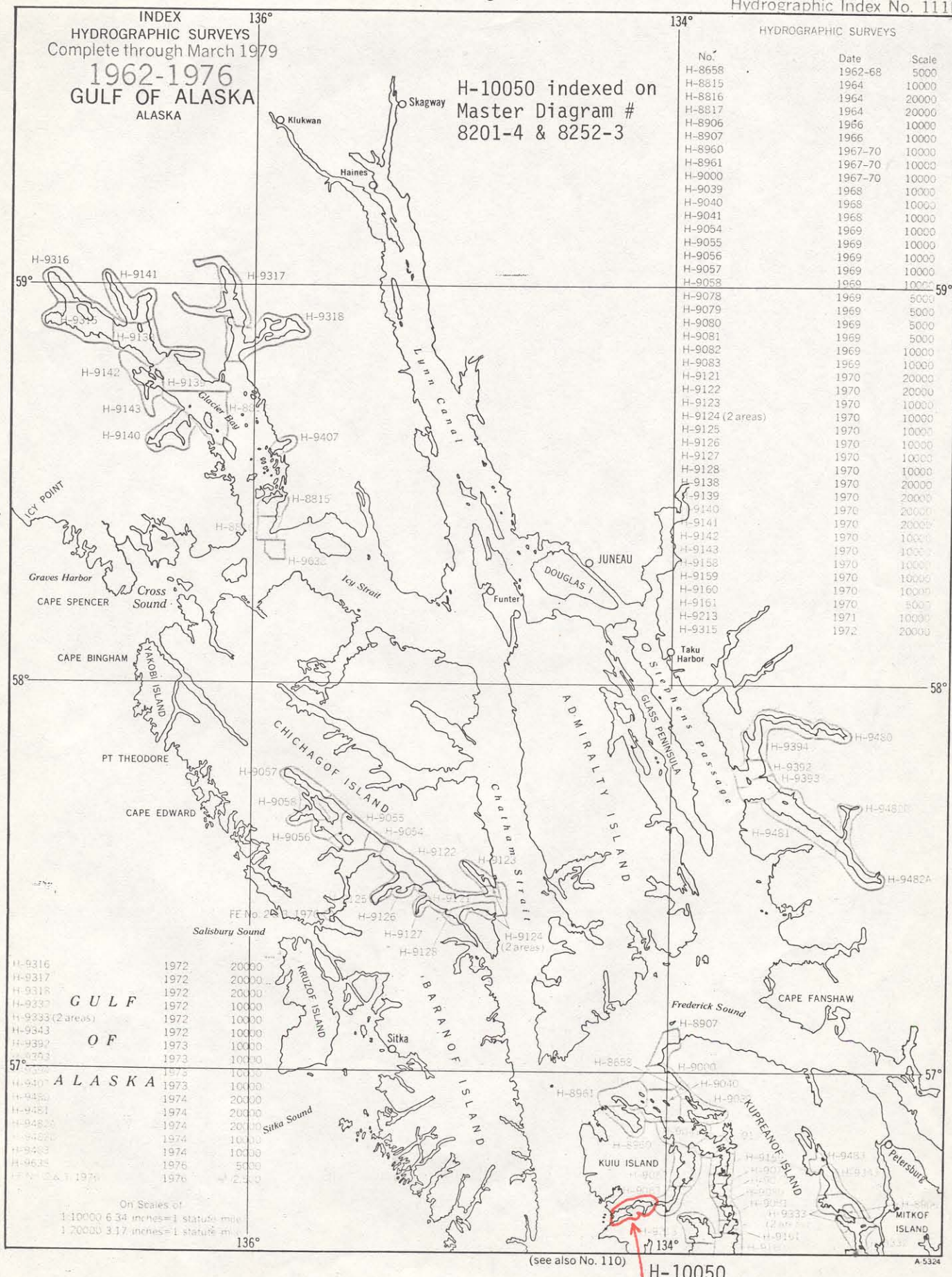
SIGNATURE AND DATE:

 4/20/84

After review of the smooth sheet and accompanying reports, I hereby certify this survey is accurate, complete, and meets appropriate standards with only the exceptions as noted above. The above recommendations are forwarded with my concurrence.

 4/20/84  
Director, Pacific Marine Center (Date)

## Hydrographic Index No. 111E



## RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10050

## 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.

[illegible]