H-4730

Diag. Cht. Nos. 8552 & 8502-2

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

E. Lester Jones, Director

State: ~~S. W.~~ Alaska

DESCRIPTIVE REPORT

~~Topographic~~
Hydrographic } Sheet No. "H" 4730

LOCALITY

Montague Strait
~~Gulf of Ala ska~~

Montague Id. to Puget Bay.

192 7

CHIEF OF PARTY

R. R. Lukens.

GOVERNMENT PRINTING OFFICE

4730

8.3 mean range
7.9 "

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET "H"

Steamer SURVEYOR O R. R. Lukens,
Chief of Party.

Season-1927.

- - - - -

This sheet which is on a scale of 1:60,000, covers the offshore hydrography from the meridian of Puget Bay eastward to a line about 10 miles eastward of Cape Cleare on Montague Island, Gulf of Alaska.

METHODS: Practically all the ship work on the sheet was done by the SURVEYOR, using the fathometer, supplemented by frequent up-and-down casts for bottom specimens and as a check on the fathometer. In a few places when the fathometer was not functioning properly, continued up-and-down casts were taken until the fathometer was put in adjustment.

LAUNCH WORK: Some inshore launch work was done near Pt. Elrington. This was done to fill up a blank spot in the present chart. Signals for this work were cut in from the ship.

The inshore work eastward from Cape Cleare was done with the launch using signals cut in from the ship. There was no way of getting control along this coast. The shore line is so rounding and so rough that a plane table traverse was inpracticable, due to the very short sights obtainable.

REDUCTION OF FATHOMETER SOUNDINGS: Upon comparing the fathometer soundings with the up-and-down soundings, it was found that corrections varied with depth. In depths of 20 to 30 fathoms the fathometer gave results too deep by 2 to 3 fathoms. In depths of 50 to 70 fathoms the fathometer agreed very closely with the up-and-down soundings. For this reason the reductions were made by curves in the same manner as with tube soundings. This was done after receiving permission from the office to do so. I believe this is the best way to reduce fathometer soundings. Various adjustments on the fathometer produce different readings and the up-and-down comparisons show exactly what the instrument is doing. I do not see how one can go wrong using the curve method. Frequent up-and-down soundings are necessary in any case to obtain bottom specimens.

CONTROL: The hydrography was controlled by mountain peaks, the greater majority of which were located by triangulation. A few features were cut in by sextants angles from strong fixes. In general, the control was strong and satisfactory.

DANGERS: No dangers were found during the survey. An area of uneven bottom exists about 1-1/2 mile southeast of Point Elrington. In passing over this area using the fathometer, a least depth of 13 fathoms was recorded. Both myself and Dr. Dorsey were observing the instrument and it appeared to be a true depth flash. Depths of 15 to 17 fathoms were had on adjacent lines. Later, however, a half day was spent by the ship taking up-and-down soundings over this area and these spots could not be found. It is believed that the fathometer soundings are genuine and that they should stand.

BANK OFF CAPE CLEARE: It will be noted that an extensive bank exists off Cape Cleare, in the prolongation of Montague Island. The bottom is smooth and of hard material, rocky with patches of sand and gravel. In a few cases, shells came up on the lead. Old charts show rocks extending off Cape Cleare. These do not exist and it is believed that the reports have been due to violent tide rips resembling breakers, which are often observed off the Cape.

Throughout most of the sheet, except for on the banks, the bottom is a sticky, blue mud.

CURRENT: Throughout the seasoh, the current was usually found setting to the westward. Every time the ship anchored off Cape Cleare, a westerly set was noticed. Currents set in and out of the various passages leading to Prince William Sound. While running sounding lines in an east and west true direction the ship often encountered narrow bands of these currents off the various passages. I have often heard mariners talk of the difficulty of making landfalls in this region when approaching from the southward, and after experiencing the currents as we did on this sheet I can readily understand the reason for their difficulty. A very strong current sets in and out of Montague Strait. On some occasions the ship was held up 30° in making an east and west true line.

TIDE GAUGE: All soundings on this sheet were reduced from the automatic gauge maintained at Seward. Observations made during the season indicate that there is but little difference in time and range along this coast eastward of Resurrection Bay.

ROCK 15 MILES EASTWARD OF CAPE CLEARE: The work this year did not extend far enough eastward to cover the area of the P. D. rock, which the S. S. JEANIE is reported to have struck. Local fishboat Captains, however, told me that the rock was much closer inshore than shown on the chart. Captain Johanson says that he has floated nets all along this coast and that the rock is not out where indicated on the chart.

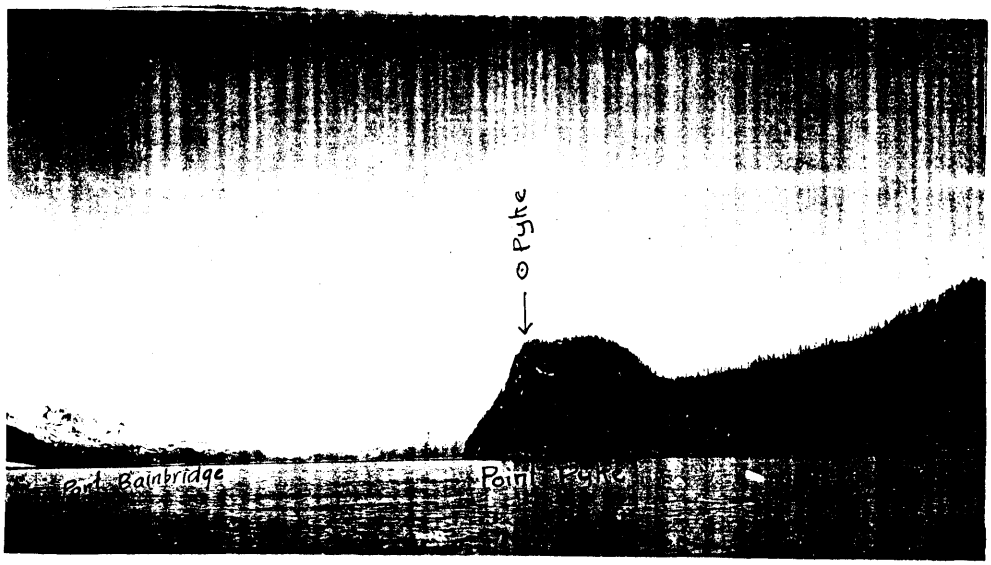
TOPOGRAPHY EASTWARD FROM CAPE CLEARE: The only topography available for this area is that found on this sheet, which was carefully determined by sextant angles, using fixes on peaks located by triangulation.

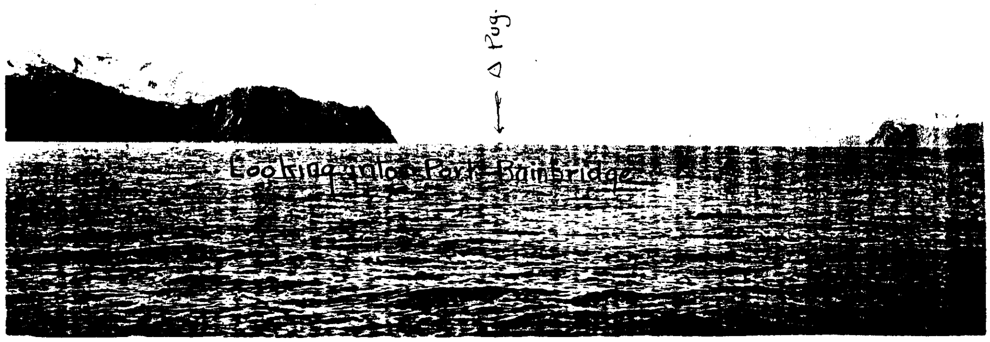
FUTURE WORK: It is recommended that the boat sheet be returned to this party prior to the 1928 season so that the work can be extended to the eastward, using the mountain control allready established on Montague Island.

Respectfully submitted

R. R. Lukens

R. R. Lukens,
Commanding Str. SURVEYOR.


Pyke
Bainbridge
Point


Δ Pug.
Looking toward Port Bainbridge


Δ Pug
20' rock
Cape Puget

STATISTIC SHEET

to accompany
HYDROGRAPHIC SHEET "H"
--ooOOoo--

Date 1927	(Letter)	(Vol)	(Positions)	(Soundings)	(Miles stat)	(Vessel)
Aug. 2	A	1	70	253	64.0	SURVEYOR
15	B	1	60	116	10.5	"
16	C	1	139	438	117.0	"
17	D	1	102	338	92.0	"
18	E	2	99	338	86.0	"
19	F	2	62	228	65.0	"
22	G	2	62	233	50.5	"
23	H	2	133	539	123.5	"
24	J	3	163	563	115.0	"
25	K	3	178	737	131.5	"
26	L	3&4	153	678	138.5	"
27	M	4	75	334	50.0	"
29	N	4	39	150	25.0	"
30	P	4	79	200	48.5	"
Sept. 1	Q	4	18	54	15.5	"
2	R	5	9	27	5.0	"
13	S	5	131	495	86.0	"
27	T	5	90	387	61.0	"
			1662	6121	1314.3	

(Area - 605.0 Sq. Stat. Miles)

Sept. 21	a	1L	30	55	6.6	Motor Sailer#2967
22	b	1L	60	93	15.0	"
27	c	1L	57	143	22.4	"
			147	291	44.0	

These day are in Vol 5 Sheet 473

(Area - 9.0 Sq. Stat. Miles)

Totals for Sheet - -- - - 1809 6412 1358.3

Total area - 614.0 Sq. Stat. Miles)

Form 567

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DIVISION OF CHARTS, FILE NO. .....

List of Hydro. Pos. and.

LANDMARKS FOR CHARTS

Seattle, Washington,

Surveyor. January 18, 19 28

SUPERINTENDENT, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

Sheet H, 1927 R. R. Lukens *Chief of Party.*

DESCRIPTION.	POSITION.						Datum.	Method of determination.	Charted.
	Latitude.			Longitude.					
Hydro. Sheet "H"	°	′	D. M. meters.	°	′	D. P. meters.			Remarks
Low	59	52	687	147	34	120			Low round hill.
Spur	59	54	42	147	36	912			High sharp ridge.
Peak "G"	59	51	1417	147	39	755			
Neck	59	48	58	147	41	275			Peak on point.
Sharp	59	47	1289	147	41	296			Prom. pin. rock.
Peak "F"	59	48	1640	147	41	408			Prom. peak
Doe	59	48	248	147	45	545			W.W.
Buck	59	46	1496	147	49	83			W.W.
Rip	59	46	235	147	50	726			W.W.
Dot	59	45	1774	147	51	755			W.W.
Ram	59	45	1557	147	52	874			W.W.
Fit	59	46	79	147	53	825			W.W.
Rock	59	46	307	147	54	857			Detached rock 50'
Up	59	46	1949	147	55	180			W.W.
Jo	59	46	1726	147	55	787			W.W.
Pan	59	56	45	148	10	12			W.W.
Nip	59	55	1812	148	11	00			W.W.

A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report. The selection, determination, and description of these points are of primary importance.

The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

11—5948

Form 567

DIVISION OF CHARTS, FILE NO. .....

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

.....

....., 19

SUPERINTENDENT, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

.....

Chief of Party.

DESCRIPTION.	POSITION.						Datum.	Method of determination.	Charts affected. Remarks
	Latitude.			Longitude.					
	°	′	D. M. meters.	°	′	D. P. meters.			
TIN	59	55	1829	148	11	630			W.W.
Two	59	55	1452	148	13	169			W.W.
Pin	59	55	1582	148	13	846			Pin/ Rock
Rag	59	56	123	148	15	78			Rounding summit.
Pk.L	59	56	979	148	27	103			Summit
Left	59	55	552	148	38	920			Peak

A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report. The selection, determination, and description of these points are of primary importance.

The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

11—5948

D.H.

February 23, 1928.

Copy for Record Section files.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 4730

Locality: S. W. ALASKA

Chief of Party: R. R. Lukens, 1927.
Plane of reference is M L L W
2.4 ft. on tide staff at Seward

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

G. T. Rude

Chief, Division of Tides and Currents.

Section of Field Records

Report on Sheet No. 4730 — Surveyed in 1927
Chief of Party R.R. Lukens — Surveyed by R.R. Lukens
Protracted by H.O. Westby — Soundings plotted by H.O.W.
Verified and Inked by J.D. Walker

The sounding records were in most part legible and neat. In volume three page 15 and 18 there were some notes which were not clear. Small red a, b & c days (inshore launch work was contained in Vol 5 Sheet 4731. No boat sheet was found for these three days.

Hydrographic signal Pyk was found to be incorrectly plotted and this made it necessary to change a large number of positions. Thirty percent of the positions were checked and of these twelve percent were found wrong.

The soundings were fairly well plotted except that the figures were too large. The time intervals were well adhered to.

There was insufficient development between the launch work area and the ship work area south of Elrington Island.

The sheet was clean when received and the work was legible.

The drafting conformed to General Instructions.

Remarks: The position of the soundings between 43 and 44C were doubtful and were left out. A bad crossing occurred between 161-2 J and 130-1 J. The sounding at 162 J is questionable and looks suspicious. - See H 4677.

The shoreline from △ Mont east is doubtful.

All the soundings on the sheet are fathometer sounding except the inshore launch work (small red a, b & c days) and those accompanied by VC (vertical cast). Where simultaneous vertical cast and fathometer soundings were taken the fathometer sounding was plotted in the true position and the vertical cast sounding was written in nearby, inclosed in parenthesis and followed by VC. In the case of simultaneous soundings the curve was controlled by the least depth. The overlap when transferred to adjoining sheet was also plotted as the least depth.

Reviewed by

Date

Respectfully submitted

J. D. Walker.

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO No. 11-DRM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

May 9, 1928.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4730

Montague Strait - Montague Islands to Puget Bay

Surveyed by R. R. Lukens.

Chief of Party, R. R. Lukens (Steamer SURVEYOR)

Instructions dated February 3, 1927.

Protracted by H. O. Westby.

Plotted by H. O. Westby.

Verified and inked by J. T. Walker.

1. The specific instructions were complied with as far as the work progressed but all the work called for was not completed on account of lack of time.

2. The shoreline of the south side of Montague Island was located by the hydrographic party. Signals and rocks were cut in from the ship as shown by the sounding records. However, the shoreline as shown on the smooth sheet by the field draftsman does not agree with that shown on the ship boat sheet. Also a few details are shown on the smooth sheet that do not appear on the boat sheet. It is thought that this may be cleared up if the launch boat sheet is obtained. No launch boat sheet for this area has been received yet. Signal "Rock" was described in this locality in the sounding records as a detached pinnacle about 25 feet high but in the descriptive report it was described as a 50 foot pinnacle rock. In showing the elevation on the smooth sheet the office draftsman used 38 feet as a mean of the two estimates.

   No boat sheet has been received for the launch work southeast of Elrington Pt.

3. While the ship was sounding south of Elrington Pt. with the fathometer a shoal 13 fathom and later 15 fathom sounding was obtained. The fathometer was not working very good at the time and there was considerable uncertainty of these soundings. Later a half day was spent trying to verify the soundings with vertical casts, without success. The commanding officer recommended that the fathometer soundings be used.

In examining these places the following points were noted:

a. The fathometer did not jump directly from the deeper water to the shoal sounding but gave one or two intermediate soundings as it would naturally do in passing over an obstruction of some kind.

b. The character of the bottom indicates that this might be a continuation of the bank to the north.

c. Within the bight to the southwest formed by the 50 fathom curve are several ~~7 or 8 fathom shoalings~~ area enclosed by differences of 7 to 8 fms. Similar.

d. Near position 35 N are several 17 and 18 fathom fathometer soundings. These were checked by vertical casts. The nearness of the 26 fathom and 27 fathom soundings to these 17 and 18 fathom spots indicates what may be expected in regard to the slope of the bottom in other places.

In view of the above facts it is recommended that the soundings be charted as shown. OK (sgd) A. M.S.

4. The 20 fathom depth curve does not form the bight to the southward as shown by the dotted line unless it has changed from the survey shown o n H. 2833 in 1906. This is not considered possible. The area between the ship and launch work here has been surveyed in 1906. check

OK

5. Near the entrance to McLeod Harbor a detached 33 fathom spot is shown outside of the 50 fathom curve. The sounding was taken by the fathometer and the records say the fathometer was functioning perfectly. Moreover the records show a uniform shoaling up to 33 fathoms and then a uniform falling off to deeper water as would be had by passing across the bight formed by the 50 fathom curve. The plotted positions indicate that position 162 J is in error when checked against the time run. By rejecting this position the 33 fathom sounding plots down to the southward on the bank and all soundings on this line agree with the overlap of sheet H. 4677 except the last one at position 163 J. In the record it is evident that a 39 fathom sounding has been erased and replaced by 29 fathoms.

Therefore it is recommended that position 162 J be rejected and the soundings between 161 J and 163 J be plotted on course and time.

163 OK

6. South by east of Danger Islands is an extensive bank with a depth of 29 fathoms shown on it. No attempt was made to develop this bank. Owing to the gentle slopes indicated there it is probable that the least depth is approximately as shown.

7. The field drafting was good with the exception of the plotting of signal "Pyk". This signal was incorrectly plotted on the smooth sheet and consequently numerous positions had to be changed by the office draftsman. The cuts to signal "Pyk" did not form very large angles with each other.

8. The General Instructions were not complied with in spacing the lines run by the launch inside the 20 fathom curve.

9. The surveying on this sheet was excellent. Numerous vertical casts were taken for bottom specimens and for comparison with the fathometer. A correction curve was made from this comparison for reducing fathometer soundings. Wherever vertical casts and fathometer soundings differ it is recommended that the shoalest sounding be used in charting.

10. Office drafting was excellent.

11. Reviewed by W. M. Gibson, May 8, 1927.

Approved:

Chief, Section of Field Records (Charts)

James S. Borden

Chief, Section of Field Work (H. & T.)

The 16 fathom sounding seven miles southwest of Cape Clear should have been investigated.

11 → 16

Form 537
11—5812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4730

HYDROGRAPHIC TITLE SHEET

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

Field No. "H"

REGISTER NO. 4730

State ~~S. W.~~ ALASKA

General locality ~~Gulf of Alaska~~. Montague Strait

Locality ~~South Coast of~~ Montague Island, to Puget Bay

Scale 1:60,000 Date of survey Aug. 2 to Sept. 27, 1927

Vessel Steamer SURVEYOR

Chief of Party R. R. Lukens

Surveyed by R. R. Lukens

Protracted by H. O. Westby

Soundings penciled by H. O. Westby

Soundings in fathoms ~~xfeet~~

Plane of reference M.L.L.W. Seward 2.5

Subdivision of wire dragged areas by

Inked by J.T.Walker May 4, 1928

Verified by JTW

Instructions dated February 3, 1927

Remarks:

GPO

4730 Add'l Wk.

4730 Add'l Wk.

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

....., *Director*

C. & G. SURVEY
L. & A.
MAR 27 1929
Acc. No.

State: Alaska

DESCRIPTIVE REPORT

~~*Topographic*~~ *Hydrographic* } *Sheet No.* 4730 Add'l Wk.

LOCALITY

Montague Island

Cape Cleare to Wooded Islands

192 8

CHIEF OF PARTY

R. R. Lukens

GOVERNMENT PRINTING OFFICE

HYDROGRAPHIC SHEET

No. 4730 - addl work on orig sheet

Descriptive Report, List of Statistics etc

Str. SURVEYOR.

1928.

DESCRIPTIVE REPORT.

Hydrographic Sheet

No. 4730 Add. Wk. on orig. Sheet

Str. SURVEYOR R.R.Lukens, Chief of Party

1928.

AUTHORITY for this sheet is contained in the Director's instructions dated Feb. 18, 1928.

LIMITS. The sheet covers an area of offshore hydrography from the Wooded Islands on the southeast coast of Montague Island, to the meridian of Cape Puget on the west. It is on the scale of 1:60,000.

The most of the work on the sheet was done during the season of 1927. The work in pencil was done during the season of 1928.

CONTROL The control is largely based on mountain peaks located by triangulation in 1905. Some additional peaks were determined in 1927 using the old datum.

S.E.COAST OF MONTAGUE ID. There is no triangulation along the outside coast of Montague Island. It would be a slow and expensive piece of work to carry triangulation over the mountains to the outside coast. The signals on this coast from Cape Cleare to the Wooded Ids. were located by sextant cuts based on fixes using mountain peaks. The cuts intersected well, and it is believed that there is no large accumulative error, as fairly strong fixes could be carried as far eastward as the Wooded Ids.

The outside coast of Montague Id. is rugged, devoid of harbors or anchorages and is subject to the pounding of a heavy surf. It seems safe to say that there never will be a demand for a detailed survey along here.

METHODS The offshore sounding was done by the fathometer checked by frequent up and down casts for the purpose of checking the fathometer and determining the character of the bottom. The inshore work was done with the motor sailer using a power driven sounding machine. In depths of less than 15 fathoms, the hand lead was used.

REDUCTION OF FATHOMETER SOUNDINGS. All fathometer soundings were reduced for temperature and salinity in accordance with the method outlined in the Hydrographic Manual. The graphs and

tables used in the reductions will be found filed with the records of hydrographic sheet #7 (RAR sheet).

TIDAL DATA All soundings were reduced from the automatic tide gauge in Seward. The plane of MLLW was used.

ELEVATIONS Elevations shown on the sheet were determined by means of sextant angles taken from the deck of the ship . They can be regarded only as approximate but are sufficiently accurate for the use of the navigator.

NECK POINT, lying about seven miles northeastward from Cape Cleare is bold and prominent. About 100 yards off the point there is a prominent pinnacle rock about 104 feet high. Between Neck Point and Peak "F" there is a depression which shows as a neck of land from the southwestward.

JEANIE COVE, is an open, foul cove lying about three miles northeastward from Neck Point. There are two known dangers in Jeanie Cove. There is a rock which bears 2 feet at MLLW, lying about 1 mile off the western entrance point. It is a sharp black pinnacle. There are several other rocks close to this pinnacle. While running a sounding line here, the SURVEYOR touched a rock within a few yards of the two-foot rock. When the ship struck, the leadsman was getting nine fathoms at the sounding chair. This rock was never seen bare. I was near here when a moderate to heavy southerly swell was running but did not see it break.

There is also a group of rocks about one mile off the eastern entrance point. These rocks were observed nearly awash and were located by sextant cuts from the deck of the ship. They appeared as two groups as shown on the sheet. It is believed that they would probably bare at extremely low water. At the time that they were observed breaking, the tide stood at one foot above MLLW.

The party on the Motor Sailer tried to get a sounding on the rocks, but the tide was high and the rocks could not be found.

It is believed that these are the rocks on which the S. S. JEANIE struck in 1903.

BLUFF POINT, is a bold, rocky bluff. There is a small detached rock a short distance off the point. Hydrographic Signal QUAD is located on this rock. The bold, rocky coast line continues from Bluff Point to Wooded Island.

WOODED ISLANDS, lying about five miles northeastward from Jeanie Cove are a group of flat-topped wooded islands. The group consists of one large island , nearly one mile in length, and three much smaller ones. The largest island is about 150 feet high as determined by sextant angles

FISH ISLAND , the northeasternmost island of the group, is small with a few scattered trees on its summit. When viewed at a distance from the southwest it has the appearance of a whale breaking water.

TANKER ISLAND , lying about 1½ miles southwest from Fish Island is about seventy-five feet high and viewed from the southwest it has the appearance of an oil tanker headed inshore. A small clump of trees appears as the smoke stack.

The southwesternmost island is small and wooded. It is about 150 feet high and lies about one mile off shore.

The area around Wooded Islands is foul and should be avoided. The principle reefs are shown on the sheet. Reefs appear to extend nearly across the channel between the largest island and the mainland. It is probable however, that small craft could find a channel through here.

There is an area of broken bottom about three miles south (true) from Bluff Point. Several closely spaced lines were run over this area and the least depth found was eighteen fathoms. It was first thought that this might have been the place where the JEANIE struck, but neither dangers or signs of dangers were found. Captain Johanson, a man who has had many years experience in Alaskan waters, told me that the JEANIE was close inshore when she struck. He has fished with nets all along this coast and has never found shoal water in the position referred to. However, the bottom is uneven and in my Coast Pilot directions, I have laid a course well off shore.

CAPE CLEARE. Considerable additional hydrogrphy was done off Cape Cleare. The currents here are very strong and variable, making it difficult to run split lines. No dangers were found. Part of this work was done with the fathometer and part with the lead line.

BREAKER NEAR ⊙ DOT. On the morning of June 19th., while bound to San Juan bight from an anchorage off signal DOE, what appeared to be a breaker was seen about one-half mile off from signal DOT, in the position indicated on the boat sheet. This occured about 10:00 A.M. At eight AM there was a minus tide of 1.6. A fairly heavy swell was running and it was very misty so that only a glimpse of the shore line was visible occasionally. The water was observed to curl and break twice. The ship's position was known sufficiently well so that a close estimate of the position of the breaker could be made. No fix was available at the time. I looked repeatedly for this breaker afterward but never saw it again. On two different days a launch spent several hours searching for it and found no indication. On the first occasion the officer in charge did not record any angles or soundings.

On the second occasion the hydrography was recorded and is plotted on the smooth sheet. It is possible that the sea was breaking on the five fathom spot shown on the smooth sheet. It is also possible that it may have been a tide rip. Tide rips are often seen here and they sometimes look like breakers. Judging from the way the water was heaping, however, I am inclined to think that the sea was actually breaking. On the morning that the breaker was seen there was a heavy sea running and the ship was proceeding to San Juan bight for shelter.

I would recommend that some such a note as "Breakers reported" be shown on the chart.

Sunken rock symbol + note shown on smooth sheet auth. U.S.C.&G.S. U.S.

Additional development was made on the bank about two miles southeast from Danger Island. No dangers or indications of dangers were found.

HYDROGRAPHIC SIGNAL ROCK, on Cape Cleare has been estimated as being twenty five feet high. It is shown as thirty eight feet on the smooth sheet. This was probably computed from a vertical angle measured from the deck of the ship, and is more nearly correct than the estimate.

TOPOGRAPHY. All topography from Cape Cleare to Wooded Island is by hydrographic control. The shore line has been carefully sketched between located points.

DESCREPANCIES: In general the lines seemed to cross very well. There are a few cases where the crossings are not satisfactory, such as near 95 G'and 34 D'. In several other cases the soundings on G' line appear too deep. The fathometer was watched carefully and the speed was closely checked. I am unable to account for the difference but believe it must be due to some fathometer trouble that was not apparent at the time.

TITLE: In order to plot the work done in 1928, it was necessary to erase the inked title that had been put on in the Office. This title is now shown in pencil right above the old position.

Respectfully submitted

P. T. Lukens

NEW NAMES

NECK POINT	Named by survey party. Suggested by the neck of depression which separates signal NECK and Peak "F".
JEANIE COVE	Suggested by the old S.S.JEANIE which struck a rock near here in 1906. OK.
BLUFF POINT	Suggested by the rocky bluff in this vicinity. 8 Bluff Pts in Ketchikan District of Alaska
TANKER ISLAND	Suggested by its likeness to an oil tanker when viewed from the southwest. OK.
FISH ISLAND.	Suggested by it s resemblance to a whale on the surface of the water when viewed from the southwest.
RIDGE MOUNTAIN	A mountain peak which shows as a sharp peak from the southeastward.
SPUR MOUNTAIN	A peak on the same cordillera as Ridge . Has ravines which show up prominently in summer when filled with snow.

The names Jeanie Cove and Tanker I. are acceptable and it is recommended that they be forwarded to the Geog. Board for approval.

There are already 8 Bluff Pts. in Alaska, which makes this name out of the question. Since this point adjoins Jeanie Cove, it is recommend that the name Jeanie Pt. be forwarded to the Geog. Board for approval.

Whale I. would be more appropriate than Fish I. for island above described. Since there are numerous Whale Is. in Alaska, the name Kitovi, Russian for whale, could appropriately be used. Since the naming of this feature is not urgent, it can be postponed to a later date.

The name Neck Pt. is duplicated in Icy Strait—SE. Alaska. If it is thought desirable to name this point, the Russian work for neck, "Gorlo" could be used.

Ridge Mt. Would reject this name as being inappropriate. Spur Mt. is practically duplicated in Mt. Spurr, Cook Inlet.

H.B. May 17, 1929

Statistics, Hydrographic Sheet No. 4730

Date	Day	Vol.	Positions	Soundings FR.	Soundings S.	Miles
July 1	A'	1	87	261	139	84.5
July 27	B'	1	18	59	5	17
July 28	C'	1	28	49	49	17
Aug. 3	D'	1	162	629	30	105.2
Sept.10	E'	1	15	79	4	12
Sept.10	E'	2	35	160	8	36
Sept.11	F'	2	19	56	8	11.7
Sept.12	G'	2	99	397	20	73.8
Sept.13	H'	2	86	294	40	39.2
Sept.14	J'	2	27	62	33	11.5
Sept.14	J'	3	54	100	92	21.8
Oct. 8	K'	3	126	384	47	72
Sept.13	a	4	113		343	35.3
Sept.14	b	4	90		227	25.2
Oct. 8	c	4	59		215	15.4
			1018	2530	1260	527.6

E.A.L.

(For Files of Field Records Section)

Division of Hydrography and Topography: Mar. 28, 1929.

Division of Charts:

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 4730a

Locality: Off Montague Island, S. W. Alaska

Chief of Party: R. R. Lukens in 1928
Plane of reference is Mean lower low water, reading
2.6 ft. on tide staff at Seward, Alaska
ft. below B. M.

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

Paul C. Whitney

Chief, Division of Tides and Currents.

Field Records Section

Report on H-4730 – Add. Wk.

Surveyed in 1928.

Chief of Party, R.R. Fulkens – Surveyed by, R.R.F. & S.B. Grenell
Protracted by P.F. Bernstein – Soundings by – P.F.B.
Verified and inked by J. Fleming.

① The records conform to the requirments of G.D. ✓

② The plan and character of the development fulfill the requirments of G.D. ✓

③ The sounding line crossings are fair except on sounding line – 89-G' to 99-G' where differences of two or more fathoms are noted. Differences are also noted at sounding line crossings between 1-D' and 15-D' Practically all positions along these lines were checked and time intervals noted – no errors were detected. ✓
Between 34-D' and 35-D' a difference of 5 fathoms is noted. Note a 38 fathom sounding just south of this crossing.

Between 21-22-H' (in Jeannie Cove) is a $4\frac{5}{6}$ fathom sounding which practically coincides with a 7 fathom sounding on line 14-15-A.

④ The usual depth curves can be completely drawn except the 5 fath. curve and those representing lesser depths inshore where, owing to the nature of the coast, approach was difficult ✓

⑤ The field plotting was completed to the extent prescribed in G.D. ✓

⑥ No part of the work had to be done over except a few positions and several sounding which had to be corrected in value ✓

Field Records Section
Report on H- 4730 - Add. Wk.

(7) It appears that this survey is sufficient for present purposes but in the next survey of this area the following spots should be sounded out:-

The	18 Fathom sounding	Lat.	59° - 47 - 30"
		Long.	147 - 30 - 33
"	15 " "	Lat.	59° - 44 - 45"
		Long.	147° - 52 - 15"
"	16 " "	Lat.	59° - 41 - 15"
		Long.	148° - 04 - 00"
"	16 " "	Lat.	59° - 44 - 45"
		Long.	147° - 57 - 40"
"	15 " "	Lat.	59° - 44 - 15"
		Long.	147° - 52 - 15"
"	14 " "	Lat.	59° - 46 - 45"
		Long.	148° - 02 - 30"
"	14 " "	Lat.	59° - 45 - 06"
		Long.	148° - 02 - 30"
"	15 " "	Lat.	59° - 44 - 40"
		Long.	147° - 55 - 45
"	32 " "	Lat.	59° - 46 - 15"
		Long.	147° - 30 - 00"
"	4 5/6 " "	Lat.	59° - 50 - 15"
		Long.	147° - 37 - 10"
~~"~~	~~16~~ " "	~~Lat.~~	~~59° - 41 - 15"~~
		~~Long.~~	~~148° - 04 - 00"~~
"	38 " "	Lat.	59° - 44 - 30"
		Long.	147° - 34 - 30"

See notes A.L.S. attached herewith.

Field Records Section
Report on H 4730 – Add. Wk.

Complying with instructions from Capt. Sobiralski Chief Field Records Section the following corrections and additions have been made:—

(a) A group of 21-fathoms soundings from the previous survey – (H-4730) along lat. 59° 42'-15" between long. 148°-00' and 148°-05' produced a condition which appeared to be extremely unlikely. They were therefore rejected for the purpose of straightening the curve.

(b) The approximate position of the breaker described on page -3 – D.R.—H—4730-Add.Wk. is marked with a sunken rock symbol and an appropriate notation.

It was found that the signals used in this survey could be easily and rapidly checked. – This was done without discovering any error.

The protracting of positions was found to be Excellent and only 4 had to be corrected.

Position 1-A was out about 650 meters and the new or correct position gives sounding values in agreement with adjacent soundings on other lines.

Field Records / Section I
Report on H. 4730 — Add. Wk.

Soundings were sometimes recorded in fathoms and tenths and sometimes in fathoms and feet.

When plotting using fathoms and tenths 18.5 fathoms was frequently plotted as 19 fathoms.

When plotting, using fathoms and feet 18 - 5 (5 feet) was frequently plotted as 18 fathoms.

A list of vertical cast and fathometer soundings taken at various positions accompany this report. This extract is for the purpose of comparative analysis.

On the small boat sheet (Add. Wk.) about 100 - Meters S.W. of position 104-a is a feature in pencil the center of which is marked with a needle point.

The pencil used was no doubt the same as that used on the rocks awash and kelp on the shore above.

No reference to the above feature could be found in the record for a day and no mention of it is contained in the D.R. Add. Wk. - It was not on the smooth sheet but a needle point does mark the spot on the smooth sheet but it is not on the large boat sheet.

This was examined by a ship party and not a work of A.C.S.

Shore Line

The shore line in ink between Odoe and Neck on the small boat sheet is erroneous and the more nearly correct shore line is shown in pencil. This part is now in good agreement with the smooth sheet. The corresponding part of this shore line on the large boat sheet is partially corrected by the location of Oout.

Field Records Section
Report on H-4730-Add. Wk.

The delineation of the shore line in Jeannie Cove on the small boat sheet is inaccurate as is proved by the hydrography which was checked and found correct on the smooth sheet a day — Positions 9-10-11.

The faint outline of the shore line as sketched by the field party in Jeannie Cove is visible on the large boat sheet — this agrees with the smooth sheet.

The small boat sheet shows a small island to the N.W. of the large Island located about 1400 - Meters S.W. of O End. This was not on the smooth sheet and was added in the office. T.8470 air photo compilation, surveyed June 1943 shows neither shoreline nor shoal area at the islet in question. Omit, 2.M.A.

Practically all of the rocks awash shown in pencil on the small boat sheet a and b days had to be transferred to the smooth sheet.

Remarks

The general character of this work is considered very good and the developments over questionable areas sufficient for present needs

There is a more or less constant difference of about one fathom between the fathometer soundings of this and the previous survey in the same area, which may be due to some functional variation or mechanical derangment.

Respectfully submitted
John Fleming

May - 6th - 1929

See next page.

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO No. 11-DRM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

July 8, 1929.

Memorandum by A. L. Shalowitz

In view of the broken character of certain portions of this sheet, it is recommended for future consideration, that the entire area from the 20 fathom curve inshore as far as practicable, be wire dragged. In the vicinity of Neck Point and Bluff Point the drag work should extend offshore to about the 40 fathom curve.

Approved:

_____

Chief, Section of Field Records (Charts)

_____

Chief, Section of Field Work (H. & T.)

H-4730-Add-WK

D'-day

Pos. No	V. C (Fathoms)	Fath. S (Fathoms)	Fath. Corr. (Fathoms)
1 - D'	19.	19.5	- 0.5
15 - "	68.	68.	———
21 - "	41.5	41.	+ 0.5
26 - "	17.	19	- 2.
27 - "	15.5	16	- 0.5
36 - "	54.	54.	———
37 - "	54.5	56.	- 1.5
45 - "	15.	15.5	- 0.5
46 - "	16	16.5	- 0.5
61 - "	66.5	69.5	- 3.
62 - "	66.5	69.5	- 3.
65 - "	64.5	66.5	- 2.
66 - "	62.5	63.5	- 1
72 - "	35.5	36.	- 0.5
14 - "	31.5	32.	- 0.5
88 - "	21.5	22	- 0.5
90 - "	34.5	34.5	———
93 - "	20.5	21.	- 0.5
94 - "	17.5	17.	+ 0.5
101 - "	44.5	49.	- 4.5 ?
102 - "	50.	48.5	+ 1.5 ?

H-4730. Add.-Mk

D'-day (Continued)

Pos. No.	V. C. (Fathoms)	Fath. S. (Fathoms)	Fath. Corr. (Fathoms)
111 – D'	20.	18.5	+ 1.5
112 – "	19.	18.	+ 1.
127 – "	68.5	69.5	– 1.
128 – "	67.5	70.5	– 3.
144 – "	20.5	20.	+ 0.5
145 – "	22.5	22	+ 0.5
153 – "	50.	51	– 1.
154 – "	50.5	51	– 0.5
162 – "	24	23	+ 1.

– 20.5
+ 6.0

Field Records Section

H-4730 - Add. WK.

On the authority of Capt. Sobrinalos, Chief Field Records section, the following:

H - 4730 - Add. Work

Comparison of V.C & Fathometer Soundings

G' - day

Position	V.C. (Fathoms)	Fath. S. (Fathoms)	Fath. Corr. (Fathoms)
1 - G'	30	32.5	- 2.5
5 - "	28.5	28.	+ 0.5
13 - "	51.5	52.5	- 1.
24 - "	23.5	23.	+ 0.5
31 - "	46.5	46.5	—
34 - "	54.	52.	+ 2.
39 - "	59.	61.	- 2.
42 "	66.5	68.5	- 2.
50 - "	50.	48.5	+ 1.5
55 -	33	34.5	- 1.5
57 - "	21	21.5	- 0.5
58 - "	23	23.5	- 0.5
64 -	55.5	55.5	—
65 - "	53.5	55.5	- 2.
75 - "	23.5	24.	- 0.5
77 - "	16.5	18	- 1.5
89 - "	55.5	57.5	- 2.
95 - "	47.5	49.	- 1.5
99 - "	23.5	24	- 0.5

H-4730-Add.W/R

K' - day

Pos. No.	V.C (Fathoms)	Fath. S (Fathoms)	Fath. corr. (Fathoms)
1 - K'	29.	29.5	- 0.5
3 - "	16	16.5	- 0.5
7 - "	19	19.5	- 0.5
9 - "	19.5	20.5	- 1.
12 - "	18.5	18.5	
13 - "	18.5	19.	- 0.5
16 - "	16.5	18.	- 1.5
18 - "	19.	19.	
20 - "	16,	16.5	- 0.5
24 - "	17.5	17.	+ 0.5
25 - "	18.	18.5	- 0.5
28 - "	18.5	17.	+ 1.5
32 - "	17.5	18	- 0.5
33 - "	17.5	19	- 1.5
35 - "	18.5	19.	- 0.5
36 - "	18.5	19	- 0.5
42 - "	25,	26.	- 1.
46 - "	20.5	21.5	- 1.
50 - "	24.	24.5	- 0.5
53 - "	20.	20.	
54 - "	20.5	21.	- 0.5
58 - "	21.5	22.	- 0.5
61 - "	19.5	20.	- 0.5
62 - "	19.0	20,	- 1.
64 - "	20.5	21.5	- 1.

K'-day (continued)

Pos. No	V. C (Fathoms)	Fathe. S. (Fathoms)	Fath. Corr. Fathoms.
67-K'	20	20	—
71-"	19.	19.5	-0.5
72-"	18.5	18.5	—
74-"	21.	21.5	-0.5
75-"	19.	19.5	-0.5
76-"	19	19.5	-0.5
7-"	20	19.5	+0.5
79-"	19	18.5	+0.5
81-"	19	19.	—
83-"	20	20	—
86-"	19	20	-1.
87-"	19.5	19.5	—
90-"	26.	26.	—
92-"	22.	22.	—
100. "	41.5	42	-0.5
107-"	16.	17.5	-0.5
108-"	34.5	35.	-0.5
111-"	25.5	25.	+0.5
114-"	35.5	34.	+1.5
115-"	34.5	35	-0.5
116-"	33.5	35	-1.5
118-"	41.5	42.	-0.5
121-"	41.	42.5	-1.5
123-"	48.	48.5	-0.5
126-"	49.	49.5	-0.5

Form 537
11—5812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

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

Field No. .....

REGISTER NO. 4730 Add'l. Work

State Alaska

General locality Montague Island

Locality Cape Cleare to Wooded Islands

Scale 1:60,000 Date of survey July to October, 1928

Vessel Str. SURVEYOR

Chief of Party R.R.Lukens

Surveyed by R.R.Lukens and S.B.Grenell

Protracted by P.L.Bernstein

Soundings penciled by P.L.Bernstein

Soundings in fathoms ~~feet~~

Plane of reference MLLW at Seward, Alaska

Subdivision of wire dragged areas by .....

Inked by J. Fleming May 6 - 1929

Verified by .....

Instructions dated Feb. 18, 1928

Remarks: Additional Work

GPO