

5093

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5093

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton, Director

U. S. COAST & GEODETIC SURVEY
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Acc. No. _____

State: Alaska

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 22 **5093**
Hydrographic }

LOCALITY

Kenai Peninsula

~~Pye Islands~~

S. E. Coast of Pye Is.

19 30

CHIEF OF PARTY

F. B. T. Siems

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5093

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. 22

REGISTER NO. 5093

State ~~Territory of Alaska~~
General locality Kenai Peninsula
Locality ~~Pye Islands~~ S.E. Coast of Pye Is.
Scale 1:20,000 Date of survey July 8 - Aug. 16, 19 30
Vessel M.V. WESTDAHL & Port Motor Sailer
Chief of Party F. B. T. Siems
Surveyed by L. D. Graham & F. B. Quinn
Protracted by R. A. Earle
Soundings penciled by G. C. Mast
Soundings in fathoms feet
Plane of reference M.L.L.W.
Subdivision of wire dragged areas by ---
Inked by *R. M. Blosson*
Verified by *R. M. Blosson*
Instructions dated March 21, 19 30
Remarks: _____

April 15, 1931

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 5093

Locality S.E. Coast of Pye Islands, Kenai Peninsula, S.W. Alaska

Chief of Party: F.B.T. Siems in 1930
Plane of reference is mean lower low water, reading
2.6 ft. on tide staff at Seward
14.9 ft. below B. M. la
7.0 ft. on tide staff at Chance Lagoon
21.3 ft. below B.M. 1

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.

H. T. Warner
Chief, Division of Tides and Currents.

DESCRIPTIVE REPORT

to

Accompany Hydrographic Sheet No. 22
Scale 1:20,000
Fye Islands, Alaska
Project No. 57

U.S.C. & G.S.M.V. WESTDAHL

L.D. Graham, H. & G. Engineer,
In Charge.

Surveyed by L.G. Graham & F.B. Quinn

July 8, to Aug. 16, 1930

Instructions dated March 21, 1930

LIMITS:

This sheet covers the area between Sheet, Field No. 42A and the shore line, and joins with Sheet, Field No. 21 on the north and Sheet 4721 (1927) on the west.

SURVEY METHODS:

The Tender Westdahl took all soundings with the exception of some close inshore taken with the DISCOVERER'S port motor sailer, F. B. Quinn, in charge. Standard methods were used; vertical casts over 15 fathoms; hand lead 15 fathoms and under. Some time was spent in drifting over rocky shoals trying to get shoaler soundings.

Control on the northern part of the sheet was excellent, all signals being located by triangulation or topography. Control of the southern part was based on topography done in 1927, Sheet No. 4313. Several points were recovered, and the remainder of the signals were located by sextant cuts. These latter signals were only used close inshore.

DISCREPANCIES:

Positions 121, 122, 123 of day, Westdahl, plotted about 20 meters too close inshore. The line was run approximately 20 meters off the rocks, and the positions are thus shown on the smooth sheet. The topographer was sent back to examine this region, but failed to detect errors that would change these positions.

DANGERS:

The rock awash at 3/4 tide, (Dot), about a mile south of triangulation station Hoof is the only danger in approaching Wild Cat Pass from the eastward.

The bottom to the south and east of Pye Island is very rocky and uneven. The only dangers found here were Pye Island Reef, awash at high tide, (we never observed this reef to be completely covered) which is steep-to with deep water close alongside, and a 2-1/2 fathom spot one half mile southeast of Pye Island. Owing to the unevenness of the bottom, however, ships should not run inside the 50 fathom curve in rounding the Islands from the eastward. On approaching from the westward, one cannot depend on depths so readily, but should give Pye Island Reef a good berth, and be well past before changing course to the northward, owing to the prevailing southwesterly current here.

CURRENTS:

The prevailing current past Pye Islands, during the summer set in a southwesterly direction and sometimes exceeded a velocity of one knot.

Strong tidal currents set in and out of Nuka Bay. On July 24, 8:20 a.m. at a point one half mile southwest of Pye Island a

current of 1-1/2 knots was observed setting into the Bay.

ANCHORAGES:

Good anchorage for moderate sized vessels may be found near the northeast end of Wild Cat Cove in 23 fathoms of water, 250 meters scope, bottom rocky and muddy in spots. Smaller vessels, such as fishing boats can find good anchorage a little further in, in 15 fathoms of water. ✓

COMPARISON WITH PREVIOUS SURVEYS:

There have been no previous surveys of this area, except where we connected with the 1927 surveys, which checked well at all points. ✓



L. D. Graham
H. & G. Engineer,
Hydrographer.

Approved and
forwarded
F. Williams
Chief of Party.

STATISTICS
for
SHEET, FIELD NO. 22

Date 1930	Letter Westdahl	Volume	Positions	Soundings Wire -- H.L.		Miles (statute) Sounding Line	
July 8	a	2	21	21		5.8	
" 11	b	2	84	84		9.4	
" 14	c	2	130	130		18.3	
" 15	d	2	155	155		31.3	
" 16	e	2	102	93	5	20.9	
" 17	f	2 & 3	154	136	18	16.5	
" 21	g	3	123	113	10	14.9	
" 22	h	3	293	233	5	54.1	
" 23	j	3 & 4	163	164	1	27.5	
" 24	k	4	187	187		26.6	
<u>Motor Sailer</u>							
July 29	a	1	122	71	50	9.5	
" 31	b	1	73	64	6	6.5	
Aug. 1	c	1	51	4	111	5.7	
" 2	d	1	24		49	2.0	
" 3	e	1	20		33	1.7	
" 16	f	1	44	21	33	4.2	
TOTALS:				1751	1536	326	254.9

APPROVAL
of
CHIEF OF PARTY.

Sheet No, 22 and accompanying records have been inspected and approved by me. Both the field work and office work were done under my supervision. No further hydrography is considered necessary in the area covered.

See
Review
this sheet,
A.L.S.



F. B. T. Siems,

Chief of Party, C. & G.S.

Section of Field Records

Sheet No 5093

Surveyed in 1930

Chief of Party F. B. T. Seims

Surveyed by L. D. Graham & F. B. Quinn

Protected by R. H. Earle

Soundings plotted by E. C. West

Verified & Inked by H. M. Blosson

1. The records conform to the requirements of the general instructions.
2. The plan and character of development fulfill the requirements of the general instructions.
3. There are very few line crossings but those that do cross are adequate.
4. The usual depth curves can be completely shown within the limits of the sheet.
5. The field plotting was completed to the extent prescribed in general instructions.
6. The officer draftsman did not have to do over any part of drafting done by field party except as noted on statistical sheet.

7. The junctions with adjacent sheets, that were considered, were found to be satisfactory. One adjacent sheet had not been verified and inked and it will be considered when this has been done. However some of the adjacent sheets in which the overlays were transferred to H5093 we find a difference in the soundings. But due to the fact that the bottom in this area is very rough and ragged, consequently this difference is probably all right.

8. Remarks:

The rock is probably close in-shore. As the area is already marked by other dangers it is not necessary to further examine it.

A.L.S

Pos "114 a and 115 a" were rejected by field party. These positions cannot be found on the boat sheet nor will they plot on the smooth sheet satisfactory. Therefore the sunken rock, which is mentioned in volume 1 page 13, cannot be found nor located as a result of position "115-a" failing to plot.

In long. $150^{\circ} 25' 746m$ and lat $59^{\circ} 18' 1698m$ there is a

rock work shown. Three
cuts were taken on this rock
and one cut was very, very
weak. There was a note in
pencil on the smooth sheet which
said "awash at $\frac{3}{4}$ tide". We can
find no verification of this
note anywhere but it was
placed on the smooth sheet
in ink. In all probability
a ~~at~~ rock awash does exist
at this place as it is very
close to "Bye ledge" a
rocky reef.

Respectfully submitted
G. M. Glosson

There is no doubt of the existence of
~~on this~~ this rock. As to the notation "awash at
 $\frac{3}{4}$ tide", this was accepted. Since Bye ledge
is awash at H.W. that will govern as far
as the charts are concerned. It is unnecessary to
refer the matter to the field party.

A.R.S.

DEPARTMENT OF COMMERCE

AND REFER TO No. 80-AAP

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

SECTION OF FIELD RECORDS

Report on H. 5093

Southeast Coast Pye Islands - Kenai
Peninsula, Alaska

Surveyed in 1930.

Instructions dated March 21, 1930 (DISCOVERER)

Hand Lead and Machine Soundings - Three Point Control

Chief of Party, F. B. T. Siems

Surveyed by L. D. Graham; F. B. Quinn.

Protracted by R. A. Earle.

Soundings plotted by G. C. Mast.

Verified and inked by G. C. McGlasson

1. Records:

The records conform to the requirements of the Hydrographic Manual with the exception that the wire sounding work was not entered in accordance with the sample record given on p. 116, H. M. As the field party has recorded the soundings the correct interpretation would be that the sounding was not taken at the time the position was taken but sometime later, presumably after the vessels headway had been killed. However, the assumption was made that the sounding was taken at the time the position was taken and that the recorded difference in time between the stopping of the vessel and the time the sounding was taken was merely an interval that elapsed after the vessel was dead in the water, and hence the vessel did not traverse any additional distance. Another possibility is that the position was actually taken at the instant the sounding was taken, but the position number at the left hand side of the sounding record was entered opposite the time of "stop" instead of after the time of taking the sounding. The result in such case would be in agreement with the office interpretation. This matter should be referred to the surveyor for explanation.

Regarding the ~~reading~~^{recording} of data, ~~it~~ it is desired to

suggest that in all cases where notes are made referring to rocks, the actual amount that the rock bares at the time it is observed should be entered and not what it would bare at some plane of reference. It is a simple matter for the office to compute the latter, but it is not always easy to reconcile a statement by the hydrographic party that a "rock bares at H. W." with some other source of information, to say nothing of the possibility of confusing the plane of reference. A case in point occurs on this sheet. At position 1 a (vol. 1 p. 4), a note says "rock awash at H. W. 50 meters towards @ Must," there being at the time a minus 2 foot tide. The high water for the day was 11 feet. The topographic sheet for the area shows a sunken rock in practically the same position given by the hydrographic party. The two sources of information are therefore in open conflict as to the character of the rock. If the rock is awash at H. W. the topographer would surely have seen it since his work indicates that he was in the vicinity at tides below high water. But if the rock is awash at L.W. or at a minus tide the sunken rock on the topographic sheet is easily explained. After due consideration of all factors the conclusion was reached that the rock was awash at the time the observation was made. It is quite obvious that such uncertainties would be eliminated if in every case a reference is made to the amount the rock uncovers at the time it is observed.

2. Specific Instructions.

It is not considered that the work as executed is in conformity with paragraphs 24 and 25 of the specific instructions. There are numerous places where further development should have been done, or where drag work should have been accomplished. These will be mentioned more specifically under "Additional Work".

3. Depth Curves.

While the depth curves can generally be completely drawn there are a few places, particularly in the vicinity of shoals, where the curves can only be approximated. Noticeable in this respect is the area around Pye Ledge, the 20 fathom curve south of the eastern end of Outer Island and the 20 fathom curve in the vicinity of lat. 59-24.3 long. 150-19.

4. Field Drafting.

The usual field plotting was done by the field party. The position numbers and letters should be made a little larger than shown on this sheet.

5. Junction with surveys.

The junctions with H. 5091 and H. 5092 are satisfactory. The junction with the 1927 work H. 4721 is also considered adequate.

6. Additional Work.

The following supplementary work should be done before this survey can be considered complete:

(a) The $9\frac{1}{4}$ fathom spot in lat. 59-20.6 long. 150-25 should be further examined. The cove if clear of dangers should make good protection in northerly weather.

(b) The entire ridge making off from the eastern end of Outer Island and terminating in Pye Ledge should be better developed and if feasible wire dragged. There are several indications of possible shoaler water that may be menacing to boats running between Outer Island and Pye Ledge.

(c) The area surrounding Pye Ledge should be completely developed. This is highly important. The axis of the ridge runs directly between two sounding lines that are 500 meters apart and it is quite probable that shoal water exists to the southwestward of Pye Ledge that should be indicated on the chart. The general statement in the D. R. that Pye Ledge is steep with deep water close alongside is insufficient unless supported by actual soundings. In this connection, it is important to note that since Pye Ledge (awash at H. W.) is visible at every stage of the tide, it makes a good point of departure for vessels navigating this locality, and unless the area immediately surrounding the ledge is properly developed the published chart on a scale of 1/80,000 will be misleading.

(d) The ridge making out from the southeastern end of Outer Island and terminating in the 10 fathom shoal about 2 miles to the southeastward should be more fully developed and wire dragged, particularly the $2\frac{1}{2}$ and 10 fathom shoals. In connection with the $2\frac{1}{2}$ fathom shoal it should be noted that between positions 72 and 73 e (Vol. 2 p. 56) the record says "Breakers here". As this falls about 150 meters to the southeast of the $2\frac{1}{2}$ fathom shoal, it would seem that the peak of the shoal was not located.

The 10 fathom shoal (mentioned above) is one of the most important spots on the entire sheet and a special effort should have been made to determine the full extent of this danger either by dragging or by further development. There are indicated slopes as great as 35 degrees and yet the nearest sounding to the 10 fathom spot on top of the ridge is 200 meters away. There is no evidence in the sounding record that there was any "feeling around" after the 10 fathom "rocky" sounding was obtained.

(e) At the south entrance to Kitten Pass, more development should be done in the broken area between the 10 and 20 fathom curves.

(f) The area in the vicinity of the 20 fathom spot in lat. 59-24.1 long. 150-19 should be further examined.

In connection with the examinations called for above, it should be said that the experience on the $2\frac{1}{2}$ fathom shoal in lat. 59-20.3 long. 150-22.4 should be sufficient justification for further examination of the other shoals. The Westdahl had obtained a least depth of 24 feet on practically the identical spot where the motor sailer later found 15 feet.

7. Note to Compiler.

The present survey should supersede all the work shown on H. 2853 that falls within the limits of the new survey. The earlier survey is on a 1/200,000 scale and is of a reconnaissance nature only.

8. Reviewed by A. L. ShalXowitz, June 1931.

Approved:



Chief, Field Records Section



Chief, Field Work Section

AND REFER TO No. **00-AAP**

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

SECTION OF FIELD RECORDS

Report on H. 5093

**Southeast Coast Eye Islands - Kenai
Peninsula, Alaska**

Surveyed in 1930.

Instructions dated March 21, 1930 (DISCOVERER)

Hand Lead and Machine Soundings - Three Point Control

Chief of Party, F. B. T. Siens

Surveyed by L. D. Graham; F. B. Quinn.

Protracted by H. A. Earle.

Soundings plotted by G. C. Mast.

Verified and inked by G. C. McIllasson

1. Records:

The records conform to the requirements of the Hydrographic Manual with the exception that the wire sounding work was not entered in accordance with the sample record given on p. 118, H. M. As the field party has recorded the soundings the correct interpretation would be that the sounding was not taken at the time the position was taken but sometime later, presumably after the vessel hadway had been killed. However, the assumption was made that the sounding was taken at the time the position was taken and that the recorded difference in time between the stopping of the vessel and the time the sounding was taken was merely an interval that elapsed after the vessel was dead in the water, and hence the vessel did not traverse any additional distance. Another possibility is that the position was actually taken at the instant the sounding was taken, but the position number at the left hand side of the sounding record was entered opposite the time of "stop" instead of after the time of taking the sounding. The result in such case would be in agreement with the office interpretation. This matter should be referred to the surveyor for explanation.

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In connection with the examinations called for above, it should be said that the experience on the 2½ fathom shoal in lat. 59-20.3 long. 150-22.4 should be sufficient justification for further examination of the other shoals. The Westdahl had obtained a least depth of 24 feet on practically the identical spot where the motor sailer later found 15 feet.

7. Note to Compiler.

The present survey should supersede all the work shown on H. 2953 that falls within the limits of the new survey. The earlier survey is on a 1/200,000 scale and is of a reconnaissance nature only.

8. Reviewed by A. L. Shallowitz, June 1951.

Approved:

Chief, Field Records Section

J. S. Borden

Chief, Field Work Section

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5093

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

Number of positions on sheet	1751
Number of positions checked	314
Number of positions revised	11
Number of soundings recorded	1862
Number of soundings revised	29
Number of signals erroneously plotted or transferred	None

Date: 21 May 1901

Cartographer: E. M. Blinn