

4836

Diag. Cht. No. 8502-2 & 8552

Form 504
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: Alaska

11-5613

DESCRIPTIVE REPORT.
8
Hydro. Sheet No. 4836

LOCALITY:

Kenai Peninsular

Seal Rock to Two Arm Bay and
Harris Bay

1928

CHIEF OF PARTY:

R.R. Lukens

4836

DESCRIPTIVE REPORT

Hydrographic Sheet No.8. 4836

S.W. Alaska.

Str. SURVEYOR

R.R.Lukens,
Chief of Party.

1928.

Scale, 1:40,000

DESCRIPTIVE REPORT.

To accompany

Hydrographic Sheet No. 8

Scale 1:40,000

Str. SURVEYOR R.R. Lukens

S.W. Alaska.

1928.

Authority Director's instructions of Feb. 18, 1928.

LIMITS This sheet covers the area bounded by Eye Island, Sea Rock and Granite Island. The hydrography was finished from Sea Rock, westward to the meridian of the western entrance to Two Arm Bay.

METHODS Practically all the soundings on the sheet were made with the fathometer. Occasional vertical casts were made for the purpose of checking the fathometer and obtaining bottom specimens. A small area of hydrography at the southern end of Granite Island was done by the launch for the reason that there were no signals available for this area on sheet No. 11 (Harris Bay, 1:20,000).

CONTROL All control on the sheet is from the 1928 triangulation and all is based on the old line Aialik - Chiswell.

DESCREPENCIES Between positions 23E and 24E there is a poor crossing. This is probably due to improper spacing. The time ahead may have been taken too soon. If the 61-fathom sounding were pulled to the left a few meters, the line would cross. The 44-fathom sounding ~~XXXX~~ shows the need for additional soundings here. This was inadvertently overlooked before leaving the field. A copy of the boat ^{sheet} has been retained, and this area will be developed while the vessel is enroute to the working grounds next season.

Position 101 F appears to plot too far north. There was no change of course here, and subsequent positions indicate

that the vessel was making a straight line. If a straight line were assumed between positions 100 and 102E, the lines would cross fairly well. ^{58F}

Near position 40 F, there are some irregularities in the bottom. Some additional lines should be run here when work is resumed in this section.

DANGERS No dangers were found.

BANKS There is a bank of small area about 1 mile northwestward from Sea Rock. The bank was carefully developed and a least depth of 17 fathoms was found. About 1/2 mile north of this spot there is another small bank on which a least depth of 20 fathoms was found. The vertical casts near these soundings showed rocky bottom. The banks appear to be surrounded by mud. These banks were discovered while running a spirit line on the old survey of this area. Vessels bound between Kodiak and Seward pass just north of Sea Rock, Breakers have never been reported. This indicates the absence of any dangers.

TIDAL DATA All soundings were reduced from the automatic gauge at Seward.

FATHOMETER REDUCTIONS Fathometer soundings were reduced for temperature and salinity in accordance with the method outlined in the hydrographic manual. The tabulation of temperatures and densities will be forwarded with sheet No. 11 (R.A.R.). The irregularities of the fathometer are rather large in comparison with the temperature corrections obtained. The flashes usually cover an arc of 2 or 3 fathoms. The mean value was recorded. Occasionally when over a flat bottom, it was noted that the fathometer reading just before coming to a stop differed by 3 or 4 fathoms from that obtained when the flashes started coming in again after starting ahead. I have been at a loss to explain this behavior.

SLOPE CORRECTIONS No slope corrections have been made. There are no long uniform slopes on the sheet, and it was not considered necessary to make these corrections over up and down bottom or where the slopes are steep and short.

Respectfully submitted,

R. R. Lukens
R. R. Lukens,
Chief of Party.

LIST OF STATISTICS

Sheet #8.

Seal Rock to Pye Island.

1928. (Date)	(Vol)	(Day)	(Positions)	(Soundings)	(Miles)	(Vessel)
Sept. 20	1	A	93	375	66.2	SURVEYOR.
" 21	1	B	60	233	41.4	"
" 25	1	C	33	121	20.0	"
" 26	1	D	25	82	11.0	"
" 27	1	E	99	368	59.5	"
" 28	1&2	F	117	450	77.5	"
Oct 2	2	G	46	156	16.0	"
Sept. 26	2	e	<u>12</u>	<u>35</u>	<u>3.2</u>	MOTOR SAILER.
Totals			485	1820	294.8	

Total area - 76.6 Sq. Statute miles.

(For Files of Field Records Section)

E. A. L.

March 5, 1929.

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 4836

Locality: Seal Rocks to Fye 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
~~XXXXXXXXXXXXXX~~

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.

Report on H4836

Chief of Party - R. R. Lukens
Surveyed by - R. R. Lukens

Plotted & Pencilled by, J. C. Mathison
Verified and Inked by John G. Ladd

1. The records conform to the General Instructions, except that the recording of "line turns right" or "left" was always on the line with the position whereas the boat sheet shows that often the line turned before the position was taken.
2. The plan and character of development fulfills the requirements of the General Instructions.
3. The sounding line crossings are adequate and agree very well.
4. The usual depth curves could be drawn.
5. The field plotting was complete and accurately done.
6. On the positions where vertical cast soundings were taken at same time with Fathometer sounding, the V.C. sounding was accepted and inked on smooth sheet in parentheses.

John G. Ladd

March 19, 1929

Jr. Capt. Eng.

Section of Field Records
Report on Hyd. Sheet No. 4836
Vicinity of Kenai Peninsula, Alaska
Surveyed in 1928.

Instructions dated Feb. 18, 1928 (Surveyor)

Chief of Party - R. R. Lukens

Surveyed by - R. R. Lukens

Protracted and plotted by - J. C. Mathisson

Verified and inked by - John G. Ladd

1. The records for this sheet conform to the requirements, except that in recording fathometer soundings no check mark has been made at the extreme right hand edge of the left hand page to show that the middle reed of the tachometer was vibrating at maximum amplitude when the fathometer was read.
2. The plan and character of development

confirms to the requirements of the general instructions.

3. The plan and extent of the survey satisfies the specific instructions with the following exceptions.

There are several gaps in the work. A split line should have been run on Long. $149^{\circ}53.5'$ from Lat. $59^{\circ}29'$ to Lat. $59^{\circ}32'$. Another split line should have been run on Long. $149^{\circ}53.5'$ from Lat. $59^{\circ}35'$ to Lat. $59^{\circ}38'$.

More lines should have been run to fill in the gap about two miles west of Lone Rock.

The 44 fathom sounding near pos. 23E and the 49 fathom sounding near pos. 6E should have been further developed.

More lines should have been run in the vicinity of the soundings under fifty fathoms near pos. 40F and pos. 58F.

The depths on the 17 fathom and the 20 fathom shoal, N.N.W. from Seal Rock, might have been checked by taking vertical casts.

4. The sounding line crossings are satisfactory.
5. The information is sufficient for drawing the usual depth curves except in the open space two miles west of Lone Rock.
6. The junctions with H. 4838 and H. 4837 on the north is satisfactory. There is no contemporary work on either the eastern or western limits. The additional work done on H. 4731, on the eastern side of Seal Rock, falls about a mile short of reaching this work.
7. In order to complete this survey, further work should be done as outlined in par. #3.
8. The usual amount of field drafting was well done by the field party.
9. Reviewed by R. L. Johnston March, 1929.

Recommended additional work
Completed - see 4836 Add'l work.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

C. & G. SURVEY
L. & A.
FEB 25 1929
Acc. No.

REG. NO. 4836

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. 8

REGISTER NO. 4836

State Alaska

General locality Southwest part Kenai Peninsula

Locality Sea Rock to Two Arm Bay and Harris Bay
~~Eye Island~~

Scale 1:40,000 Date of survey September, 1928.

Vessel Ship SURVEYOR

Chief of Party R. R. Lukens

Surveyed by B. R. Lukens

Protracted by J. C. Mathisson.

Soundings penciled by J. C. Mathisson.

Soundings in fathoms ~~feet~~

Plane of reference MLLW Seward.

Subdivision of wire dragged areas by

Inked by John G. Ladd

Verified by J. G. L.

Instructions dated Feb. 18, 1928

Remarks: ~~Western portion of sheet unfinished.~~

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 4836

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

Number of positions on sheet	.113...
Number of positions checked	.60...
Number of positions revised	.1....
Number of soundings recorded	.453...
Number of soundings revised	.12...
Number of signals erroneously plotted or transferred	.0...

Date: 3-12-30

Cartographer: *A. M. Blason*

4836 Add'l. Work

4836 Add'l. Work

Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

....., *Director*

State: Alaska

DESCRIPTIVE REPORT

Topographic } ^{4836 Add'l} Sheet No. **4836 Add'l. Work**
Hydrographic }

LOCALITY

Kenai Peninsula

Off Two Arm Bay and Harris

Bay

1929

CHIEF OF PARTY

R.R. Lukens

C. & G. SURVEY
L & S
FEB 17 1930
Acc. No.

Descriptive Report
Hyd. sheet 1:40000
off Two Arm Bay
Alaska
1929

To be plotted on 1928 smooth sheet
now in the office.

DESCRIPTIVE REPORT.

1:40,000 Hyd. Sheet

Off Two Arm Bay

Alaska.

1929.

The work on this sheet consists of some developements that were omitted when the original survey was made in 1928. The work was done with the fathometer checked by frequent up and down casts. ✓

TIDES The automatic tide gauge at Seward is to be used in reducing these soundings. The tidal data is not at hand and it is expected that the reductions will be made in the office. ✓

VELOCITIES A series of temperatures was taken and the mean temperature for each depth was computed from this series. The velocities were worked out in accordance with the hydrographic manual. The temperature curve and the index correction curve are attached to this report. ✓

CONTROL No new signals were used and it is thought that the work can be plotted on the original smooth sheet without trouble. ✓

In several cases the fathometer readings taken just before the ship stopped did not agree with the wire measure. In nearly every case however, when the ship went ahead the fathometer began flashing depths near the wire measure. This is a feature that I have often noticed when sounding with the fathometer. |

This was the first hydrography done by the ship after arriving on the working grounds in 1929. ✓

Respectfully submitted,

R.R. Lukens

R.R.Lukens,

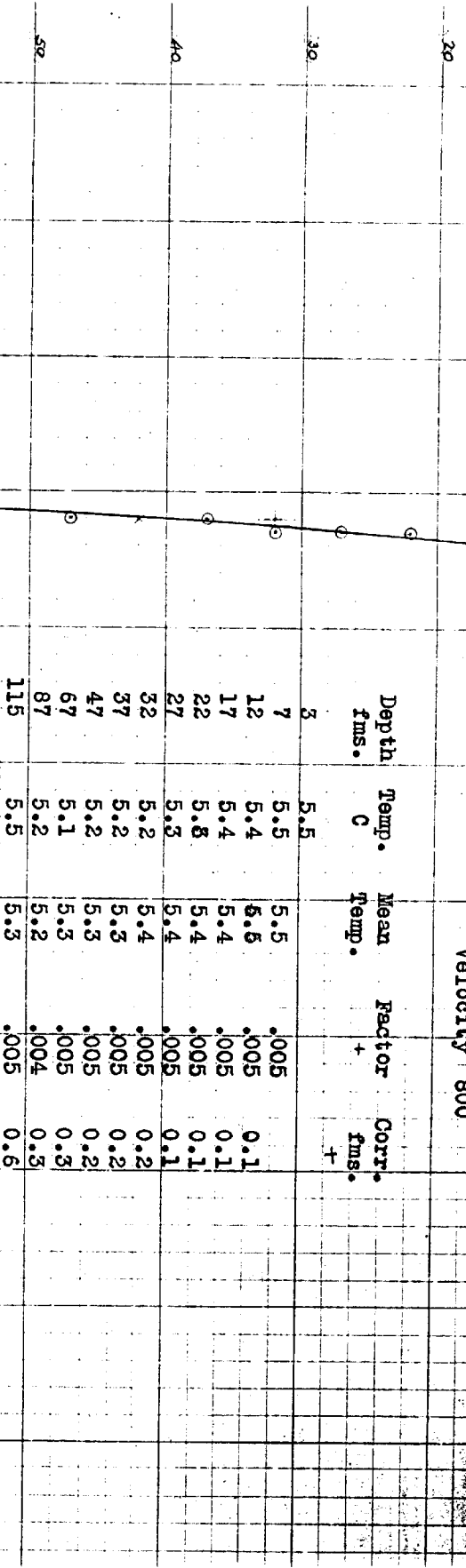
Chief of Party.

FATHOMETER TEMPERATURE CURVE AND VELOCITY CORRECTIONS

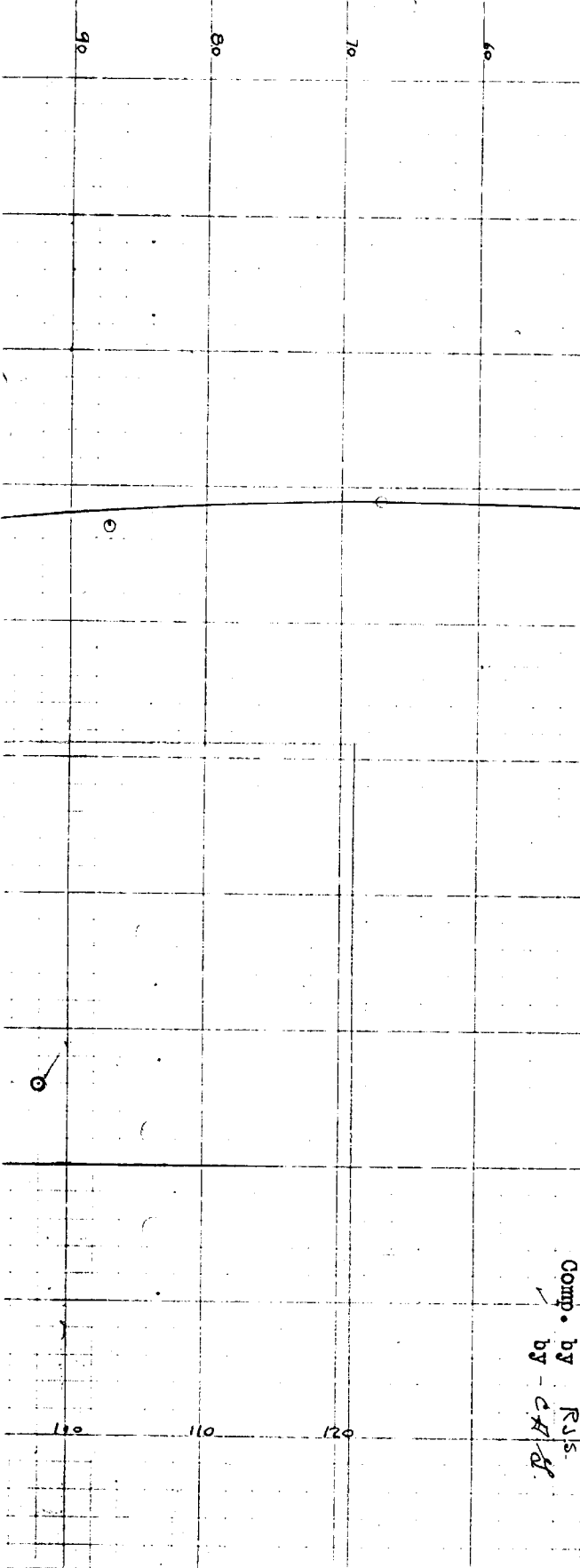
May 9, 1929.

Str. SURVEYOR - Off Harris Bay, West of Inna Rock.

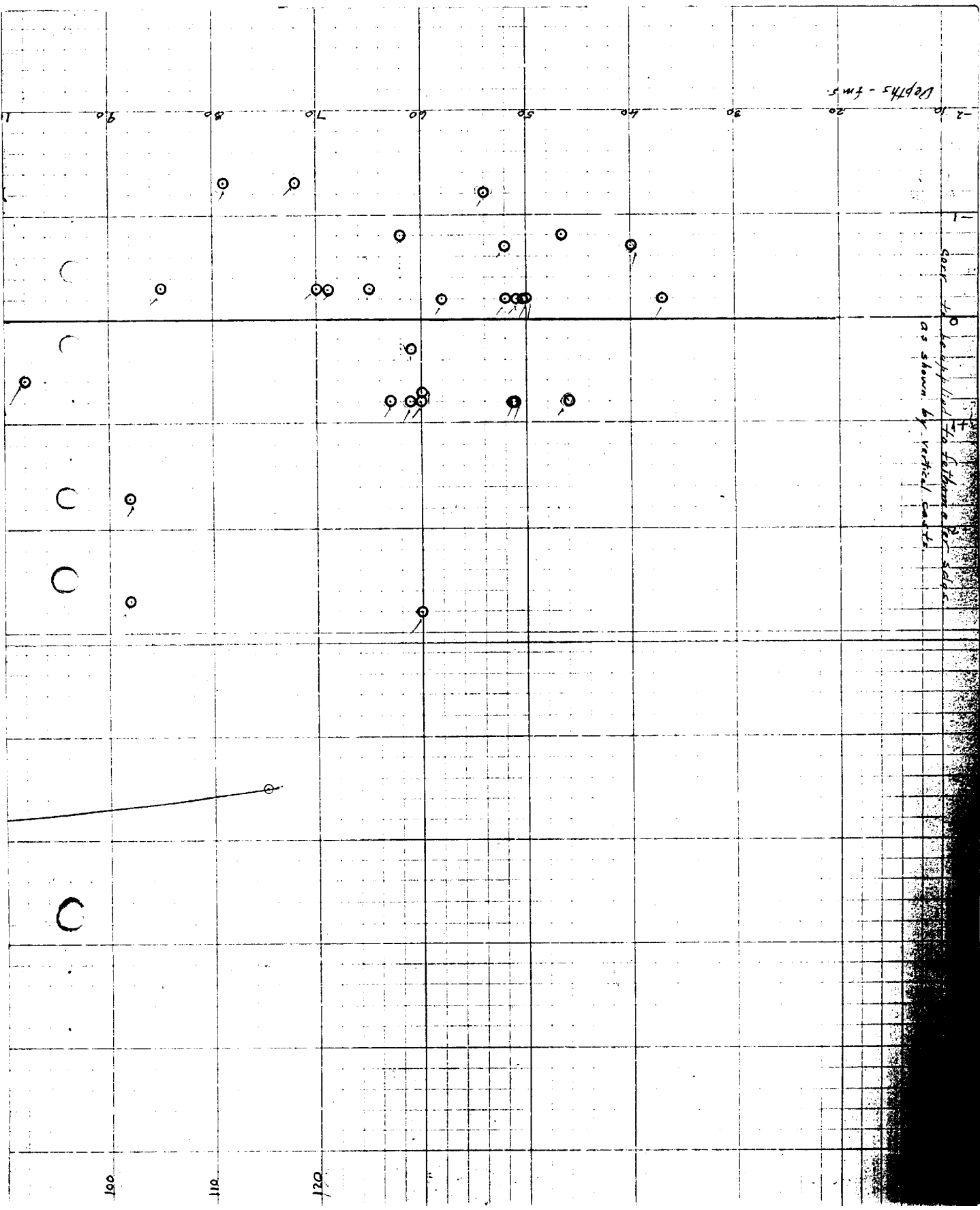
Mean Salinity 32
Velocity 800



Comp. by R.J.S.
by C.A.H.



depths - fms.



So far to be applied to Altham's Bar side as shown by vertical casts

100

110

120

20 30 40 50 60 70 80 90

DEPARTMENT OF COMMERCE

AND REFER TO No. 11-DFM

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

March 21, 1930.

SECTION OF FIELD WORK

Report on Hydrographic Sheet No. 4836 (Additional Work)

Vicinity of Two Arm and Harris Bays, Kenai Peninsula

Surveyed in 1929

Chief of Party, R. R. Lukens

Surveyed by R. R. L.

Verified and inked by G. C. McGlasson

1. There are no instructions issued for this additional work. It was merely a continuation of the 1928 work and covers some developments that were omitted on that survey.
2. The work conforms to the requirements of the Hydrographic Manual. The work was verified on the boat sheet and then transferred to the smooth sheet.
3. The shoaling to the northwest of Seal Rock has been completely developed.


In the vicinity of Two Arm Bay inside the 50 fathom curve a closer development might reveal slightly less water over certain spots, but it is not believed that any dangerous depths would be encountered. However, since the DISCOVERER is to make a junction with H. 4836 it will not entail a great amount of work to further examine the area in the vicinity of the 27 fathom sounding in Lat. 59° 33' 300 m., Long. 150° 02' 260 m. and the 24 fathom sounding in Lat. 59° 34' 640 m., Long. 150° 03' 660 m.

It should be noted that the gap in the work to the westward of Lone Rock is covered in the instructions to the DISCOVERER for 1930.

4. Reviewed by A. L. Shalowitz, March 1930.

Approved:


Chief, Section of Field Records (Charts)


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

Section of Field Records

Sheet No 4836

Surveyed in 1929

Chief of Party - R. R. Lukens

Surveyed by - R. R. Lukens

Protracted by - J. C. Mathisson

Soundings Plotted by J. C. Mathisson

Verified & Inked by G. C. M^o. Glasson

1. This report relates to additional work done on this sheet in 1929. It consists of developments that were omitted when the original survey was made in 1928. The new work was taken from the boat sheet after it had been checked and verified and then transferred to the original smooth sheet.
2. The records conform to the requirements of the general instructions.
3. The plan and character of development fulfill the requirements of the general instructions.
4. The usual depth curves can be completely drawn within the limits of the sheet.
5. The field plotting was completed to the extent prescribed in general instructions.
6. The office draftsman did not have to do over any part of drafting done by field party except to correct the reduction for tide on boat sheet.
7. The junction with adjacent sheets are satisfactory explained in original report.

Respectfully Submitted,

G. C. M^o. Glasson

cm

(COPY FOR FILES FIELD RECORDS SECTION)

Mar. 1, 1930

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
1 volume of sounding records for

HYDROGRAPHIC SHEET 4836 (Add'l work)

Locality: Seal Rock to Pye I., Alaska

Chief of Party: R. R. Lukens, in 1929
Plane of reference is mean lower low water, reading
2.6 ft. on tide staff at ~~Seal Rock~~ Seaward
~~Seal Rock~~

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. Wilby

Chief, Division of Tides and Currents.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

HYDROGRAPHIC TITLE SHEET

Submitted on Boat Sheet and to be plotted on original Sm. Sh. 4836

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. *4836 Add'l Work*

State *Alaska*

General locality *Kenai Peninsula*

Locality *Off Two Arm Bay and Harris Bay*

Scale *40,000* Date of survey *May 9*, 192*9*

Vessel *Surveyor*

Chief of Party *R.R. Lukens*

Surveyed by _____

Protracted by _____

Soundings penciled by _____

Soundings in fathoms _____ feet

Plane of reference _____

Subdivision of wire dragged areas by _____

Inked by _____

Verified by _____

Instructions dated _____, 192*9*

Remarks: *This work consists of some developements that were omitted during the original survey of 1928*

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

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 11-DFM

WASHINGTON

March 21, 1930.

SECTION OF FIELD WORK

Report on Hydrographic Sheet No. 4836 (Additional Work)

Vicinity of Two Arm and Harris Bays, Kenai Peninsula

Surveyed in 1929

Chief of Party, R. R. Lukens

Surveyed by R. R. L.

Verified and inked by G. C. McGlasson

1. There are no instructions issued for this additional work. It was merely a continuation of the 1928 work and covers some developments that were omitted on that survey.
2. The work conforms to the requirements of the Hydrographic Manual. The work was verified on the boat sheet and then transferred to the smooth sheet.
3. The shoaling to the northwest of Seal Rock has been completely developed.

In the vicinity of Two Arm Bay inside the 50 fathom curve a closer development might reveal slightly less water over certain spots, but it is not believed that any dangerous depths would be encountered. However, since the DISCOVERER is to make a junction with H. 4836 it will not entail a great amount of work to further examine the area in the vicinity of the 27 fathom sounding in Lat. 59° 33' 300 m., Long. 150° 02' 260 m. and the 24 fathom sounding in Lat. 59° 34' 640 m., Long. 150° 03' 660 m.

It should be noted that the gap in the work to the westward of Lone Rock is covered in the instructions to the DISCOVERER for 1930.

4. Reviewed by A. L. Shalowitz, March 1930.

Approved:

Chief, Section of Field Records (Charts)

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