

4745

Diag. Cht. No. 5101-2 & 5902

Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: Oregon

11-5013

U. S. O. SURVEY
I. L. & A.
MAR 22 1928
Acc. No.

DESCRIPTIVE REPORT.

Sheet No. ⁷ **4745**

LOCALITY:

Cape Meares

Tillamook Bay to Cape

Lookout

1927

CHIEF OF PARTY:

R.F. Luce

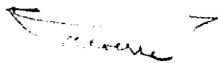
4745

DESCRIPTIVE REPORT

TO ACCOMPANY LAUNCH HYDROGRAPHIC SHEET

No. 7 4745

CAPE LOCKOUT TO TILLAMOOK BAY

A handwritten scribble in cursive script is located below the text "CAPE LOCKOUT TO TILLAMOOK BAY". It appears to be a signature or a set of initials, possibly "M. M. M.", written in dark ink.

DESCRIPTIVE REPORT

TO ACCOMPANY LAUNCH HYDROGRAPHIC SHEET 7 & 8, KINCHELOE POINT
TO NESTUCCA BAY.

AUTHORITY

This work was called for under instructions from the Director, dated March 8, 1927. This work was done during the months of July and August 1927. ✓

LIMITS

These sheets represent the northern part of the in-shore hydrography executed by the launch WISDOM during the field season of 1927. The hydrography was carried from the beach to a good junction with the work done by the Str. PIONEER during the year 1927. Sounding lines are spaced at about 200 meters. ✓

CONTROL

The control for these two sheets consists of third order triangulation stations supplemented by plane table locations of intermediate natural and artificial objects, and a few signals located by sextant fixes. Over the entire area covered by these sheets the control was found to be very good. ✓

BOTTOM CHARACTERISTICS

For practically the entire area covered by these sheets the bottom consisted of gray sand and sloped evenly toward the beach. Pyramid Rock in Lat. 44 - 29.8 Long. 123 - 59 is steep to on all sides and there is a good passage between this rock and the shore. Three Arch Rocks are steep to on the seaward side and the North and South but there is no clear passage between them and the shore. The West face of Cape Lookout is very steep to and there are no jutting ledges. The 15 fathom curve passes very close to this face of Cape Lookout. On the North and South faces of Cape Lookout the 5 fathom curve passes close to the shore. There are two or three 9 fathom banks immediately Northwest of Haystack rock of rock bottom. This area was developed by the motor sailer working from the ship. ✓

GENERAL DESCRIPTION OF THE COAST

This section of the coast is fully described in the Pacific Coast Pilot on pages 148 and 149. ✓

LANDMARKS AND DANGERS TO NAVIGATION.

Signal Kin is a very prominent large hotel on the beach and is easily distinguished for a considerable distance offshore in clear weather.

Pyramid Rock, called Mid, about 5/8 of a mile northwesterly from Cape Mears Light House and 5/8 of a mile offshore is a prominent rock easily visible from seaward.

Three Arch Rocks is a group of three large rocks and several smaller ones easily distinguished from seaward for a considerable distance and lie about 1 1/2 mile S x W true from Cape Mears Light House. The eastern most rock is 275 feet high. In a westerly direction from this 275 foot rock, the other three rocks are 204 213 and 12 feet high respectively. These rocks are very steep to and vessels can pass very close if they so desire.

Cape Lookout is a long narrow strip of land projecting out about 1 1/2 miles almost perpendicular from the shore and is 850 feet high on top and about 450 feet high at the extremity.

Haystack Rock is a large conical shaped rock lying about 1/2 mile offshore, 327 feet high and easily distinguished for considerable distance from seaward.

On H-4746

SHOALS FOUND.

No shoals dangerous to navigation were found within the limits of these sheets. About 1/2 mile SWly of signal Out a 12 fathom bank of small extent and rocky bottom was found. Northwesterly from Haystack Rock the bottom is somewhat lumpy and several banks of small extent with a least depth of 9 fathoms were found. This area was thoroughly developed by the mptor sailew working from the ship.

On H-4746

AIDS TO NAVIGATION.

Tillamook Bay and Bar are covered by the descriptive Report accompanying Launch Hydrographic Sheets for 1926.

Cape Mears Light House and Nestucca River Sea Buoy are the only two aids to navigation found within the limits of these sheets.

CHANNELS

Netarts Bay and Sand Lake are both nearly dry at Low Water and at high water are obstructed by constant lines of breakers. No directions of value to a stranger can be given as local knowledge is essential in entering Netarts Bay. No vessels enter Sand Lake.

ANCHORAGES.

The south side of Cape Lookout affords excellent protection for vessels of all kinds in any Northwest weather or sea. 8 fathoms can be found within 100 yards of the shore for a distance of $\frac{7}{8}$ of a mile East of the point. The launch WISDOM has anchored here with perfect safety and comfort in strong N. W. winds of approximately 45 miles per hour. The holding ground is good and the vessel when anchored close to the shore is protected from the wind by the steep sides of Cape Lookout thereby minimizing the danger of dragging. However when the wind and sea veer to any direction South of W. N. W. no protection is afforded and the vessel must put to sea. The same situation is true South of Three Arch Rocks., except that the bottom is rocky. No other anchorages fall within the limits of these sheets.

CURRENTS.

North of Cape Lookout a strong Southerly current was experienced the amount of which was ascertained on various days while the launch was drifting during lunch. This drift amounted to $2\frac{1}{2}$ knots running in a S. x E. true direction. South of Cape Lookout little or no current was found except at the outer ends of the lines. This current was not as strong as that north of the cape. It is thought that Cape Lookout deflects the strong current offshore. This current appears to be governed by the strength & direction of the wind.

METHODS EMPLOYED

The hand lead was used throughout the limits of these sheets. The sounding chair was rigged up high enough so that the leadsman could get a 9 foot swing of the lead. Consequently it was possible to procure 15 fathom soundings with the launch proceeding at a speed of about 4 knots. In depths up to about 23 fathoms it was possible to obtain up and down soundings by merely throwing the clutch out about 20 sec before the time for taking the sounding. Off Cape Lookout in the deeper depths the interval was increased. The notes C. O. and C. I. and H. R. and H. L. refer to clutch out clutch in, hard right and hard left respectively.

NOTE Distances are given in nautical miles and a carbon of this report is attached to sheet 8

*J. E. Rittenburg
J. N. & J. E.*

T A B L E O F S T A T I S T I C S
Sheet 7

Date, 1927	Letter	Volume	Position	Soundings	Miles, Statute	Vessel
July 6	A	1	136	372	17.5	WISDOM
7	B	1	113	293	15.25	"
8	C	1	102	308	19.0	"
8	C	2	9	28	1.5	"
11	D	2	20	61	3.5	"
12	E	2	125	360	21.5	"
13	F	2	136	419	23.5	"
14	G	2	38	91	8.0	"
14	G	3	12	26	2.25	"
15	H	3	80	226	16.50	"
18	J	3	127	423	23.5	"
Aug. 9	K	3	27	63	5.0	"
TOTAL			925	2,670	157.0	

Soundings are in fathoms referred to Mean Lower Low Water on the auto-portable tide gauge at Garibaldi, Oregon.

Mean Lower Low Water on Staff is 5.66 feet.

Tide arrives on Outside Coast 45 minutes earlier than at Garibaldi, Oregon, and 75 minutes earlier than at Tongue Point, Oregon.

Tides were tabulated in Washington Office and consequently highest and lowest tides observed are not known.

March 26, 1928

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 4745

Locality: COAST OF OREGON

Chief of Party: R. F. Ince, 1927.
Plane of reference is M L L W
5.6 ft. on tide staff at Garibaldi.

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. H. H. H.

Chief, Division of Tides and Currents.

Section of Field Records

Report on sheet #H 4745
Chief of Party - R. F. Luce
Projected by - R. L. Pfau
Verified and inked by - F. G. Eskine

Surveyed in 1927
Surveyed by R. J. Pettiburg
and
R. L. Pfau
Soundings plotted by
L. P. Bowles

1. The sounding records were fairly complete but were not neat and in places were illegible.
2. The transferring of O G A B from the topographic sheet was erroneously done, consequently nearly all positions using this signal had to be re-projected. These numbered about thirty. There appeared to be an error in the field projector which showed up when an extreme off-shore position was plotted. Nearly 36% of the positions were checked. Approximately 5 1/2% had to be changed.
3. The spacing of the soundings was generally good. The greatest error in the plotting of the soundings was reducing feet to fractional fathoms. The most common error was disregarding one foot (in plotting to quarters), instead of plotting it as one quarter of a fathom. Approximately 5% of the soundings were erroneously plotted. There were extremely few bottom characteristics in A day.
4. The sheet was clean and legible.
5. The drafting otherwise conformed with the General Instructions.

Respectfully submitted

Frank G. Eskine

September 6, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON February 14, 1929.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4745

Tillamook Bay to Cape Lookout, Oregon.

Surveyed in 1927

Instructions dated March 8, 1927 (PIONEER); April 17, 1926 (PIONEER)

Leadline Soundings

Chief of Party, R. F. Luce.

Surveyed by I. Z. Rittenberg and R. L. Pfau.

Protracted by R. L. Pfau.

Soundings plotted by L. P. Sowles.

Verified and inked by F. G. Erskine.

1. The records conform to the requirements of the General Instructions with the exception that they totally lacked neatness, particularly the right hand pages where the angles were sprawled all over the page instead of confining them to their assigned columns.
2. The plan and character of the survey conform to the General Instructions with the exception that in depths of 15 to 20 fathoms stop soundings should have been taken instead of resorting to merely throwing out the clutch before each sounding. It is believed that the practice adopted has introduced an error which is partly responsible for the lack of agreement with the adjacent survey. This will be discussed in the review for H. 4755.
3. The plan and extent of development satisfy the specific instructions. It is assumed that in all cases where the work was not carried close inshore, it was prevented by breakers.
4. The usual field plotting was done by the field party. Owing to the erroneous transfer of \odot Gab from the topographic sheet, numerous positions based on this signal had to be corrected. A common error in the plotting of soundings was the dropping of 1 foot when plotting in fathoms and quarters.

5. The 10 and 20 fathom curves were the only ones that could be drawn completely as far as the work on this sheet extended. Inshore of the 10 fathom curve the information was incomplete to permit of a continuous delineation of the shoaler depth curves.
6. The junctions with H. 4614 and H. 4746 are satisfactory. The junction with H. 4755 will be taken up when that sheet is reviewed.
7. No additional work is required within the limits of this survey unless it is desired to extend the work further inshore, particularly in the vicinity of Cape Mears or unless it is desired to develop the channel into Netarts Bay. The 12 fathom bank in the vicinity of lat. $45^{\circ} 27 \frac{1}{4}'$, long. $124^{\circ} 00'$ might stand a little further investigating.
8. Reviewed by A. L. Shalowitz, September, 1928.

Approved:

Chief, Section of Field Records (Charts)

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

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

4745

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

7

Register No. **4745**

State OREGON

General locality ~~NORTHERN OREGON~~ Cape Meares

Locality Tillamook Bay to Cape Lookout
~~CAPE LOOKOUT to TILLAMOOK BAY~~

Chief of party R. F. LUCE

Surveyed by I. E. RITTENBURG & RALPH L. PFAU

Date of survey JULY & AUGUST 1927

Scale 1 - 20000

Soundings in FATHOMS

Plane of reference MEAN LOWER LOW WATER

Protracted by R.L.P. . . . Soundings in pencil by L.P.S.

Inked by F.G. Erskine . . . Verified by F.G.E.

Records accompanying sheet (check those forwarded):

Des. report, Tide books, Marigrams, 1 Boat sheets,

3 Sounding books, Wire-drag books, Photographs.

Data from other sources affecting sheet

Remarks:

2

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

4746

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. ⁸ 4746

State OREGON

General locality . . . ~~NORTHERN OREGON~~ Cape Lookout . . .

Locality CAPE LOOKOUT TO NESTUCCA BAY . . .

Chief of party R. F. LUCE

Surveyed by I. E. RITTENBURG & RALPH L. PFAU

Date of survey JULY TO SEPTEMBER 1927

Scale 1 : 20,000

Soundings in FATHOMS & FEET

Plane of reference . . MEAN LOWER LOW WATER

Protracted by . I. E. R. Soundings in pencil by L. P. S.

Inked by J. FLEMING . . . Verified by J. F. JULY-13-1927 . . .

Records accompanying sheet (check those forwarded):

Des. report, Tide books, Marigrams, Boat sheets,

Sounding books, Wire-drag books, Photographs.

Data from other sources affecting sheet

Remarks:

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 4745

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

Number of positions on sheet . 923 .
Number of positions checked . 331 .
Number of positions revised . 51 .
Number of soundings recorded . 2678 .
Number of soundings revised . 143 .
Number of signals erroneously
plotted or transferred 1

Date: - September 6, 1928 - - - -
Cartographer: - Frank G. Eubank

