



3894

Diag. Cat. No. 6102-1

Form 501  
DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

State: *Washington*

11-3653

DESCRIPTIVE REPORT.

Hydrographic No. *3894*

LOCALITY:  
*Neah Bay*

191*6*

CHIEF OF PARTY:  
*A. S. Patton*

3894

DESCRIPTIVE REPORT

To Accompany

HYDROGRAPHIC SHEET (A), - NEAH BAY, WASHINGTON.  
3894

The object of this resurvey was to verify the depths in the harbor inside the five fathom curve, and to develop the passage between Waaddah Island and the mainland. The former was necessitated by a statement on the British Admiralty charts to the effect that in this harbor the depths were about two fathoms less than charted.

The shoreline and signals furnished by the Office were based on a plane table survey made a few years previously. As there was some doubt as to the exact scale of this survey, and also of its connections with the general surveys of the Straits, the present work was made to furnish all the data necessary for supplying this information.

For this purpose the base  $\triangle$  Waaddah to  $\triangle$  Rock was assumed to be correct as given on the Hydrographic Sheet. From this base all signals used in the work were determined by angles taken with a four inch Theodolite, and the azimuth was fixed by including in the round of angles taken at  $\triangle$  Waaddah, a direction to  $\triangle$  Sail Rock. Later, the exact scale of the survey was determined by a base measured on the beach by means of a length of sounding wire, the length of which was afterward determined in Seattle. This somewhat roundabout method was made necessary by the fact that the <sup>u</sup>equipment provided for this work included neither a tape nor a plane table outfit, as it had been assumed that neither would be needed.

One rather important correction should be noted on the original topographic sheet. This is in the position of the weather bureau signal tower, which, as plotted on the Hydrographic Sheet furnished me was about 50 meters in error. It was the discovery that such an error existed, the identity of which however, was uncertain, which led to the adoption of the procedure above described. All data in connection with the above work will be found in the sounding record.

The present tidal observations indicate that the plane of reference as referred to the B.M. of the previous work, is between five and six feet too high. I suspect however, that this error, if it exists, is in the levels connecting the Tide Staff of 1888 with the B.M., rather than in the determination of the plane of reference, and therefore, that the error does not effect the depths as shown on the present chart. For, since the chart appears to be the result of two different surveys; in 1855 and 1888 respectively, for which independent planes of reference were determined, it seems impossible that a mistake of such magnitude could have been overlooked had it been of a character to enter into the reduction of the soundings of the 1888 survey, since the most casual comparison of that work with the previous survey would have revealed the discrepancy.

This however, is mere speculation. The volume of Tidal Observations has been forwarded to Washington to have the plane of reference determined, and there the precise character of the error will be determined.

These, I believe, are the only details which require special mention. There were the usual difficulties encountered in connection with breaking in an inexperienced party, some of which reveal themselves in the records of the work. But these records were carefully examined for any errors or uncertainties prior to leaving the field of work, to make sure that everything was in good shape.

The following are the statistics of the work:

Date 1916	Day	Number of			Vessel
		Soundings	Angles	Miles	
June 8	A	524	234	15 $\frac{1}{4}$	Manila
June 10	B	204	114	5 $\frac{1}{4}$	"
June 15	C	357	188	9 $\frac{1}{4}$	"
June 17	D	<u>11</u>	<u>8</u>	<u>1</u>	"
Totals		1096	544	30 $\frac{1}{4}$	

Respectfully submitted,

*R. S. Patton*

Chief of Party, C. S. GS

## LIST OF HYDROGRAPHIC SIGNALS

## NEAH BAY, WASHINGTON

Name	Latitude			Longitude.		
West Gable of Small House	48°	22'	855	124°	35'	928
Lone Tree "Tree"	48	22	727	124	35	770
Hid	48	22	496	124	34	770
Weather Bureau Mast - "Mast"	48	22	709	124	35	358
Flag Pole	48	22	750	124	35	412
Flag Pole, L.S.S. "Save"	48	22	545	124	35	953
Cupola * L.S.S.	48	22	533	124	35	970
White	48	22	000	124	36	520
Flag Pole "Can"	48	22	82	124	37	53
North Gable - Wharf House.	48	22	233	124	37	000
Flag Pole on Beach - "Beach"	48	22	81	124	37	237
Chim - Chimney on Hotel	48	22	159	124	37	400
Stair	48	22	380	124	37	628
Rock	48	23	530	124	38	130
Tripod	48	23	268	124	35	1155

STATISTICS. Sheet No. 3894

Neah Bay, Washington.

Date	1916	Letter	Vol.	Positons	Soundings	Miles Statute	Vessel
June 8		A	1	116	524	15 $\frac{1}{2}$	Lch. Manila
June 10		B	1	57	204	5 $\frac{1}{2}$	" "
June 15		C	1	94	357	9 $\frac{1}{2}$	" "
June 17		D	1	4	11	$\frac{1}{2}$	" "
Totals.				271	1096	30 $\frac{1}{2}$	

Hyd. Sheet No. 3894

Within the limits of the work, the ground is very well covered and the purpose of the work, a verification of depths in the harbor and development of the passage south of Waaddah Id, seems to have been accomplished.

R. L. Johnston

Soundings shown in feet.

Protracted and plotted by field party  
Verified and inked by R. L. J.

VEC  
Nov. 4, 1916.

LIBRARY

Place with descriptive report  
of hydrographic sheet No. 3893

S.P.D.  
H.C.

HYDROGRAPHIC SHEET 3894,

*R.P.D.*  
Drawing Section.

Neah Bay, Washington, by Assistant R. S. Patton

in 1916.

TIDES.

	Neah Bay. Feet.
Mean lower low water, or plane of refernce on staff	4.6
Mean range of tide	5.8

NOV 11 1916



Applied to chart 6266. July 31, 1942. L.A.M.