

4863

Diag. Cht. No. 5702

ORIGINAL

Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

E. Lester Jones, Director

State: Oregon

DESCRIPTIVE REPORT

~~Hydrographic~~ } Sheet No. 1 4863
Hydrographic

LOCALITY

~~Southern Oregon Cape Sebastian~~
~~Cape Sebastian to Brookings Oregon.~~
Chetko River to Cape Sebastian

1928

CHIEF OF PARTY

F. G. Engle, H. & G. Engineer.

GOVERNMENT PRINTING OFFICE

4863

DESCRIPTIVE REPORT

To Accompany Hydrographic Sheet #1 (Field)
Scale 1/40,000

Coast of Oregon, Brookings ----- to ----- Cape Sebastian
U.S.C. & G.S.S. DISCOVERER ----- F. G. Engle,
H. & G. Engineer,
Commanding.

June -- October 1928.

Instructions dated March 13, 1928. Supplemental Instructions dated May 8 and October 12, 1928.

Limits:

The work on this sheet extends inshore from previous work on sheet #4489 to a junction with inshore work of the present season between Cape Sebastian and Brookings, Oregon together with several examinations of shoal soundings on sheet #4489.

Control:

All the work is controlled by visual fixes on triangulation points and topographic points.

Method:

Soundings are by fathometer with ship speed of eight to ten knots. Fathometer soundings were recorded at thirty second intervals and at other times where sharp changes of depth occurred. The disc motor speed was kept adjusted to vibrate the middle reed of tachometer when soundings were read. Vertical casts were obtained at suitable intervals to obtain water temperatures and samples for salinity determination and comparison with Fathometer soundings.

Hand lead soundings were obtained in shoal water between Crook Point and Cape Sebastian.

Comparison with Previous Work:

In the examinations made of the shoal soundings on sheet #4489, no indications of shoals were found. The fathometer soundings showed the bottom to be quite regular as opposed to the previous work, and the differences in depth between the old and new work must therefore be ascribed to inaccurate apparatus used on the old work.

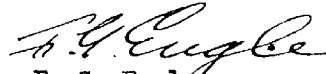
Discrepancies between Boat & Smooth Sheets:

Moderate discrepancies in position are the result of differences in the positions of certain rocks used as signals as plotted on the Boatsheet by transfer from bromides of old work and the corresponding positions plotted on the smooth sheet by transfer from topographic sheets of the present season. The soundings on the Boatsheet are the result of an approximation reduction made in the field using an assumed factor for Fathometer and some moderate difference therefore occurs in depth between the two sheets.

Shoal Soundings:

A sounding of $13\frac{1}{2}$ fathoms was obtained on D day one mile southwest of Hunter Island in the general depth of 17 fathoms. This sounding of $13\frac{1}{2}$ fathoms is probably correct although not verified by development line on H day.

Shoal soundings were obtained on the inshore line off Cape Ferrelo and Goat Island. As this line passes close to the off-lying rocks uneven bottom was to be expected.


F. G. Engle,
H. & G. Engineer,
Commanding.

TIDAL NOTE SHEET 1 (Field).

On A, B, C, and D days, the tide tables were used to reduce soundings. On E, F, and G days the auto-portable gauge at Crescent City, Calif., Latitude 41-45 North, Longitude 124-12 West, was used. There-after the auto-portable gauge at Brookings, Oregon, Latitude 42-03 North, Longitude 124-16 West, was in operation and this was used.

The plane of mean lower low water on the gauges was used in each case. The reading of mean lower low water on the Crescent City gauge was 3.00 ft.; on the Brookings gauge, 1.59 ft.

The tabulations for highest and lowest tides observed have not been made.

STATISTICS, SHEET NO. 1

Date 1928	Letter	Vol	Pos	Soundings		Miles(stat)		Waggels
				H.L.	Fm	H.L.	Fm	
June 14	A	1	92		526		40.5	Ship
" 15	B	1	82		507		52.9	"
" 20	C	1	32		172		15.9	"
" 21	D	1&2	119	85	414		50.3	"
" 29	E	2	8		44		4.0	"
July 18	F	2	10		61		4.4	"
Aug. 1	G	2	24		161		11.8	"
Sept. 21	H	2	54		396		21.7	"
Oct. 24	J	2	137		1068		90.4	"
Total - - - - -			558	85	3339		271.9	

Approval by Chief of Party.

Sheet #1 and accompanying records have been inspected and approved by me. The field and office work have been under my immediate supervision at all times.

No further work is thought necessary on this sheet.


F. G. Engle,
H. & G. Engineer.
Commanding.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Sheet #1 (Field).

....., 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:

H. 4863

F. G. Engle
F. G. Engle, H. & G. Engineer, Chief of Party.

DESCRIPTION.	POSITION.					Method of determination.	Charts affected.
	Latitude.		Longitude.		Datum.		
	'	D. M. meters.	'	D. P. meters.			
<u>Cape San Sebastian:</u> Prominent & distinguishable from the southward a sharp pointed hill rising abruptly with wooded slopes 720 ft. high from the sea. Δ San Sebastian is located on the highest point.	42	19	1282	124 25	965	Δ	5702
<u>Mack Arch:</u> A light colored arched rock the highest offshore rock in the vicinity, distinguishable for some distance up & down the coast and offshore by its light color. It has two summits the northernmost being the highest, and an arch about 50 ft. high.	42	13	1348	124 24	711	Δ	5702, 5923
<u>Whale's Head:</u> Not prominent, remove from chart.	42	08	740	124 21	855	Topo.	5702
<u>House Rock:</u> A large off-shore rock about 110 ft. high distinguishable by its light color.	42	06	1028	124 21	1323	Δ	5702

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, flagstaves and like objects are not sufficiently permanent to chart.

Division of Hydrography and Topography:

April 17, 1929

Division of Charts:

Tide Reducers are approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 4863

Locality: Vicinity of Cape Sebastian, Southern Oregon.

Chief of Party: F. G. Engle in 1928

Plane of reference is Mean lower low water, reading

1.6 ft. on tide staff at Brookings, Oregon

~~1.6 ft. on tide staff at Brookings, Oregon~~

2.8 " " " " Crescent City, Calif.

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.

June 22, 1929

Section of Field Records
Report on Hydrographic Sheet No. 4863
Cape Sebastian, Oregon
Surveyed in 1928
Instructions dated March 13, 1928

Chief of Party - F. G. Engle
Surveyed by - F. G. Engle
Contracted and Soundings Plotted by - C. M. Duzin
Verified and checked by - J. J. Jarman

1. The records conform to the requirements of the General Instructions.
2. The plan and character of development conform to the requirements of the General Instructions.
3. The sounding line crossings are reasonably good.
4. The information is sufficient for drawing the 20 fathom curve and parts of the 10 and

50 fathom curve.

5. The field plotting was completed to the extent prescribed by the General Instructions. However, no depth curves were indicated by the field draftsman and no names of geographical points were shown.

6. The junctions with H4819 and H4861 are good. The junction with H4864 is good except for the spot just north of the parallel $42^{\circ} 12'$ and located on the meridian $124^{\circ} 24'$. The soundings in this spot were secured by the pathometer while those on the adjoining sheet were secured by lead line. Since the lead line soundings are slightly less in depth it was thought probable by the office draftsman that the pathometer soundings which disagree would be rejected and for this reason the 20 fathom curve

in the immediate vicinity was not included. Sheets H 4860 and H 4872 are not yet complete and no junction was shown.

7. The character and scope of the surveying are excellent.

Report by

J. T. Jarman

Note:

The field plotting of "A" day was particularly faulty and practically every position with the corresponding soundings had to be replotted. Beginning with "B" day the errors were no more numerous than on the average sheet. The above errors seemed to be due to a combination of factors. The protracting seemed to be careless and the majority of the positions were inclined to be weak.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. *4863*

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

Number of positions on sheet *.558.*
Number of positions checked *201.*
Number of positions revised *.74.*
Number of soundings recorded *.3339.*
Number of soundings revised *.542.*
Number of signals erroneously
plotted or transferred *.None.*

Date: - *June 22, 1929* - - - - -

Cartographer: - *James T. Jarman* - - - - -

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

November 12, 1929.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4863

Chetco River to Cape Sebastian, Coast of Oregon

Surveyed in 1928

Original instructions dated March 13, 1928 (DISCOVERER)

Supplemental instructions dated May 8 and Oct. 12, 1928

Chief of Party, F. G. Engle.

Surveyed by F. G. Engle.

Protracted and plotted by C. M. Durgin.

Verified and inked by J. T. Jarman.

1. The records conform to the requirements.
2. The plan and character of development conform to the requirements of the General Instructions.
3. The plan and extent of the survey satisfy the specific instructions.
4. The few cross lines run are satisfactory and soundings on adjacent lines show good agreement.
5. The information is sufficient for drawing the usual depth curves within the limits of the work.
6. The junctions with the following sheets are satisfactory: H. 4819, H. 4861, H. 4864, H. 4872 and H. 4860. A few fathometer soundings, between pos. 75 J and pos. 77 J, were omitted where they did not check shoaler depths obtained with the lead line on H. 4864. This sheet, H. 4863, joins H. 4489, surveyed in 1925 using the Rude Fisher sounding tubes, on its western limits. The soundings agree fairly well at the junction south of Lat. 42° 12'. North of this several examinations were made of doubtful shoal soundings, shown on H. 4489. In no case was any indication of a shoaling found. The fathometer soundings showed the bottom to be even and regular and in some places were from eight to twenty fathoms deeper than the old work. There are still other soundings on H. 4489 which appear doubtful and which were not investigated.

7. The usual amount of field plotting was acceptably done by the field party. In the verifier's report reference is made to differences in the protracting of A day, while the protracting of other days checked up. These lines are in the extreme north-western corner of the sheet and differences in the protracting may have been caused by changes in the paper since the original protracting was done.
8. Character and scope of surveying - very good.
9. In view of the consistent differences that were found between this work, H. 4863, and the previous work, H. 4489, the work on H. 4489 seems to be somewhat discredited. Capt. Engle ascribes these differences to the use of inaccurate apparatus on the old work.

Additional work covering the areas on H. 4489, north of Lat. 42° 12', which have not been covered by H. 4863, is recommended.

10. Reviewed by R. L. Johnston, November 11, 1929.

Approved:

A. M. Sobieralski
Chief, Section of Field Records (Charts)

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

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.
4863

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. 1

REGISTER NO. **4863**

State Oregon

General locality ~~Southern Oregon~~ Cape Sebastian

Locality Chetko River to Cape Sebastian
~~Cape Sebastian to Brookings Oregon~~

Scale 1-40,000 Date of survey June 14 - Oct. 24, 1928

Vessel Str. DISCOVERER

Chief of Party F. G. Engle

Surveyed by F. G. Engle

Protracted by C. M. Durgin

Soundings penciled by C. M. Durgin

Soundings in fathoms feet

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated ~~April 4~~ March 13, 1928

Remarks: