

4984

123

Diog. Cht. No. 5602-2

4984

Form 504 Ed. June, 1928 DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY R. S. Patton, Director	
State: CALIFORNIA	C. & G. SURVEY L. & A APR 10 1930 Acc. No.
DESCRIPTIVE REPORT Topographic } Hydrographic } Sheet No. 23 4984	
LOCALITY Mendocino CASPAR ANCHORAGE TO GREENWOOD LANDING to Caspar Landing CALIFORNIA	
<hr/> 19.29 <hr/>	
CHIEF OF PARTY R. D. T. Sims, L. & G. Eng'r.	

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 23

SCALE 1:20,000

COAST OF NORTHERN CALIFORNIA

POINT CABRILLO TO GREENWOOD

INSTRUCTIONS DATED MARCH 25, 1929

F. G. Engle
F. B. T. Siems
Commanding

PARTY OF THE STR. DISCOVERER

SURVEYED BY: R. W. Knox, S.M.S. June 6 to Aug. 2, 1929.
G. E. Anderson, P.M.S.

SURVEY METHODS:

Both hand lead and a hand sounding machine were used in surveying this area, twelve and eighteen pound leads being used respectively. The sheaves ^{were} ~~was~~ read to half fathoms and to tenths of fathoms. The leadlines were carefully made from phosphor bronze wire core leadline and frequently checked. No difficulty was experienced in keeping the corrections within one percent of depth below reference plane. The machine was used in nearly all the soundings on the off shore work, the prevailing choppy sea making it difficult to obtain handlead soundings. The handlead was used in the survey of Mendocino Bay, Little River, and Albion, while both methods were used at Greenwood.

DANGERS:

With the exception of the few breakers noted below, this portion of the Northern California coast is singularly free from dangers outside the 10 fathom curve, this curve being very close to the beach in the greater part of its length.

Colby Reef, lat. $39^{\circ} 15' 20''$ m, long. $123^{\circ} 47' 1060''$ m, is 1/2 mile SWxW of Stillwell Point, with a 1 fm. spot 1/4 mile north of the reef. ✓

A 4-2/6 fm. sounding was obtained in the vicinity of the P D on chart 5703 in lat. $39^{\circ} 14' 390''$ m, long. $123^{\circ} 47' 360''$ m. ✓
7860

Bull Rock, lat. $39^{\circ} 12' 1690''$ m., long. $123^{\circ} 47' 350''$ m is important, as small steam schooners were observed by the launch party to have passed very close aboard while seeking what shelter the land afforded in running northward. ✓

Two breakers in lat. $39^{\circ} 10' 440''$ m, long. $123^{\circ} 45' 950''$ m, make off Saddle Point a distance of 1/2 mile. ✓

ANCHORAGES:

In general the information in the Coast Pilot relative to supplies, water, wood, bottom conditions, dangers, etc. in the succeeding anchorages is still accurate. ✓

LITTLE RIVER: When the lumber mill at Albion was running this anchorage rather than the former was sometimes used by the small lumber schooners that called there in weathering out moderate southwest blows. A mooring buoy was anchored by the lumber company. The bottom in the anchorage proper is sand. The wharfinger at Albion informed the writer that the schooners entered the anchorage in the following way: From a point about 400 meters west of signal IS, head for the ^{prominent} point upon which signal POLE is located until the small islet is cleared, then head for the buoy. ✓

The party noted that a strong northerly breeze nearly always blew down the draw at the head of the anchorage, even though it would be calm other places.

ALBION: In former years considerable lumber was shipped from Albion, the schooners tying up to the end of the dock for loading. It is a very treacherous place in southerly weather, and of late years the company has ruled that no steamer is allowed to remain at the dock after sunset during the winter months. Three times have schooners been blown through the dock, and upon the beach behind it.

Water and wood can be obtained on the dock, and a limited supply of gasoline, but no fuel oil.

There is a breaker in the bay in lat. $39^{\circ} 13'$ 1350 m and long. $123^{\circ} 46'$ 1210 m, but the hydrographic party was unable to find it. It is well known to the wharfinger, however.

All the signals up the Albion River were located by the hydrographic party by measuring distances along the face of the wharf and plotting on the shoreline as transferred to the boat sheet from chart 5703. Most of the signals in the entrance were likewise transferred from the chart. The topography could not be obtained until after the hydrographic party had moved from the vicinity.

Only two feet of water can be carried up the river at mean lower low tide, and it is said there is even less when the mill is in operation and the river dammed and a portion of the flow diverted. The bottom is covered with boulders and portions of old band saws, and strangers with even the smallest fishing boats are warned to obtain a local fisherman, ^{or} a mill employee as a pilot if intending to run up the river to the landing just seaward of the bridge. Small boats may obtain good shelter in north-west weather behind the dock in about 8 feet of water, sandy bottom.

GREENWOOD LANDING AND CUFFY COVE: Considerable work was done at Greenwood in 1926, and no attempt was made to duplicate any of it; therefore

no sounding was done in the area where the schooners moor nor in the little cove just west of Cuffy Cove. The wire drag area was sounded out, as the bromides showed the soundings to be confined to the areas just mentioned and in the vicinity of the breakers and shoals.

The Coast Pilot contains all information concerning industry, supplies, anchorages, etc. in this area.

As with Albion, no topography was available when this area was sounded out and all signals were transferred from the bromides of the 1926 work.

MENDOCINO BAY: The DISCOVERER anchored in Mendocino Bay quite often during the first half of the season, and found it offered good protection from the north-west; no dragging was experienced. The re-survey disclosed nothing new, and the Coast Pilot is referred to for notations as to dangers, etc., etc. Part of the soundings in the vicinity of the shoal in the entrance are plotted on vellum.

COMPARISON WITH PREVIOUS SURVEYS AND SHOALS:

Attempts were made to verify shoal soundings appearing on chart 5703 and bromides of previous surveys. In most cases, in addition to the system of lines run over the shoal, considerable time was spent in drifting over them, generally sounding with three lead lines, from the bow, midships and stern. Where the reported shoal was not marked by kelp it was the custom to heave a marker buoy overboard as a guide.

SDG. ON CHART OR BROMIDE	LATITUDE o ' m	LONGITUDE o ' m	LEAST WATER OBTAINED	POSITION	TIME SPENT IN ATTEMPTING TO VERIFY OLD SDG.	
--	39 20 700	123 50 0	19 $\frac{1}{2}$	<i>General surrounding depth</i> Fm. 34fm. 57a PMS	-- Min.	571
--	960	49 990	13	18 to 30 fms 79a SMS	--	✓
18	19 1320	880	16 $\frac{7}{8}$	27 to 35 fms 5c	40	✓
15	150	520	16	25 to 33 fms. 9c	16	✓
13 $\frac{3}{4}$	370	48 1230	9 $\frac{3}{4}$ 10	17 fms. 17c	15	✓
13	18 1130	49 480	12	30 fms. 12d	30	✓
14	17 170	48 1040	14	17 fms 82d	--	✓
12	16 1810	770 ⁸⁹⁰	13	---	93-94d	✓
10	16 870	610	13	---	60r <i>the 10 fm. sdg. has been discredited.</i>	40 ✓
1	15 540	47 1230	6 $\frac{1}{2}$	12 fms 5f	50	✓
1 $\frac{1}{2}$	15 100	1060	1 $\frac{1}{2}$	11 to 23 fms 87r	--	✓
--	14 1680	1130	16	21 to 29 fms. 61f	--	✓
10	14 900	760	4-2/6	^{17 to 20 fms.} 88f ^r	--	✓
PD *	660 ⁶⁸⁰ 630	480	8 $\frac{1}{2}$	<i>near 20 fm curve</i> 89f ^r	55	✓
13	40	410	9 $\frac{1}{4}$	14 to 15 fms 65h	--	✓
14	12 460	46 1260	12 $\frac{1}{2}$	14 fms 145j	--	✓
1 $\frac{3}{4}$ & 2	10 680	45 960	2 $\frac{3}{4}$ & 2	11 fms 17-18q	21	✓
--	130	320	5 $\frac{1}{2}$	9 to 12 105 l	--	✓
9	09 540	44 930	11	---	2-7q	8 ✓
$\frac{1}{4}$	07 390	43 1080	$\frac{1}{4}$	11 to 15 53p	--	✓
(br.)	13 1335	46 1210	12	---	49-57r	12 ✓
3 $\frac{1}{4}$	17 1480	48 360	3-4/6	---	109a	70 ✓

*It is thought no further number of hand lead casts would produce a shoaler sounding in the immediate vicinity of this PD. The state of the sea was such while the party was working on this sheet that no breaker was observed. It is believed the true position of the breaker should be 290 m northwest of its charted position or in the vicinity of the 4-2/6 fm. sdg., position 88f^r.

Approved and Forwarded:

F. B. T. Siems
F. B. T. Siems,
H. & G. Engr.,
Commanding.

Robert W. Knox
Robert W. Knox,
Jr. H. & G. Engr.,

TIDAL NOTE:

The auto-portable tide gauge no. 133 at Mendocino City, lat. $39^{\circ} 18'$, long. $123^{\circ} 48'$, was used in reducing the soundings on this sheet.

The plane of mean lower low water was used in each case. The reading of mean lower low water on the gauge was 1.6 feet.


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

REMARKS AND RECOMMENDATIONS FOR ADDITIONAL WORK:

Rocky shoals, generally of small extent, with considerably less water than the surrounding depths, are numerous along the coast covered by this sheet. On page 5 of this report there is listed the least depth obtained by handlead on some of these shoals together with respective general depths surrounding the shoals. There are included in the area covered by the sheet: Mendocino Bay, Greenwood Landing, Albion River, and Little River. It is considered that this stretch of the coast be wire dragged within the 40 fathom curve.

A wire drag examination of the approaches to Albion River is considered necessary to find or disprove the sunken rock (breaker) at the entrance which could not be found by the hand lead this season and to investigate the entire entrance. (See Chart 5703) It appears that a photostat of the survey of Albion, upon which Chart 5703 (Sub-sketch) depends was not forwarded to this party and that only the photostat of Hydro. Sheet 1586 a was received. The instructions did not specify nor did the photostat of Hydro. sheet 1586a indicate that a resurvey of Albion should be made.

The field work on this sheet was completed at the time of transfer of command by a detached unit, and was not under my instructions or supervision at the time. The office work was done under my supervision.


F. B. T. Siems
H. & G. Engr.
Commanding.

STATISTICS

DATE-1929	LETTER	VOL.	POSITION	SOUNDINGS		MILES (STAT) SDC. LINE	VESSEL
				H.L.	WIRE		
June 6	(a)	1 ✓	221		232	14.5	P.M.S.
July 15	(a)	13	95		156	10.3	S.M.S.
16	(b)	13	7		13	1.0	"
17	(c)	13	128		233	15.0	"
18	(d)	13	106		205	14.0	"
19	e	2	107		187	12.6	"
20	f	2	79		135	9.0	"
22	g	2	153		406	19.0	"
23	h	3	131		250	13.0	"
24	j	3	155		265	19.6	"
25	k	3	123		233	13.7	"
25	k	4	18		34	8.5	"
26	l	4	131		266	18.8	"
29	m	4	142		384	12.7	"
30	n	4	70		149	7.0	"
30	n	5	84		187	7.3	"
31	p	5	137		347	11.4	"
AUG. 1	q	5	81		214	5.0	"
2	r	5	107		290	4.0	"
				<u>4186</u>			
<u>MENDOCINO BAY</u>							
July 6	(a)	12	152	440		12.0	"
16	(b)	12	61	197		5.0	"
19	(c)	12	21	41		0.5	"
<i>Grand Total</i>			2309	678	4186		
				4864			

(FOR FILES OF FIELD RECORDS SECTION)

April 22, 1930.

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
volumes of sounding records for

7

HYDROGRAPHIC SHEET

4984

Locality:

California (Vicinity of Mendocino Bay)

Chief of Party:

Plane of reference is C. Kagle and F. B. T. Siems, in 1929
ft. on tide staff at mean lower low water, reading
1.6 ft. below B. M. Mendocino City

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.

Chief, Division of Tides and Currents.

Section of Field Records.

Report on Sheet H 4984
 Chief of Party F. H. Engle
 Protracted by J. C. Bore
 and C. J. Wagner.
 Verified and Inked by
 J. Walker.

Surveyed in 1929
 Surveyed by R. W. Knox
 and G. L. Anderson
 Soundings plotted by
 C. J. Wagner

I. Sounding Records.

The records were neat and legible.
 Sufficient bottom characteristics were given on
 the four sub-sketches which were mostly hand lead
 but the main sheet which was mostly sounded with
 a machine did not have many bottoms given.
 Most of the dangers were adequately described
 when they were mentioned at all, but few of the many
 rocks were made note of in the records.

No list of signals as called for on page 17 of
 the Hydrographic Manual was found in the sounding
 records or descriptive report. Two signals named
 Sun were found on the sheet.

II. Protracting.

Very few positions were found erroneously plotted.
 Red "a" Log Vol. 1 June 6 appears on the boat sheet as
 a washed out blue. Green "a" day Vol 3, page 4 appears

on the boat sheet as red "a" day. Many of the position numbers are too close to the position so that when the soundings are inked in the position numbers are covered up.

III. Soundings.

The time intervals of soundings between positions were mostly uniform and were strictly adhered to.

The fractions were correctly plotted except some where they had to be converted from tenths of fathoms to feet.

Very few cross lines were run except on shoals which were developed and on sub-sketch D. In these places, however, there was a generally good agreement and no bad discrepancies.

IV Conformity to General Instructions.

The sheet was received clean and neat.

There were no geographic names either in pencil or in ink on the sheet.

On the four sub-sketches the shore line and rocks were inked in by the field men with the exception of some of the offlying rocks and aids to navigation. None of the shore line or rocks

on the main sheet were inked in or shown in pencil as the contemporary topo sheets were on half the scale.

Dock at Albion River. This dock is not shown on T 4501 but was shown in pencil on H 4984 and in ink on the boat sheet. From the sounding records, descriptive report, and other information it is quite apparent that this dock exists and it is assumed it is in the same position as shown on the 1909 survey T 2978. A tracing was made of the dock from T 2978 and it was transferred to the smooth sheet H 4984 and inked in. In addition, the building between hydro. stations E & F was likewise transferred and inked in as well as the shoreline up the river from station J. On T 2978 the shoreline along the north side of Albion River from the dock to the bridge is shown as a straight line and is apparently a bulkhead. On T 4501 this shoreline is shown as an irregular and natural shoreline. On page 4 of the descriptive report for T 4501 it says, "There is a long platform on the north side of the river where the boats can come along side." These discrepancies

were taken up with Capt. Engle while he was in the Washington office but he had never landed at Albion River and knew nothing of the matter. I believe that the dock and bulkheaded shoreline as shown on T 2978 may be accepted.

The positions of the hydrographic signals on the Albion River ("B" to "K" inclusive) are in doubt. Apparently they were plotted directly on the boat sheet without notes and from there transferred to the smooth sheet. The positions as shown on the smooth sheet were accepted and no attempt at revising them was made.

Investigation should be made of the $4\frac{5}{8}$ fath. sounding S.W. of signal "Lo" at Russian Gulch, position 191 (red) "a" Vol 1 page 24. A rock awash falls on this position as transferred from T 4500.

The rocks on T 4207 were checked with H 4984 and found to agree in most cases fairly close except as to treatment of some of the rocks (bare, awash, and sunken). Disagreements which could not be ignored are noted in pencil on H 4984.

H 4587 "a" when compared with T 4207

(5)

was found to have the following rocks transferred erroneously: an island was shown on H 4587 "a" lat. $39^{\circ}-19'$ + 1372 m. long $123^{\circ}-48'$ + 1103 m. where a longer line was shown on T 4207. It was changed to conform with the topo sheet. A rock awash was shown 45 m. SE of the island which was shown as a sunken rock on T 4207. It also was changed to conform with the topo sheet. An island was shown on H 4587 "a", 178 m N.W. of O Bridge which was shown as a rock awash on T 4207. It was changed to conform with the topo sheet. Between this rock and shore was shown an island on H 4587 "a" which does not appear on T 4207. This island was removed from H 4587 "a".

Sub-sketch A. A tracing was made of the section of T 4500 covered by sub-sketch A - H 4984. Such changes and additions were made as required to make it agree with the topo sheet.

Sub-sketch B. A tracing was made of the section of T 4501 covered by sub-sketch B - H 4984. All the shore line was checked and all the rocks except those along shore south of signal Rock.

Sub-sketch C. A tracing was made of T 4502 from Lat. 39°-07' to Lat. 39-08+1100 m. and the rocks, shoreline and other data was carefully compared with the same area on sub-sketch C of H 4984. A number of rocks and other features which had been omitted were added to the hydro. sheet. A tracing was made of a photograph of H 45 89 "a" reduced to a scale of 1:10,000, and the rocks and shoreline were compared with sub-sketch C of H 4984. Rocks not located in the 1929 survey were added in pencil from the 1926 survey. A cursory examination was made of T 4208, the topo sheet contemporary with H 45 89 "a" and it was found that not all the rocks had been transferred to the hydro sheet. However, it is thought that the important off lying dangers have been transferred and therefore no attempt was made to make the two sheets agree or to transfer the rocks shown on T 4208 to H 4984.

Sub-sketch D. A tracing of T 4500 was made of the area covered by sub-sketch D - H 4984 and some changes and additions were made

⑦

to the sub-sketch to make it agree with the topo sheet.

V. Overlap.

The junction with H 4983 is good and the soundings agree.

The junction with H 4989 is fair except at the northern end where there is a considerable space between the two sheets. A 19 fathom sounding on H 4989 approximate Lat. $39^{\circ}-18\frac{1}{2}'$ Long. $123^{\circ}-49\frac{1}{2}'$ falls on a 12 fathom sounding on H 4984 and was not transferred.

The junction with H 4990 is fair except as follows: Between 119 D and 121 D on H 4990 are two sets of double soundings which it was decided not to ink in until H 4990 had been reviewed. A 25 fath. sounding from H 4990 falls on a 27 from H 4984 Lat. $39^{\circ}-12' + 565$ m. Long. $123^{\circ}-47' + 220$ m. It was not transferred. Numerous other soundings differ one or two fathoms but did not have to be omitted. The differences are, no doubt, due to the fact that H 4990 is fathometer work and H 4984 is sounding machine work.

⑧

The junction with H 4985 is good.

The overlap with H 4587 "a" shows up some off lying shoals which were probably not investigated because the area had already been wire dragged in the 1926 survey H 4587. The blank area Lat. $39^{\circ}-19'$ Long. $123^{\circ}-48\frac{1}{2}'$ was not developed in either survey and no reason was given in the recent survey for not doing so. The soundings obtained by the wire drag party as shown on the area and depth tracing H 4587 "b" had not been plotted on the "a" sheet. They were transferred to the "a" sheet and shown in green.

The overlap with H 4589 shows up some off lying shoals which were found by the wire drag in 1926. Most of them were entirely missed by the recent survey.

It is understood that the instructions call for a complete survey below Salmon Point and this has been done. Above Salmon Point the new work was to supplement the

old work and this probably accounts for the blank areas above Salmon Point. ⑨

VI Curves.

The curves are, in general, quite irregular as would be expected along this kind of rocky coast. Practically all of the 20 fathom curve can be drawn and most of the 10 fathom curve. Not many soundings could be obtained inside the 10 fathom curve on account of the numerous rocks and the rapidly shoaling bottom, so that, only short portions of the shoaler curves could be drawn.

VII Development of shoals.

The discussion on the development of shoals on this sheet is left to the reviewer, except as follows: The one fathom spot $\frac{1}{4}$ mile north of Colby Reef as shown on Chart 5703 was not found but falls in 10 to 15 fathoms with a $6\frac{1}{2}$ fathom sounding west and a group of three sunken rocks, transferred from T 4500, to the S.E. These sunken rocks were probably seen as breakers.

VIII Comparison with other data.

Sounding Records. The remarks in the records were gone over and all the rocks, buoys, and kelp were plotted as indicated with accompanying notes.

Boat sheet. The boat sheet for sub-sketches "A" and "B" was checked for rocks notes, and kelp.

The boat sheet for sub-sketch "C" was checked for rocks, notes, and kelp. Apparently some of the rocks shown on the boat sheet are from H 4589a.

The boat sheets for sub-sketch "D" and for the main sheet were checked for rocks, notes, and kelp.

Topo sheets. The four topo sheets T 4499, T 4500, T 4501, and T 4502 were reduced to a scale of 1:20000 and tracings were made of them from Lat. $39^{\circ}-08\frac{1}{2}'$ to $39^{\circ}-22\frac{1}{2}'$. The shoreline, rocks and other features were then carefully transferred to the hydro. sheet. as already mentioned.

(11)

in part IV of this report the contemporary topo sheets covering the areas of the four sub-sketches have been traced and carefully compared with the hydro sheet.

Charts. No examination was made of the charts except to obtain geographic names.

Old Sheets. No examination was made of the old sheets except those already mentioned in part IV of this report.

Descriptive Report. The first four paragraphs at the top of page 2 of the descriptive report seem confused as most of the distances given and descriptions, seem erroneous. Otherwise the descriptive report seems to be all right and quite complete.

IX Conclusion.

The following photostats and tracings of them are being held by the writer in case they can be used by the reviewer:

H4587a reduced from 1:5000 to 1:20,000.

H4589a " " " " 1:10,000.

T4499 " " 1:10000 " 1:20,000.

T4500 " " " " " " " " " "

T4501 " " " " " " " " " "

T4502 " " " " " " " " " "

T4500 (Sub-sketch A) 1:10000 tracing from original.

T4501 (" " B) " " " " " " " "

T4502 (" " C) " " " " " " " "

T4500 (" " D) " " " " " " " "

Respectfully submitted
 JFWalker
 10/21/30.

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

April 22, 1931.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4984

Coast of California from Greenwood Landing to Caspar Anchorage

Surveyed in 1929

Hand lead and Machine soundings

Original instructions dated March 25, 1929. (Discoverer)

Supplemental instructions dated May 1, 1929

Chief of Party - F. G. Engle

Surveyed by R. W. Knox, G. L. Anderson

Protracted by J. C. Bose, C. J. Wagner

Soundings plotted by C. J. Wagner

Verified and inked by J. T. Walker

1. The records are clear and well kept, but more bottom characteristics should have been recorded with the machine soundings and more notes should have been entered when passing close to rocks. No list of signals was furnished with the records.
2. The plan, character and extent of the survey satisfy the general instructions and also the specific instructions except that a number of shoal soundings on the old surveys were not investigated.
3. Few cross lines were run. The agreement of adjacent lines is fairly good considering the irregularity of the bottom.
4. The information is sufficient for completely drawing the twenty fathom curve. The ten fathom curve could be partially drawn but the curves under ten fathoms could not be drawn except on the sub-plans.
5. The junction on the north with H. 4983 is satisfactory.

There is quite a gap between the work on this sheet and the inshore line on H. 4989, but a junction with this sheet was evidently not intended, since the instructions for H. 4989 did not call for the work to be brought this far inshore.

The junction with H. 4990 is satisfactory south of Lat. $39^{\circ}12.5'$. Between Lat. $39^{\circ}12.5'$ and Lat. $39^{\circ}15'$, there are several gaps which are in the area where this sheet, H. 4984, is only supposed to supplement the old survey, H. 1586a.

The junction on the south with H. 4985 is satisfactory.

5. Comparison with previous work.

The numerous inshore rocks as shown on the old topographic surveys of 1872, T. 1305, T. 1362 and T. 1363a, agree closely with the recent topographic sheets T. 4499, T. 4500, T. 4501 and T. 4502. A few additional rocks are shown on the old sheets close inshore, but were not added to this sheet.

Three sunken rocks in Whitesboro Cove, in Lat. $39^{\circ}13.05'$, Long. $123^{\circ}46.8'$ were added to this sheet from T. 1362. The following note ^{in pencil} "Not investigated, no indication of breakers" was on T. 4501, but was not considered enough evidence for dropping these rocks. its
removed

The descriptive report of this sheet, H. 4984, states that there is a breaker in the entrance to Albion River, which is well known to the local wharfinger, but the hydrographic party were unable to find it with the hand lead. The following note is on T. 4501, "A swell was ^{in pencil} noticed in approximately this locality by topographer, ^{removed} which might indicate a rock, but no cuts could be obtained." A sunken rock symbol is shown on T. 1362 and breakers are mentioned in the sounding records of H. 1586a. The sunken rock was added to this sheet, H. 4984, in the position as shown on T. 1362.

There are a number of wharves shown on the old topographic sheets which are not indicated on the recent topographic surveys. A wharf in Albion River was added to this sheet, H. 4984, from ~~T. 4207, surveyed in 1926.~~

- ⊙ Attention is called to three other wharves, which have not been placed on this sheet as it is not known if they still exist. Coast Pilot, page 115, says there is no Wharf. One is at Little River and is shown on T. 1363a,

* T-2978, surveyed in ~~1926~~ 1909.

- ⊙ A small wharf in Russian Gulch was added to this sheet, H-4984, from T-4207, surveyed in 1926.

surveyed in 1872. The second is in Whitesboro Cove and the third at the entrance to (Navarro Landing Abandoned) Navarro River, both of these are shown on T. 1362 surveyed in 1872.

The large scale topographic surveys of 1926, T. 4207 and T. 4208, show a number of additional rocks, most of which are close inshore, which are not on the new topographic sheets. All of these have been added to this sheet, H. 4984, including a sunken rock in about Lat. $39^{\circ}18.9'$, Long. $123^{\circ}48.44'$, from T. 4207. On T. 4500 there was a note "Not investigated, could not be seen", but as no new hydrographic investigation was made and the old hydrographic sheet H. 1586a shows a 7 foot sounding at this point, the rock was retained.

The hydrography north of Salmon Point is intended to supplement the old work while south of that point the Hydrography is supposed to be complete. The general agreement with the old sheets is fairly good for an area where sharp rocky shoals are so numerous. While attempts were made by the field party to verify a great many of the shoal soundings from the old sheets and in some cases shoaler depths were found, there are still some rather critical soundings which were neither verified nor disproved. Those soundings from H. 1586a and H. 1537 were verified from the original records and placed on this sheet, H. 4984. This investigation in the office resulted in the rejection on the original sheet of the following soundings from H. 1586a: A $4\frac{1}{2}$ and $3\frac{1}{4}$ fathom sounding in Lat. $39^{\circ}18.1'$, Long. $123^{\circ}48.7'$, and two 10 fathom soundings in Lat. $39^{\circ}16.5'$, Long. $123^{\circ}48.4'$ were discredited in this manner and should be removed from the chart.

A rock awash in Cuffey's Cove, Lat. $39^{\circ}08.22'$, Long. $123^{\circ}43.8'$, was found to have been erroneously plotted from the records on H. 1537.

The original sounding records for H. 1228, Mendocino Bay, could not be found and the soundings on this sheet could not be checked. There is a 10 and $7\frac{1}{2}$ fathom sounding shown on this sheet in about Lat. $39^{\circ}17.5'$, Long. $123^{\circ}48.5'$, which appear doubtful. The curves on the original sheet indicate probability that these soundings were erroneously plotted or some other error. In view of the fact that there is no indication of a shoaling on H. 4984, recommend that these two soundings be omitted from the chart.

From Lat. $39^{\circ}20.1'$, to Lat. $39^{\circ}20.3'$ there are several soundings, the shoalest of which is $5\frac{3}{4}$ fathoms, from

H. 1586a which fall outside the ten fathom curve on this sheet, H. 4984. Although these soundings are fairly close inshore, the area should have been further developed since there is a marked disagreement with the new work.

A search was made for the one fathom spot about $\frac{1}{2}$ mile north Colby Reef, but it could not be located with the lead line. The sounding was verified from the records of H. 1586a and should be retained on the chart.

The Position Doubtful sunken rock, shown on chart 5703 in approximate Lat. $39^{\circ}14.4'$, Long. $123^{\circ}47.35'$, was taken from T. 2978, surveyed in 1909. From the appearance of the topographic sheet only one cut was obtained. An $8 \frac{2}{6}$ fathom sounding was obtained at this point but the true position of the breaker is believed to be at the $4 \frac{2}{6}$ fathom sounding shown on this sheet, H. 4984, about 280 me. northwest of the charted position. The removal from the chart of this Position Doubtful rock is recommended.

Other critical soundings from the old surveys, not mentioned in this report, have been added to this sheet, H. 4984, in orange.

6. The usual amount of field plotting was well done by the field party. The use of green for position numbers should be avoided when possible as it fades if the ink is not absolutely fresh.
7. Character and scope of surveying - good.

The area is a difficult one to survey on account of the numerous rocks, shoals and the general broken character of the bottom. There are a number of places where more development could have been done and some of the shoal soundings from the old surveys could have been more closely examined. For example the 10 and $7\frac{1}{2}$ fathom soundings from H. 1228 in Lat. $39^{\circ}17.5'$, Long. $123^{\circ}48.5'$.

A few more lines might have been run in the blank areas in the vicinity of Lat. $39^{\circ}19'$, just south of Lat. $39^{\circ}14'$, in Whitesboro Cove and off of Salmon Point. However the results obtained are considered good for the amount of work done.

8. While a number of places might be pointed out where additional development would be done, this stretch of the coast is so full of small rocky shoals that an

endless amount of lead line work might fail to find them all.

An examination of the 1926 wire drag surveys shows that many shoals were found between sounding lines which showed no indication of a shoaling. Therefore a wire drag survey of this area from the 40 fathom curve as far inshore as practical is recommended.

Also the approaches to Albion River should be wire dragged in order to locate or disprove the sunken rock at the entrance which could not be found with the hand lead.

9. Reviewed by R. L. Johnston, December 5, 1930.

Approved:

K. T. Adams

Chief, Section of Field Records (CHARTS)

S. Borden

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

Inspected E.P.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. 4984

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. 23

REGISTER NO. 4984

State CALIFORNIA

General locality ~~Northern Coast~~ Mendocino

Locality ~~Caspar Anchorage to~~ Greenwood Landing to Caspar Anchorage

Scale 1:20,000 Date of survey Jun. 6 to Aug 2, 1929

Vessel Starboard Motor Sailer

Chief of Party F. G. Engle

Surveyed by Robert W. Knox and George L. Anderson

Protracted by J. C. Bose and C. J. Wagner

Soundings penciled by C. J. Wagner

Soundings in fathoms ~~1000~~

Plane of reference mean lower-low water

Subdivision of wire dragged areas by

Inked by J. T. Walker

Verified by J. T. W.

Instructions dated March 25, 1929

Remarks:

DEPARTMENT OF COMMERCE

AND REFER TO NO. **11-WSW**

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

April 22, 1931.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4984

Coast of California from Greenwood Landing to Caspar Anchorage

Surveyed in 1929

Hand lead and Machine soundings

Original instructions dated March 25, 1929. (Discoverer)

Supplemental instructions dated May 1, 1929

Chief of Party - F. G. Engle

Surveyed by R. W. Knox, G. L. Anderson

Protracted by J. C. Bose, C. J. Wagner

Soundings plotted by C. J. Wagner

Verified and inked by J. T. Walker

1. The records are clear and well kept, but more bottom characteristics should have been recorded with the machine soundings and more notes should have been entered when passing close to rocks. No list of signals was furnished with the records.
2. The plan, character and extent of the survey satisfy the general instructions and also the specific instructions except that a number of shoal soundings on the old surveys were not investigated.
3. Few cross lines were run. The agreement of adjacent lines is fairly good considering the irregularity of the bottom.
4. The information is sufficient for completely drawing the twenty fathom curve. The ten fathom curve could be partially drawn but the curves under ten fathoms could not be drawn except on the sub-plans.
5. The junction on the north with H. 4983 is satisfactory.

There is quite a gap between the work on this sheet and the inshore line on H. 4990, but a junction with this sheet was evidently not intended, since the instructions for H. 4990 did not call for the work to be brought this far inshore.

The junction with H. 4990 is satisfactory south of Lat. $39^{\circ}12.5'$. Between Lat. $39^{\circ}12.5'$ and Lat. $39^{\circ}15'$, there are several gaps which are in the area where this sheet, H. 4994, is only supposed to supplement the old survey, H. 1596a.

The junction on the south with H. 4998 is satisfactory.

5. Comparison with previous work.

The numerous inshore rocks as shown on the old topographic surveys of 1872, T. 1308, T. 1362 and T. 1363a, agree closely with the recent topographic sheets T. 4499, T. 4500, T. 4501 and T. 4502. A few additional rocks are shown on the old sheets close inshore, but were not added to this sheet.

Three sunken rocks in Whitesboro Cove, in Lat. $39^{\circ}13.05'$, Long. $123^{\circ}45.8'$ were added to this sheet from T. 1362. The following note - "Not investigated, no indication of breakers" was on T. 4501, but was not considered enough evidence for dropping these rocks.

The descriptive report of this sheet, H. 4994, states that there is a breaker in the entrance to Albion River, which is well known to the local wharfinger, but the hydrographic party were unable to find it with the hand lead. The following note is on T. 4501, "A swell was noticed in approximately this locality by topographer, which might indicate a rock, but no cuts could be obtained." A sunken rock symbol is shown on T. 1362 and breakers are mentioned in the sounding records of H. 1596a. The sunken rock was added to this sheet, H. 4994, in the position as shown on T. 1362.

There are a number of wharves shown on the old topographic sheets which are not indicated on the recent topographic surveys. A wharf in Albion River was added to this sheet, H. 4994, from T. 4207, surveyed in 1926.

Attention is called to three other wharves, which have not been placed on this sheet as it is not known if they still exist. Coast Pilot, page 113, says there is no wharf. One is at Little River and is shown on T. 1363a.

* T-2978, surveyed in 1909.

o A small wharf in Russian Gulch was added to this sheet, H-4984, from T-4207, surveyed in 1926.

surveyed in 1872. The second is in Whitesboro Cove and the third at the entrance to (Navarro Landing Abandoned) Navarro River, both of these are shown on T. 1362 surveyed in 1872.

The large scale topographic surveys of 1926, T. 4207 and T. 4208, show a number of additional rocks, most of which are close inshore, which are not on the new topographic sheets. All of these have been added to this sheet, H. 4984, including a sunken rock in about Lat. $39^{\circ}18.9'$, Long. $123^{\circ}48.44'$, from T. 4207. On T. 4500 there was a note "Not investigated, could not be seen", but as no new hydrographic investigation was made and the old hydrographic sheet H. 1586a shows a 7 foot sounding at this point, the rock was retained.

The hydrography north of Salmon Point is intended to supplement the old work while south of that point the Hydrography is supposed to be complete. The general agreement with the old sheets is fairly good for an area where sharp rocky shoals are so numerous. While attempts were made by the field party to verify a great many of the shoal soundings from the old sheets and in some cases shoaler depths were found, there are still some rather critical soundings which were neither verified nor disproved. Those soundings from H. 1586a and H. 1537 were verified from the original records and placed on this sheet, H. 4984. This investigation in the office resulted in the rejection on the original sheet of the following soundings from H. 1586a: A $4\frac{1}{2}$ and $3\frac{1}{2}$ fathom sounding in Lat. $39^{\circ}18.1'$, Long. $123^{\circ}48.7'$, and two 10 fathom soundings in Lat. $39^{\circ}16.5'$, Long. $123^{\circ}48.4'$ were discredited in this manner and should be removed from the chart.

A rock awash in Cuffey's Cove, Lat. $39^{\circ}08.22'$, Long. $123^{\circ}43.8'$, was found to have been erroneously plotted from the records on H. 1537.

The original sounding records for H. 1228, Mendocino Bay, could not be found and the soundings on this sheet could not be checked. There is a 10 and $7\frac{1}{2}$ fathom sounding shown on this sheet in about Lat. $39^{\circ}17.5'$, Long. $123^{\circ}48.5'$, which appear doubtful. The curves on the original sheet indicate probability that these soundings were erroneously plotted or some other error. In view of the fact that there is no indication of a shoaling on H. 4984, recommend that these two soundings be omitted from the chart.

From Lat. $39^{\circ}20.1'$, to Lat. $39^{\circ}20.3'$ there are several soundings, the shoalest of which is $5\frac{1}{2}$ fathoms, from

H. 1586a which fall outside the ten fathom curve on this sheet, H. 4984. Although these soundings are fairly close inshore, the area should have been further developed since there is a marked disagreement with the new work.

A search was made for the one fathom spot about $\frac{1}{2}$ mile north Colby Reef, but it could not be located with the lead line. The sounding was verified from the records of H. 1586a and should be retained on the chart.

The Position Doubtful sunken rock, shown on chart 5703 in approximate Lat. $39^{\circ}14.4'$, Long. $123^{\circ}47.35'$, was taken from T. 2978, surveyed in 1909. From the appearance of the topographic sheet only one cut was obtained. An $8 \frac{2}{6}$ fathom sounding was obtained at this point but the true position of the breaker is believed to be at the $4 \frac{2}{6}$ fathom sounding shown on this sheet, H. 4984, about 280 me. northwest of the charted position. The removal from the chart of this Position Doubtful rock is recommended.

Other critical soundings from the old surveys, not mentioned in this report, have been added to this sheet, H. 4984, in orange.

6. The usual amount of field plotting was well done by the field party. The use of green for position numbers should be avoided when possible as it fades if the ink is not absolutely fresh.
7. Character and scope of surveying - good.

The area is a difficult one to survey on account of the numerous rocks, shoals and the general broken character of the bottom. There are a number of places where more development could have been done and some of the shoal soundings from the old surveys could have been more closely examined. For example the 10 and $7 \frac{1}{2}$ fathom soundings from H. 1228 in Lat. $39^{\circ}17.5'$, Long. $123^{\circ}49.5'$.

A few more lines might have been run in the blank areas in the vicinity of Lat. $39^{\circ}19'$, just south of Lat. $39^{\circ}14'$, in Whitesboro Cove and off of Salmon Point. However the results obtained are considered good for the amount of work done.

8. While a number of places might be pointed out where additional development would be done, this stretch of the coast is so full of small rocky shoals that an

endless amount of lead line work might fail to find them all.

An examination of the 1926 wire drag surveys shows that many shoals were found between sounding lines which showed no indication of a shoaling. Therefore a wire drag survey of this area from the 40 fathom curve as far inshore as practical is recommended.

Also the approaches to Albion River should be wire dragged in order to locate or disprove the sunken rock at the entrance which could not be found with the hand lead.

9. Reviewed by R. L. Johnston, December 5, 1930.

Approved:

Chief, Section of Field Records (CHARTS)

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

Inspected: E.P.E.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. *4984*

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

Number of positions on sheet	<i>.2309</i>
Number of positions checked	<i>.1074</i>
Number of positions revised	<i>...10</i>
Number of soundings recorded	<i>.4864</i>
Number of soundings revised	<i>...14</i>
Number of signals erroneously plotted or transferred	<i>.....0</i>

Date: *Oct. 17, 1930*

Cartographer: *J. Walker*

Applied to Chart Comp. 5711 Aug. 14. 1941. H. MacEwen