

5017

Diag. Cht. No. 8201-3

5017

<small>Form 504 Ed. June, 1928</small>	
DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY R. S. PATTON, Director	
	<small>U. S. COAST AND GEODETIC SURVEY</small> L 47 JUN 28 1930
State: ALASKA	
DESCRIPTIVE REPORT	
<i>Topographic</i> <i>Hydrographic</i>	} Sheet No. 13 5017
LOCALITY	
S. E. ALASKA	
SUMNER STRAIT	
LEVEL ISLANDS	
19.29.	
CHIEF OF PARTY	
E. W. Eickelberg	

U. S. GOVERNMENT PRINTING OFFICE: 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.
5017

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. 13

REGISTER NO. 5017

State ALASKA

General locality S. E. ALASKA SUMNER STRAIT

Locality Vicinity of SUMNER STRAIT - LEVEL ISLANDS

Scale 1:20,000 Date of survey July - September, 1929

Vessel U.S.C. & G.S.S. EXPLORER

Chief of Party E. W. Eickelberg

Surveyed by W. Weidlich, Mate - E. H. Bernstein, H. & G. E.

Protracted by W. Weidlich, Mate - H. O. Fortin, Aid

Soundings penciled by W. Weidlich, Mate - H. O. Fortin, Aid.

Soundings in fathoms feet

Plane of reference M. L. L. W.

Subdivision of wire dragged areas by

Inked by W. Weidlich, Mate.

Verified by

Instructions dated February 19, 1929

Remarks:

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET # 13

AUTHORITY: The hydrography on this sheet was executed under instructions of the Director of U. S. Coast & Geodetic Survey, dated February 19th, 1929.

SCALE: 1:20,000, and soundings are in fathoms.

LIMITS: This survey covers the area in the vicinity of Level Island and extends as far as Point Mitchell. It connects north with sheets # 14, and east with sheet # 11. The southern limit extends about one-half mile into the area wire dragged in 1916.

METHODS: The approved methods of this service were used throughout, with a few modifications on account of the irregular nature of the bottom and the strong tidal currents.

The launch "Delta" was used for the greater part of the survey, and the letter days are shown in red.

A 10 pound hand lead was used in depths of less than 15 fathoms, and in greater depths a steam sounding machine with a 14 pound lead and stranded wire was in use.

The lines are spaced about 200 meters apart with splits between to depths of 10 fathoms and more. All lines run in northerly and southerly direction.

In Kah Sheets Bay, in channels west of Lung Island, and immediately north of Level Island, the lines are spaced about 100 meters apart.

At times when the current was running too strong to continue hand lead sounding speed, machine soundings were taken, going full speed in order to make some headway. Splits were run between such lines at slack tides or when currents were running at their minimum.

In developing shoals, regular sounding lines were discarded. Numerous soundings were taken on shoals located previously and angles taken when lesser depths were obtained.

In order to avoid confusion when plotting the smooth sheet, only the lesser soundings were plotted, or such soundings necessary to obtain a complete depth curve.

When developing shoals, two hand leads were used simultaneously and in numerous cases, three lead lines were in use, virtually dragging the shoal area with the hand leads.

The anchor was used on practically all the shoals, using a long anchorline and steaming around it when tides were not too strong.

Numerous shoals were also developed with the steam sounding machine, in this case lift-the lead only a few feet off the bottom, yet taking great care that all soundings were up and down.

Hundreds of soundings were taken on all the shoals, although only the least depths obtained were recorded and plotted.

* * * * *

The area south of Level Island was surveyed by Launch # 69, Mr. E. H. Bernstein, H. & G. Engineer, in charge, and the work is indicated by blue letters.

The lines are spaced from 100 to 200 meters apart, run in northerly and southerly direction, with exception of the development lines.

Power sounding machine with a 14 pound lead and stranded wire was used in depths of more than 15 fathoms, in lesser depths a 10 pound hand lead was used.

Shoals and other critical places were developed by a system of regular development lines.

* * * * *

CURRENT: On account of the strong current the compass was discarded and ranges steered at all times.

The estimated velocity of the current was from 1-1/2 to 3 knots. When current was running at its maximum, considerable difficulties were experienced in keeping the launch on sounding line, and on numerous occasions had to hold up from 6 to 8 points to counteract the current. Hand lead soundings had to be discarded, as in order to make some headway, the launch had to go full speed.

Heavy tide rips were experienced in the vicinity of Level Island Gas Buoy, at time shipping plenty of water.

The current outside of Level Island runs in a north-easterly direction with the flood, in a south-westerly direction with the ebb. The ebb was observed to be much stronger than the flood.

Between Level Island, Lung Island, and Kupreanof Island, the flood runs with the channel in a northerly direction, and the ebb in opposite direction. ^{North of} White Rock, and the northern shore of Level Island the ebb follows the shoreline with considerable force, while the flood was found to be of no consequence.

Heavy tide rips were also experienced in the vicinity of Lung Island, making it rather uncomfortable for the launches at times.

DANGERS AND OTHER OBSTRUCTIONS:

This survey revealed numerous rocks and other obstructions and the most important are enumerated below, beginning at the north end of the sheet.

1. A shoal with a least depth found of 8-1/4 fathoms at M.L.L.W., lies about 225 meters, 92° from triangulation station BLUNT. This area extends in a north-easterly direction, is well developed although only a few shallow depths are recorded and plotted. (Pos. 123-131-132-133 & 134 "d").

2. A shoal of some extent, with a least depth found of 7-1/4 fathoms at M.L.L.W., lies about 460 meters, 151 1/2° from triangulation station BLUNT. This area is well developed on d' and e' day. Numerous soundings were taken and only least depths recorded and plotted. Rocky bottom. (Pos. 6-10-11-26-27-30 "e")

3. A shoal area with a least depth found of 7-1/4 fathoms, rocky bottom, at M.L.L.W., lies about 840 meters, 163° from triangulation station BLUNT. This area is well developed, least depths recorded and plotted. (Pos. 28-27-29-30 "e")

4. A shoal with a least depth found of 16 fathoms at M.L.L.W., lies about 485 meters, 52 1/2° from triangulation station LEW. This area is well developed on d' and e' day. Bottom in this locality is alternating rocky, hard, muddy with coral on pos. 50 e'. (Pos. 60 "v", 161 "e", 168 "d" and 43 "e").

5. A 25 fathoms spot, (pos. 80 e') hard bottom, lies about 595 meters, 219° from triangulation station ISLE. Nothing less than 35 fathoms was found when developing this area. (Pos. 98 to 107 "e")

6. A shoal with a least depth found of 18 fathoms at M.L.L.W., rocky bottom, lies about 460 meters, 197½° from triangulation station ISLE. This area is well developed, only least depths recorded and plotted. (Pos. 57-58-59-67 and 68 "e")

7. A shoal with a least depth found of 7-1/4 fathoms at M.L.L.W., hard and sticky bottom, lies about 700 meters, 332° from triangulation station WHITE. This area is well developed using sounding machine and hand leads. (Pos. 42-44-52-53 "z" red). Only least depths recorded and plotted.

8. A shoal with a least depth found of 12 fathoms at M.L.L.W., sticky bottom, lies about 610 meters, 27½° from triangulation station WHITE. Bottom in this vicinity is alternating hard, rocky, muddy, and sticky. This shoal is of small extent. (Pos. 60-61-63-64-65 and 66 "z" red).

9. (74) A shoal of small extent with a least depth found of 7-1/2 fathoms, at M.L.L.W., muddy bottom, lies about 870 meters, 274° from triangulation station WHITE. Numerous soundings were taken, only least depths recorded and plotted. (Pos. 67-68-69-70-71 and 75 "z"). 34V (red) 74

10. A shoal of small extent with a least depth found of 7-1/2 fathoms at M.L.L.W. lies about 385 meters, 257° from triangulation station WHITE. Bottom is alternating rocky and muddy. (Pos. 79-80 and 83 "z" red).

11. A shoal with a least depth found of 9-1/4 fathoms at M.L.L.W., lies about 950 meters, 233° from triangulation station WHITE. (Pos. 101-102 and 107 "z" red).

12. An 9 foot spot lies about 175 meters west-south-west from above position with several 9-3/4 fathoms soundings in close vicinity. (Pos. 84 "z", 94-96 and 97 "z" red). Area is closely developed, only least depth recorded and plotted. Bottom hard and muddy.

13. A shoal with a least depth found of 6-2/6 fathoms at M.L.L.W., lies about 530 meters, 210° from station WHITE. This area is well developed. Least depths recorded and plotted. Bottom is rocky with no indication of any kelp. (Pos. 1-5-13-14-15-16 "k" red).

14. A rock which bares about 7 feet at M.L.L.W., lies about 420 meters, 165° from triangulation station WHITE. This foul area is marked by thick kelp and is also located by topographer.

15. A shoal with a least depth found of 6-1/6 fathoms at M.L.L.W., lies about 745 meters, 157° from triangulation station WHITE. This shoal covers quite an area, is well developed, bottom rocky and hard. No kelp. (Pos. 23-24-25-26-35-43 and 44 "k'").

16. A shoal with a least depth found of 7-3/4 fathoms at M.L.L.W., lies about 770 meters, 133° from triangulation station WHITE. Bottom is rocky. (pos. 32-35 and 36 "k'").

17. A shoal area of considerable extent with a least depth found of 4 fathoms at M.L.L.W., rocky bottom, lies about 1075 meters, 199° from triangulation station WHITE. No kelp. (Pos. 54-55 "k'" red).

18. A rocky patch with a least depth found of 3-1/6 fathoms at M.L.L.W., lies about 865 meters, 71° from station FED. This area is well developed, numerous soundings were taken, only least depths recorded and plotted. (Pos. 109-115-116-117-119-122 "z" red).

19. A 1-1/2 fathom spot, at the edge of very thick kelp, lies about 600 meters, 95° from station FED. This area is undeveloped. Rocky bottom. (Pos. 30 "v").

20. A 5-1/6 fathom spot with several shallow soundings in immediate vicinity lies about 975 meters, 95° from station FED. (Pos. 30-31 "w", and 139-140 "z" red). Bottom is rocky, no indication of any kelp.

21. A rocky patch with a least depth found of 3-1/6 fathoms at M.L.L.W., lies about 1200 meters, 111° from triangulation station LOUISE. No kelp. (Pos. 105-108-110 "k'" red). This area is marked by a gas buoy. See position # 71 "g" blue.

²⁰³⁰ A 5-4/6 fathoms spot lies about 230 meters north-east from above position. (Pos. 95 and 104 "k'" red).

22. A shoal with a least depth found of 9 1/2 fathoms at M.L.L.W. lies about 1280 meters, 132° from triangulation station LOUISE. There are several 10 fathom soundings in immediate vicinity. (Pos. 66 "v", 75-83-94 "y" red). Area is well developed, bottom hard and rocky.

• A 9-1/4 fathom spot lies about 150 meters north of this shoal. (Pos. 64-65 "y" red). Area is undeveloped.

23. A 9-3/4 fathoms spot lies about 980 meters, 144° from triangulation station LOUISE. (Pos. 64 "u" red). There is deeper water all around it, lies in the area sounded by Launch # 69, and is undeveloped.

24. A 7-3/4 fathoms sounding was obtained about 710 meters, 125¹/₂ from triangulation station LOUISE. This sounding lies inside the area covered by Launch # 69, and is undeveloped. (Pos. 63-04 "u" red). H

25. A 5-5/6 fathoms spot, rocky bottom, lies about 700 meters, 345 from station TUS. (Pos. 75 "k" red). Another 5 fathom spot lies about 150 meters west of this position. Area is undeveloped. H

26. A rocky patch with a least depth found of 3-5/6 fathoms at M.L.L.W., lies about 755 meters, 13⁰ from triangulation station BIG. (Pos. 183-185-186 and 187 "j'" red). This area is marked by kelp. H

27. A small kelp patch with a least depth found of 1-2/6 fathoms at M.L.L.W., lies about 990 meters, 351⁰ from triangulation station BIG. (Pos. 174 to 177 "j'" red) Rocky bottom. H

28. A large kelp patch, rocky bottom, with a least depth found of 2 feet at M.L.L.W., lies about 285 meters, 147 from station REF. REF is a signal on a reef which bares at minus tides. There is deeper water between the kelp patch and station REF. H

The area west of station REF is foul and is marked by kelp during the later part of the season. There are several shoals west of the reef and they extend practically across toward the east shores of Kupreanof Island. These shoals are enumerated below.

29. A kelp patch with a least depth found of 2 feet at M.L.L.W. lies about 200 meters, 280⁰ from station REF. Bottom is rocky. (Pos. 4 to 7 "c" red, 164 to 167 "j'" red). H

30. A shoal of small extent with a least depth found of 6 fathoms at M.L.L.W., lies about 370 meters, 327⁰ from station REF. Rocky bottom. (Pos. 37-38-41 and 42 "c" red). H

31. A shoal of small extent, with a least depth found of 1-2/6 fathoms, rocky bottom, at M.L.L.W., lies about 580 meters, 260⁰ from station REF. Bottom is very irregular. Launch anchored on this shoal using three leadlines. (Pos. 3-4-5 "r" red, and 109 to 112 "j'" red). H

32. A shoal of small extent, marked by some kelp, rocky bottom, with a least depth found of 1-5/6 fathoms at M.L.L.W., lies about 735 meters, 270⁰ from station H

REEF. (Pos. 52 and 55 "c" red and 5 "d" red, 7-8 "p" red, and 93 "j'"). This area is thoroughly developed and investigated on several working days. On "p" day, tide was running so strong as to take the lead off the bottom, making it impossible to feel at the bottom as customary when investigating critical places.

33. A shoal with a least depth found of 3-2/6 fathoms at M.L.L.W., lies about 970 meters, 267° from station REEF. No indication of any kelp. Bottom is rocky. (Pos. 66-70-76-78-79 and 82 "j'" red).

34. A pinnacle rock with very small extent with a least depth found of 4 fathoms at M.L.L.W., lies about 1040 meters, 255° from station REEF. Launch anchored on this rock and numerous soundings were taken, 10 and 13 fathom soundings were obtained alongside the rock. No indication of any kelp. (Pos. 10-11-12 "d" red).

35. A shoal of small extent with least depth found of 2-2/6 fathoms at M.L.L.W., lies about 640 meters, 91° from triangulation station NEXT. (Pos. 30-31-32-35-37 "j'" red). Bottom is rocky and very irregular. See difference of soundings, Pos. 37 "j'" red.

^{East} A 4-5/6 fathom spot lies about 150 meters south from above position. (Pos. 52 "j'" red).

36. Several 14 and 15 fathom soundings were obtained about 1100 meters, 15° from triangulation station LEVEL. The soundings are surrounded by much deeper water. (Pos. 66-72 "h'", and 5-6-7-11-12 "j'"). Bottom is rocky.

37. A 10 fathom spot, surrounded by much deeper water, lies about 685 meters, 51° from triangulation station LEVEL. (Pos. 50-51-56-57 "h'" red). Rocky bottom.

38. A shoal of small extent with a least depth found of 3 fathoms at M.L.L.W., lies about 500 meters, 292° from triangulation station LEVEL. (Pos. 98 "c" red, 3-5-8-9 "e" red, and 246 "g'" red). Bottom in this vicinity is very irregular, rocky and muddy. Launch anchored at this shoal to find least water.

A pinnacle rock with a least depth found of 5-1/2 fathoms is situated on the same shoal. There is 16 fathoms right alongside of this rock. (Pos. 13 "e" red).

Position # 14 "e" shows very irregular bottom. Depths range from 5-1/6 fathoms to 12-5/6 fathoms within a few feet of each other. Bottom is alternating rocky and muddy. Launch was anchored at that time.

39. A shoal with a least depth found of 4-1/6 fathoms, at M.L.L.W., lies about 710 meters, 266° from triangulation station LEVEL. Bottom is rocky. (Pos. 15-17 "e" red). Seven and eight fathom soundings were obtained near the 4-1/6 fathoms spot, and 5-1/2 and 5-1/6 fathoms, 100 to 150 meters eastward of given position. (Pos. 238-239-240 and 242 "g" red). H

40. A shoal of very small extent with a least depth found of 3-5/6 fathoms at M.L.L.W., lies about 685 meters, 250° from triangulation station LEVEL. (Pos. 20 "e" red), also (Pos. 134-135 "c" red, and 234 and 235 "g" red). H

The 3-5/6 fathoms sounding is taken on a pinnacle rock with 8 and 9 fathoms alongside. Bottom is rocky and muddy. H

41. A shoal of very small extent with a least depth found of 6-1/6 fathoms at M.L.L.W., lies about 850 meters, 255° from triangulation station LEVEL. (Pos. 4-5-15-17 "h"). Attention is called to position # 5 h' where 6-2/6 and 11-3/4 fathoms were obtained at practically the same spot. Numerous soundings were taken with two lead-lines, only least depths recorded and plotted. H

42. A shoal with a least depth found of 4-1/2 fathoms at M.L.L.W., lies about 740 meters, 175° from station AFT. (Pos. 134-135-136 "g" red). Bottom is hard and rocky. Numerous soundings were taken, only least being recorded and plotted. H

43. A 4-4/6 fathoms spot lies about 900 meters, 167° from station AFT. Hard Bottom. (Pos. 115-116 "g" red). A 4-4/6 fathoms spot lies about 75 meters south-west from above position. (Pos. 145-146 "f" red and 118-119 "g"). H

44. A shoal of small extent with a least depth found of 4 fathoms at M.L.L.W. lies about 1170 meters, 166° from station AFT. Hard bottom. (Pos. 100 to 105 "g" and 110 "g"). H

45. A reef which bares at minus tides lies about 580 meters south of station PLY. On account of the very thick kelp, this reef was circumnavigated at the edge of the kelp, with soundings taken at regular intervals. (Pos. 73-81 "e" red). H

46. A reef which bares at minus tides lies about 750 meters, south of station PLY. (Pos. 82 to 91 "e" red). Thick kelp. H

47. A reef which bares about 1 foot at M.L.L.W., lies about 1100 meters, 172° from station PLY. This reef was crossed at high tides, otherwise it would have been impossible to penetrate the kelp without undue loss of time. (Pos. 92 to 106 "e" red and 86 to 87 "d" red).

H

9-3/4 and 10 fathom soundings were obtained between the last two mentioned reefs.

↓

48. A shoal of small extent with a least depth found of 2-1/2 fathoms at M.L.L.W., lies about 790 meters, 217° from station HOT. (Pos. 186 "g" and 1-2-3-6 "f" red). Bottom is rocky, no indication of any kelp.

H

49. A shoal of considerable extent, with a least depth found of 1-2/6 fathoms at M.L.L.W., lies about 1510 meters, 265° from station RAT. (Pos. 9-10-11-12-13-14-18-19 "f" red). Bottom is rocky with no indication of any kelp.

H

50. A shoal area lies south-west from above position with a least depth found of 4-1/6 fathoms at M.L.L.W., 1750 meters, 260° from station RAT. Bottom is hard. There are several 6 fathom spots in same locality with coral bottom. (Pos. 147-148-150-153-155 "g" red, 5-6-7 "g", and 19-20 "d" red).

H

51. A shoal of considerable extent with a least depth found of 2-4/6 fathoms at M.L.L.W., lies about 1370 meters, 258° from station RAT. Bottom is hard and rocky. (Pos. 123 "c" and 159-160-162-168-170-171-176 "g" red). This shoal extends well toward the north-east into area covered by Launch # 69.

H

52. A shoal of very small extent with a least depth found of 6 fathoms at M.L.L.W., lies about 1760 meters, 245° from station RAT. Bottom is hard, soft and rocky in this locality, no kelp. (Pos. 22-23-24 "f" red).

H

53. A shoal of small extent with a least depth found of 3 fathoms at M.L.L.W., lies about 1740 meters, 238° from station RAT. Bottom is alternating rocky, soft and hard. Area is well developed, only least depths recorded and plotted. (Pos. 36-38 "f" red, and 76-77 "g" red). Attention is called to the 3-1/6 fathom sounding, dropping off to 17 fathoms no bottom at the next.

being given to 3 fath. Sog 37 F (2) which covers the spot.

54. A shoal with a least depth found of 2-1/6 fathoms at M.L.L.W. lies about 2070 meters, 238° from station RAT. Bottom is rocky, muddy and sticky in this locality. (Pos. 32-36-43-45-46 "g" red). No kelp. A strong south-westerly set was experienced in this locality with an estimated velocity of from 1-1/2 to 2 knots.

H

4
26 (48F) Q

55. A shoal with a least depth found of 2-5/6 fathoms, at M.L.L.W., lies about 1740 meters, 230° from station RAT. (Pos. 118-119 "c" red, and 41-46-53-55-56 "f" red). Bottom is alternating rocky, sticky, and muddy. No kelp. H

56. A 4 fathom spot lies about 2260 meters, 227° from station RAT. (Pos. 49-50 "g" red, and 7-12-18 "g'" red). This area is well developed, only least depths recorded and plotted. Bottom is hard and rocky. H

57. A shoal of small extent, surrounded by much deeper water, with a least depth found of 5-4/6 fathoms at M.L.L.W., lies about 2385 meters, 222° from station RAT. (Pos. 75-79-85 "f" red, and 165 "c" red). Bottom is hard, rocky, and sticky in this locality. Launch anchored on this spot. Numerous soundings were taken, only least depths being recorded and plotted. H

58. The area south and south-west of station OUT is extremely foul. There are numerous 1 and 2 fathom spots which are marked by kelp, and only those are enumerated which lie south of a large reef which bares at M.L.L.W. H

A foul area, marked by very thick kelp, lies about 1500 meters, 166° from station OUT. This area is thoroughly developed and least depth obtained was 1-2/6 fathoms. Rocky bottom. (Pos. 49 to 57 "a'"). H

59. A foul area, marked by very thick kelp lies about 1640 meters, 200° from station OUT. Least sounding obtained is 1-1/6 fathoms. (Pos. 126 t² red). Bottom is rocky. Foul area extends about 250 meters south and about 700 meters north from the 1-1/6 fathom sounding. H

60. A shoal with a least depth found of 5-4/5 fathoms at M.L.L.W., lies about 2050 meters, 215° from station OUT. (Pos. 184-189-191-195 "t" red). Bottom is hard, no indication of any kelp. H

61 26 (1125) Q

A shoal with a least depth found of 2-2/6 fathoms at M.L.L.W., lies about 2080 meters, 223° from station OUT. (Pos. 161-162-163 "s" red). Bottom is rocky. Launch anchored on this shoal, numerous soundings were taken, only least depths recorded and plotted. No indication of any kelp at that time. H

62. A reef which bares at minus tides, lies about 280 meters, 180 from triangulation station MITCHEL. This reef is marked by thick kelp. Position 11-12-13-14 and 37 "m" red, mark the limits of the kelp patch. According to remarks at pos. # 11, the reef bared about 2 feet at a three foot minus tide. H

63. The limits of the reef which was marked by station OUF was determined at minus tides by sextant fixes with soundings at the edge of very thick kelp. H

(Shoals and obstructions south of Level Island)

64. A 7-3/4 fathoms spot lies about 855 meters, 168° from LOUISE. (Pos. 6 to 7 "j" blue). Rocky bottom. Another 7-3/4 fathoms spot lies about 380 meters, 266° from above sounding. Area is developed by sounding lines only. H

65. An 8-3/4 fathom spot lies about 1170 meters, 186° from LOUISE. This sounding is surrounded by much deeper water, with a similar depth in close vicinity. (Pos. 29 "g"). ✓

66. An 8-3/4 fathoms spot lies about 1415 meters, 158° from station RAT. There are a few 11 and 10 fathoms soundings within a radius of about 100 meters. This shoal area is surrounded by much deeper water. (Pos. 8-9 "e" blue). H

67. A few 10 fathom soundings were obtained about 2100 meters, 191° from station RAT. Area is surrounded by much deeper water. Rocky bottom. (Pos. 51 "c" blue). H

68. A 12 fathom sounding was obtained about 1890 meters, 195° from station RAT. This area is undeveloped. (Pos. 1-2 "e" blue). H
← W.D. 3915 shows 45 ft in this area B.

69. A shoal of some extent lies south-west of station RAT. This shoal runs in south-west and north-easterly direction. A rock which bares three feet at M.L.L.W. lies about 275 meters, 162° from station RAT. This area is marked by thick kelp. There is much deeper water between the rock and the small wooded island. (Pos. 95-96 "c" blue). H

A 2-5/6 fathom spot lies about 120 meters west of the rock.

Several 2-5/6 fathom soundings were obtained 530 meters, 206° from station RAT. Bottom is rocky. (Pos. 78-79 "h" and 107-108 "c" blue) A 3-2/6 fathom spot lies at the south-west end of the shoal about 930 meters, 209° from station RAT. Soft bottom. (Pos. 54-55 "c" blue). H

70. A shoal area with a least depth found of 2-1/4 fathoms at M.L.L.W., lies about 970 meters, 265° from station RAT. Rocky bottom. (Pos. 9-10 "c" blue). H
n. 2 1/2 (90 fms) B

71. A shoal area with a least depth found of 1-5/6 fathoms at M.L.L.W., lies about 625 meters, 299° from station RAT. Area is alternating rocky, sticky, with occasional sand. (Pos. 102-103 "h" blue). H
? (1025 meters)

72. A 2 fathoms spot lies about 400 meters, 208° from station HOT. Marked by kelp. Rocky bottom. Area not developed. (Pos. 4-5 "d" blue). H

73. A 4-1/2 fathoms spot lies about 1180 meters, 244° from station RAT. This area is undeveloped. (Pos. 11-12 "d"). H

W. Heidlitz
Mats. S. Survey

The following geographic name approved by U.S.G.B. and added to sheet.

KAN SHEETS ISLAND in KAN SHEETS BAY LAT 56°-31.1' LONG 133°-05.5'

C. R. B.

10/15/34

(13)

STATISTICS

HYDROGRAPHIC SHEET # 13.

DATE	VOL.	LETTER	SDGS.M.	SDGS.H.	POS.	ST.MILES	LAUNCH
7-17-29	1	a red	115	339	98	12.7	DELTA
7-18-29	1	b "	197	246	104	15.5	"
7-24-29	1&2	c "	130	151	65	9.2	"
7-25-29	2	d "	277	114	110	20.5	"
7-26-29	2&3	e "	157	426	146	14.8	"
7-29-29	3	f "	71	277	168	13.2	"
7-30-29	3	g "	206	203	141	21.7	"
7-31-29	4	h "	184	310	111	20.5	"
7-1-29	4	j "	187	287	119	16.7	"
8- 2-29	4&5	k "	216	95	88	17.6	"
8- 5-29	5	l "	128	187	70	10.7	"
8- 6-29	5	m "	47	318	115	11.5	"
8- 7-29	5	n "	30	87	68	4.5	"
8- 7-29	6	n "	27	129	33	3.1	"
8- 8-29	6	p "	9	52	23	1.4	"
8- 9-29	6	q "	117	134	58	9.2	"
8-10-29	6	r "	93	147	54	10.0	"
8-13-29	6	s "	9	320	218	12.0	"
8-14-29	7	t "	22	366	224	12.0	"
8-20-29	7	u "	207	127	78	16.5	"
8-22-29	7	v "	247	65	88	18.3	"
8-23-29	8	w "	279	26	87	20.4	"
8-26-29	8	x "	195	25	71	15.9	"
8-27-29	8&9	y "	199	238	135	19.6	"
8-29-29	9	z "	185	497	142	13.9	"
8-30-29	9	a' "	74	136	76	8.5	"
9- 4-29	9	b' "		798	121	15.4	"
9- 5-29	10	c' "		670	118	12.5	"
9- 6-29	10	d' "	95	327	169	13.5	"
9- 7-29	10	e' "	93	42	107	7.3	"
9- 9-29	11	f' "	160	67	192	12.0	"
9-10-29	11	g' "	49	218	247	12.0	"
9-11-29	11	h' "	44	33	77	4.5	"
9-12-29	11 & 12	j' "	66	244	204	11.4	"
9-16-29	12	k' "	41	175	153	9.5	"
9-17-29	12	l' "	26	274	78	6.0	"
TOTAL			3798	8150	4156	454.0	
7-29-29	13	a blue	143	218	111	12.6	# 69
7-30-29	13	b "	172	256	113	16.4	# 69
7-31-29	14	c "	165	336	119	15.2	# 69
8- 8-29	14	d "	10	433	103	12.5	# 69
8- 9-29	15	e "	102		38	5.9	# 69
8-10-29	15	f "	110	19	50	8.1	# 69
8-13-29	15	g "	133	171	95	13.0	# 69
8-14-29	15	h "	39	423	117	12.9	# 69
9- 7-29	16	j "	129	2	44	7.1	# 69
TOTAL			1003	1858	790	103.7	

TIDAL NOTE

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 13

All hydrography reduced from tide staff readings at Level Island. This was a plain staff located in Latitude 56° 27'.8 Longitude 133° 05'.9.

Mean Lower Low Water - 4.95 feet to 9:30 A.M. July 25th.
" " " " - 5.13 feet to end of work.

Highest Tide - 16.3 feet - September 5th, 1929 *above reference plane*
Lowest Tide - -3.3 feet - August 6th, 1929 *below " "*

APPROVAL SHEET

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 13

The sheets and records have been examined, and are approved.

This work was all very painstakingly done by Mr. Weidlich, Mate, and I believe it represents conditions as they are, with very little chance of additional shoals.

Less water was obtained by the wire drag on the 6 fathom shoal, one milè west of gas buoy off Level Island. Mr. Bernstein did the area south of Level Islands, and the least depth he could find, after repeated efforts and cautions, was 7-3/4 fathoms. The 6 fathom depth is very likely a pinnacle and should remain on the chart.



E. W. Eickelberg,
Chief of Party, C. & G. S.

DEPARTMENT OF COMMERCE

AND REFER TO No. 11-DRM

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 5017

Vicinity of Level Islands, Summer Strait, Alaska

Chief of Party, E. W. Eickelberg

Surveyed by E. H. Bernstein, W. Weidlich

Protracted by W. W., H. O. Fortin

Soundings plotted by W. W., H. O. F.

Verified and inked by G. Risegari

1. The records conform to, and the plan and character of development fulfill the requirements of the General Instructions; exception: Failure to show date of location of the triangulation stations on the smooth sheet, as per Chapter 23, Hydrographic Manual.
2. The plan and extent of development satisfy the specific instructions; exception: Failure to comply with Chapter 20, page 8 of the specific instructions.

No information was submitted regarding the retention or rejection of the numerous dangers shown in this particular area on chart 8160 as requested.

The shoal and several adjoining soundings shown on chart 8160, latitude $56^{\circ} 25' 30''$, longitude $133^{\circ} 09' 30''$ from H. 1753, 1754 and 1749 were found to be erroneously plotted on the original sheets.

A replotting of the above (see tracing attached to H. 1749) shows excellent agreement with the work on H. 5017. A decision was made to discredit this part of the work on H. 1749 and to give preference to the work on H. 5017.

Attention may be called here that the reef east of Mitchell Pt. from latitude $56^{\circ} 26'$ to about latitude $56^{\circ} 27'$, longitude $133^{\circ} 10'$ was found to be erroneously plotted on the original chart. The work on H. 5017 appears satisfactory and it is recommended that it supersede the old work.

*Tracing with replotting of several sndg from H-1754
in vicinity of Δ Mitchell are in Descriptive Report for H-1754a*

A rock awash shown on H. 1753, position 9 D, was found to be erroneously plotted and charted on chart 8160. Location is approximately latitude $56^{\circ} 25'$, longitude $133^{\circ} 09'$. This rock when transferred to H. 5017 plots in generally deep water where there are no indications of obstacles. A careful replotting of the rock from the old records indicates that it is very probably one of the rocks shown on the shoal on H. 5017 mentioned above.

Three rocks awash in Kah Sheets Bay shown on chart 8160, latitude $56^{\circ} 30'$, longitude $133^{\circ} 06'$ are evidently non-existent and are discredited by Chief of Field Records Section. Inspection of the old records of sheets H. 1804 and H. 1807 give no evidence of their existence. The rocks when transferred from the old work to H. 5017 plot in generally deep water where there are no indications of obstacles.
(See memorandum by A. L. Shalowitz regarding these rocks, at end of this report.)

3. Sounding line crossings are adequate.
4. The usual depth curves can be completely drawn within the scope of the survey.
5. The junction with H. 4995 (east) is satisfactory.

The junction with H. 5019 (north) is not yet completed.

There is no other contemporary work adjoining H. 5017.

The junctions with the wire drag sheets shown on H. 8160 as requested in the special instructions has been complied with.

6. The following shoal soundings have been transferred from other hydrographic sheets:

A 6 fathom and a $6 \frac{5}{6}$ fathom sounding were transferred from W. D. 3915 and are shown in blue.

Two soundings in red, vicinity of lat. $56^{\circ} 26'$, long. $133^{\circ} 08'$ from H. 1804.

Two soundings in green, vicinity of lat. $56^{\circ} 26'$, long. $133^{\circ} 12'$ and lat. $56^{\circ} 26'$, long. $133^{\circ} 11'$ from H. 1749, replotted positions.

7. Attention is called to several undeveloped spots in addition to those mentioned in descriptive report, page 12, and are as follows:

10 fathom spot, lat. $56^{\circ} 26' 09''$, long. $133^{\circ} 09' 42''$.
 8 $\frac{3}{4}$ fathom spot, lat. $56^{\circ} 27'$, long. $133^{\circ} 08' 24''$.
 Spot in vicinity of lat. $56^{\circ} 26' 50''$, long. $133^{\circ} 10'$.

*Additional attention is stressed on ^{par} chapter 64, page 11, descriptive report, of the 7 $\frac{3}{4}$ fathom spot, lat. $56^{\circ} 27'$, long. $133^{\circ} 03'$, of the failure to fully develop this spot which appears to be in a steamer lane. A buoy sets approximately 600 meters SE x E. *This rock is well inside of buoy and not in steamer lane.

8. Character and scope of the surveying - good.
 Field drafting - good.

9. Reviewed by G. Risegari, September 23, 1930.

Sheet inspected by A. L. Shalowitz. (See additional notes attached.)

Approved:

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

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

The character of the area makes a wire drag investigation desirable - although intensively developed there is no assurance that least water has been found, as is evidenced by note opposite par. 68 of descriptive report. Amos.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO.

WASHINGTON

October 3, 1930.

Additional Notes on H. 5017

The three charted rocks awash in Kah Sheets Bay in Lat. $56^{\circ} 30'$, Long. $133^{\circ} 06'$ have been looked into and the only authority for them appears to be H. 1804 (combination topographic and hydrographic sheet on 1:80,000 scale) and H. 1807 which is an enlargement of H. 1804 on a 1:20,000 scale. No reference could be found to them in the old sounding records and while they have the appearance of rocky ledges on the old sheet, they may have been intended for patches of kelp. At any rate, the close development around the area on the new survey definitely discredits the existence of these rocks in the locations shown. The bottom is regular, with no indications whatever of shoaling. Furthermore, a line of soundings on the day (42-43 e) passed close to the westernmost rock when the tide was but 1 foot above the plane of mean lower low water and apparently the hydrographic party saw no indication of a rock. It is inconceivable that in an area extending 600 meters in length (the distance covered by the three rocks) with 6 sounding lines running directly across it, no indication of a shoaling would have been obtained.

In view of the above as well as the dubious character of the source, it is recommended that these rocks be disregarded in all future compilations of the chart.

A. L. Shalowitz

Approved:


Chief, Section of Field Records.

Δ Mitchell 2, 1915 vol 1 p. 203
Lat. $56^{\circ} 26' 39.927''$ (1235.0 meters)
Long. $133^{\circ} 12' 34.694''$ (594.4 meters)

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5017

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

Number of positions on sheet	4946
Number of positions checked	.500
Number of positions revised	.30.
Number of soundings recorded	14809
Number of soundings revised	.20.
Number of signals erroneously plotted or transferred

Date: Sept. 1930

Cartographer: G. Prigari

Chart 8/60 Extension fully app'd 1-30-70 H. Fadda