5166

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. PATTON, Director

State: ALASKA

DESCRIPTIVE REPORT

~~Topographic~~
Hydrographic } *Sheet No.* 24

5166

LOCALITY

KODIAK ISLAND

KAIUGNAK BAY

TO

TWOHEADED ISLAND

1931

CHIEF OF PARTY

F.B.T.SIEMS, Comdr. U.S.C. & G.S.

U. S. GOVERNMENT PRINTING OFFICE: 1931

5166

Form 537
11—5812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5166

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. 24

REGISTER NO. 5166

State Alaska

General locality South Coast of Kodiak Island

Locality ~~Kaiugnak Bay to Technaded~~ Two Headed Island to Kaiugnak Bay

Scale 1:20,000 Date of survey July 16 - Sept. 18, 19~~38~~ 31

Vessel Surveyor WILDCAT, Launches #3 and #4 and Motorsailer

Chief of Party F.B.T.SIEMS

Surveyed by R.W. Knox, W.J. Chovan, E.C. Baum, G.M. Marchand

Protracted by E.C. Baum

Soundings penciled by E.C. Baum

Soundings in fathoms ~~xfeetx~~

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by none

Inked by J T Walker

Verified by JTW

Instructions dated April 17, 19~~38~~ 31

Remarks:

GPO

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NUMBER 24

TWOHEADED ISLAND TO SITKALIDAK STRAITS - KODIAK ISLAND

Scale: 1:20,000

Instructions dated April 17,1931.

Project #52

Surveyed by: R.W. Knox
W.J. Chovan
E.C. Baum
G.M. Marchand

Party of:
Str. SURVEYOR
F.B.T.Siems, H.&G.E.,
Commanding.

GENERAL LOCATION:

The area surveyed on this sheet is to the southwest of entrance of Sitkalidak Straits and north of Kaguyak Bay. It joins hydrographic sheets, field number 21 (5151) to the north, number 42 to the east and number 23 (5161) to the south.

SURVEY METHODS:

Standard hydrographic survey methods were used throughout. Depths were obtained by hand lead and machine soundings exclusively.

DANGERS:

A 3½ fathom shoal at M.L.L.W. is located at latitude 57° 03.14', longitude 153° 31.6', position No. 130d, vol. 7.

A 5-4/6 fathom shoal at M.L.L.W. is located at latitude 57° 04.35', longitude 153° 34.1', position No. 42d, vol. 7.

A 2-2/6 fathom shoal at M.L.L.W. is located at latitude 57° 04.25', long. 153° 38.17', position No. 23 to No. 24a, vol. 8.

A 3½ fathom shoal at M.L.L.W. is located at latitude 57° 03.8', longitude 153° 40.8', position No. 14 to No. 15a, vol. 11.

A 7¾ fathom sounding is located at latitude 57° 04.5', longitude 153° 39.6' position No. 40 to No. 41a, vol. 11.

A rock baring 5 feet at M.L.L.W. is located at latitude 57° 00.2', longitude 153° 32.15' (32.20). ~~Location transferred from topographic Sheet No. 0 (field).~~ Plotted by this party.

There is a foul area radiating from triangulation station Kiavak 1931 with 0.6 mile radius. Triangulation station Vak 1931 is a pinnacle rock 25 feet above M.H.W.

A small boat should not approach nearer than 1/3 mile to shore between triangulation station Kiavak 1931 and triangulation station Sis 1931.

A rock awash at M.L.L.W. is located at latitude 56° 56.12', longitude 153° 34.96'.

A large reef one small head of which bares about 6 feet at M.L.L.W. is located at latitude 56° 55.5', longitude 153° 36.0'. The remainder of the reef is awash at M.L.L.W. (see topographic sheet B 2).

Foul areas surround triangulation stations Mass and Mite 1931.

Ships rounding Cape Kiavak should keep at least 1 mile off shore.

OVERLAYS:

Two overlays were made to accomodate soundings over congested area 1500 meters 85° true from triangulation station Vak. Overlays are attached to this report. The most critical depths were plotted. A 20 fathom depth curve was drawn which shows this shoal to have a definite head. 18 fathoms was the least depth found.

Verification of final smooth sheet plotting was accomplished by superimposing boat sheet tracing of positions on smooth sheet. Appreciable discrepancies were inspected and errors corrected.

CHANNELS:

Ships may pass between Twoheaded Island and the mainland, favoring the island shore to avoid foul area off the mainland.

On entering Kaiugnak Bay proceed midway between the capes until well inside, then favor the south shore of Kaiugnak Bay keeping about ½ mile off. See Coast Pilot section of this report.

Small boats should not attempt entering the small lagoon at the head of Kiavak Bay except at H.W., and then only with extreme caution.

The lagoon at the head of Kaiugnak Bay is covered with eel grass and is not navigable.

ANCHORAGES:

An anchorage in 13 fathoms of water, with black mud, affords shelter for vessels in all weather except east and southeast gales. Latitude 57° 03.46', longitude 153° 40.6'. Anchor at the intersection of two well defined ranges; the first formed by two small islands in range at the head of Kaiugnak Bay using the east tangent of each and to the south of both, the second formed by the two points on the south shore of Kaiugnak Bay and to the eastward of anchorage.

Anchorages for vessels of deep water draught and another for shoaler draught boats is afforded in Knoll Bay. Definite instructions for methods of entering this bay and anchoring on ranges is incorporated in the COAST PILOT SECTION of this report.

COMPARISON WITH PREVIOUS SURVEYS:

No previous survey existed in this area.

WIRE DRAG GROUNDINGS:

No wire drag was executed.

GEOGRAPHIC NAMES:

Cape Kiavak is locally known as Chinaman's Head. Peninsular forming southern limits of Knoll Bay was given the name "False Island Point" which is descriptive of same.

Wide Bay is the local name for Kaiugnak and Kiavak Bays.

PLOTTING:

In plotting this sheet the following day-letter designations were used:

Record of Sheet #24

WILDCAT	Blue	Capital letters.
Launch #3	Green	Lower case letters.
Launch #4	Blue	Lower case letters.
Motorsailer	Red	Lower case letters.

STATISTICS:

A table of statistics is attached to this report.

DISCREPANCIES:

A rock awash 5 feet at M.L.L.W. lying 859 meters N.E. true of triangulation station Kivak was found to differ in position from location of same rock obtained by topography. The hydrographic location places rock 22 meters closer to triangulation station Kivak and in range with topographic position. Hydrographic position was obtained by placing launch in range with rock and shore signal (on common center) and taking two angles. This was repeated four times and the intersections determined position, giving a double check.

Since this rock was not visible at all times it was left to the hydrographer to get exact position which is the correct location.

COMMERCIAL SITE:

A small bight at the head of Kaiugnak Bay affords ample depth approach and protection for a cannery site. (bight - latitude 57° 05', longitude 153° 40'). A large all year stream flows into the N.W. corner of this bight with an abrupt 15 foot drop at the beach and an ample head a short distance inland, making water-power feasible.

Inspection suggests advisability of cannery location to be on the east side of the bight. In order to have dock fully protected against S.E. seas, dredging would be necessary.

Respectfully submitted:

Edwin C. Baum

E.C. Baum, Jr. H.&G.E.
U.S.C. & G.S.S. SURVEYOR

Approved and forwarded:

F.B.T. Siems

F.B.T.SIEMS, H.&G.E.
Commanding SURVEYOR

(Coast Pilot Notes attached to this report)

COAST PILOT NOTES

TWOHEADED ISLAND (NASIKAN ISLAND):

Twoheaded Island is very prominent and marks the entrance to Jap and Kaguyak Bays. Two peaks of 1838 and 1724 feet elevation lying east and west of one another mark the western half of the island, the highest being to the eastward and separated by a saddle of 1400 feet elevation. The eastern half may be identified by an elongated shoulder 1442 feet elevation lying in a N.E. by E. direction with a gentle rolling declivity terminating in abrupt shear rock bluffs at the beach. The outside coast of the island is bold and precipitous interspersed with huge boulders, fringed with kelp and disclosing numerous rocks making landing an impossibility except in a calm sea. The north shore adjacent to the mainland is less rugged permitting several stretches of gravel and sand beaches. A fox farm is located midway down the north shore. Two rocks of an elevation of about 26 feet (7.9 meters) lies near the southwest shore, the northernmost being the larger and block shaped.

FALSE ISLAND PT:

False Island Pt. is a flat elevated peninsular, appearing as an island on the mainland opposite Twoheaded Island. It lies in an east and west direction 80 feet in elevation, having a flat grass covered top abruptly dropping away to its shores with erroding shoulders; except on the inshore side the top has a gentle grass covered slope connecting with the narrow gravel neck to the mainland. This neck covers at spring tides.

THE CHANNEL between Twoheaded Island and the mainland has a minimum width of 0.9 mile adjacent to foul ground marked by kelp extending over ½ mile southward of False Island Pt. at the southern edge of foul area is a large group of rocks mostly awash at mean lower low water, with one or two heads baring 6 feet at MLLW. This group of rocks is ½ mile S½E from False Island Point. The Twoheaded Island side should be favored in navigating the channel to avoid the dangers off False Island Point.

The entire topography between False Island Point and Cape Kiavak is covered with steep grass covered hills. A wide valley finds its way inland just south of Cape Kiavak. Cape Kiavak is a low rounded point of approximately 75 feet elevation.

KNOLL BAY:

also identified by False Island Pt marking its southern limit.

Knoll Bay may be identified by a low flat grass covered valley running in a northwesterly direction from the N.W. bight of bay, confined by irregular, rolling hills rising to approximately 1700 feet elevations; Contiguous to the hills to the north is a well rounded, grass knoll of 543 feet elevation, which appears to stand alone in the center of the valley, from seaward.

An anchorage in 10 fathoms of water, gray sand, affords shelter for vessels in N.W., W. and S.W. gales. Latitude 56° 56.8', longitude 153° 35.4'. Proceed to anchorage on a W.S.W.'ly course midway between north and south limits of bay until reaching the 10 fathom curve. Cognizance should be taken of two rocks, one at the north entrance and the other at the south entrance. The former is a 2 foot rock at M.H.W. (covers at extremely high spring tides) 430 meters off shore in a S.W.'ly direction from point forming northeasternmost limits of bay. The area between this rock and shore is heavily kelped. The latter is a rock awash

at mean lower low water 710 meters distance in a N.E.$\frac{3}{4}$ E. direction from the end of False Island Point which forms the southern limits of bay. Heavy kelp in the vicinity will normally aid in identifying general location of rock. Anchor on a range to southward formed by the west tangent of headed peninsular forming southern limits of the bay, and the west tangent of Twoheaded Island.

Smaller boats may seek shelter from all weather except N.E., E. and S.E.'ly gales in 5 fathoms of water, sand bottom, in the southernmost bight of the bay. Proceed to anchorage in a westerly direction, midway between the north and south limits of bay, until inside of bay then proceed in a S. by W.'ly direction. Anchor at the intersection of two well defined ranges to the southward. The first is formed by the east tangent of False Island Point, and N.E. tangent of Twoheaded Island. The second is formed by the west shoulder of top of False Island Point and the center of saddle midway between two highest peaks on Twoheaded Island.

Small boats should not approach nearer than 1/3 mile to shore between False Island Point and Cape Kiavak. This area is foul and spotted with sunken rocks and kelp.

There is a foul area off Cape Kiavak within 0.6 mile radius. The eastern extremity is defined by a rock 25 feet elevation, 700 meters E. by N. from Cape Kiavak. The northern limit is bounded by a rock baring 5 feet at mean lower low water, 830 meters N.N.E. from Cape Kiavak. Ships rounding Cape Kiavak should keep at least 1 mile off shore.

KAIUGNAK AND KIAVAK BAY:

Kaiugnak and Kiavak Bays are two well defined bays, the former being the larger, having steep, irregular grass covered hills rising to a maximum elevation of 3220 feet. Both are deep and interspersed with shoals varying in depths from 2$\frac{1}{2}$ fathoms to 35 fathoms (5 meters to 64 meters). The existing chart shows Kiavak Bay as being the larger whereas this survey reveals it to be but a small arm of Kaiugnak Bay. There are four rocks menancing navigation in these two bays. A small shoal with 3$\frac{1}{2}$ fathoms (6.4 meters) is 1 mile 228° true (S.S.W.$\frac{1}{4}$ W. mag.) from northern point of Kaiugnak Bay entrance. A shoal with 5-4/6 fathoms (10.5 meters) is 2.2 miles 284° true (W.$\frac{3}{4}$ S. mag.) from the northern point of Kaiugnak Bay entrance. A shoal with 2-2/6 fathoms (4.3 meters) is 0.9 mile 87° true (N.E. by E.$\frac{3}{4}$ E. mag.) from the midbay island adjacent to a prominent peninsular near the head of Kaiugnak Bay. A 3$\frac{1}{2}$ fathom shoal at mean lower low water is 1200 meters, S.S.W. distant from midbay island.

A good anchorage in 12 to 14 fathoms, with mud bottom, for all weather except easterly gales is afforded near the head of Kaiugnak Bay, at a point approximately 0.8 mile south from the mid-bay island. On entering, a vessel should pass midway between Cape Kiavak and point forming N.E. limits of bay, head W.$\frac{3}{4}$ N. for the north tangent of peninsular separating Kiavak and Kaiugnak Bays, until within $\frac{1}{2}$ mile of the peninsular, then bear right to round peninsular shore 3/8 mile off and favor south shore of Kaiugnak Bay (about 3/8 mile off) while proceeding to anchorage.

Anchor at the intersection of two well defined ranges; the first formed by the mid-bay island described above and the island along the north shore, the east tangent of each and to the southward of both; the second formed by the two points on the south shore of Kaiugnak Bay and to the eastward of anchorage.

There are two small lagoons, one at the head of each bay. Neither lagoon permits entrance except at high water.

APPROVAL NOTE OF CHIEF OF PARTY

The field and office work of Hydrographic Sheet (field) No. 24 was accomplished under my immediate supervision and the sheets and records have been inspected by me and herewith approved.

Additional work is recommended on a 7⅜ fathom sounding located at latitude 57° 04.5', longitude 153° 39.5'. Inspection of the boat sheet showed this least depth (8 fathoms prior to final tide reduction) to have a 10 fathom sounding on the deep water side to southward, due to erroneous plotting which indicated that least depth was enclosed by deeper water. Smooth sheet plotting locates this 10 fathom (9⅜ fathom final reduction) sounding alongside of the 8 fathom (7⅜ fathom final reduction) sounding indicating possibility of shoaler water to the south.

F.B.T.SIEMS, H.&G.E.
Chief of Party, C.&G.S.
Commanding SURVEYOR

STATISTICS FOR SHEET NO. 24

DATE	VOL.	DAY	STATUTE MI.	POSITIONS	SOUNDINGS	VESSEL
July 16	1	A	17.0	126	227	WILDCAT
" 17	1	B	21.2	128	206	"
" 29	1	C	22.9	171	297	"
" 31	2	D	17.4	79	149	"
Aug. 1	2	E	16.8	118	170	"
" 3	2	F	29.2	136	210	"
" 4	2 & 3	G	20.2	161	271	"
" 5	3	H	3.0	22	46	"
" 6	3	J	12.8	83	160	"
" 7	3	K	22.5	143	328	"
" 8	3	L	13.4	73	116	"
" 10	4	M	30.3	145	296	"
" 11	4	N	25.8	133	256	"
" 12	4 & 5	P	27.0	126	279	"
" 13	5	Q	12.2	137	189	"
" 31	5	R	9.8	79	132	"
Sept. 1	5	S	5.6	64	88	"
" 14	5	T	3.2	23	45	"
" 18	5	U	9.1	46	84	"
July 31	6	a	21.7	163	397	Motorsailer
Aug. 12	6	b	3.0	25	62	"
" 13	6	c	14.8	146	400	"
" 27	7	d	11.9	130	325	"
July 31	8	a	20.6	110	352	Launch No.4
Aug. 8	8	b	8.7	69	210	"
" 10	8 & 9	c	26.7	169	566	"
" 11	9	d	21.2	153	431	"
" 12	9 & 10	e	22.4	168	479	"
" 13	10	f	22.5	125	362	"
" 24	11	a	11.0	107	269	Launch No.3
" 25	11	b	17.8	148	374	"
" 26	11 & 12	c	22.5	146	448	"
" 27	12	d	18.0	132	298	"
" 28	12	e	20.0	150	353	"
" 29	13	f	0.3	5	35	Skiff
			578.5	3939	8910	

Section of Field Records

Report on H5166
Chief of Party FBT Sims
Protracted by E C Baum
Verified & Inked by J T Walker

Surveyed in 1931
Surveyed by R W Knox, W J Chovan, E C Baum, G M. Marchand.
Soundings plotted by E C Baum

I. The sounding records were neat, complete and legible.

II. The protracting was satisfactory. The boat sheet was legible in most cases and helped materially in the verification. Most of the mistakes in protracting were due to the use of wrong signals.

III The soundings were plotted according to time. The majority of errors found were due to erroneous applications of fractions. No bad crossings were found.

IV No geographic names were ~~found~~ shown on the sheet. Chart 8502 showed the names Kaingnak Bay, Kiavak Bay, Cape Kiavak, and Two Headed Island which the writer inked in on the sheet. Knoll Bay and False Island Point are names assigned by the field officers. They were penciled in on the sheet by the writer. See D.R. for T 4658 & T 4654.

The shoreline was inked in and some of the low water line and rocks had been transferred from the topo sheets and inked in. However they had been transferred so incompletely that a thorough check had to be made and the omitted features added.

~~A rock 270 metres east of ⊙ Dot, Lat 56°-58½'~~ located by cuts Vol 9 p 66. ~~It was described in the records~~ as 4' above H.W. ~~A rock in~~ approximately the same location on T 4654 is ~~described~~ as 10' above ~~H.W.~~ Four feet above ~~H.W. was accepted as the more probable elevation.~~

V The only overlapping sheet that has been completed is H 5161. The overlap from it was transferred and found to be adequate and in good agreement with the soundings on H 5166.

Respectfully submitted
J T Walker
9/7/32

Section of Field Records
Review of Hydrographic Sheet No. 5166
Two-headed Island to Kaiugnak Bay, Kodiak I., Alaska
Surveyed - 1931
Instructions dated April 17, 1931 (Surveyor)
Chief of Party - F. B. T. Siems
Surveyed by R. W. Knox, W. J. Chovan, E. C. Baum, G. M. Marchand
Protracted and soundings plotted by E. C. Baum
Verified and inked by J. T. Walker

Hand lead and machine soundings.

1. The records conform to the requirements of the Hydrographic Manual.

2. The plan and extent of development satisfy the specific instructions except that the $7\frac{3}{4}$ fathom depth in lat. 57° 04.'5 long. 153° 39.'5 should have been further developed as noted by the chief of party in the approval sheet, and an additional line of soundings should have been run off the point in lat. 57°03.3' long. 153° 36.'5 to develop the depth curves.

3. Soundings. There are no cross lines except in the development of some of the shoal areas where the depths are consistent. A 30 fathom sounding in lat. 57° 04.'1 long. 153° 34.'8 may be an extension of the 5 4/6 fathom shoal or an indication of another shoaling. Lines are rather openly spaced for bottom of this character.

4. Depth curves. The lesser curves are necessarily incomplete. This includes the 10 fathom curve in a few places. The deeper curves can be satisfactorily drawn.

5. Junction with H5161 to the southwest is satisfactory. Sheets H5151 and H5182 have not yet been completed.

6. Comparisons. There are no previous surveys in this area.

   Chart 8502 does not show any hydrography in the area covered by this sheet.

7. Field drafting is generally good. Several apparent conflicts in topographic and hydrographic features along shore were due to reference to different planes (MHW and MLLW). They were satisfactorily adjusted. The legibility of elevations and notes could have been improved by placing them on the land areas with leaders to the features involved. Periods were used after some of the abbreviations in the water areas which is contrary to the usual practice.

8. Recommendations. Although the items mentioned in par. 2 are desirable, no further surveys are deemed urgent.

9. Reviewed by R. J. Christman. September 26, 1932.

Sheet inspected by A. L. Shalowitz.

Approved
A. M. Sobieralski

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5166

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

Number of positions on sheet	3939
Number of positions checked	1098
Number of positions revised	55
Number of soundings recorded	8910
Number of soundings revised	98
Number of signals erroneously plotted or transferred	0

Date: Sept. 7, 1932

Cartographer: J. T. Walker

May 9, 1932

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
13 volumes of sounding records for

HYDROGRAPHIC SHEET **5166**

Locality **Kaguyak Bay to Wide Bay, S. E. Coast Kodiak I., Alaska**

Chief of Party: **F. B. T. Siems in 1931**
Plane of reference is **mean lower low water reading**
2.2 ft. on tide staff at **Jap Bay**
8.4 ft. below B. M. **1**
2.9 ft. on tide staff at Three Saints Bay
11.9 ft. below B.M. 1

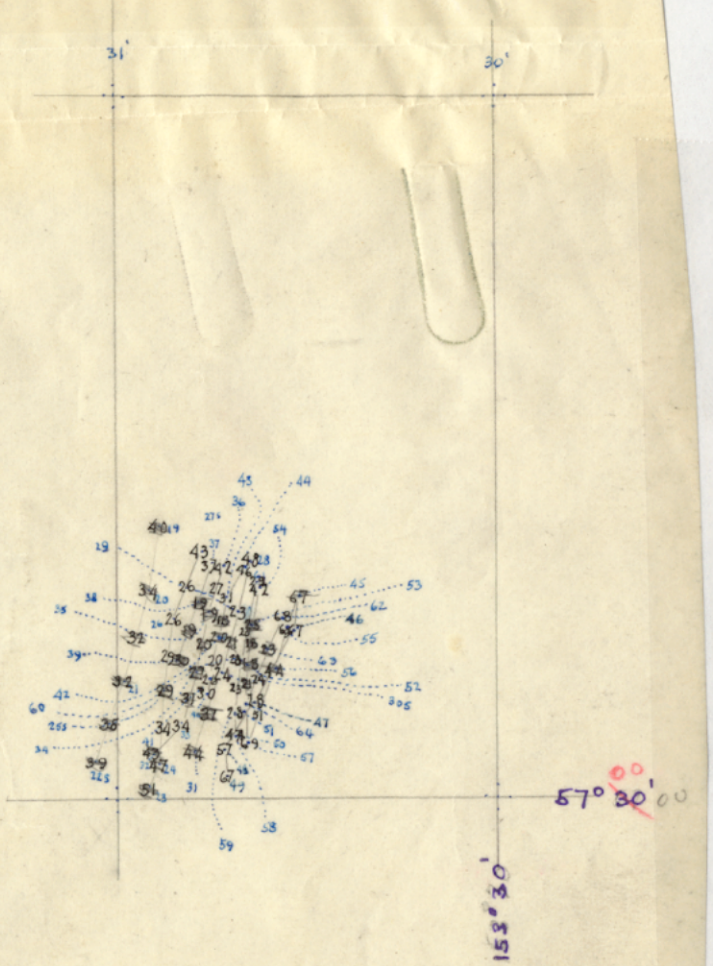
8.30 H H W
7.70 M H W
above M L L W

Condition of records satisfactory except as checked below:

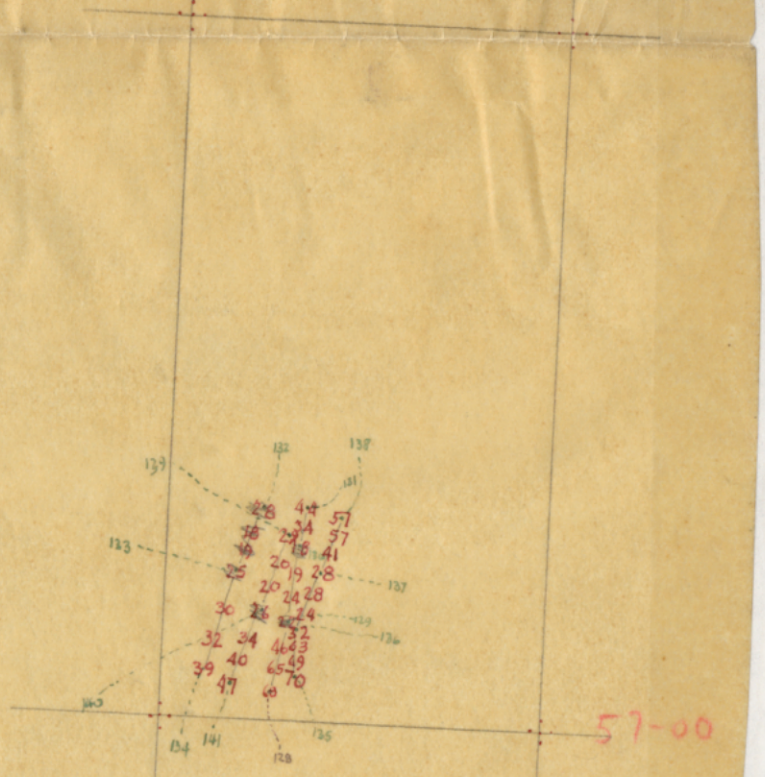
1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered 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 P. Whitney

Chief, Division of Tides and Currents.



To accompany hydrographic sheet # 24. H-5166



To accompany hydrographic sheet #24
H-5166