

4195

C. & G. SURVEY
L. & A.
FEB 4 - 1922
S.S. No.

Diag. Chart No 8102-2

4195

Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
E. Lester Jones, Director

State: S. E. Alaska

11-5613

DESCRIPTIVE REPORT.
4195

Hyd. Sheet No. 3 (Field No.)

LOCALITY:
Clarence Strait

Scott Pt. to Port Johnson

1921
~~1922~~

CHIEF OF PARTY:
J. H. HAWLEY, U. S. C. & G.

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SHEET NO. 3 (Field Number)

S.E. Alaska, Clarence Strait, Port Johnson to Scott Pt.

J. H. HAWLEY, Chief of Party - 1921.

This descriptive report to accompany hydrographic sheet No. 3, is respectfully submitted. This survey was made in the execution of instructions dated Feb. 11, 1921.

All distances in this report refer to nautical miles and all depths are referred to mean lower low water. All bearings are given in a clockwise direction with North as zero.

LIMITS:

From about 2/3 mile off Scott Point, or about 131° 57' W. the eastern limit follows very closely the 131° 57' meridian northward to 55° 08' N., thence due west to the northside of the entrance to Port Johnson, then it follows the east shore of Prince of Wales Island southward to Scott Point, then to the first mentioned point. It includes the whole of Port Johnson and Ingraham Bay and Moira Sound as far as the entrance to the North Arm, Safety Rock and Black Point. On the south it is connected with sheet No. 2, on the east with the ship hydrography and on the north with sheet No. 4.

ORGANIZATION:

In charge, right angle and plotting: G. L. Bean,
H. & G. Engr.
Left angle and recording: C. E. Christopherson,
Draftsman; H. C. Bonaobra, Ch. Writer;
T. J. Stocking, W. O. 2c.
Coxswain: Fred. Peterson, Sea.
Engineer: S. H. Davis, A. to E. 2c.
Leadsman: D. R. Haines, Sea.
Sounding Machine Operator: H. C. Miller, Sea.

EQUIPMENT:

Boat used: Steam Launch "Delta"
" " #117 (1 day.)
Machine: Cosmos sounding machine driven by a
three-cylinder steam engine.
Lead: 20 to 25 pounds.
Wire: Regular 7-strand steel sounding wire.
Depth recorder: Regular registering sheave.
Tide apparatus: Automatic gauge at Menefee
Anchorage and plain staff at Hidden Bay,

and Dolomi, Port Johnson.
Camp near Menefee, Hidden Bay and Dolomi, Port Johnson.

METHOD:

This survey was made on a 1:20,000 projection. Up and down soundings were obtained by stopping and backing for each sounding. Three-hundred-meter lines were used except where closer lines were necessary for an adequate development. The lead line was used only to get the least water on a shoal. The tidal data was obtained from automatic gauge at Menefee Anchorage and from plain staffs at Hidden Bay and Dolomi, Port Johnson. The steam launch #117 was used on the first day with a hand power Ballauf machine, because the Delta was not ready for operation. After this the Delta was used with a Cosmos machine driven by a 3-cylinder steam engine. It was endeavored to obtain a good development of the 10-fathom curve. Many rocks and kelp patches are shown close to shore which could not be mentioned in the record book.

CONTROL:

The control on this sheet is based upon the triangulation stations Scott, Pol, Sun, White Rock, Moira Rock, Nest, Wedge, Safety Rock, Halliday, Black, Moi and Flat. The remainder of the signals were located by the topographic party. They consisted of a large number of whitewash signals, a few banners and a few natural objects. No difficulty was experienced in getting good fixes except when close to shore.

DANGERS:

Ingraham Bay has a very broken bottom and is choked by numerous small islands. There are several bad rocks and reefs. Off the southside of the outermost island in the entrance two rocks bare about 1/2 tide. The outermost is about 145 meters offshore.

It bears about 350°,	585 m. dist. from hyd. sta.	In
51°,	770 m. " " " "	Oar
178°,	850 m. " " " "	Ham.

A small bight on the northside of the entrance is foul and nearly choked by a reef baring about 1/2 tide.

On the southside of the entrance a reef extends offshore about 225 meters. It is marked by kelp.

South of the islands in the entrance the channel is clear. North of the islands the channel is nearly choked by a reef at the northwest end of the islands. Two rocks baring about 3/4 tide lie about 150 meters off the west end of the islands.

The outer one bears about 222°,	230 m. dist from hyd. sta.	Clif
140°,	340 m. " " " "	Bad
1230°,	680 m. " " " "	Arm.

In the vicinity of hydrographic station Bad a reef makes about 150 meters offshore. The entrance to the North Arm is very narrow and both shores are rocky. After passing a small islet on the south side the North Arm is clear except a few rocks close to shore.

About 200 meters S.W. of the small island on which hydrographic station Box is located are two rocks which bare about 1/2 tide. They are marked by kelp.

They bear about	227°	320 m.	dist. from hyd. sta.	Box
	116°	480 m.	" " " "	Boy
	41°	270 m.	" " " "	Kay

A rock swash about 1/4 tide lies about 180 meters offshore, S.E. from hydrographic station Din.

It bears about	118°	190 m.	dist. from hyd. sta.	Din
	70°	515 m.	" " " "	Hor
	273°	370 m.	" " " "	Kay

About 220 meters S.E. off hydrographic station Bul is a rock which bares about low water.

It bears about	128°	220 m.	dist. from hyd. sta.	Bul
	259°	440 m.	" " " "	Bit
	316°	510 m.	" " " "	Dag

About 35 meters N.W. of hydrographic station Dag is a rock which bares about 1/4 tide. A reef extends about 90 meters N.E. from hydrographic station Sno. On the north shore from hydrographic station Bul to hydrographic station Tar, small islets and rocks extend offshore for a distance of 140 meters. Beyond the island on which hydrographic Station Cem is located ~~ax~~ a reef extends about 160 meters offshore. It bares from 1/4 to 1/2 tide. There are several rocks close to shores in the head of the north bight just west of hydrographic station Ros.

There are two rocks close to shore off Ingraham Point. Midway between hydrographic stations Cig and Med a low rocky islet lies 260 meters offshore. Inshore from this islet it is foul with rocks and kelp.

Around the south end, and the east shore of Polk Island are several rocks close to shore. In the middle of the passage back of Polk Island is a group of rocks which bares ~~low~~ about 1/2 tide.

They bear about	343°	700 m.	dist. from hyd. sta.	Med
	99°	350 m.	" " " "	Gus
	291°	435 m.	" " " "	Mis

Opposite these rocks a reef makes off the west side of Polk Island for a distance of about 100 meters.

About 160 meters north of hydrographic station Lor a rock lies about 80 meters offshore. It bares about 1/2 tide.

About 200 meters west of the N.W. corner of Polk Island is a small bare islet. Opposite this islet and about 60 meters off the Prince of Wales Island shore is a rock which bares about 3/4 tide. The low water line lies about 100 meters off the north end of Polk Island. It is covered with rocks. About 60 meters off the northern islet north of Polk Island is a rock which bares about 1/4 tide. It bears about

99°	340 m.	dist. from hyd. sta.	Mar
155°	720 m.	" " " "	Lok
299°	745 m.	" " " "	Bar

A reef makes offshore about 50 meters from hydrographic station Mar. There are several rocks close to shore in this bight.

The south side of the northern bight in Chichagof Bay is foul. Kelp and rocks extend about 150 meters offshore.

S. E. from Rip Point a reef extends about 400 meters offshore, terminating in two small rocky islets. Triangulation station Sun is on the southern of these islets. Between these islets and shore are several rocks and kelp. Part of the rocks are bare at low water. About 210 meters S. by E. from triangulation station Sun is a rock which bares about 1/4 tide.

It bears about

161°	210 m.	dist. from tri. sta.	Sun
41°	690 m.	" " hyd.	Gof
23°	1325 m.	" " " "	Lok

About 1/4 mile west of Rip Point is a small bay. Rocks lie on both sides of the entrance about 50 meters offshore, but the inside is clear except a rock on the north side, close to shore.

South of White Rock Island is a large shoal area, so covered with rocks and kelp that it was inadvisable to make an examination of it. It extends southward from White Rocks about 1200 meters. At its southern limit are three small islands. A reef extends westward from these islands about 500 meters. It bares about 1/4 to 1/2 tide and is well marked by kelp. About 210 meters south of triangulation station White Rock is a rock which bares about 1/4 tide.

It bears about

173°	210 m.	dist. from tri. sta.	White Rk.
47°	300 m.	" " hyd.	Del
114°	680 m.	" " " "	Log

A reef makes out from the E. E. corner of White Rock Id. for a distance of about 350 meters. It is marked by kelp.

West of White Rock Id. about 500 meters is a group of rocks which bare about 3/4 tide. They are marked by kelp. They bear about

238°	690 m.	dist.	from	hyd. sta.	Lam
276°	530 m.	"	"	"	Gum
342°	580 m.	"	"	"	Pit

The small bay on the north side of White Rock Id. is foul with a reef running thru the center of it, marked by kelp and bearing about 1/2 tide.

Between White Rock Id. and the small islet upon which hydrographic station Pit is located is a shoal area covered with rocks and kelp.

A reef makes out from the north end of Moira Id. terminating in a small island. It is marked by kelp and rocks awash.

Between Moira Island and Moira Rock are three rocks, well marked by kelp, which bare about extreme low tide.

The northern one bears about	218°	940 m.	from	tri. sta.	Moira Lt.
	25°	1130 m.	"	hyd	" Ran
	110°	2560 m.	"	"	" Cap

The middle one bears about	221°	1090 m.	"	tri.	" Moira Lt.
	20°	1005 m.	"	hyd.	" Ran
	113°	2470 m.	"	"	" Cap

The southern one bears about	218°	1170 m.	"	tri.	" Moira Lt.
	22°	900 m.	"	hyd.	" Ran
	115°	2475 m.	"	"	" Cap

About 1950 meters east of Moira Rocks is a rocky shoal with a least found depth of 9 fathoms on it.

It bears about	20°	3800 m.	dist.	from	tri. sta.	White Rock
	70°	1950 m.	"	"	"	Moira Lt
	147°	2850 m.	"	"	"	West

A rock lies about 200 meters west of Moira Light. It is marked by kelp.

South of the eastern end of the group of islands known as Menefee Islands is a foul area extending about 250 meters offshore. About 50 meters S.E. of the small islet upon which hydrographic station Kor is located are two rocks which bare about extreme low tide.

At the south end of Menefee Anchorage is a small island. Between the east end of this island and the shore is a foul. South of the island along the shore reefs extend about 100 meters offshore.

Mo
— carry table
7 928 5

West of Menefee Anchorage are two large islands. On the west side of the southern island reefs extend 50 to 100 meters offshore, nearly choking the passage between the island and the mainland. There is less than a fathom of water in this passage at extreme low tide. From the N.W. corner of this island a reef extends about 100 meters offshore. About 250 meters N.W. of hydrographic station Jak a reef extends about 100 meters offshore. ✓

Idch on BS 4 25 217

About 450 meters S.W. of the west end of Menefee Islands is a rock which is just awash on a minus tide. It is marked by kelp.

It bears about 215° 480 m. dist. from hyd. sta. Sob
 288° 840 m. " " " " Dik
 352° 1340 m. " " " " Mul

In about the center of the bay S.W. of Menefee Islands is a rock which is just awash at high tide.

It bears about 167° 1720 m. dist. from hyd. sta. Sob
 288° 760 m. " " " " Mul
 45° 1740 m. " " tri. " Flat

About 500 meters south of this rock is a rock which is just awash at high tide.

It bears about 160° 2090 m. dist. from hyd. sta. Sob
 252° 640 m. " " " " Mul
 59° 1550 m. " " tri. " Flat

West of these rocks is a group of small islets. Back of these islets is a narrow passage which was not closely examined, but which is thought to be clear.

North of these islets 550 meters is a small rocky shoal with about 5 fathoms on it. ✓

About 250 meters N.E. of triangulation station Flat a reef makes offshore about 140 meters. It bares about 1/4 tide. ✓

Just north of hydrographic station Hat a reef makes offshore about 140 meters. S.E. of Safety Rock is a group of islands called Egg Islands. On the N.E. side of the western of these islands are several rocks. A rock lies about 70 meters off the S.W. corner of the largest of these islands. A rock lies about 70 meters off the N.E. corner of these islands. It bares about 3/4 tide. ✓

A reef makes off the South side of the small islet at the eastern end of Egg Islands, about 140 meters. It bares about 1/2 tide. ✓

About 1200 meters north of the east end of Egg Islands is a sandy shoal with about 18 fathoms of water on it.

From Point Halliday to Adams Point the shoreline is broken and there are many rocks close to shore. The ten-fathom curve lies from one to two hundred meters offshore.

North of Adams Point are two groups of rocks close together. The outside one is about 425 meters offshore. They are well marked by kelp.

The outside group bears about

347°	500 m.	dist. from hyd. sta.	Sem
52°	425 m.	" " " "	Per
77°	890 m.	" " " "	Ty

The inside group bears about

338°	360 m.	" " " "	Sem
75°	330 m.	" " " "	Per
85°	830 m.	" " " "	Ty

About 1700 meters S.W. of Wedge Island is a shoal marked by kelp with about 2-1/3 fathoms on it.

It bears about

216°	1740 m.	dist. from hyd. sta.	Mab
175°	1420 m.	" " " "	Hay
48°	1890 m.	" " " "	Sem

About 1 mile S.E. of Wedge Island is an E.D. marked on Chart 8102 with two rocks awash. No trace of this shoal could be found, there being about 120 fathoms in this vicinity.

North of Scraggy Point is a small bay called French Harbor. In the center of this are two rocks which bare about 3/4 tide.

They bear about

490°	220 m.	dist. from hyd. sta.	Day
157°	320 m.	" " " "	Cur
240°	300 m.	" " " "	Cry

This bay is rocky close to shore.

Port Johnson is clear except for a few rocks close to shore.

ANCHORAGES:

Menefee Anchorage is of easy access from Clarence Strait and much used by fishing craft but it is not suited to large vessels. An anchorage in about 15 fathoms, mud and rock bottom may be had with about 200' swinging room. Altho it is protected by land from the S.E., the land is low and a S.E. gale would be severely felt.

Niblack Anchorage ~~is~~ has excellent protection and good holding bottom but is rather remote from Clarence Strait. To enter keep 1/4 mile north of Moira Rock thence to the

north side of Safety Rock the channel is clear.

A fair anchorage for vessels up the 75 or 100 feet in length may be had in Dolimi, Port Johnson, in 7 to 8 fathoms of water.

To enter from Clarence Strait a course of N85° W (true) is recommended passing about 450 meters off the rocks north of Adams Point. Care must be taken to avoid the rocky shoal with 2-1/3 fathoms on it which lies about 1700 meters S.S.E. of Wedge Island. After passing the rocks north of Adams Point, follow a mid-channel course into Dolomi.

The small bay just north of Scraggy Point is sometimes used by fishermen, but should not be entered without local knowledge.

Excellent anchorage may be had in the head of Ingraham Bay and also in the North Arm. However, these anchorages are inaccessible to large vessels and small craft should not go to the head of the bay without local knowledge. To enter the north arm pass south of the small islands in the middle of the entrance, keeping at least 300 meters off. When the entrance to the North Arm is well open beyond the islands in the entrance, follow a N.62°W (true) course to the entrance to the North Arm, keeping at least 100 meters off the islands in the entrance. Follow a mid-channel course thru the narrow neck into North Arm. After passing the small island on the south shore fair holding bottom will be found in 12 to 15 fathoms of water.

TIDAL CURRENTS:

Strong tidal currents are found at various places in the vicinity of Moira Sound. Off Rip Pt. an estimated velocity of 2 knots is reached and moderate tide rips are set up with the wind opposed to the tide. Moderate tide rips are also found off of White Rock and Moira Rock and south of Wedge Island. North of Menefee Island and West of Moira Island a very strong N.E.'ly set was felt during the ebb tide.

TOPOGRAPHIC FEATURES:

The shoreline is bold and very broken. It is wooded to the storm water line. High bare ledges are frequently found and detached rocks and boulders are numerous close to shore. Kelp grows abundantly in many places. White Rock on the eastern side of White Rock Island is a high light colored rock which is distinguishable as a land mark for twenty miles.

TRAFFIC:

From Scott Point on to Rip Point the traffic consists only of fishing vessels and an occasional lumberman or piledriver. Ingraham Bay is seldom entered even by fishermen. It probably would be used more if it were well charted as it has an excellent anchorage.

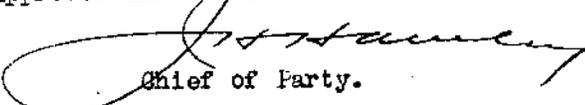
In the vicinity of Menefee Anchorage is a large native summer village. During the king salmon hand troling season, and the herring run, this anchorage is overcrowded with fishing craft. It is deserted the remainder of the year.

There is a large copper mine at Niblack. This mine has not been worked for several years and the wharf has been destroyed. However, it is said to be a valuable mine and will probably be worked sometime in the future, in which case large ore vessels will have to enter Niblack Anchorage.

There is a P.O. at Dolomi, in Port Johnson, with a mail boat once a week. Dolomi was a considerable village a few years ago, but at present there are only two residents and usually two or three transients. A fair general store is maintained by the postmaster for the benefit of the few settlers who have homes about Koira Sound and Port Johnson. The largest wharf has been destroyed but a large float is kept up by the postmaster. Dolomi was an important gold mining district in the past and there are hundreds of claims on record. Many of these have been developed and a few have proven valuable. The Valparaiso and Golden Fleece mine are the largest holders. The Valparaiso has been fully developed with a large investment and is equipped with a large stamp mill and all necessary extracting and refining machinery. It is not worked extensively at present, but is considered valuable property. Vessels of several thousand tons have entered Dolomi but the harbor is very restricted.

Prepared and submitted by G.L.Bean, H.& G.E.

Approved and forwarded:


Chief of Party.

TIDAL DATA

HYDROGRAPHIC SHEET NO. 3 (Field Number)

An automatic gauge was installed at Menefee Anchorage, connected to bench marks established in 1921, was used from April 26 to May 14th, and from June 13th to June 16th.

Plane of reference	Mean lower low water
do	7.8 feet of the staff
Highest tide observed	Not available
Lowest " "	do

A plain staff at Hidden Bay, connected to bench marks, established in 1921, was used from May 19th to May 26th.

Plane of reference	Mean lower low water
do	3.6 feet on the staff
Highest tide observed	17.7 do
Lowest " "	2.0 "

A plain staff at Dolomi, Port Johnson, connected to bench marks, established in 1921, was used from June 24th to July 2nd, 1921.

Plane of reference	Mean lower low water
do	7.9 feet on the staff
Highest tide observed	21.5 do
Lowest " "	8.0 "

LIST OF SIGNALS
HYDROGRAPHIC SHEET NO. 3 (Field Number)

Hydrographic Name.	Location		Est.
Scott	Triangulation station	Scott	1912
Back	do	Back	1921
Pol	"	Pol	1921
Ingraham	"	Ingraham	1912
Sun	"	Sun	1912
White	"	White Rk.	1912
Light (Moira Rk.Lt)	"	Moira Rk.Lt.	1921
Nest	"	Nest	1912
Wedge	"	Wedge	1912
Safety Rock	"	Safety Rock	1912
Halliday	"	Halliday	1912
Black	"	Black	1912
Moi	"	Moi	1912
Flat	"	Flat	1912

The remainder of the signals are located on topographic sheet No. 6180 and #1.

This is duplicate copy, original is pasted into front of Vol. 1. Sounding record. *J*

February 24, 1922.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
10 volumes of sounding records for

HYDROGRAPHIC SHEET 4195

Locality: Scott Point to Port Johnson, Clarence Strait, S.E. Alaska.

Chief of Party: J. H. Hawley in 1921.

Plane of reference is mean lower low water, reading

7.8 ft.	on tide staff at	Menefee Anchorage.
7.9 "	" " " "	Dolomi, Port Johnson.
3.6 "	" " " "	Hidden Bay.

Condition of records satisfactory except as checked below:
for reduction of soundings.

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 each 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.

STATISTICS SHEET NO. 3 (Field Number)

Date 1921	Letter	Vol.	Pos.	sdgs.	miles Stat.	vessel
Apr. 26	a	1	82	158	11.7	"117"
" 27	a	1	77	161	14.4	"Delta"
" 28	b	1	28	68	4.9	"
" 28	b	2	83	218	12.6	"
" 29	c	2	74	173	9.0	"
" 29	c	3	48	112	7.9	"
" 30	d	3	54	138	9.1	"
May 4	e	3	101	234	19.3	"
" 5	f	3	33	84	5.3	"
" 5	f	4	80	207	13.8	"
" 6	g	4	78	181	15.8	"
" 7	h	4	80	188	12.8	"
" 9	j	4	33	75	6.6	"
" 9	j	5	34	77	6.5	"
" 10	k	5	99	190	21.2	"
" 11	l	5	98	260	10.9	"
" 12	m	5	66	137	7.6	"
" 12	m	6	18	29	4.0	"
" 13	n	6	118	313	18.0	"
" 14	o	6	30	83	7.6	"
" 19	p	6	79	246	12.3	"
" 19	p	7	32	93	4.9	"
" 26	q	7	181	467	27.6	"
June 13	r	7	56	150	10.6	"
" 13	r	8	5	15	.7	"
" 14	s	8	70	206	15.0	"
" 15	t	8	105	277	25.8	"
" 16	u	8	82	229	17.2	"
" 16	u	9	33	97	5.3	"
" 24	w	9	117	301	23.3	"
" 25	x	9	89	251	14.2	"
" 27	y	10	82	263	12.3	"
" 28	z	10	125	338	24.7	"
" 29	aa	10	42	66	10.2	"
July 2	bb	10	14	38	1.1	"
Totals			2427	6123	410.4	

Hydrographic Sheet No. 4195

Clonnie Strait. S. E. Alaska.

The character of the work covered by this sheet appears to be as satisfactory as would be expected for the character of the bottom and depth of water; there are, however, some few open spaces which might develop danger spots other than those shown if closer sounded.

The most prominent rocks are definitely located by angles and distances in the descriptive report covering this work. This would appear good practice for all Hydrographic parties to follow.

The plotting done by the field party appears good as no serious errors were found.

The plotting also by the field party was found accurate except as to fractional soundings. Records well kept but no courses given.

John D. Torrey
April 17, 1922

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 4-DEM

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

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4195.

Surveyed in 1921.

Instructions dated Feb. 11, 1921.

Chief of Party, J. H. Hawley.

Surveyed by Geo. L. Bean .

Protracted by C. E. Christopherson and E. L. Evans.

Soundings plotted by G. L. Bean and E. L. Evans.

Verified and inked by J. D. Torrey.

1. The records conform to the requirements of the General Instructions except that the boat's courses were omitted.
2. The plan and character of development fulfill the requirements of the General Instructions.
3. The plan and extent of development satisfy the specific instructions.
4. The sounding line crossings are as good as could be expected in irregular depths like this area.
5. The information is sufficient for drawing the usual depth curves.
6. The field plotting was completed to the extent prescribed in the General Instructions. None of it had to be done over, except that the rocks and islets were not given with as high degree of accuracy as should have been done and these features required careful checking and some revision.

7. The junctions with adjacent sheets are satisfactory.
8. No further leadline surveying is required within the limits of this survey. As there are without doubt additional dangers besides those discovered by this survey the area should be dragged whenever the commercial importance of the locality warrants it.
9. The surveying is excellent and the field drafting is good.
10. Reviewed by E. P. Ellis, November, 1922.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 3 (Field Number) **4195**

State . . . S. E. Alaska

General locality . . Clarence Strait

Locality Scott Point to Port Johnson

Chief of party . . . J. H. Hawley, H. & G. E.

Surveyed by Geo. E. Bean, H. & G. E.

Date of survey . . . April 26 to July 2, 1921.

Scale 1:20,000

Soundings in Fathoms

Plane of reference . . M.L.L.W.

Protracted by C. E. C. Christopherson Soundings in pencil by G. L. B., E. L. Evans

Geographic names lettered by A. F. Lewis.

Inked by J. D. Torrey Verified by J. D. Torrey

Records accompanying sheet (check those forwarded):

Des. report, 2 Tide books, _____ Marigrams, 1 Boat sheets,

10 Sounding books, _____ Wire-drag books, _____ Photographs.

Data from other sources affecting sheet . . Marigrams of . .

Automatic gauge at Menefee Anchorage.

Remarks: