4514a-b
4514c-d

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. ..... Office No. 4514A 4514C 4514B 4514D

LOCALITY

State S.E. Alaska

General locality Port Conclusion

Locality to Vicinity of Port Herbert

1945

CHIEF OF PARTY

F.B.T. Siems

LIBRARY & ARCHIVES

DATE .....

B-1870-1 (1)++

4514a-b
4514c-d

4514a

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

State: S.E. Alaska

11—5613

DESCRIPTIVE REPORT.

Hydrographic *Sheet No.* (5) 4514a

LOCALITY:

~~Port Conclusion, Port Armstrong,~~

~~Port Walter and~~ Chatham Straits ~~(inshore)~~

Port Conclusion to Vicinity of

Port Herbert

1925

CHIEF OF PARTY:

F.B.T. Siems

Form 537

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

45148

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. (5) 45148
4514 a

State S.E. Alaska.

General locality . Chatham Strait to Vicinity of Port Herbert

Locality . Port Conclusion, ~~Port Armstrong, Port Walter and inshore Hydrography of Chatham Straits~~.

Chief of party . F.B.T. Siems

Surveyed by . F.B.T. Siems, R.D. Horne, H.W. Tyler.

Date of survey August 19 - September 14 1925.

Scale . . 1: 20 000

Soundings in . fathoms.

Plane of reference mean lower low water.

Protracted by E.B.L. . . Soundings in pencil by E.B.L. .

Inked by . . . . . Verified by . . . . . .

Records accompanying sheet (check those forwarded):

Des. report, ... Tide books, ... Marigrams, ... Boat sheets,

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

Data from other sources affecting sheet . . . . . .

Remarks:

DESCRIPTIVE REPORT

to accompany

Hydrographic Sheet of Port Conclusion

Port Armstrong and Port Walter

- 1925 -

This hydrographic survey which was made under the Directors instructions of February 14, 1925, joins hydrogrphic sheet Register # 4392B at the south end and with the exception of Pot Lucy covers all the inshore area up to a point one mile north of Port Walter. It joins the offshore hydrography of Chatham Straits on Register # 4261B. Since there are no Canneries or other habitations in Port Lucy, its relative unimportance caused it to be left until the last and was not completed.

GENERAL REMARKS: The inshore waters of Chatham Strait covered by this sheet are unusually clear of obstructions . The depths drop off very sharply near shore to ten fathoms or more and the hundred fathom curve is only about a half mile offshore. The water in the three ports covered by this sheet is deep and clear for the most part. Each of these ports will be treated seperately in this report.

PORT CONCLUSION: The water of Port Conclusion is deep and affords poor anchorage. A small shoal 300 meters east of signal COT has a depth of 13 fathoms. This shoal has been used for anchoring but has poor holding bottom. Small fishing boats may find good anchorage in 3 fathoms of water in Ships Cove. The entrance to this cove is clear in midchannel but kelp extends forty or fifty meters offshore on the south side. Another anchorage for small boats is found about a quarter of a mile inside of Point Conclusion (between signals BUD and MID) The tidal current in Port Conclusion is very moderate and almost unnoticeable.

The dock at Port Conclusion Saltery is in good condition and affords a least depth of water at its face of 20 feet.

PORT ARMSTRONG: The entrance to Port Armstrong while narrow has an even botton and a depth of 8 to 10 fathoms. The shores of the entrance fall off sharply into deep water. A line of kelp alongshore marks the limits of shoal area in the summer. This channel is used by large steamers. A reef baring at low water and marked by kelp extends off Point Eliza in an ENE 'ly direction on the south side of the entrance.

Anchorage for large vessels may be found in 15 fathoms soft bottom at the head of Port Armstrong and small boats usually anchor near the Cannery. The least depth of water along the face of the Cannery dock is 4 fathoms.

TOLEDO HARBOR: This small harbor affords good protection and anchorage for small boats. Its entrance is very narrow and in the summer streamers of kelp grow in the channel. A midchannel depth of 4 to 5 fathoms in thought to be free from ofstructions. Anchorage in the harbor is from 5 to 8 fathoms.

Port Walter: The main part of Port Walter is clear and deep. The deep water shoals to about 11 to 13 fathoms near the group of small islands at the head of the port. The area west of these islands affords the only anchorage for large vessels. A number of rocks bare at varius stages of the tide near these islands and on the western side extend 100 meters off.

The channel into BIG PORT WALTER is clear and deep. Big Port Walter is deep with the exception of the flats at the northern end and has no anchorage. The tidal current flowing through the narrows into Big Port is moderate and it is estimated that it does not exceed 1 1/2 or 2 knots.

LITTLE PORT WALTER: Little Port Walter is an excellent harbor but its entrance is narrow and shoal. A group of piles supporting a light has been driven on the south side of the entrance at its narrowest point. In entering vessels should pass as closely as possible to this pile and continue on the same course until clear of the rocks ledge on the south side. ~~A depth of twenty feet can be carried through this channel.~~ Anchorage in eight fathoms soft bottom can be had in the center of the harbor. It is estimated that he current in the channel does not exceed one knot.

The water at the end (west face) of the main Cannery Dock has a depth of 32 feet at the south corner and 20 feet about half way along the dock. The north end of this dock goes dry at low tide. Deep draft vessels will find it safer to dock on the south side of the main dock where there is a minumum depth of 23 feet. The least water along the face of the oil dock is 13 feet. A convenient float is provided at the end of the slip between the docks for small boats. The water off the float has a minimum depth of 12 feet.

The dock at New Port Walter has a depth of 40 feet at the outside corner. This depth decreases to 2 feet at the inside end by the fish elevator. The depth of water at he face of the oil dock varies from 2 feet to 6 feet. The water draps off sharply from the face of the dock however.

SURVEY METHODS: The sounding was done by four different boats. The Explorer was used for outside sounding to within half a mile of shore. The Scandinavia and Wire-drag Tender # 1 were used for soundings in the ports and alongshore. Each launch and the Explorer was equiped with hand sounding machine and lead line. The motor whaleboat was used for sounding in Little Port Walter. This boat is not adapted for sounding however.

Respectfully submitted:

H.W. Tyler

H.W.Tyler
Lt. (j.g.)

Approved:

F.B.T. Siems

F.B.T.Siems
Chief of Party
Commanding Str. Explorer.

STATISTICS FOR HYDROGRAPHIC SHEET OF PORT CONCLUSION, PORT ARMSTRONG AND PORT WALTER

Date 1925	Letter	Volume	No. of positions	No. of sdgs.	Miles (stat.)	Vessel
Aug. 19,	A	1	30	30	9.3	Explorer
" 20	B	1	65	65	13.8	"
" 21	C	1	27	27	12.6	"
" 22	D	1	13	13	6.9	"
" 25	E	1	25	25	10.2	"
	5		160	160	52.8	
Aug. 19	a	1	51	119	3.8	Tender # 1
" 20	b	1	117	166	9.5	"
" 21	c	1	111	150	8.2	"
" 25	d	1	114	261	5.5	Motor whaleboat
" 26	e	1	98	266	7.0	"
" 28	f	2	79	108	4.5	Tender # 1
Sept. 14	g	2	52	95	3.0	Tender - Heli.
	7		622	1165	41.5	
Aug. 20	A	1	35	67	1.3	Scandinavia
" 21	B	1	67	178	8.2	"
" 22	C	1	23	53	5.2	"
" 24	D	1	30	65	6.9	"
" 25	E	1	49	102	9.8	"
" 26	F	1	58	101	10.7	"
" 27	G	2	58	133	11.0	"
" 28	H	2	57	100	8.7	"
Sept. 11	J	2	2	14	.2	
	9		379	813	62.0	
Total	21		1161	2138	156.3	

2.12.

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER
AND REFER TO No. 11-DRM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON March 14, 1927.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4514[a]

Chatham Strait, Alaska, from Port Conclusion to Port Walter

Surveyed in 1925

Instructions dated Feb. 14, 1925 (EXPLORER)

Chief of Party, F. B. T. Siems.

Surveyed by F. B. T. S.

Protracted and soundings plotted by E. B. Latham.

Verified and inked by H. E. MacEwen.

1. The records conform to the requirements of the General Instructions except that very few compass courses were given.

2. The plan and character of development satisfy the requirements of the General Instructions.

3. The plan and extent of the survey satisfy the requirements of the Specific instructions.

4. Wherever cross lines were run, there is a good agreement.

5. The information is sufficient for drawing the usual depth curves, except around the south entrance point to Port Conclusion.

6. The usual field plotting was done by the field party. There were a number of instances of erroneous protracting which indicated a failure to refer to the boat sheet when protracting, particularly when doubtful bends in the line occurred.

7. The junctions with H. 4392[a] on the south and H. 4261[a] on the east are satisfactory.

8. Additional work will be required as follows:

   a. Extend the work northward along the east coast of Baranof Island.

   b. Develop the 200-fathom bank in Lat. 56° 21 1/2', Long. 134° 35'.

c. In the narrows in Little Port Walter it may be advisable to take a few more soundings, since the drag work was rejected in this area. (See Paragraph 6, Review of W. D. 4514[b].) OK

d. Should it be impracticable to drag the shoal off the south entrance point to Little Port Walter (as called for in Paragraph 6, Review of W. D. 4514[b]) then the area should be closely developed on a 5000 scale from the shore to the 20-fathom curve. OK

e. Extend the work into Port Lucy.

f. Develop the possible spit off △ Clu in Lat. 56° 16', Long. 134° 38' to the limits of the drag work. OK

9. Character and scope of the survey - ~~excellent~~. very good
Field drafting - good.

10. It is recommended that the old work in Port Armstrong and Port Conclusion from Vancouver's surveys be omitted from all future charts of this locality and only the present survey be used. The 17-fathom sounding about 1/2 mile north of the north entrance point to Port Armstrong falls well outside the 20-fathom curve on the new survey and was covered by an 87-foot drag, showing at least that no danger exists here. It was probably erroneously located on the Vancouver survey. OK

11. Reviewed by A. L. Shalowitz, March, 1927.

Approved:

L. O. Colbert

Chief, Section of Field ~~Records (Charts)~~ Work

N. T. Scarborough

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

WWB

June 5, 1926.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
10 volumes of sounding records for

HYDROGRAPHIC SHEET NO. 4514 A, B, C,&D.

Locality: S. E. Alaska

Chief of Party: F. B. T. Siems, in 1925

Plane of reference is MLLW
7.7ft. on tide staff at Port Walter

For reduction of soundings, 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 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.

G Rude

Chief, Division of Tides and Currents.

4514b

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

State: S.E. Alaska

11—5613

DESCRIPTIVE REPORT.

Wire Drag *Sheet No* (5) 4514b

LOCALITY:

~~Port Alexander, Port Conclusion,~~

~~Port Armstrong, Port Walter and~~

Chatham Straits (~~in the~~)

Port Conclusion to Vic. of Port Herbert.

1925

CHIEF OF PARTY:

F.B.T. Sioms

Form 537
11—5812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

4514b

WIRE DRAG ~~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. (5) 4514b
4514 b

State . . . S. E. Alaska . . . . . .

General locality . Chatham Strait. . . . . .

Locality ~~Port Walter, Port Armstrong, Port Conclusion~~ Port Conclusion to Vicinity of Port Herbert . . .

Chief of party . . . F. B. T. Siems . . . . . .

Surveyed by . . . F. B. T. Siems, R. S. Horne, F. E. Jockel . . . .

Date of survey . . . September, 5-29 1925. . . . . .

Scale . . 1/20000., . 1/10000., . 1/5000 . . . . . .

Soundings in . . . Feet . . . . . .

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

Protracted by D. H. Askew Soundings in pencil by D. H. Askew

Inked by . D. H. Askew . . Verified by . R. D. Horne, J. M. Albert . . .

Records accompanying sheet (check those forwarded):

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

...2... Sounding books, ...4... Wire-drag books, ... Photographs.

Data from other sources affecting sheet . . . . . .

Remarks:

DESCRIPTIVE REPORT

to accompany

WIRE DRAG SHEET NO. 5 (FIELD NUMBER)

EXTENT. This work extends along the east shore of Baranof Island, with a width of about two miles, from Port Alexander to Port Herbert, including the dragging of Port Conclusion, Port Armstrong, and Port Walter. Port Lucy was not dragged because of its comparative unimportance. The work just out of Port Alexander is plotted on a separate sheet and a separate report is written on it.

METHODS OF SURVEY. Regular drag methods with a 3/16" ground wire and wooden toggles were used in this work. Bridle towlines were used in some of the close dragging in the ports, but in general a single towline was used. Frequent tests were made of the depths of the drag. A two foot lift was allowed as a factor of safety, although the tests do not show that so great a lift was ever found.

PLOTTING AND RECORDS. The launch positions were pricked through the protective covering of tracing cloth on the smooth sheet and the towline connecting launch position and large buoy is indicated by a light pencil line. This is similar to the practice used in plotting all wire drag sheets of this party.

Some of the work in the vicinity of Little Port Walter is plotted on tracing paper which is forwarded with the sheet. This was done to save confusion as some of the work plots on previous detailed work.

This work has been transferred to the smooth sheet in the office J.a.

The End Launch positions were copied into the Guide Launch record. The numbers corresponding to the Guide Launch positions were indicated on the sheet; these of the End Launch were retained in copying, but were not shown on the smooth sheet.

Grounds recorded are prominently indicated in the record by a red "G" with a red circle around the letter.

LIST OF GROUNDS FOR WIRE DRAG SHEET NO. 5

1. Position 71B. 90 meters N.W. from ⊙ Ile. Effective depth of drag 48 ft., least water by sounding ~~23~~ 24 ft. Not dragged over as drag ran aground close inshore.

2. Position 16C. 250 meters E.N.E. from ▲ Tor. Effective depth of drag 45 ft., least water by sounding 38 ft. Later the drag ran aground near same position with an effective depth of 35 ft. Covered with an effective depth of 29 ft. ~~This day is plotted on tracing paper.~~ This day now shown on smooth sheet. The 35 ft. ground is probably on same spot as the 29 ft. ground. 45 ft. charted for this ground and 29 ft. about 50 meters to the south for ground at 29 (E.4)

3. Position 10D. 522 meters S.W. from ▲ Eli. Effective depth of drag 37 ft., least water 35 ft. Later covered at an effective depth of 31 ft.

4. Position 29E. 353 meters E.N.E. from ⊙ Cot. Effective depth of drag 53 ft., least water 41 ft. Later covered at 3o ft. Sounding on same shoal at later date 37 ft.

5. Position 44E. 70 meters E.N.E. from ⊙ Can. Effective depth of drag 51 ft., least water 37 ft. Not covered later as ground was too close inshore.

6. Position 4F. 312 meters E.N.E. from ⊙ Cot. Least water 37ft. Drag strip up to position number four was not plotted because the drag ran aground on a known shoal and no additional useful information was obtained.

7. Position 7K. The drag ran aground, but no sounding less than the depth of the drag was obtained. The 2ft. sounding plotted 114 meters S.W. from ⊙ Ile was taken on the preceeding day. (A sndg. of 28' (1ft less than drag depth) was obtained and is plotted on smooth sheet. JG.

8. Position 42H. Aground on same shoal as that of 16C. No sounding obtained. Effective depth of drag 35 feet.

Fine work from 35H to 42H has been omitted. See Remarks.

SPECIAL NOTES FOR WIRE DRAG SHEET NUMBER 5.

A DAY. Position 13, G. L., was rejected on the smooth sheet because it would not plot correctly. It had apparently been rejected on the boat sheet also, but no note to that effect had been made in the record book.

B DAY. Position 8, G. L. Left angle changed to agree with that plotted on the boat sheet.

Position 31, G. L. transferred from boat sheet to smooth sheet. Left object not plotted on smooth sheet.

Position 44, E. L. rejected - does not plot. (Not required).

Position 55, E. L. Left angle changed to agree with that plotted on the boat sheet.

C DAY. Positions 1 - 3, 7 and 8, G. L., with corresponding positions of the E. L., were rejected because this drag was intended for the narrow part of the channel and is of little value elsewhere.

Position 28, G. L. The left angle was changed to agree with that plotted on the boat sheet.

This applies to positions 1-11 C incl. A.Z.S.

The fact that the scale is large, some fixes weak, insufficient number of fixes considering the narrowness of the channel, buoy angles not taken simultaneously with other angles causing distance between end buoys as plotted to be greater or less than the constant length of 56 feet, (See VOL. I, G. L., page 30, for note giving description of drag used) makes path as plotted more or less approximate and is therefore indicated by a dotted line. The main purpose of this day was to examine the channel at its narrowest part; having an aid, signal "Pile", on one side at that part it is very probable that the channel at that point was successfully covered by the drag. In going both ways, however, the drag touched bottom at the ends.

Reject

D DAY. Position 11D to 53D. The uprights were set at various depths over the drag, but the least effective depth was plotted on the smooth sheet for the entire drag strip. This was done because of difficulty of showing the different depths correctly in the narrow channel and the maneuvers of the drag in Port Armstrong.

In the office, this area was subdivided so as to show deep strips also, except in the narrow channel near LIG and FAT. J.M.A.

E DAY. Positions 30 and 31, G. L., and 34 to 38 E. L. were not plotted on the smooth sheet because the drag ran aground on a known shoal. The drag was reversed, cleared, and run back over the same area, avoiding the shoal.

Position 33, G. L. The right angle was changed to agree with that plotted on the boat sheet.

F DAY. The drag strip through position number 4 was not plotted on the smooth sheet because the drag ran aground on a known shoal. The sounding obtained is the same depth at which the drag was set, though the drag reduces to a two foot lesser depth because of correction for lift.T The sounding was plotted on the smooth sheet. The shoal is shown covered by a later drag.

35 ft.+ charted

Position 7, G. L. The left angle was changed to agree with that plotted on the boat sheet.

G DAY. Position 38, G. L., was rejected and line ended at position 37 because the drag parted after going aground at position 37. This ground is not noted in the List of Grounds because the big buoy ran aground close inshore and no position or sounding was obtained.

No grounding depth charted here. See remarks

J DAY. It was necessary to reject J Day as the maneuver did not cover the area as originally intended, which was to sweep in a fan-like manner as far as the channel would permit on one side of the narrow part, then through the narrow part and continue circling on the other side, having the drag taut at the beginning and at the end of the maneuver. Furthermore, some unexplainable discrepancies exist in the plotted positions of this day on this large scale sheet.

Plotted length of drag exceeds recorded length. J day plotted but no additional area is covered. Drag grounds at 2 J. Subsequently rejected.

Respectfully submitted,

Roland D. Horne
H.&G. Engr.

approved: F.B.T. Siems
F. B. T. Siems,
Commanding Officer,
U. S. S. EXPLORER.

List of Grounds and Special Notes, by
D.H. Haskell
Aid.

STATISTICS SHEET FOR WIRE DRAG SHEET NO. 5.

DATE	LETTER	VOL.	NUMBER OF POS.	ONUMBER OF SDGS.	NO. OF MILES (STATUTE)	VESSEL
Sept. 5, 1925	A	1	41 40 0	0	9.4	Scandinavia Explorer Tender
" 8, "	B	1	78 81 1	1	7.0	Scandinavia Helianthus Tender
" 9, "	C	1	37 42 2	2	1.5	Scandinavia Tender-Heli Tender
" 10, "	D	1	74 76 72 2	2	6.9	Scandinavia Helianthus Tender
" 11, "	E	2	44 59 4	4	6.3	Scandinavia Helianthus Tender
" 12, "	F	2	54 61 5	5	3.0	Scandinavia Helianthus Tender
" 14, "	G	2	59 57 2	2	4.0	Scandinavia Heli-Explorer Tender
" 16, "	H	2	42 30 0	0	5.7	Scandinavia Helianthus Tender
" 28, "	J	2	3 0 0	0	0.1	Scandinavia Tender
" 29, "	K	2	7 8 0	0	0.2	Scandinavia Tender
TOTALS			909	16	44.1	

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO No. 11-DRM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

March 14, 1927.

SECTION OF FIELD RECORDS

Report on Wire Drag Sheet No. 4514[b]

Chatham Strait, Alaska - From Port Conclusion to Port Walter

Surveyed in 1925

Instructions dated Feb. 14, 1925 (EXPLORER)

Chief of Party, F. B. T. Siems.

Surveyed by F. B. T. S., R. D. Horne, F. E. Joekel.

Protracted and inked by R. D. H. and E. B. Latham.

Soundings plotted by E. B. Latham.

Verified by (Soundings - R. L. Johnston.
(Drag work - F. M. Albert.

1. The records conform to the requirements of the General Instructions except that the end launch positions were copied into the same column as the guide launch positions instead of as shown in the wire drag manual (Special Publication 118). Another objectionable feature was the pasting of strips of paper in the guide launch records for additional end launch positions. These are always subject to being lost and since it is contemplated eventually destroying the end launch records, some original data may thereby become unrecoverable. Further, the records should be more specific regarding groundings, that is, noting which buoy was aground and the time of such ground. It is insufficient merely to note "Big buoy aground", without stating whether N or F.

2. The methods and character of the survey conform to the requirements of the General Instructions except that some important groundings were left uninvestigated. These will be mentioned below.

3. The depth of dragging is generally sufficient except in Little Port Walter where the effective depth is only 30 ft. which is much less than the general depths existing here, and therefore in accordance with the practice of the Chart Division, this area will not be included on the tinted charts. It is recommended, in this connection, that the attention of all chiefs of parties

be called to such practice, as very often a lowering of the drag 1 foot will enable the office to chart the area as dragged. Briefly stated, the working rule adopted for representing dragged areas on charts is as follows:

"Treat all areas swept over as not dragged when the effective depth of the drag is 30 feet or less except where such depth is within 2 or 3 feet of the bottom."

4. The extent of the dragging satisfies the specific instructions except that a small area was left undragged on the east coast of Baranof Island about 1 mile south of Port Walter.

5. A clearance depth was obtained over all important shoals discovered sufficient for surface navigation except the following:

a. The 35-foot sounding (grounding depth) in Lat. 56° 15' 1230 m., Long. 134° 39' 950 m. has been cleared by a 30-ft. drag. The least actual sounding obtained here was 37 feet. Considering that this shoal lies practically in the center of Port Conclusion, it should be combed closer than 5 feet. adequate, out of channel

b. The 40-ft. sounding in Lat. 56° 23' 140 m., Long. 134° 40' 700 m. has not been cleared. Two small splits occur close to this spot. There is also some uncertainty as to the exact position of this sounding. The area should therefore be cleared.

c. The 38-ft. sounding in Lat. 56° 23' 590 m., Long. 134° 38' 60 m. has been cleared by a 29-ft. drag, but by a very small overlap. A number of groundings at various depths occurred within a radius of 175 meters of this sounding. All of these are not shown on the sheet, owing to the rejection of the drag work from 35 H to 42 H. The work around this area was plotted on a 1:5000 scale and an intensive study made of all the drag strikes and after a consultation with the Chiefs of Field Records and Field Work, a decision was reached as to the groundings to be charted and the drag work to be accepted. The strip mentioned above was rejected on account of the uncertain manoeuvering of the drag.

d. The 29-ft. sounding (grounding depth) about 140 meters south of the 38-ft. sounding mentioned above was not cleared. This grounding occurred at 39 C (E.L.) and the drag cleared itself. Previous to this at 23 C (E.L.) the F buoy was momentarily aground in approximately the same place. No investigation was made in either case. Although the actual plotting of H day (rejected portion) showed this spot cleared by a 36-ft. drag, it was considered advisable to chart a 29-foot sounding here, since there is a possibility that the drag at 37 H (G.L.) was actually aground on this same spot. This area should, however, be investigated.

e. The 30-ft. sounding (grounding depth) in the entrance to Little Port Walter about 85 meters southeast of ⊙ Tor was previously cleared by a 30-ft. drag without grounding. In view of the fact that the drag immediately cleared itself on the later strip, it is possible that 30 feet represents the least depth here.

6. Attention is called to the fact that in Lat. 56° 23' 650 m., Long. 134° 37' 934 m., or about 175 meters N.E.x E. of the 38-ft. sounding mentioned in Paragraph 5 c, the N. buoy was momentarily aground at a depth of 29 feet. No investigation was made at the time. On a later day (H day), a 36-foot drag appears to have cleared this spot, although the drag hung up about 100 meters to the southwest. This is the portion of H day that was omitted on account of the uncertain manoeuvering. While no 29-ft. sounding will be charted here for the present, the area will likewise not be shown as dragged. It is strongly recommended that this entire area at the entrance to Little Port Walter be investigated with a drag and particularly the shoal making out from the south point. *

The drag work in the narrows in Little Port Walter, comprising J day and portions of C day, was omitted upon recommendation of the Chief of Field Work, as the exact position of the drag is uncertain. (See Descriptive Report.)

7. Additional work will be required as mentioned in Paragraphs 5 and 6. Also in the following places:

a. The area left undragged about 1 mile south of Port Walter, including the split nearby.

b. Make the drag work continuous from the limits of the deep drag in Chatham Strait into Little Port Walter.

c. If considered sufficiently important, deepen drag in Little Port Walter to at least 31 feet to permit showing drag limits on the charts.

d. Extend the drag work into Port Lucy, whenever commercial requirements warrant it.

8. There are no adjoining drag sheets in this vicinity.

* As these edges are all off the southern point, the charting of them will indicate that that point should not be rounded close aboard. ~~and~~ The channel appears to be clear. There is no field work contemplated done to this vicinity at this time. - [illegible]

9. This sheet is acceptable for charting purposes and aside from the failure to investigate groundings off Port Walter, was well executed.

The field drafting was well done.

10. Reviewed by A. L. Shalowitz, March, 1927.

Approved:

A. L. Giacomini

Chief, Section of Field Records (Charts)

L. O. Colbert

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

Report on Verifying and Inking H. 4514 b (Wire Drag.)

The protracting and subdivision of areas were well done. The field drafting was completed to the extent required by the General Instructions.

The guide launch records were too crowded. This was caused by copying into the same column of the G.L. records, the record of end launch positions. Since some of the end launch positions are shown in the guide launch record on pasted slips of paper, with possibility of becoming detached and lost, it is recommended that the end launch records should not be destroyed.

Several times the records mention "Big buoy aground" without stating whether N or F. This should be eliminated in future work.

Sometimes there are notes of a certain buoy being aground but no time given. The ground is shown in relation to the nearest recorded position, but a time note would definitely fix the position.

On many occasions the drag grounded or "momentarily grounded" and no soundings were obtained. See records of B and C days.

Some signals had double names or were recorded differently from the name given on smooth or boat sheet. For example the signal known as B15 on boat and smooth sheets was called V15 and D15 in the record.

Aug. 1926

F. M. Albert

Above report written before completion of the hyd. sheet 4514 a
F. A.

Hyd. Sheet 4514 b Wire Drag.

Places where drag grounded and decisions are required concerning the showing of soundings

Day		REMARKS OR DECISION
22 B	May be on known shoal. Note says G bet. 4&5 but may mean 4th + 5th buoy from E.L.	A sounding of 40 feet plotted about 100 meters from this place. Probably a known shoal.
67 B	"Big buoy momentarily aground." [redacted]	~~Show 40 ft.~~ Probably drag swung inshore and grounded on known shoal. Sdg. omitted.
76 B	Drag aground. Tender got sndg. 8 3/6 but no fix, except "at #3" May be same place as G of 22B	Sounding reduced to 40 feet and is plotted at #3 buoy. O.K.
10 C	N aground. As the path of the buoy is indefinite no sounding has been plotted.	This work has been rejected. See review.
15 C	F aground.	May be same place as 37H. Chart +45'
3 20 C	F and 6 aground.	Show two 30's. F probably aground at same position 39 C End Launch. So assumed. Compromise position accepted for ground of buoy #6
26 C	F momentarily aground.	Show 30 ft.

Supplemental Report on Verification of H 4514 b Wire Drag.

The hydrographic sheet 4514a having been completed, this sheet (4514b) was again taken up to study the groundings or drag strikes of C day at the entrance to Little Port Walter and of B day at the entrance to Port Walter Narrows.

In order to study C day, the drag work was plotted on a 1:5,000 scale on tracing paper and then transferred to the smooth sheet as a sub-plan. The result of this plotting shows 9 drag strikes, at only one of which (the 38 ft. sounding) is there a leadline cast. After inspection of the tracing, Capt. Colbert advised charting all drag strikes except the two 29's. While these two places appear to have been covered by a 36 ft. drag, yet there is a possibility that the bight of the drag should extend back of them. Another possibility is that the drag may have appeared aground yet actually have been clear. Capt. Colbert intends to have additional work done here in 1927, and until the results of that work are known, the 29's will be retained on the smooth sheet, but not charted.

See Review covering these points a-f-s

No enlargement was made in the study of B day, though this might have been of assistance. The drag grounded at least 3 times in the vicinity of the 40 ft. sounding 230 meters S.W. of ⊙ NOW. This 40 ft. sounding was made by the tender "at buoy #3" and is the only means of locating the sounding. No 3 point fix was taken. This area has two line splits and was not subsequently dragged to determine the least depth and the accurate position of the shoal.

Another drag strike at an effective depth of 48 ft. about 100 meters E x S of △ ELL falls in an area seemingly covered previously by a 52 ft. drag. No sounding was obtained here and it may be that one of the drag strips is out of position or else the strike was an apparent and not a real one, as the launches continued moving, practically without interruption.

(OVER)

If and until additional work is done here, a 48 ft. sounding will be shown with a split around it. The other strikes in this vicinity fall on known shoal places.

Jan. 28, 1927.

F. M. Albert

Hus was omitted since the drag probably swung in close to point and grounded on known shoal

4514c+d

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

State: SE Alaska

11—5613

DESCRIPTIVE REPORT

Hydro ~~this~~ 4514&c

Wire Drag *Sheet No.* 4514&d

LOCALITY:

Chatham Strait

Vic. of Port Alexander

1925

CHIEF OF PARTY:

F.B.T. Siems

Form 537
11—5812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET
AND WIRE DRAG

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. 4514BC
4514d (W.D.)

State S. E. Alaska

General locality . Chatham Strait

Locality Vicinity of Port Alexander

Chief of party . F. B. T. Siems

Surveyed by F. B. T. Siems and R. D. Horne

Date of survey . Sept. 12 to Sept. 14, 1925

Scale 1 : 2000 Includes two sheets, Wire Drag and Hydrographic

Soundings in fathoms

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

Protracted by R.D.H.& E.B.L. Soundings in pencil by E.B.L.

Inked by . . R.B.H. . . . Verified by F.B.T.S.

Records accompanying sheet (check those forwarded):

Des. report, ... Tide books, ... Marigrams, ... Boat sheets,

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

Data from other sources affecting sheet

Remarks:

4514BC 4514d

DESCRIPTIVE REPORT

TO ACCOMPANY WIRE DRAG AND HYDROGRAPHIC SHEET

OF AREA OFF PORT ALEXANDER.

- 1925 -

EXTENT OF WORK: This work was done at the request of the Standard Oil Company to prove an area outside of Port Alexander which they desired to use as a mooring for their oil tanker while pumping oil to tanks at Port Alexander.

SURVEYING METHODS: This area was partly covered by kelp and before any dragging was attempted it was necessary to put several parties out in samll boats armed with machetes on long poles to cut away the kelp. About a days cutting cleared the area. Previous to this however a system of sounding lines were run over part of the area. These lines were carefully run on ranges about 25 meters apart and the boat was slowed down to a minimum speed.

In dragging a 1200 foot drag with 100 foot sections was used with a bridle towline. No.toggles were used on this drag so that if it became necessary to stop because of kelp there would be no lift and the drag could continue without causing a split.

The area was first dragged to 20 feet without hanging up on any rocks. The next attempt was with the drag set at 38 feet but this drag hung up in two places at which points soundings of 36 feet and 33 feet, respectively were obtained.

The third attempt was not plotted because no new rocks were discovered, but on the fourth attempt with drag set at 29 feet, two rocks were discovered with 29 feet on them. But on the fifth and last attempt with the drag set at 27 feet effective depth the area was completely covered without a hang up except that the "N" buoy momentarily bumped at position 18G. In all these drags a lift of 2 feet was allowed as a factor of safety although the speed of dragging was so slow and as there were no toggles it is doubtful if there was any lift.

Bottom specimens obtained at various parts of this area indicated the bottom to be quite hard and composed mainly of shell.

RECORDS: The records for this work will be found with the records for Sheet No. 5 forming a part of those records:

Wire Drag:	Positions	11 - 60	F day
		1 - 22	G day
Hydrography:	Positions	1 - 35	A day - Scandinavia
		1 - 21	G day Tender

It was originally intended to plot this work on Sheet 5 in the lower left hand corner and space was left for this but in order to send it to the Washington Officer sooner it was plotted on a separate sheet.

Respectfully submitted:

Roland D. Horne

Roland D. Horne,
Lieutenant.

APPROVED:

F. B. T. Siems

F. B. T. Siems,
Commanding Officer,
U. S. S. EXPLORER.

LIST OF GROUNDS AT PORT ALEXANDER.

1. Position 31, "F" day, N buoy momentarily aground drag set effective depth of 38 feet. No sounding.

2. Position 33, "F" day, N buoy momentarily aground, drag set at effective depth of 38 feet. No sounding.

3. Position 36, "F" day, N buoy momentarily aground, drag set at effective depth of 38 feet. No sounding.

4. Positions 43 and 44, "F" day, drag aground in two places, one between buoys #2 and #3 and one between buoys #8 and #9. Soundings of 33 feet and 36 feet, reduced, obtained. Later covered by drag of 27 feet, effective depth.

5. Position 4, "G" day, aground at #3, drag set at effective depth of 28 feet. Sounding of 29 feet reduced, obtained. Not covered later.

6. Position 16, "G" day, End Launch, Positions 6 and 10, "G" day, Guide Launch. Drag aground effective depth of 28 feet. Sounding of 29 feet reduced, obtained. Later covered with drag set at 27 feet effective depth.

7. Position 18, "G" day, N buoy momentarily aground but dragged over with drag set at 27 feet effective depth. No sounding and was not covered later.

COPY OF PART OF SMOOTH SOUNDING RECORD OF SHEET NO. 5 PERTAINING TO THIS SHEET.

"F" DAY SEPTEMBER 12TH, 1925 OFF PORT ALEXANDER.

Position Number	Time	Sounding Fms	Sounding Ft.	Red. for Tide	Red. sdg. Fms.	Red. sdg. Ft.	Bottom	Angles	Remarks
2	3:24	6	3	5	5	4		Lite 107-47	Pinnacle rks
	3:26	6	2	5	5	3		Alex	8½ fms around
								Bum 95-20	shoal.
3	3:39	7	2	5	6	3	Sharp Rocks	Lite 122-57	
								Alex	
								Bum 70-19	
4	4:26	7	0	6	6	0	Rky	Bum 95-40	
								White	
								Lite 63-23	
5	4:56	6	3	6	5	3	Irreg ular Rky.	Lite 114-30	
								Alex	
								Bum 69-19	

"G" DAY SEPTEMBER 14TH, 1925 OFF PORT ALEXANDER

1	9:07	6	1	8	4	5	Rky	Lite 118-20	
								Alex	
								Bum 67-28	
2	9:26	6	1	8	4	5	Rky	Lite 131-50	
								Alex	
								Bum 67-35	

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 11-DRM

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

June 7, 1926.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4514[c]

Vicinity of Port Alexander, Alaska

Surveyed in 1925

Instructions dated Feb. 14, 1925 (EXPLORER)

Chief of Party, F. B. T. Siems.

Surveyed by F. B. T. S. and R. D. Horne.

Protracted by R. D. H. and E. B. Latham.

Soundings plotted by E. B. L.

Verified and inked by J. C. MacNab.

1. The records conform to the requirements of the General Instructions except that boats' headings by compass were omitted.

2. The plan and character of development fulfill the requirements of the General Instructions.

3. It is assumed that the extent of the survey is in accordance with the request made by the Standard Oil Co.

4. The sounding line crossings are adequate considering the irregular character of the bottom.

5. The information is sufficient for drawing the usual depth curves.

6. The usual field plotting was done by the field party and was found to be accurately executed.

7. The junction with H. 4392[a] (surveyed in 1924) is satisfactory. There are several soundings on H. 4392[a] that look a little doubtful when plotted on this sheet, besides having been dragged over by a deeper drag than the soundings obtained. This may be accounted

GPO

for by the fact that any slight error made in the location of the soundings on H. 4392a, which is on a 10,000 scale, would be magnified 5 times when plotted on H. 4514c, which is on a 2,000 scale. It is hardly reasonable to suppose that the party when surveying on a 10,000 scale would have exercised any greater care than the scale of the sheet warranted, so that such errors resulting from failure to record the exact time of soundings, or to take both angles at exactly the same time and from the same point on the boat, as well as at the point where the soundings were being taken, would be sufficient to manifest itself on a scale of 1:2,000, although inappreciable on a 10,000 scale.

With this in view the locations of the few soundings were arbitrarily altered so as to fall outside the limits of the wire drag.

8. No further surveying is required within the limits covered by this survey.

9. Attention is called to the fact that signals White, Clump, Knole, and Bum, while named the same as on last year's survey, were relocated by this party and the locations differ somewhat from that of last year. It is possible that different points were used for the signals. The shoreline on this sheet was transferred by the office cartographer from H. 4392b for as much as was shown there, and the balance transferred from an enlargement of T. 4074 (1:10,000 scale).

10. Character and scope of surveying - excellent.
Field Drafting - excellent.

11. Reviewed by A. L. Shalowitz, April, 1926.

Approved

L. O. Colbert
Ch. Field Work.

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 11-DRM

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

June 7, 1926.

SECTION OF FIELD RECORDS

Report on Wire Drag Sheet No. 4514[d]

Vicinity of Port Alexander, Alaska

Surveyed in 1925

Instructions dated Feb. 14, 1925 (EXPLORER)

Chief of Party, F. B. T. Siems.

Surveyed by R. D. Horne.

Plotted by R. D. H. and B. E. Lancaster.

Verified and Area and Depth Sheet by R. L. Johnston.

1. The records for this sheet may be criticized in the following respects:

   a. It does not conform to the General Instructions in that the end launch angles should be entered in the right hand column of the columns marked "Angles" instead of alternating guide and end launch positions as was done. The standard method tends to simplify the records and should be adhered to.

   b. Additional intermediate end launch positions not corresponding to a guide launch position were entered on strips of paper and pasted in the guide launch record. This is unsatisfactory considering the danger of the strips being lost, and the fact that the end launch records are ultimately destroyed, leaving the guide launch records as the only permanent record.

2. This work being done at the request of the Standard Oil Co., it is assumed that the extent of the survey conforms thereto.

3. The depth of dragging, while it may be sufficient for the purpose, does not satisfy the general requirements for drag work. It appears from an examination of the hydrographic sheet for this locality, that with the exception of a 29 ft. spot near the western limit of the sheet the heart of the proposed anchorage could have been dragged to a depth considerably in excess of 27 ft.

GPO

4. With the single exception of the 29 ft. shoal that was covered by a 27 ft. drag, none of the shoals were dragged to within 3 ft. of the bottom. This includes the instances where the drag grounded but no sounding was obtained. In particular should the 33 ft. sounding (marked pinnacle rock) have been combed closer.

5. The overlaps within the sheet are sufficient. There are no adjoining drag surveys.

6. There are no splits within the limits of this survey.

7. No further work will be required if the depth to which the area was dragged is adequate for the purpose contemplated.

8. Attention is called to the fact that there are several shoal soundings from H. 4392[a] (surveyed in 1924) that appear to have been dragged over by a depth greater than indicated by the soundings. The locations of these soundings were arbitrarily changed in the office so as to fall outside of the drag limits. The reason for this is set out in Paragraph 7 of the review for the accompanying hydrographic sheet (H. 4514[c]).

9. Character and scope of field operations and field drafting - very good.

10. Reviewed by A. L. Shalowitz, May, 1926.

Approved Oct 22 1927
L. O. Colbert
Ch. Field Work

Verification of Hydrographic Sheet No. 4514[c]

This is a companion sheet with W. D. - H. 4514[d], which is a drag sheet covering this area by the same party.

The sounding records are mixed up with those of H. 4514[a], as it was first intended to make the a sheet include the c sheet.

There are also several lines of soundings plotted from the records of H. 4392[a] included in the area of this sheet. These were plotted in red ink. The signals White, Clump, Knole, Bum, See and Long were transferred from H. 4392[b] to a tracing and these soundings were plotted on the tracing and transferred to sheet H. 4514[c]. Signals White, Clump, Knole, and Bum have different determinations for H. 4392[b] in 1924 and H. 4514[c] in 1925.

The records were well kept and are clean and legible and the protracting was accurate.

In plotting the soundings the time intervals were not carefully adhered to.

The development, considering that the area was dragged, is sufficient, although more care might have been shown in the disaffirming of certain soundings shown on H. 4392[a].

(a) Soundings on and between positions 39 to 41 d.
(b) Soundings on and between positions 16 to 17 f.

The drafting conformed to the general instructions except

(a) All positions were not numbered as required by Section 326 G.I.
(b) Several reductions from fathoms and feet to fathoms were incorrect (see Section 338 G.I.)

The shoreline on the completed sheet H. 4514[c] is not entirely satisfactory as it is a combination of shoreline on Topographic sheet 4074 enlarged by photography from a scale of 1:10,000 to 1:2,000 and the shoreline shown on H. 4392[b].

John C. MacLab
Cartographic Engineer.

Wire Drag Sheet No 4514 d

This area is well covered and there are no splits.

There are four points at which the drag was aground and no sounding obtained. These are listed in the descriptive report and the depth at which the drag was aground has been shown on the sheet within a green circle.

The work has been well protracted and plotted.

The sounding record for this work has been filed with the records of Hyd. 4514 b.

The guide launch record for the wire drag work is hardly satisfactory as considerable data is shown on pieces of paper pasted in the record, which may easily be lost.

R. L. Johnston