4157

Diag. Chl. No. 8556-1

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

State: Alaska

11—5613

DESCRIPTIVE REPORT.

Hyd. Sheet No. 4157

LOCALITY:

Alaska Peninsula

Shelikof Strait

1920

CHIEF OF PARTY:

F. H. Hardy

4157

6

DESCRIPTIVE REPORT.

to accompany

HYDROGRAPHIC SHEET NO. ____

Southern Part of

SHELIKOF STRAIT

ALASKA

U. S. C. & G. S. STR. SURVEYOR.

F. H. HARDY: COMDG.

Scale 1 - 100,000

1920

cc

DESCRIPTIVE REPORT

To Accompany

HYDROGRAPHIC SHEET NO. ____

SHELIKOF STRAIT

ALASKA

This sheet shows the ship hydrography done by the U. S. S.SURVEYOR during the season of 1920. The soundings in the middle of Shelikof Strait show an even bottom, deepening gradually towards the Alaska Peninsula side, to a depth of about 180 fathoms, then shoaling abruptly with very irregular depths between the 100 fathom curve and the shore. The soundings on "F" day were taken during stormy weather when it was impossible to get up and down soundings. On "J" day an adjoining line of soundings gives more accurate depths.

On this sheet the shoreline has also been sketched, both on the Kodiak Island side and on the Alaska Peninsula side, using triangulation and sextant cuts.

The shoreline of Kodiak Island from Karluk Head to a point south of Cape Ikolik was sketched after locating a number of points, indicated by blue circles, with sextant cuts from the ship.

Along the Kodiak Island shore enough soundings were taken to verify the courses given in the Coast Pilot from Karluk Head to a point 10 miles south of Cape Ikolik.

DESCRIPTION OF SHORE, ALASKA PENINSULA.

CAPE KEKURNOI has a low bluff at the water gradually rising to a group of peaks about 2,000 feet high. Scattered rocks and reefs border the shore. About three miles north-eastward of the point there is a pinnacle rock about 40 feet high and one half mile north-westward of this rock is a small flat topped islet of about the same height.

A group of rocks and islets extends south-westward almost four miles. The Islets are all about the same height and most of them are grass covered, sothat it is difficult to pick out any particular islet. The large islets were located by plane table and triangulation cuts.

COLD BAY. Kekurnoi Point forms the eastern entrance point of Cold Bay. Between Kekurnoi Point and Aklek Head, the bay is about 6-1/2 miles wide and about 6 miles deep. The entrance however is constricted by reefs and islets which extend from the east entrance point, to a width of about four miles.

AKLEK HEAD the west entrance point, is a steep and co conspicuous headland. A small islet and a pinnacle rock lie close to the south shore, and a reef extends eastward from the point, it's limits not being accurately determined.

The shores of Cold Bay are bordered by hills. At the northern end there is a long ridge with a fairly sharp peak (A Hog) separated by a wide valley from two conspicuous peaks

to the westward which are used for a range in entering.

DIRECTIONS. Only a few reconnaissance lines have been run in the vicinity of Cold Bay, and as there are several areas off the entrance with suspicious soundings which have not been fully developed, extreme caution should be used in navigating in this vicinity. The courses given in the Coast Pilot appear to lead too close to the reefs extending off the east entrance point. The following courses were used by the SURVEYOR in entering.

From a point about five miles south-eastward of Aklek Head, With the twin peaks at the head of Cold Bay over the tangent to Aklek Head, steer 340° true (N W 1/4 N mag.) on this range. When within two miles of the islet on the south side of Aklek Head, Kekurnoi Point and a conspicuous islet on range bearing N E x N (magnetic), change course to 11° true (N x W magnetic) and follow this course for 3-1/4 miles, passing Aklek reef at a distance of about one mile. Then round Aklek reef and proceed to anchorage in depths from 7 to 15 fathoms, off the settlement, using great caution as the place has not been surveyed. The anchorage is reported as being exposed to easterly winds.

The anchorage just inside of the east entrance point was used by the "Yukon" and there found some shelter from easterly winds. The anchorage is close to the shore and fit only for small boats.

From Aklek Head the shore line trends eastward for five miles to Dry Bay, then southward five miles to Cape Unalishagvak.

Dry Bay, as it's name implies goes dry at low water, A sand bar extends across the middle of it. It is possible that some shelter from westerly winds may be found for small boats just inside the south entrance point, which is high and conspicuous.

OIL BAY is the local name of an open bight indenting the shore between Aklek Head and Dry Bay.

Between Dry Bay and Cape Unalishagvak there is a stretch of gravel beach about 3/4 mile long where a triangulation party camped in 1919 and 1920. The SURVEYOR anchored about one mile off this beach in depths from 15 to 20 fathoms, mud bottom, but the anchorage was exposed except in N W weather.

CAPE UNALISHAGVAK is a high grass covered headland.. It can often be distinguished by the sharp hill about 900 feet high (△ Outer) at it's extremity, the ridge northward of it being considerably higher. A conspicuous pinnacle about 140ft high lies close to the shore about two miles wwestward of the point.

The SURVEYOR found irregular bottom about two miles south-eastward of this cape. It should be given a berth of at least two miles.

From Cape Unalishagvak the shore trends in a general westerly direction for six miles to Cape Kanatak.

JUTE BAY indents the shore between these two points. A low flat island with reefs extending off both ends lies across the mouth of the bay. Good shelter for small boats can be found behind this island. The entrance is on the east side of the island. The west side may be used but the entrance is narrow and crooked.

The small bight at the head of Jute Bay is dry at low water.

CAPE KANATAK is a rounding point bordered by a low rocky bluff, rising to two conspicuous peaks of about the same height. △Jute was located on the westerly of the two peaks. The valley between the two peaks terminates in a small bay with a fine sand beach. A triangulation camp was located here in 1920. The bay is shoal and offers little shelter.

From Cape Kanatak the shore trends northwestward for four miles then southward for eight miles to Cape Igvak, forming Portage Bay.

PORTAGE BAY is bell shaped opening towards the southward, being about 1-1/2 miles wide at the head, and widening rapidly at the mouth. High mountains border both sides. There is a small native village at the head of the bay called Kanatak.

The line of soundings shown on the sheet in Portage Bay was plotted from angles taken to tangents, etc. and as the shore has not been surveyed, these soundings are not very accurately located.

About 3/4 mile from the head of the bay, a reef makes off from the eastern shore, extending more than one third of the distance across the bay. Small boats anchor close to the beach behind the reef and launches are sometimes taken into a stream at high water.

The SURVEYOR anchored about two miles from the head of the bay in 15 fathoms, mud bottom, where fair shelter was found from all winds except southerly. The bay was entered by the following courses. From a point two miles south of Cape Unalishagvak steer 227° true (S S W 1/4 W mag) for about five miles until Cape Aklek closes behind Cape Unalishagvak. Then head for the entrance to the small bay on the west side of Portage Bay, course 301° true (W 3/4 N mag) for about 6-1/4 miles. When about 0.7 mile from the shore, follow the western shore to an anchorage, course 354° true (N N W 1/2 W mag), favoring the western shore

The small bay indenting the western shore of Portage Bay is about 1-1/4 miles long and about 3/8 of a mile wide. The entrance is narrow and winding and has only about five feet at low water, with deeper water inside. During westerly weather, extremely heavy willy waws blow down the bay.

There is an islet about one half mile southward of the entrance to this bay.

CAPE IGVAK is a conspicuous mountainous headland, the southern end of a chain of high conical peaks. About two miles northward of the point there is a conspicuous pinnacle

rock. Reefs extend about 300 meters off the western side of the point. No sounding was done in this vicinity.

From Cape Igvak the shore trends westward and northwestward to Kialagvik Bay which is described in another report. The islet about two miles westward of Cape Igvak is flat and lo low, covered with grass. The shore westward of the Cape is broken and rocky and appears to be foul.

Respectfully submitted,

A. M. Sobieralski

A. M. Sobieralski.
H. & G. E., C. & G. Survey.

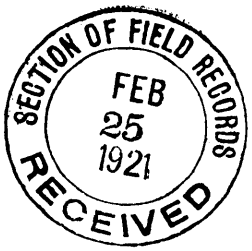
To the Director
C. & G. Survey
Washington, D. C.

DIRECTOR
ADDRESS THE SUPERINTENDENT
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO. 41/VFB

FIELD RECORDS (C)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON February 23, 1921.



Division of Hydrography and Topography:

Division of Charts:

Tidal reductions are approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 4157

Shelikof Strait, S. W. Alaska
F. H. Hardy in 1920

Plane of reference is
Mean lower low water, reading

* 4.5 ft. on tide staff at Erskine Dock, Kodiak, Kodiak Island.
* 5.5 " " " " " Barolof Bay, Unga Island.

* Allowance made for difference in tide at place of soundings.

Condition of records: Satisfactory.

G. R. Putnam

Chief, Division of Tides and Currents.

STATISTIC SHEET

To Accompany

HYDROGRAPHIC SHEET NO. 4157

Date (1920)	Day	Statute Miles	Soundings	Positions	Angles
May 12	A	7.8	12	12	24
May 13	B	10.2	19	19	39
May 14	C	7.2	10	10	20
May 22	D	36.8	36	36	72
May 24	E	15.0	21	21	55
May 25	F	38.4	38	38	78
May 26	G	27.4	38	38	74
May 28	H	29.9	30	30	60
June 9	I	7.8	8	8	16
June 16	K	14.7	15	15	30
June 23	L	3.9	12	12	24
July 24	M	18.9	20	20	40
July 27	N	42.3	37	37	85
Aug. 6	P	44.9	56	56	113
Aug. 20	Q	28.3	57	57	196
Aug. 21	R	50.2	77	77	197
Aug. 23	S	22.1	26	26	53
Aug. 27	T	21.6	50	50	105
Sept.3	U	13.7	22	22	44
Sept.25	V	5.1	18	18	36
TOTAL		446.2	602	602	1361

DIRECTOR
ADDRESS THE [redacted]
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO. 4-MEM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

SECTION OF FIELD RECORDS.

REPORT ON HYDROGRAPHIC SHEET 4157.

Surveyed in 1920.

Chief of Party, F. H. Hardy. Surveyed by party of Str. SURVEYOR.

Protracted by W. M. Scaife. Soundings plotted by F. M. Albert.

Verified and inked by H. E. MacEwen.

1. The records conform to the requirements of the General Instructions.

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

3. The sounding line crossings are adequate, and the development is sufficient to permit the usual depth curves being drawn.

4. The soundings were plotted by the office draftsman.

5. No indications of shoals were found in the open waters of Shelikof Strait and this survey is adequate for that area.
An 18 fathom bank was discovered 6 miles south of Cape Aklek which should be developed. Also the inshore areas adjacent to this survey should be developed.

6. The character of the surveying and field drafting are good.

7. Reviewed by E. P. Ellis, March, 1921, and 2 copies of this report to be sent to H. & T. Division.

REPORT ON HYD. 4157

Action of Field Records

Sheet No 4157 Surveyed in 1920
Chief of Party - F. H. Hardy.
Surveyed by " " "
Protracted by - W. M. S. Edges plotted by F. M. Albert
Verified plotted by - H. E. MacEwen

1. The records conform to the requirements of the general instructions.

2. The plan and character of the development fulfills the requirements of the general instructions

3. The plan and extent of development satisfies the specific instructions

4. The sounding line crossings are, generally, adequate.

5. The depth curves can not be completely drawn but sufficiently so to draw no doubt as to the

6. Field plotting was completed to the extent prescribed in general instructions.

7 Office Draftsman did not have to do over any part of the work done by field party.

8 Rating of work Character and scope of surveying excellent
Quality of field drafting - excellent

H. E. MacEwen

Form 537
11—5812

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. 4157

State . . . . . Alaska. . . . . .

General locality Alaska Peninsula. . . . . .

Locality . . . . Shelikof Strait . . . . . .

Chief of party . F. H. Hardy. . . . . .

Surveyed by . . F. H. Hardy. . . . . .

Date of survey . May 12 -- Sept. 25, 1920. . . . . .

Scale . . . . . 1--100,000. . . . . .

Soundings in . . Fathoms . . . . . .

Plane of reference . . . . . .

Protracted by W.M.S. . . Soundings in pencil by . . . . .

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

Records accompanying sheet (check those forwarded):

Des. report, 0 Tide books, 0 Marigrams, 0 Boat sheets,

3 Sounding books, 0 Wire-drag books, 0 Photographs.

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

Remarks: