4394

4394

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

11—5613

State SOUTHWEST ALASKA

DESCRIPTIVE REPORT.

Hyd. Sheet No. (E) 4394

LOCALITY:

ALASKA PEN.

Bechevin Bay
(Isanotski Strait)
Traders Head to Vic. of Chunak Pt.

1924

CHIEF OF PARTY:

R.R.Lukens

DESCRIPTIVE REPORT

Hydrographic and Topographic Sheet "E"

Northern Part of False Pass

Southwest Alaska

Steamer PIONEER - R. R. LUKENS, Cmmdg.

1924

LIMITS: This sheet includes the hydrography of the known channel of False Pass (Isanotski Straits) from Station "Not" on the west shore of False Pass in latitude 54° 54' northward to the Bering Sea. Topographic traverses from stations "Not" to "Wind" along the west shore of False Pass and from stations "Chunak" to "Beacon" along the Bering Sea shore of Chunak Point, run on separate traverse sheets in advance of the triangulation, have been transferred to this sheet. The sheet joins hydrographic sheet "F" and topographic sheet "D" on its southern limits.

KNOWN CHANNEL: The examination shows a least depth of seven feet at mean lower low water off Chunak Point and two fathoms across the outer bar in the Bering Sea. These are the limiting depths. It is probable that nine feet could be carried through, stemming the tide and changing the course sharply around a low water spit off Chunak Point. Vessels drawing eleven feet have used this channel with the right stage of tide and local knowledge. The bottom between the spits at the mouth of Bechevin Bay consists of sand ridges normal to the current with but five or six feet of water over them and greater depths between. These ridges doubtless progress with the current and new ones form. The channel close to the spit is reported to be relatively constant. No passage other than the one developed was noticed between the breakers on the outer bar in heavy weather. No breakers outside the line sketched were noticed at the time of survey.

SAILING DIRECTIONS: Approaching from the south, to keep in the strongest current and deepest water, follow the westshore one half mile off to Rocky Point. From one half mile off Rocky Point steer for a low lone grass dune with a sharp higher cone on its west side(330° T - NW ¼ W Mag.)two and a half miles until Chunak Point bears five points off the starboard bow. (This course leaves the shoal in the center of the bay 200 yards to the eastward). With Chunak Point bearing 27° T- N x ¼ E Mag. steer for 200 yards off the highwater line or 100 yards off the breakers and keep the distance off until well around the point. To pass through a two fathom channel over the outer bar two thirds of a mile north (true) from the beacon, bring the grass high waterline of the north shore of Chunak Point to a bearing of 114° (true) - E.¼ S. Mag. On a clear day the high waterline will be seen to be in range with the bottom of the valley to the right of the second peak from the Bering Sea of the low mountains between Bechevin and Morzhovoi Bays.

DANGERS : The beach may be skirted closely by small vessels except off Rocky Point where there are a few rocks awash at low water and for a detached reef awash one half foot at mean lower low water 1400 meters 108 degrees true from Station "Wind". In 1924 a sand spit partly awash projected about one hundred yards to the north of the turn of the shore to the northwest of Chunak Point. By rounding this spit very closely and hugging the shore to the eastward an extra foot or two could be carried past the inshore tip of a sand bar north of the Point.

CURRENTS : The strength of the ebb offChunak Point reaches five knots in places during spring tides. It is usually about two knots. Off Rocky Point currents of two knots were observed on both ebb and flood.

TIDES : During the hydrography a staff was observed at Newuman's Cove about four hundred meters south of Rocky Point. This staff was connected by forty-eight hours of simultaneous observations with the automatic gauge at the False Pass Cannery Wharf. An attempt was made to establish a staff on Chunak Point but it was washed out by storms and currents before hydrography commenced. The sea was too choppy to establish a staff on Chunak Point while the hydrography was in progress. Although the strong currents indicate considerable difference in level, the crossing lines of soundings on different days show few discrepancies. Due to the difference of tide level between the Pacific and the Bering Sea and the influence of meterological conditions on shallow water, it is probable that extensive observations would be needed for accurate prediction of tides and currents. Such predictions would be of great value to the small vessels using the Pass for they are often held up several hours waiting for the right stage of tide and current. Even those with local knowledge often fail to guess the tide correctly.

GENERAL DESCRIPTION OF THE SHORE: From a flat topped hill 1220 feet high with a prominent vertical black rock escarpment along the shore side of its top, at the southern limits of the sheet, the ground gradually slopes to a low rolling tundra covered plain with numerous lakes near St. Catherine's Cove. The beach from stations "Not" to "Wind" is very rocky with numerous boulders and occasional gravel coves. At the head of St. Catherine's Cove the beach changes to dark sand with extensive sand and mud flats. Chunak Point is a low grass covered sand spit from its eastern tip to the dune (Station "Beacon") on which the Bureau of Lighthouses has established a white beacon. Dunes about fifty feet high skirt the Bering Sea coast to the westward as far as the entrance to Swanson's Lagoon. The beach at Chunak Point and along the Bering Sea is dark grey sand.

CHARACTER OF SURVEY AND METHODS: This survey was made in a few days of practicable weather occurring during three weeks of storms. As the Pass had a secondary place in the instructions (dated February 8, 1924) only the known channel was examined with a maximum spacing of sounding lines. The triangulation and topography were done at the same time and the topographic traverse sheets transferred to the projection made later.

Sufficient time wasnot available to complete the topography of St. Catherine Cove or to search for a possible channel on the eastern side of Bechevin Bay and off Cape Krenitzin. A few soundings taken by a triangulation party while running between stations "Vin" and "Island" did not disclose any indications of a channel on the east side of Bechevin Bay. It is doubtful if there is a practicable channel between Chunak Point, Cape Krenitzen and the eastward for local fishermen running to east to Port Moller use the passage to the west of Chunak Point.

O. S. READING

Approved
R.R. Palmer

U.S.C.&G.S.S. PIONEER

R.R. HUKENS

Chief of Party

* * * * *

FALSE PASS

List of Distances on Meridians and distances on Parallels.

Hydrographic and Topographic Sheet F

NAME	LATITUDE °	'	D.M. Meters	back D.M. Meters	LONGITUDE °	'	D.P. Meters	back D.P. Meters	Remarks
Pat	54	54	1459	396	163	24	128	941	WW Rk
Tom		55	50	1805		24	477	592	do
Let		55	745	1110		24	739	330	do
Man		55	1417	438		24	910	159	do
Son		56	161	1694		25	56	1013	do
Neb		56	679	1176		25	218	851	do
Blat		56	1016	839		25	259	810	do
Car		57	320	1535		25	691	377	do
Trol		57	955	900		26	03	1065	do
Lam		57	1403	452		26	137	931	do
Ab		57	1628	227		26	264	804	do
Hos		57	1833	22		26	479	589	Neuman'S Cabin
Ram		58	487	1368		26	608	460	Large Rock
Won		58	872	983		27	77	991	WW Rk
Mud		58	1325	530		27	448	620	do
Dub		58	1726	129		27	753	315	do
Big		59	384	1471		27	1029	38	do
White		59	569	1286		28	316	751	do
Bank		59	994	861		28	757	310	do
Bluff		59	1358	497		28	1011	56	do
Green		59	1546	309		29	222	845	do
Flat		59	1776	79		29	685	382	do
Slope	55	00	523	1332		30	211	856	do
Lex		00	1024	831		30	560	507	do
Bag		00	1185	670		30	616	451	do
Tent		01	1575	282		27	422	644	Tent Pole
Tuf		02	399	1456		27	08	1058	D.W. Sig. *
Den		02	612	1243		27	416	650	do
Tri		02	856	999		27	768	298	do
Tall		02	1185	670		28	287	779	do
Jam		02	1351	504		28	832	234	do
Hay		02	1302	553		29	321	745	do
Dune		02	950	905		29	725	341	Sand dune
Sig		02	1370	485		29	936	130	D.W. Sig.
Gis		02	1476	379		30	542	524	do
Lit		03	247	1608		31	908	157	do
Bank		03	288	1567		32	332	733	do
Cabin		02	1174	681		32	178	888	Fish Warden's cabin

* Driftwood Signal

LIST of STATISTICS

for

HYDROGRAPHIC SHEET E FALSE PASS

* * *

Date (1924)	Letter	Volume	Positions	Soundings	Miles (St.)	Vessel
July 14	blue a	1	71	376	11.5	M.S.#1
16	" b	1	177	1148	29.2	do
17	" c	2	158	943	24.1	do
14	green a	1	36	222	7.0	M.S.#2
16	" b	1	181	1037	30.3	do
Sept.19	" c	2	97	419	16.8	do
July 24	yellow a	1	75	247	7.5	Launch 117
	Totals		795	4392	126.4	

Soundings in fathoms above MLLW

Tide gauge at Neumans Cove near Rocky Point

Plane of Reference MLLW reading on gauge	0.19 feet	
Lowest tide observed reading on gauge	-1.3 "	9:00 A.M. July 16 10:10 A.M. July 17
Highest tide observed reading on gauge	5.3 "	12:40 A.M. May 13

Section of Field Records. January 31, 1925.

~~Division of Hydrography and Topography~~

Division of Charts:

Tide reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 4304

Locality: Chunak Point, Isanotski St., S. W. Alaska

Chief of Party: R. R. Lukens in 1924
Plane of reference is mean lower low water
0.9 ft. on tide staff~~xxt~~ No. 1 at Neuman's Cove, Unimak Island, Alaska
3.1 " " " " No. 2 " " " " " "
-0.1 " " " " No. 3 " " " " " "

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 beginnding of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered 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 tubeused 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.

Section of Field Records.

Report on Hyd. sheet No. 4394
Surveyed in - 1924.
Chief of Party - R. R. Lukens.
Surveyed by - Field Party.
Protracted by -
Soundings plotted by -
Verified + inked by - H. E. MacGregor.

1. The records conform to the requirements of the general instructions.
2. The character of the development fulfils the requirements of the general instructions.
3. The plan and extent of the development satisfy the specific instructions.
4. The sounding line crossings are adequate
5. The usual depth curves can be completely drawn in the area covered.
6. The field plotting was completed to the extent prescribed in the general instructions
7. The office draftsman did not have to do over any part of the drafting done by the field party.
8. The junction with hyd. sheet 4391, the only sheet bordering, is not satisfactory - there being no overlap.

9. No further surveying is required within the limits of this sheet.

10. Remarks: For the most part there was apparently no effort made by the field party to space soundings equally by timing in the original records. While this does not detract from the value of the work it is not in line with suggestions in paragraph 225, Field Instructions; and greatly increases the time required for inking and verifying by the office draftsman.

This sheet contains Topography and Hydrography.

11. Rating of work.

a. Character and scope of Surveying: Excellent

b. Field drafting: Excellent

12. Reviewed by: — Date:

Respectfully submitted

H. E. Macartney

V

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 4-DRM

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

May 13, 1925.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4394

Bechevin Bay, Isanotski Strait, Alaska Peninsula

Surveyed in 1924.

Instructions dated February 8, 1924.

Chief of Party, R. R. Lukens.

Surveyed by O. S. Reading, C. J. Itter, and A. J. Hoskinson.

Protracted and soundings plotted by D. W. Taylor.

Verified and inked by H. E. MacEwen.

1. The records conform to the requirements of the General Instructions except that bottom characteristics are omitted on about one-third of the pages, and but few boats' courses are given.

2. The plan and character of development conform to the requirements of the General Instructions. The plotting as well as the verification would have been easier and more expeditious if a more uniform time interval between soundings had been adhered to as suggested in paragraph 226 of the General Instructions. It is evident that the recorder endeavored to note the exact up and down times of taking the soundings which in all probability accounts for the irregularity of the time intervals. While this does not make for speed in plotting the sheet yet it gives a more accurate representation of the bottom contour than if the intervals were inaccurately recorded when the soundings were not taken at uniform intervals.

3. There were no detailed specific instructions for this survey.

4. The sounding line crossings are adequate.

5. The usual field drafting was done by the field party.

6. The junction with the adjoining work on the south is satisfactory.

7. This sheet contains topography as well as hydrography. Except for minor details, such as corrections to shoreline, topography should not be placed on a hydrographic sheet.

8. The plan and character of the topographic surveying conforms to the requirements of the General Instructions.

GPO

9. When opportunity affords the unfinished topography in the vicinity of St. Catherine's Cove and the form lines north of Rocky Pt. should be completed.

10. This hydrographic survey is an adequate development of the known western channel through the bay, but when convenient the work should be extended to the eastward throughout the entire length of the survey.

11. The character and scope of the surveying are good and the field drafting is excellent.

12. Reviewed by E. P. Ellis, May, 1925.

Approved -
A. G
5-5-25.

Form 567
11—4819

Field No. E 4394

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. 4394

State S. W. ALASKA

General locality ~~ALASKA~~ PENINSULA - Isanotski Strait

Locality ~~Bering Sea end of False Pass (Isanotski Straits)~~ Bechevin Bay — Traders Head to Vic. of Chunak Pt.

Chief of party R. R. LUKENS

Surveyed by Hydrography by O.S.R. C.J.I. A.J.H.

Date of survey July - Sept. 1924

Scale 1:20000

Soundings in Fathoms above MLLW

Plane of reference MLLW

Protracted by D.W.T. Soundings in pencil by D.W.T.

Inked by D.W.T. Verified by

Records accompanying sheet (check those forwarded):

Des. report, 1 Tide books, ____ Marigrams, 3 Boat sheets,

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

Data from other sources affecting sheet

Remarks: Combined Hydro + Topo. Sheet

Field No E

Form 537a
11—5813

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

The finished Topographic 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. Hyd 4394

State . . . S. W. ALASKA . . . . . .

General locality . ALASKAN PENINSULA – Isanotski Strait

Locality ~~Bering Sea end of False Pass (Isanotski Straits)~~ Bechevin Bay – Traders Head to Vic. of Chanuk Pt.

Chief of party . R. R. LUKENS . . . . . .

Surveyed by . Topography by A. J.H. D.W.T. C.L.N. . . . . .

Date of survey . July 1924 . . . . . .

Scale . . 1 : 20000 . . . . . .

Heights in feet above H. W. . . . . .

Contour interval . 100 . feet.

Inked by . D.W.T. . . . Lettered by . D.W.T. . . . . .

Records accompanying sheet (check those forwarded): ~~XXXXXXXXX~~ ~~Photographs~~, three temp. topo. sheets

Descriptive report, Horizontal angle books, Field computations,

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

Remarks: Combined Hydro & topo sheet

Not received Jan 17/24