

7794

Diag. Cht. No. 8551-3

e5-277

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. DER-2648 Office No. H-7794

LOCALITY

State Alaska

General locality Prince William Sound

Locality Port Nellie Juan

1948

CHIEF OF PARTY

H.A.Karo

LIBRARY & ARCHIVES

DATE 8 May 1950

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7622

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. H-7794

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. De 2648

REGISTER NO.

State Alaska

General locality Prince William Sound

Locality Port Nellie Juan

1/ 10 000 Sub-plans.

Scale 1/ 40 000 Date of survey August 1948, 19

Vessel Ship DERICKSON

Chief of Party H. Arnold Karo

Surveyed by H. Arnold Karo & H.F. Garber

Protracted by Harvey C. Parsons

Soundings penciled by Harvey C. Parsons

Soundings in fathoms ~~XXXX~~ Fathoms

Plane of reference M L L W

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated 9 Feb. 1942 & 5 Feb. 1948, 19

Remarks:



Descriptive Report to Accompany Sheet DER-2648

Port Nellie Juan
Prince William Sound, Alaska

Ship DERICKSON

H. Arnold Karo, Comdg.

Scale 1:20,000

1. Authority:

Hydrography was executed in accordance with Instructions dated 9 February 1942 and Supplemental Instructions dated 5 February 1948, Project CS-277.

2. Survey Limits and Dates:

The area covered includes the channel portions of the second and third reaches of Port Nellie Juan beginning at Lat. $60^{\circ} 31'$, Long. $148^{\circ} 18'$. Sounding was done by the Ship DERICKSON in August 1948 in conjunction with tending triangulation parties. Time and personnel permitted the survey of the mid-channel only, with the ship sounding as close to the beaches as safety permitted.

Two possible anchorages were surveyed with the motor whaleboat on a scale of 1:10,000. One possible anchorage is located at Lat. $60^{\circ} 29'$, Long. $148^{\circ} 17'$ and the other at Lat. $60^{\circ} 32.5'$, Long. $148^{\circ} 25.6'$. It is planned to plot this hydrography as insets of Sheet DER-2648 on a scale of 1:10,000.

The boat sheet was made on a scale of 1:40,000 for convenience in plotting. However, it is planned to plot the smooth sheet on a scale of 1:20,000.

3. Tide Stations:

Tide reducers were obtained from the Culross Bay tide station. (See accompanying tidal note.)

4. Smooth Sheet:

The smooth sheet is to be plotted by the Seattle Processing Office.

5. Control Stations:

Control is based on the Valdez datum as brought forward from Valdez by the Ship DERICKSON in 1947 and 1948, H. Arnold Karo, Chief of Party. The 1917 positions of stations NELL, FINI and LAND are slightly different from the 1948 determination of these stations.

Topographic stations for the launch hydrography were located on graphic control sheets DE-E and DE-F, 1948.

Hydrographic station MOSS was located by a sextant fix and recorded in Volume 1.

6. Shoreline and Topography:

No shoreline was determined as it is to be delineated from aerial photographs at a later time. The shoreline as sketched on Chart 8517 is in considerable error. There were a few vertical photographs obtained from the Army on a scale of 1:40,000 available in the field. These covered a portion of the second reach. The shoreline obtained from the photographs was transferred to the boat sheet by field methods.

It is recommended that this shoreline be treated as reconnaissance and placed on the chart until the final shoreline is available.

7. Soundings:

The soundings taken with the ship DERICKSON were obtained with the NMC No. 57, fathometer calibrated at 800 fms/sec.

The soundings taken with the motor whaleboat were obtained with the 808 recorder No. 56 calibrated at 820 fms/sec.

(See season's fathometer report for computation of fathometer corrections.)

Filed with H-7161

The soundings shown on the boat sheet in violet are soundings obtained with the motor whaleboat and plotted by inspection. These are reconnaissance soundings only and should be treated as such.

8. Control of Hydrography:

All hydrography, with the exception of the afore mentioned reconnaissance soundings, was controlled with three point sextant fixes.

9. Adequacy of Survey:

The area covered is adequately surveyed. The inshore hydrography remains unsurveyed.

There is an adequate juncture with Sheet H-3973 at the entrance of the second reach of Port Nellie Juan. The soundings appear to be 2 to 5 fathoms shoaler on the present survey, in depths over 200 fathoms.

10. Comparison with Chart and Prior Surveys:

The area covered was previously unsurveyed.

11. Dangers and Shoals:

There are no ^{an} dangers in mid channel or the area covered by the survey. Care must be exercised in approaching areas of glacial discharges, as the bottom rises rapidly from great depths to a few fathoms within a short distance.

A dangerous rock, covered at 0.8 fms. at MLLW lies at the entrance of the first inlet along the north side of the second reach. This rock was found by a party in the motor whaleboat during reconnaissance sounding. A three point sextant fix was obtained, and the position recorded on page 20, volume 3 of this sheet.

The rock is located at Lat. $60^{\circ} 32.3'$, Long $148^{\circ} 22.8'$.

12. Coast Pilot Information

(See season's Coast Pilot Notes.)

13. Aids to Navigation and Landmarks for Charts:

There are no aids to navigation or landmarks for charts in the area surveyed.

14. Geographic Names:

Except for the glaciers, very few features are named in the upper reaches of Port Nellie Juan on Chart 8517.

Apparently the bay is but little used, as no names in the upper reaches could be ascertained locally. Neither the management at the cannery at McClure Bay or local fishermen knew of any local names other than a few in the first reach.

✓ The island on the west side at Lat. $60^{\circ} 35'$, Long. $148^{\circ} 16'$ is known locally as MINK ISLAND, and the bight formed by the island and mainland at the southern part as MINK HARBOR.

✓ The small bight between Port Nellie Juan Light and McClure Bay is known as SHIPYARD COVE. Ruins of old marine ways are located on the beach, that were used for hauling out barges for overhaul and storage.

The following names for prominent features in the upper reaches of Port Nellie Juan are submitted: -

✓ Coxcomb Point a prominent point on the southern end of the second reach of Port Nellie Juan, on which triangulation station QUART is located. So named, as the headland making up from the point has the appearance of a coxcomb when steaming through the second reach.

✓ Greystone Bay a bay on the southern side of the second reach at Lat. $60^{\circ} 31'$, Long. $148^{\circ} 26'$, in which triangulation station KEEL is located. The name is derived from the precipitous greystone cliffs rising abruptly from the beaches. These rocky walls are void of vegetation, polished smooth from receding ice fields, and very striking in appearance.

✓ Deepwater Bay a bay on the southern side of the second reach at Lat. $60^{\circ} 30'$, Long. $148^{\circ} 22'$, between stations MACE and LIAR. Reconnaissance soundings indicated depths in mid channel of 50 to 70 fathoms. The depths are too great for anchoring.

✓ Derickson Bay a bay at the entrance of the second reach at Port Nellie Juan just west of Blue Fiord. It is the bay into which Nellie Juan Glacier empties. The name was derived from the USC&GS Ship DERICKSON which made the initial surveys in the upper reaches of Port Nellie Juan. The ship anchored in this bay just inside the point forming the eastern entrance, on several occasions during the field season.

Furthermore the name is in memory of a deceased Coast and Geodetic Survey Officer who spent many years of his career in charting Alaskan waters.

✓ Division Point the sharp point dividing Blue Fiord and the above referenced Derickson Bay. Station MONEY is on this point.

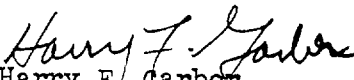
✓ East Finger Inlet the easterly of two similar long narrow inlets on the north side of the second reach of Port Nellie Juan. These inlets are quite finger like in appearance. The entrance to this inlet lies between stations PENNY and JUNK

✓ West Finger Inlet the westerly of two inlets located on the north side of Port Nellie Juan at the end of the second reach. The entrance lies between stations UNITE and VAIN. The shape of the bay is finger like.

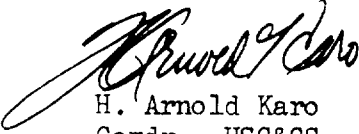
✓ Shady Cove a small cove on the north side of the second reach of Port Nellie Juan whose entrance lies between stations SHADY and YIELD. The cove is nearly enclosed, with a narrow entrance. It has a good anchorage for small craft away from the sweep of the winds. The steep terrain along its northeast side and the tall trees on the peninsula forming the northwest side render the cove shady a great part of the time.

✓ Kings Point a prominent point on the southern shore of Port Nellie Juan near its head. Station ACORN is on this point. The name is derived from Kings Glacier which lies immediately back of the point.

Respectfully submitted

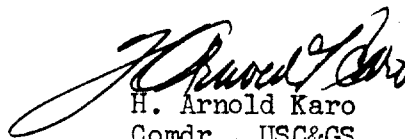

Harry F. Garber
Lt. Comdr., USC&GS

Approved:


H. Arnold Karo
Comdr., USC&GS
Chief of Party

Approval Sheet for Hydrographic Field Sheet DER-2648

The boat sheet, sounding records and fathograms have been examined and approved by me. The smooth sheet is to be plotted by the Seattle Processing Office.



H. Arnold Karo
Comdr., USC&GS
Chief of Party

Tidal Note to Accompany Sheet DER-2648

Tide reducers were obtained from the Culross Bay tide station located at Lat. $60^{\circ} 43.3'$, Long. $148^{\circ} 11.1'$.

MLLW on the staff is 5.9 feet.

No time or height corrections were applied.

Statistics for Sheet DER-2648

Vol.	Day Ltr.	Boat Used	Wire & H.L. Sdgs.	No. of P Pos.	Statute Mi. Sdg. Line
1	A	DERICKSON	3	163	100.6
1 & 2	B	DERICKSON	1	148	90.3
2 & 3	C	DERICKSON	- -	163	82.6
4	a	M. W. B.	6	192	26.3
4	b	M. W. B.	2	33	5.0
Totals			12	699	304.8

Area in square statute miles 29.5

De 2648

Prince William Sound
Port Nellie Juan.

Processing Office Notes.

Smooth sheet.

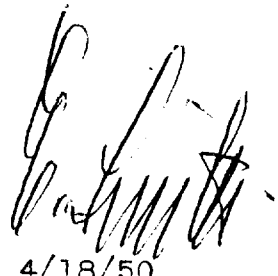
The projection was made by hand on Whatman paper. After discussion it was decided to plot the sheet on 1/40 000 scale as the soundings are adequately shown on the boat sheet. The developments of Shady Cove and the west side of Division Point are shown in sub-plans on scale of 1/ 10 000.

272 Fathom sounding.

Attention is called to the 272 fathom sounding at ϕ 60 30.5 λ 148 16.6 which was omitted from the boatsheet.

Other subjects have been covered in the report by the field party.


Edgar E. Smith
Cart. Engr.


4/18/50

De 2648

Prince William Sound.
Port Nellie Juan.

List of geographic names
penciled on smooth sheet.

Alaska

- Prince William Sound
- Port Nellie Juan
- Division Point
- Blue Fiord
- Derickson Bay
- Deepwater Bay
- Graystone Bay
- Coxcomb Point
- East Finger Inlet
- West Finger Inlet
- Shady Cove
- Kings Point

GEOGRAPHIC NAMES

Survey No. H-7794

Name on Survey	Source											
	A	B	C	D	E	F	G	H	K			
<u>Alaska</u>												1
<u>Prince William Sound</u>											USGB	2
<u>Port Nellie Juan</u>												3
<u>Blue Fiord</u>											USGB	4
												5
New Names:												6
<u>Division Point</u>												7
<u>Derickson Bay</u>												8
<u>Deepwater Bay</u>												9
<u>Graystone Bay</u>												10
<u>Coxcomb Point</u>												11
<u>East Finger Inlet</u>												12
<u>Shady Cove</u>												13
<u>West Finger Inlet</u>												14
<u>Kings Point</u>												15
												16
												17
Note that these new names are being submitted to the U.S.B.G.N., in accordance with established practice.					Names underlined in red are approved. 5-25-50.						L. Beck	18
												19
												20
<u>Culross Bay</u>				(location of tide station)							USGB	21
												22
												23
												24
												25
												26
												27

Hydrographic Surveys (Chart Division)

H-7794

HYDROGRAPHIC SURVEY NO.

Records accompanying survey:

Boat sheets²; sounding vols.⁴; wire drag vols.;
bomb vols.; graphic recorder rolls¹ envel.
special reports, etc.
.....

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

Number of positions on sheet
Number of positions checked
Number of positions revised
Number of soundings revised (refers to depth only)
Number of soundings erroneously spaced
Number of signals erroneously plotted or transferred
Topographic details	Time
Junctions	Time
Verification of soundings from graphic record	Time

Verification by.....Total time Date

Reviewed by..... Time Date

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H- H-7794

The verifier should deal with the present hydrographic survey only, as the reviewer considers its relation to previous surveys and published charts. He should be thoroughly familiar with Chapters 3, 7 and 9 of the Hydrographic Manual.

1. The descriptive report was consulted and appropriate notes were made in soft pencil regarding action taken.
2. Soundings originating with the survey and mentioned in the descriptive report have been verified, including latitude and longitude.
3. All reference to survey sheets mentioned in the descriptive report include the registry number and year.
4. Geographic names of hydrographic features if on sheet are in slanting lettering and of topographic features in vertical lettering.
5. All items affecting the plotting of the survey which are **entered in** the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken.
6. All positions verified instrumentally were check marked in the sounding records.
7. All critical soundings are clear and legible and are a little larger than the adjacent soundings.
8. The metal protractor has been checked within the last three months.
9. The protracting and plotting of all bad crossings were verified.
10. All detached positions locating critical soundings, rocks or buoys were verified.
11. The boat sheet was compared with the smooth sheet.

12. The spacing of soundings as recorded in the records was closely followed.
13. The bottom characteristics were shown on outstanding shoals.
14. The reduction and plotting of doubtful soundings were checked.
15. The transfer of contemporary topographic information was carefully examined.
16. All junctions were transferred and overlapping curves made identical.
17. The notation "JOINS H- (19--)" was added in ink for all contemporary adjoining or overlapping sheets now registered. Those not verified are shown in pencil.
18. The depth curves have been inspected before inking.
19. All triangulation stations and transfer of topographic and hydrographic signals were checked.
20. Heights of rocks were checked against range of tide.
21. Rocks transferred from topographic surveys have a dotted curve where shown thereon. Rocks located accurately by hydrographer are encircled by dotted red curve.
22. Unnecessary pencil notes have been removed.
23. Objects on which signals are located and which fall outside of the low water line have been described on the sheet.
24. The low water line and delineation of shoal areas have been properly shown.
25. Degree and minutes values and symbols have been checked.
26. Questionable soundings have been checked on the fathograms.

27. Source of shoreline and signals (when not given in report).
28. All notes on sheet are in accordance with figure 171 in the Hydrographic Manual.
29. All aids located, with those on contemporary topographic sheets, have been shown on survey.
30. Depth curves were satisfactory except as follows:
31. Sounding line crossings were satisfactory except as follows:
32. Junctions with contemporary surveys were satisfactory except as follows:
33. Condition of sounding records was satisfactory except as follows:
34. The protracting was satisfactory except as follows:
35. The field plotting of soundings was satisfactory except as follows:
36. Notes to reviewer:

Verified by

Date

RAC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

22 May 1950

Division of Charts: R. H. Carstens

Plane of reference approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 7794

Locality Port Nellie Juan, Prince William Sound, Alaska

Chief of Party: H. A. Karo in 1948
Plane of reference is mean lower low water, reading
5.9 ft. on tide staff at Culross Bay
10.7 ft. below B. M. 4 (1947)

Height of mean high water above plane of reference is 11.2 feet.

Condition of records satisfactory except as noted below:

E. C. McKay
Section
Chief, ~~Division of Tides and Currents.~~

NAUTICAL CHARTS BRANCH

SURVEY NO. 7794

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
5-11-50	8517	M. Glasston	Before After Verification and Review <i>Completely App'd.</i>
1/23/52	8551	Risegain	" " " " <i>" " " " 19th</i>
3-17-55	8502	M. Ludros	Before After Verification and Review " "
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M-2158-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.