7732

Diag. Cht. No. 8551-3

CS-277

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. DER-2548 *Office No.* H-7732

LOCALITY

State Alaska

General locality Prince William Sound

Locality Blackstone & Cochrane Bays

1948

CHIEF OF PARTY

H.A.Karo

LIBRARY & ARCHIVES

DATE 8 May 1950

B-1870-1 (1)

7732

Form 537
(Ed. Nov. 1941)

REG. NO.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

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.

REGISTER No. H-7732

Field No. DER-2548

State Alaska

General locality Prince William Sound

Locality Blackstone and Cochrane Bays

Scale 1:40,000 Smooth Sheet. 1:40,000 Boat Sheet Date of survey July - August 1948

Instructions dated 9 February 1942 and 5 February 1948

Vessel Ship DERICKSON

Chief of party H. Arnold Karo

Surveyed by H. Arnold Karo

Soundings taken by fathometer, NMC graphic recorder, hand lead, wire

Protracted by ~~Christine N. Hillmen~~

Soundings penciled by ~~Christine N. Hillmen~~

Soundings in fathoms ~~feet~~ at ~~MEAN~~ MLLW

REMARKS:

K.W.W. 3/7/94

U. S. GOVERNMENT PRINTING OFFICE 428975

DESCRIPTIVE REPORT
To Accompany Sheet DER-2548

Blackstone and Cochrane Bays
Prince William Sound, Alaska

Scale 1:20,000

Ship DERICKSON H. Arnold Karo, Comdg.

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 by the sheet includes the center portions of Blackstone and Cochrane Bays, Prince William Sound, Alaska. The sheet joins field Sheet DER-1148 at the entrance of Blackstone Bay and Sheet DER-1148 and Sheet H-7629 (1948) H-6981 (1948) at the entrance to Cochrane Bay. Junctional sdgs not sent to Amc.

The sounding was done between 28 July and 26 August 1948.

3. Vessel and Equipment:

The center of the two bays was sounded by the Ship DERICKSON, operating as closely to the beach as safety permitted. The NMC fathometer No. 57, calibrated at 800 fms./sec. was used in obtaining soundings. Occasional wire soundings were taken when obtaining bottom specimens.

4. Tide Stations:

Tide reducers were obtained from tide gages located at Cordova, Whittier and Culross Bay. A similtaneous comparison between the tides of Whittier and Cordova and Culross Bay showed no appreciable differences in time or heights. (See Tidal Note)

5. Control Stations:

The triangulation is on the Valdez Datum based on observations carried across the north side of Prince William Sound from Valdez by the Ship DERICKSON in 1947. The 1947 values of the geographic positions of triangulation stations COCH, PORT and SPLIT are slightly different from the 1914 positions. (See descriptive report of signal location sheets DE-A, DE-B and DE-C, 1948.)

All stations were located with the theodolite and are included in the list of Geographic Positions for 1948.

6. Shoreline and Topography:

The shoreline is to be delineated from aerial photographs. No shoreline was determined during 1948.

7. Soundings:

All soundings were obtained from the Ship DERICKSON using the NMC fathometer calibrated at 800 fms/sec., and occasional wire soundings to determine bottom characteristics. The velocity corrections derived from temperature and salinity observations proved to be negligible. The oscilator is set 6.2 feet below the water line, so an index correction of plus one fathom was applied to all fathometer soundings.

When sounding in depths between 200 and 230 fathoms the 2000 fm. scale was used. The graph cannot be read closer than five fathoms on this scale. This must be borne in mind when checking crosslines, and some of the fathograms may have to be reexamined to obtain good crossings.

It was noticed during the 1947 and 1948 field season that the initial marked ahead of the zero line of the fathogram when using the 2000 scale giving an additional initial correction. By inspection over a period of two seasons this value appears to be 7 fms. additive. Combining this 7 fathoms with the index correction of one fathom, gives a plus 8 fathoms to be applied to all soundings obtained on the 2000 fm. scale.

As the bottom is broken, with exceedingly steep slopes, fathometer and tide corrections were entered to 0.2 fms. up to 50 fathoms of water and 0.5 fathoms thereafter.

8. Control of Hydrography:

All positions were determined with three point fixes, observed by sextant angles.

9. Adequacy of Survey:

The hydrography was done as a by product while tending triangulation parties operating in the bays. Only the portions of the bays that could be sounded with the ship were covered. The inshore sounding was not undertaken during this season, due to lack of time and a suitable hydrographic launch.

The center portions of the bays, however, are adequately covered, and no further ship hydrography deemed necessary. Junctions with adjacent sheets are satisfactory and the depth curves can be adequately drawn at the junctions.

10. Comparison with Prior Surveys and Chart 8517:

The area covered was previously unsurveyed.

11. Scale:

The boat sheet was made on a scale of 1:40,000, however it is contemplated to plot the smooth sheet on a scale of 1:~~20~~40,000.

12. Dangers and Shoals:

There are no shoals within the area covered by the survey. See the Season's Coast Pilot Notes for inshore dangers.

13. Coast Pilot Information:

See Coast Pilot Report.

14. Aids to Navigation and Landmarks for Charts:

There are no aids to navigation or landmarks for charts within the area covered.

15. Geographic Names:

These bays are but little used, and no names, other than those shown on Chart 8517, could be ascertained locally. The large island, about three miles long, at the head of Blackstone Bay, is shown on the U. S. E. quadrangle, BLACKSTONE GLACIER, Grid Zone A, Band II N, as WILLARD ISLAND. The derivation of this name could not be ascertained. 854

Respectfully submitted

Harry F. Garber

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

Approved and Forwarded:

H. Arnold Karo

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

List of Signals to Accompany Sheet DER-2548

Hydrographic Name	Location
Also	Also 1948
Amber	Amber 1948
Area	Area 1948
Belt	Belt 1948
Bunt	Bunt 1948
Beaux	Beaux 1948
Cable	Cable 1948
Coma	Coma 1948
Coch	Coch 1948 1914
Cora	Cora 1948
Con	Con 1948
Daze	Daze 1948
Decoy	Decoy 1948
Extra	Extra 1948
Frame	Frame 1948
Fake	Fake 1948
Faith	Faith 1948
Gland	Gland 1948
Guess	Guess 1948
Gob	Gob 1948
Gain	Gain 1948
Horse	Horse 1948
Hack	Hack 1948
Inner	Inner 1948
Ivory	Ivory 1948
Jello	Jello 1948
Kraut	Kraut 1948
Lanky	Lanky 1948
Match	Match 1948
Night	Night 1948
Prize	Prize 1948
Pig	Pt. Pigot Light 1948
Rock	Rock 1948
Split	Split 1914
Torch	Torch 1948
Uncle	Uncle 1948
Viola	Viola 1948
Wedge	Wedge 1948
Welt	Welt 1948
Xebec	Xebec 1948
Xeno	Xeno 1948
Yatch	Yatch 1948
Yawl	Yawl 1948
Zeus	Zeus 1948
Zircon	Zircon 1948

Approval Sheet

The boat sheet, sounding records and fathograms have been examined and approved by me. The smooth sheet has not been plotted at this time.

H. Arnold Karo
Chief of Party

De 2548

Prince William Sound
Blackstone Bay and Cochrane Bay.

Processing Office Notes.

Smooth sheet.
The projection was made by hand on Whatman paper. No shoreline was available. All signals are found in the triangulation by Karo, 1948.

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

Edgar E. Smith.
Cart. Engr. 4/14/50

De 2548

Prince William Sound
Blackstone Bay and Cochrane Bay.

List of geographic names
penciled on smooth sheet.

Blackstone Bay

Blackstone Point

Cochrane Bay

Point Cochrane

Passage Canal

Port Wells

Kenai Peninsula

Tidal Note to Accompany Sheet DER-2548

Three tide stations were used for the reduction of soundings, depending on which gages were in operation.

On 28 July, 8 August and 11 August 1948, Whittier tide station was used.

Location of gage, Lat. 60° 46.65', Long. 148° 40.15'. MLLW on staff is 3.8 feet.

On 9 August and 10 August 1948 the Cordova tide station was used.

Location of gage, Lat. 60° 32.7', Long. 145° 46.4'. MLLW on staff is 8.4 feet.

On 26 August 1948 the Culross Bay tide station was used.

Location of gage, Lat. 60° 43.8', Long. 148° 11.1'. MLLW on staff is 5.9 feet.

No time or height corrections were applied to any of the tide stations.

Statistics for Hydrographic Sheet DER-2548

Ship DERICKSON Project CS-277

Vol.	Day Ltr.	Date 1948	No. of Wire Sdgs.	No. of Pos.	Stat. Mi. Sdg. Line
I	A	28 July	--	24	11.5
I	B	8 Aug.	--	23	11.7
I	C	9 Aug.	4	21	9.7
I	D	10 Aug.	5	52	27.2
I & II	E	11 Aug.	1	80	49.0
II	F	26 Aug.	--	82	42.5
		Totals	10	282	151.6

Area in square statute miles - 18.6

GEOGRAPHIC NAMES

Survey No. H-7732

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
Alaska										1
Prince William Sound									USGB	2
Cochrane Bay										3
Blackstone Bay									USGB	4
Blackstone Point									"	5
Point Cochrane									"	6
Passage Canal									"	7
Kenai Peninsula									"	8
Port Wells										9
										10
					Names underlined in red are approved. 5-25-50 L. HECK					11
										12
Whittier		(location of tide station)								13
Cordova			"		"					14
Culross Bay			"		"				USGB	15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7732

Records accompanying survey:

Boat sheets 1; sounding vols. 2; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 1 envel.

special reports, etc. .....

.....

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

Number of positions on sheet		282
Number of positions checked		30
Number of positions revised		0
Number of soundings revised (refers to depth only)		4
Number of soundings erroneously spaced		8
Number of signals erroneously plotted or transferred		0
Topographic details	Time	16 hrs
Junctions	Time	6 hrs
Verification of soundings from graphic record	Time	8 hrs .....

Verification by W.L. Jenna .....Total time 46 hrs Date 5-15-72

Reviewed by..... Time ..... Date .....

M-2232-1

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H- H-7732

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).
T-9131, 9132, 9133, 9135, 9136, 9137

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. NA

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:
Junction with H-7629 (1948) was not available at this office

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 W.L. JONNS Date 15 MAY 1972

E17C

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~ 22 May 1950

Division of Charts: R. H. Carstens

Plane of reference approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 7732

Locality Cochrane Bay, Prince William Sound, Alaska

Chief of Party: H. A. Karo in 1948
Plane of reference is mean lower low water, reading
8.4 ft. on tide staff at Cordova
36.9 ft. below B. M. 2 (1929)

5.9 ft. on tide staff at Culross Bay
10.7 ft. below B. M. 4 (1947)

3.8 ft. on tide staff at Whittier
16.3 ft. below B. M. 1 (1948)

Height of mean high water above plane of reference is as follows:

Cordova = 11.5 feet
Culross Bay = 11.2 feet
Whittier = 11.1 feet

Condition of records satisfactory except as noted below:

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

U. S. GOVERNMENT PRINTING OFFICE 756675

NAUTICAL CHARTS BRANCH

SURVEY NO. 7732

Record of Application to Charts

Category I Survey

DATE	CHART	CARTOGRAPHER	REMARKS
5-11-50	8517	McGlasson	Before ~~After~~ Verification and Review Completely Appld.
12/27/51	8551	Quiegani	Before ~~After~~ Verification and Review Fully appld.
3-17-55	8502	[illegible]	Before ~~After~~ Verification and Review " "
1-4-63	8517	[illegible]	Before ~~After~~ Verification and Review checked for complete application
1-21-63	8551	[illegible]	Before ~~After~~ Verification and Review checked for complete application
4-19-71	8551	C.S. Tolin	Before ~~After~~ Verification and Review appl 10 fm curves
1/3/78	8517	M.J. Friese	~~Before~~ After Verification ~~and Review~~ Final
1/10/80	8551	Naitor	Fully Appld in conjunction with charted soundings ~~Before~~ After Verification ~~and Review~~ Final appld thru 8517
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

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.