

8384

Diag. Cht. No. 8102-3.

FORM C&GS-504

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. LJ-1257 Office No. H-8384

LOCALITY

State Alaska

General locality Clarence Strait

Locality Ingraham Bay & Part of Moira
Sound

1957

CHIEF OF PARTY

E. B. Brown

LIBRARY & ARCHIVES

DATE May 4, 1960

USCOMM-DC 37022-P66

8384

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-8384

Field No. LJ-1257

State ALASKA

General locality CLARENCE STRAIT

Locality Ingraham Bay and Part of Moira Sound
~~EASTERN SHORE, FRINGE OF WALES ISLAND~~

Scale 1:10,000 Date of survey 17 July 1957 to 10 October 1957

Instructions dated 2 October 1956

Vessel LAUNCH NO. 88, FROM SHIP LESTER JONES

Chief of party E. B. BROWN

Surveyed by L. G. TAYLOR

Soundings taken by fathometer, graphic recorder, hand lead, wire ~~H.L.~~

Fathograms scaled by SHIP'S PERSONNEL

Fathograms checked by SHIP'S PERSONNEL

Protracted by Harvey C. Parsons

Soundings penciled by Harvey C. Parsons

Soundings in fathoms ~~feet~~ ^{and tenths} at ~~MLW~~ MLLW and are based on

REMARKS: velocity of sound at 800 fms/sec

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY H-8384
FIELD NUMBER LJ-1257
SCALE 1:10,000

E. B. Brown, Chief of Party
USC&GSS LESTER JONES

A. Project No. 13810, Instructions dated 2 October 1956 ✓

B. Survey Limits:

The western shore of Clarence Strait between Scott Point and Chichago~~t~~ Bay, Prince of Wales, including Ingraham Bay, Johnson Cove and a portion of South Arm in Moira Sound. ✓

Field work began on 17 July 1957 and ended on 10 October 1957. ✓

C. Vessel & Equipment:

Launch No. 88 was used throughout. Launch was based from shore camp in Ingraham Bay and from Ship anchored in Johnson Cove and South Arm Moira Sound. ✓

D. Tide & Current Stations:

Portable automatic tide gage at Ingraham Bay without correction was used for Eastern half of Sheet. Portable automatic tide gage located at entrance to South Arm, Moira Sound was used without correction for western portion of sheet in Moira Sound including South Arm and Johnson Cove. ✓

E. Smooth Sheet: (Smooth Sheet) ✓

F. Control Stations:

1. Triangulation stations, Chief of Party, Ferdinand Westdahl, 1912. ✓
2. Topographic Stations from ^{field copies of} T-10538, T-11523, T-11524, T-11526. ✓
All Topographic Control Stations were located by photogrammetric methods except as indicated in the list of stations.

G. Shoreline & Topography:

Shoreline & topographic detail from map manuscripts listed in F.2. above. ✓

Changes in topographic detail (Smooth Sheet) ✓

G. (Con't)

No indication was found of foul areas shown at Lat. 54-58.45 Long. 132-05.7 and Lat. 54-58.65 and Long. 132-05.75. Large schools of jellyfish were noticed near the head of this cove which made the water appear quite light and it is believed that this accounts for the interpretation of shoals on the photograph.

H. Soundings:

Soundings were taken with portable depth recorder (808 Fath. No. 102-S) Hand lead soundings were taken during investigations for least depths. Standard methods and procedures were used throughout. *Soundings were also taken with deep depth recorder (EDO-185).*

I. Control of Hydrography:

Standard methods of Sextant Fixes on previously located control points were used throughout.

J. Adequacy of Survey:

Survey is satisfactory to supersede prior surveys for charting.

K. Crosslines:

Crosslines were run in accordance with instructions. (Discrepancies - Smooth Sheet)

L. Comparison With Prior Surveys: (Smooth Sheet)

H-4195 (1921)

M. Comparison with Chart: (Smooth Sheet)

N. Dangers and Shoals:

No uncharted dangers were found in the area.

Shoals which required investigation are listed below:

<u>POS NO</u>	<u>POSITION</u>	<u>DEPTH</u>	<u>REMARKS</u>
123 b <i>red</i>	55-00.85 131-58.60	1.8 ✓	Least depth on shoal
^{50 a} 136 b	55-00.78 131-58.48 ✓	4.70	Least depth on shoal
<i>5 sec. prior to pos. 50a (red)</i>			
57g-60g <i>56g red</i>	55-00.67 ✓ 131-58.45 ✓	4.2 3.9	Least depth on shoal

N. (Con't)

<u>POS NO</u>	<u>POSITION</u>	<u>DEPTH</u>	<u>REMARKS</u>
3u-8u 6u (red)	55-00.86 131-59.6	1.2 ⁶	Least Depth on Shoal
1u-2u ^{4c}	54-59.05 131-58.78	7.6 5.6 5.4	Least Depth on Shoal
12u-17u 14u (red)	⁴ 58 -58.90 ² 131-59.05	5.8 5.8 ³ 4.8	Least Depth on Shoal
19u 90-91K(red)	54-58.98 131-59.06	6.7	Least Depth on Shoal
5s-7s	54-58.5 131-58.75	0.1 [✓]	Detached Position on Rock awash to Check location. (Q) Two rocks in Kelp.
115p 107-108h(red)	54-58.74 131-58.45	3.8 ⁷	Least Depth on Shoal
108p	54-58.06 131-58.35	0.9 [✓]	Least Depth on Shoal
107p	54-58.0 131-58.35	2.9 [✓]	Least Depth on Shoal
	54-57.95 131-58.39		No Rock Awash at this location However, rocky closer to shore (westward) See pos. 103-106 p.
26s	54-58.62 131-59.6	3.5 [✓]	Least Depth on Shoal 3.5 fathom depth between 14-15 d.
1c-4c blue	54-58.67 131-59.95	3.3 [✓]	Least Depth on Shoal
39 [✓]	54-58.7 132-00.0	3.0 ?	Shoal indication
2t	54-58.76 131-59.82	3.9 4.1	Least Depth on Shoal
3t-4t 46-47r	⁸ 54-59.17 ⁷ 131-59.91 ⁸	3.5 ⁴	Least Depth on Shoal
172r	54-58.88 132-01.65		No Evidence of Charted rock awash.
157s-159s	54-58.33 132-01.40		No Evidence of Topo rock awash.
20u-22u 140-141e	54-58.20 132-00.73	1.9 2.0	Least Depth on Shoal
3h	54-58.25 132-00.8	1.6 ⁴	Least Depth on Shoal

N. (Con't)

<u>POS NO</u>	<u>POSITION</u>	<u>DEPTH</u>	<u>REMARKS</u>
155s.	54-57.85 132-01.64	3.1 ✓	Least Depth on Shoal
1j	54-58.05 132-01.39	0.6	" " " <i>submerged reef</i>
147s 95-96g	54-58.05 132-02.56	4.7 ⁸ ✓	Least Depth on Shoal
23u-26u	54-58.36 132-02.65	3.8	Least Depth on Shoal
141s-144s	54-57.9 132-02.7	0.8	Least Depth on Shoal
lh	54-58.13 132-00.68	4 ³	Investigation charted rock awash! No Indication-
None	54-57.88 131-58.38		No Indication of previously charted rock.
None	54-57.95 131-58.38		No Indication of previously charted rock.
83ja-87ja 133-134 ca	54-59.29 132-09.29	1.6 ⁷	Shoal Investigation { Vol. 15, P. 34
172-175La	54-59.83 132-08.39	7.3 ² ✓	Shoal Investigation
176-178La	54-59.82 132-08.28	7.7	Shoal Investigation
108-110ma	54-59.88 132-08.08	2.1 ³ ✓	Shoal Investigation
35-37na 41-42 da	54-59.80 132-08.07	3.8 ³	Shoal Investigation { Vol. 15, P. 53
38na 108-109 aa	54-59.82 132-07.95	4.7 (4.5) ✓	Shoal Investigation { Vol. 19, P. 35 (Previously found) { Vol. 14, P. 41
20-22pa	55-01.02 132-08.52 5.19	7.7 ✓	Shoal Investigation- (Previously Found)
23-27pa 31-32 r	55-00.96 132-05.45	4.3 ⁴ 3.6	Shoal Investigation { Vol. 19 } For rock SE-ward (Previously Found) { P. 42 } see 101-102 "V" (red) { Vol. 10 } Vol. 11, P. 12 { P. 64 }
28-31pa	55-00.83 132-04.67	1.1 ✓	Shoal Investigation
35-37pa 118-119y	55-00.26 132-06.25	1.2 ¹ ✓	Shoal Investigation { Vol. 19, P. 45 Vol. 12, P. 54
38-40pa	55-00.30 132-07.26	5.7 ⁶	Shoal Investigation ✓

N. (Con't)

<u>POS NO</u>	<u>POSITION</u>	<u>DEPTH</u>	<u>REMARKS</u>
41-42pa	55-00.03 132-07.30 ₅	4.8 ⁷	Shoal Investigation
43-48pa	54-59.88 132-07.47	2.4 [✓]	Shoal Investigation
51-53pa	54-59.11 ⁰ 132-09.39 ₇	3.2 2.1	Shoal Investigation. (Previously found)
54-55pa	54-59.96 132-07.42	2.5	Shoal Investigation
56-59pa	54-59.96 132-07.80	4.3	Shoal Investigation
60-62pa 54 da	54-59.55 132-08.16	8.5 ⁴	Shoal Investigation {vol. 19, P. 49 vol. 15, P. 55}
6qa	54-57.71 132-09.96	7.4 [✓]	Shoal Investigation
7qa 102 Ka	54-57.77 [✓] 132-09.85	8.0 7.8 9.8	Shoal Investigation {vol. 19, P. 54 } both show (Previously found) {vol. 18, P. 25 } depth of 98 Fm.
13-15qa 79-80 Ka	54-57.96 132-09.67	4.6 [✓]	Shoal Investigation {vol. 19, P. 55 } both show {vol. 18, P. 20 } depth of 48 Fm.
26-27qa	54-58.53 132-09.03	5.9 6.0	Shoal Investigation (Previously Found)
28-32qa	54-58.55 132-09.10	3.1 [✓]	Shoal Investigation
33qa	54-58.65 132-09.06 [✓]	3.5	Shoal Investigation
34qa	54-58.56 132-09.18	1.2	Shoal Investigation
37 qa	54-58.61 [✓]	1.2	
26-29-31ra 19-20 ra	132-09.39 ^{09/18} 54-58.93 132-09.43	8.4 2	Shoal Investigation {Depth of 8 ² Fm. pos. 19-20 "ra" (red) vol. 20 P. 7
27-28-30ra	54-58.87 132-09.38	7.4 [✓]	Shoal Investigation
32-35ra 100-101 ja	54-59.35 ⁰⁻¹⁰ 132-09.49 ₅₀	7.9 8.2 [✓]	Shoal Investigation {vol. 20, P. 9-10 (8.0 Fm.) vol. 17, P. 67 (8.2 Fm.)

N. (Con't)

<u>POS NO</u>	<u>POSITION</u>	<u>DEPTH</u>	<u>REMARKS</u>
63-64ra 163-164 la	54-59.63 ² 132-09.95	5.5 4.6	Shoal Investigation { vol. 20, p. 15 (4 ⁶ Fm) vol. 18, p. 60 (4 ⁷ Fm)
72-73ra 91-92 ma	54-59.60 132-09.71	2.4 ² 4	Shoal Investigation
77-82ra	54-59.56 132-09.28	0.9 1.3	Shoal Investigation { 79 "ra" vol. 20, p. 18 reduces to 1 ³ Fm.
86-88ra	54-59.47 132-07.96	4.0 ²	Shoal Investigation
89-92ra	54-59.55 132-08.35	3.0 ²	Shoal Investigation
99-104ra (Omit 100)	55-00.33 132-06.54	2.1 ³	Shoal Investigation { pos. 100 "ra" plots about 95 meters E. of pos. 104 "ra"
108-112ra	54-59.91 132-07.64	2.0 ²	Shoal Investigation
113-121ra 40-41 ea	54-59.87 132-07.65	1.1 ³	Shoal Investigation 2 Fm. pos. 40-41 "ea", vol. 16, p. 11

O. Coast Pilot Information:

The following anchorages were used by the ship during the Survey:

<u>LOCATION</u>	<u>DEPTH</u>	<u>BOTTOM</u>	<u>REMARKS</u>
1 54° 58.2 132° 00.5	³² 19-24 Fathoms	g y M crs G	Good Anchorage
2 54° 59.1 132° 01.3	12 Fathoms	Sft. br M	Excellent
3 54° 58.9 131° 59.7	20 Fathoms	med G crs S	Good
4 54° 59.9 131° 58.6	13 Fathoms	hrd	Poor because of winds & currents
5 55° 00.7 132° 05.3	17 Fathoms	hrd	Fair
6 54° 58.75 132° 06.25	15 Fathoms	Stky br M	Excellent

O.(Con't)

7 54° 57.95 23 Fathoms M Excellent
132° 09.45

The entrance to Ingraham Bay is best approached from the east midway between the south entrance point north of Scott Point and the eastern end of the group of islands in the center of the entrance. A depth of over 20 fathoms may be carried from the entrance northwestward to anchorage No. 3.

A narrow channel extends into the northern arm of Ingraham Bay with a controlling depth of 8 fathoms. A shoal with controlling depth of 3.6⁴fathoms at Lat. 54° 59.18, Long. 131° 59.2⁰ extends from the western shore to the middle of the Channel. An excellent anchorage is available in the Northern Arm in about 10 fathoms with a mud and sand bottom.

Strong Currents (estimated 3 kn.) were encountered in the vicinity of the islands at the entrance to Ingraham Bay during certain stages of the tide.

The South Arm of Ingraham Bay is characterized by numerous rocks and reefs. The controlling depth at the entrance to the South Arm is 3.2³fathoms. From this point depths of at least 5 fathoms may be carried with local knowledge to the head of the bay where an excellent anchorage for small craft is available in depths from 2 fathoms to 10 fathoms. A mud bottom with gentle slopes provides excellent holding bottom in this anchorage.

There is a channel around the west side of Polk Island with a controlling depth of 3 fathoms in the narrow crooked section near the northwest end of the island.

A deep water channel may be carried to the Southern end of Johnson Cove with an excellent anchorage available in depths of 15 fathoms for large vessels. An excellent small boat anchorage is available near the head of the Bay in a depth of 6 fathoms.

P. Aids to Navigation:

No aids to navigation are located in the surveyed area.

Q. Landmarks for Charts:

No landmarks are within the surveyed area.

R. Geographic Names:

No changes to existing geographic names.

S. The fathograms indicate silt overlying a hard bottom in the following areas: ✓

<u>LOCATION</u>	<u>POSITION</u>	<u>DEPTH OF SILT</u>
Johnson Cove	Lat. 54° 58.8 Long. 132° 06.3	3 Fms over Rock ✓
South Arm, Ingraham Bay	Lat. 54° 57.4 Long. 132° 03.5	3 Fms over Rock ✓
North Arm, Ingraham Bay	Lat. 54° 59.1 Long. 132° 01.4	1 Fm silt over hard bottom. ✓


In general, the extent of these areas cover the deepest portions of the Bay and the silt gradually decreases in thickness toward the beaches. ✓

T.-Y. No Special Reports ✓

Z. Tabulation of Data: ✓

See attached list of Control Stations on Page 9.

Respectfully submitted,


LORNE G. TAYLOR, LCDR., C&GS
Commanding Officer

LJ/LGT/cks

Z. (Con't)

LIST OF SIGNALS
H-8384 LJ1257

ABE	(Hydro Vol #1 H-8384)	DAY	T-11523
ACE	T-11523	DEB	T-11524
ACT	T-11523	DIF	T-11526
ADD	T-11526	DIM	T-10538
ADO	(Hydro Vol #- H-8385)	DIP	(Hydro Vol #1 H-8384)
AHA	T-11526	DIX	T-11526
AMP	T-11524	DOC	T-11526
ANN	T-11526	DOT	(No P.C.) T-11523
ANT	(No p.c.) T-11526	DOG	T-11526
APT	T-11526	DUD	T-11526
ARM	(Hydro cuts Vol 5 (H-8384))	DUO	(Hydro Vol #1 H-8384)
ART	T-11526	EAR	T-10538
ASK	Hydro cuts Vol. 1 T-11526 H-8384	EAT	T-11526
AVE	T-11526	EBB	T-11523
AXE	T-11526	EEL	T-11526
AZO	T-10538	EGG	(Hydro Vol #1 H-8384) T-11524
BAG	(Hydro Vol #1 H8384) T-11526	EGO	(Hydro Vol #1 H-8384) T-11526
BAH	T-10538	ELF	(1912 triang) T-11526
BAT	T-11523	END	(1912 triang) T-11526
BED	T-11526	EON	T-11526
BIB	(Hydro Vol #1 H-8384)	ERA	T-11524
BIG	T-11523	ERG	T-11526
BOA	T-11523	EST	T-11526
BOB	Hydro cuts Vol. 1 T-11523 H-8384	FAR	T-11526
BON	T-11526	FAT	(Hydro Vol #1 H-8384)
BOX	T-11524	FED	T-11526
BUM	T-11524	FEW	T-11525
BUS	T-11526	FEZ	T-10538
BUS	So Arm Ingraham Bay T-11526	FIG	T-11524
CAB	(Hydro Vol #. H-8384)	FIT	(Hydro cuts Vol. 1 T-11523 H-8384)
CAR	T-11523	FIX	T-11526
CAT	T-11526	FLY	T-11526
CAW	T-11526	FOE	T-11526
COD	T-10538	FOG	T-11524
COO	T-10538	FOR	T-11526
COP	T-11523	FOX	T-11526
COW	T-11526	FRO	(Hydro Vol #1 H-8384)
CUE	T-11526	FRY	(No P.C.) T-11526
CUR	Hydro cuts Vol. 1 T-11526 H-8384	FUN	T-11524
CUT	(Hydro Vol #1 H-8384)		

Z. (Con't)

GAD	(Hydro Vol #1 H-8384)	KED	(Hydro Vol #1 H-8384)✓
GAG	T-11526	KEY	(Hydro Vol #1 H-8384)✓
GAGE	T-11523	KID	T-11526
GAL	(Hydro Vol #1 H-8384)	Kim	T-11524
GAM	T-11526	LAD	T-10538
GAS	T-11524	LAY	(Hydro Vol #1 H-8384)
GEO	T-10538	LAX	T-11526
GIG	(Hydro Vol #1 H-8384)✓	LEO	T-11524
GIN	(No P.C.) T-11526	LEG	(No P.C.) T-11524
GOB	Hydro cuts Vol. 1 T-11526 H-8384	LIP	T-11524
GOT	T-11525	LIZ	(Hydro Vol #1 H-8384)
GUM	T-11526	LOG	T-11524
GUS	T-11524	LOP	T-11526
GUY	(Hydro Vol #1 H-8384)✓	LUG	(No P.C.) T-11525
HAG	T-11526	LUX	T-11526
HAT	T-10538	MAG	T-11524
HEM	(Hydro Vol #1 H-8384)✓	MAL	T-10538
HER	T-11524	MAN	T-11526
HEX	T-11526	MAW	T-11526
HID	T-11526	MAX	(Hydro Vol #1 H-8384)✓
HIS	(No P.C.) T-11524	MID	(Hydro Vol #1 H-8384)✓
HOE	T-11526	MOI	(1912) (Triang)
HOD	(No P.C.) T-11525	MOO	(Hydro Vol #1 H-8384)✓
HON	T-11526	MOP	T-11526
HOP	T-11526	MUG	T-11523
HOW	T-11526	MUM	(Hydro Vol #1 H-8384)
HUB	T-11523	NAY	T-11523
HUG	(Hydro Vol #1 H-8384)	Neo	T-11526
HUT	T-11526	NEW	T-11526
ICE	T-10538	NIG	T-11526
IDA	T-11526	NIL	T-11526
IN	T-10538	NIP	T-10538
INK	T-10538	Nix	T-11524
ION	T-11526	NOD	T-11526
IRK	T-11526	NON	T-11526
ITS	(Hydro Vol #1 H-8384)	NOR	T-11524
IVY	T-11526	NOW	T-11523
JAP	T-11526	NUL	T-11526
JAR	T-11524	NUX	T-10538
JAW	T-11526	OAK	T-11524
JAY	T-11526	OBI	(No P.C.) T-11523
JIB	T-11526	ODD	T-11526
JIM	(Sextant Cuts Vol #5 H-8384)✓	OHM	T-11524
JOB	T-11524	OIL	T-11524
JOE	T-11523	OLD	T-11526
Joy	T-11526	ORA	(Hydro Vol #1 H-8384)
JUG	T-11526	OFF	T-11526
JUT	T-11524	ORB	T-11526
		OUT	(Hydro Vol #1 H-8384)✓
		OWL	T-11524

Z. (Con't)

PAD		T-11526	SKI		T-11526
PAL	(Hydro Vol #1	H-8384)✓	SOL	(Hydro Vol #1	H-8384)
PAN	(Hydro Vol #1	H-8384)✓	SOP		T-11526
PAW	(No. P.C.)	T-11524	SOUND	(1912 Triang)	
PEG		T-10538	SOW		T-11523
PET		T-11526	SOX		T-10538
PIE		T-10538	STY	(NO P.C.)	T-11525
PIL	Hydro Vol.1	T-11526 H-8384✓	SUB		T-11526
PIN		T-11526			
PIT		T-11525	TAD	(Hydro Vol #17	H-8384)
PIX		T-10538	TAN		T-10538
PLY		T-11523	TAP	(No P.C.)	T-11526
POI		T-10538	TAX		T-11524
POT		T-11526	TENT		T-11526
PRO		T-11526	THY		T-11523
PUG		T-11523 H-8384	TIDE		T-10538
PUP		T-11526	TOM		T-11523
PUT		T-11524	TOY		T-11526
			TRY		T-11526
QUO		T-10538	TUB	(South Arm of	T-11526
				Ingraham Bay)	
RAM	(Hydro Vol #1	H-8384)	TUB	(Hydro Vol #1	H-8384)
RAT	Hydro cuts Vol.1	T-11526 H-8384			
REV		T-11523	USE		T-10538
RIG	(Hydro Vol #1	H-8384)			
RIM		T-11524	VAL		T-10538
RIO		T-10538	VAN		T-11526
RIP		T-11526	VET		T-10538
ROCK	(1912 Triang.)		VEX		T-11526
ROT	(Hydro Vol #1	H-8384)	VIA		T-10538
ROY		T-10538	VIM	(Hydro Vol #1	H-8384)
RUE		T-11526			
RUM		T-11526	WAR		T-10538
			WAS	(Hydro Vol #1	H-8384)
SAD	(Hydro Vol #1	H-8384)✓	WAX		T-11526
SAG		T-11523	WED		T-11523
SAL		T-11523	WEE		T-11523
SAM		T-11523	WEN		T-10538
SAX		T-11525	WHO		T-11526
SEM	(Sextant Cuts	Vol 5)	WHY		T-11526
	(H-8384)	T-11522	WIG		T-11522
SET		T-11526	WIN		T-11526
SHE		T-11526	WIT		T-11523
SKY		T-11523	WOO		T-11526
SIC		T-11524	YAK		T-11526
SIN		T-T-10538	YAM		T-11525
SIP	(No P.C.)	T-11525	YEA		T-11526
SIR	(Hydro Vol #1	H-8384)✓	YES		T-10538
			YET		T-11523

Z. (Con't)

ZAG
ZIG
ZOO

T-11522
T-11526
T-11524

- - - - -

SMOOTH SHEET

The smooth sheet was hand constructed by the Seattle Hydrographic Processing Unit using standard methods of construction and checking. ✓

SHORELINE AND TOPOGRAPHY

Two areas are noted where the shoreline from the manuscripts and the hydrography do not agree. One is at Lat. $54^{\circ} 58' .0$, Long. $132^{\circ} 01' .0$ and the other at Lat. $54^{\circ} 59' .4$, Long. $132^{\circ} 09' .4$. Both areas were transferred from the boat sheet and left in pencil. *Inked in red to conform to boat sheet* ✓

ADEQUACY OF SURVEY

^(Nine) Nine photo topo signals, indicated in red on the boat sheet, had to be moved in order to get agreement in either the control of the sounding lines or at crossings. They were mostly moved to the positions indicated by check fixes taken at the signals. This involved the checking and replotting of approximately 10% of the sounding line. ✓

All discrepancies were resolved. ✓

Junctions with H-8383 and H-8385 have been compared and found satisfactory. The depth curves at the junctions can be adequately drawn. ✓

COMPARISON WITH PRIOR SURVEYS

No comparison has been made. ✓

COMPARISON WITH CHART

The survey has been compared with Chart 8102, 6th Ed., Revised 1/26/59, scale 1/229,376 @ Lat. 55° . ✓

Considering the difference in scale, the agreement between the chart and smooth sheet is very good. ✓

DANGERS AND SHOALS

Corrections to smooth sheet values have been made, in ink, in the field report. Several other shoal soundings have been added, in ink, to the list. ✓

Respectfully submitted,

William M. Martin

WILLIAM M. MARTIN
SUPERV. CARTO., C&GS

APPROVED & FORWARDED:

G. C. Mast
G. C. MAST, CAPT., C&GS
SEATTLE DISTRICT OFFICER

STATISTICS FOR HYDROGRAPHIC SURVEY

H-8384 (1957)

Ship LESTER JONES

Project No. 13810

Vol.No.	Day Ltr.	Date	No.Pos.	H. L.	Stat.Mi.
Ship					
1	A	9/11/57	28	-	4.4
1	B	9/12/57	29	2	3.1
1	C	9/13/57	16	16	-
1	D	9/27/57	8	8	-
1&21	E	10/1/57	40		6.9
Skiff					
1	C	9/12/57	4	4	-
1	d	9/25/57	3	1	-
1	e	9/26/57	15	-	-
Launch No. 88					
2	a	7/17/57	197	1	26.9
2&3	b	7/18/57	194	8	18.6
3	c	7/19/57	183	8	19.0
4	d	7/20/57	90	3	12.6
4	e	7/23/57	201	1	23.7
5	f	7/24/57	51	-	3.0
5	g	7/25/57	96	-	10.8
5	h	7/26/57	121	5	12.9
6	j	7/27/57	59	6	2.8
6	k	7/29/57	122	-	9.6
6&7	l	7/30/57	215	1	21.7
7	m	7/31/57	159	-	15.5
7&8	n	8/1/57	203	8	18.6
8	p	8/2/57	138	9	11.4
9	q	8/5/57	162	-	18.2
9&10	r	8/6/57	179	-	17.7
10	s	8/7/57	159	8	13.2
10	t	8/8/57	4	-	-
10	u	8/26/57	29	-	0.2
10&11	v	8/30/57	144	4	18.0
11	w	9/3/57	90	-	10.4
11&12	x	9/4/57	204	-	26.3
12&13	y	9/5/57	208	-	26.9
13	z	9/6/57	203	2	29.7
13&14	aa	9/10/57	171	8	30.1
14	ba	9/11/57	216	2	17.9
15	ca	9/12/57	168	6	16.6
15	da	9/13/57	144	2	9.2
16	ea	9/16/57	91	-	7.9

Vol.No.	Day Ltr.	Date	No.Pos.	H. L.	Stat.Mi.
16	fa	9/17/57	207	2	17.9
17	ga	9/18/57	124	5	9.2
17	ha	9/19/57	52	-	2.6
17	ja	9/20/57	118	1	9.1
18	ka	9/21/57	108	-	11.0
18	la	9/23/57	196	3	15.2
19	ma	9/24/57	115	7	4.4
19	na	9/25/57	38	1	2.0
19	pa	9/26/57	62	8	1.1
19	qa	9/27/57	37	-	1.7
20	ra	10/1/57	157	2	6.5
20	sa	10/2/57	25	-	-

TOTALS

5553

142

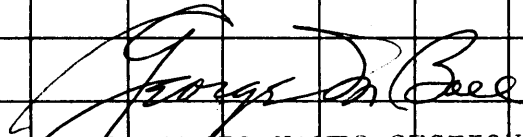
544.5

Square statute miles - 14.2

142
5695

GEOGRAPHIC NAMES
Survey No. H-8384

Name on Survey	<div style="display: flex; justify-content: space-between; font-size: small;"> On Chart No. 8102 On previous survey No. On U. S. Quadrangle Maps From local information On local Maps P. O. Guide or Map Rand McNally Atlas U. S. Light List </div>										
	A	B	C	D	E	F	G	H	K		
Clarence Strait	x										1
Ingraham Inraham Bay	x										2
Ingraham Point	x										3
Johnson Cove	x										4
Kegan Cove	x										5
Moira Sound	x										6
South Arm	x										7
West Arm	x										8
Polk Island	x										9
Prince of Wales Island	x										10
Scott Point	x										11
											12
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											27


 GEOGRAPHIC NAMES SECTION
 8 JUNE 1960

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8384...

Records accompanying survey: Smooth sheets .1...;
 boat sheets .2...; ^{Destroyed} sounding vols. .21...; wire drag vols.;
 Descriptive Reports .1...; graphic recorder envelopes .9...;
 special reports, etc.

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

Number of positions on sheet		5695	
		
Number of positions checked		223	
		
Number of positions revised		4	
		
Number of soundings revised (refers to depth only)		18	
		
Number of soundings erroneously spaced (35-37 aa)		12	
		
Number of signals erroneously plotted or transferred		0	
		
Topographic details	Time	35 hrs.	
		
Junctions	Time	32 hrs.	
		
Verification of soundings from graphic record	Time	16 hrs.	
		
Special adjustments	Time	

643657"
172 "N" - 62 "W"

Nothing difficult encountered, but comparison of tocks, shoals, reefs, ledges and hundreds of notes in "Remarks" column of volumes made verification extremely time-consuming

Verification by ... S. Rose Total time 607 hrs. Date Feb. 2, 1966

Reviewed by ... George K. Myers Time 170 hrs Date 8-8-69

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~

20 June 1960

Division of Charts: R. H. Carstens

Plane of reference approved in
21 volumes of sounding records for

HYDROGRAPHIC SHEET 8384

Locality Clarence Strait, Alaska

Chief of Party: E. B. Brown in 1957
Plane of reference is mean lower low water, reading
5.8 ft. on tide staff at Ingraham Bay
20.6 ft. below B. M. 1 (1957)

5.8 ft. on tide staff at South Arm, Moira Sound
17.4 ft. below B.M. 1 (1957)

Height of mean high water above plane of reference is:

Ingraham Bay 13.5 ft.
South Arm, Moira Sound 13.8 ft.

Condition of records satisfactory except as noted below:



Chief, Tides Branch
~~Chief, Division of Tides and Currents~~

OFFICE OF HYDROGRAPHY AND OCEANOGRAPHY

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8384

FIELD NO. LJ-1257

Alaska, Clarence Strait, Ingraham Bay and Part of Moira Sound

SURVEYED: July 17, 1957, through October 10, 1957

SCALE: 1:10,000

PROJECT NO.: 13810

SOUNDINGS: 808 Depth Recorder
EDO Deep Water Recorder, Hand Lead

CONTROL: Sextant fixes
on shore signals

Chief of Party.....	E. B. Brown
Surveyed by.....	L. G. Taylor
.....	A. J. Lewis
Protracted by.....	H. C. Parsons, PMC
Soundings Plotted by.....	H. C. Parsons
Verified and Inked by.....	S. Rose
Reviewed by.....	G. K. Myers
.....	Date: August 8, 1969
Inspected by.....	R. H. Carstens

1. Description of the Area

This is an inshore survey on the western shore of Clarence Strait from Scott Point northward to Chichagof Bay, including Ingraham Bay; and a part of Moira Sound, including Johnson Cove and a portion of South Arm.

The bottom in the area is very rugged and irregular with generally steep slopes and many shoals and pinnacles. Reefs and ledges extending from shore appear throughout the survey. The bottom characteristics are mud and gravel. Evidences of silt are present in Johnson Cove and Ingraham Bay.

2. Control and Shoreline

The origin of control is adequately covered in Part "F" of the Descriptive Report.

The shoreline originates with unreviewed photogrammetric surveys T-10538 (1956) and T-11522 through T-11526 of 1954. The topography was applied to this survey from incomplete manuscripts, with the exception of T-11522 and T-11525 which are advanced manuscripts. There may be revision necessary to the present survey after field inspection and review of these photogrammetric surveys.

Rocks awash on the incomplete manuscript T-10538 (1956) in the area of lat. $54^{\circ}58.1$, long. $131^{\circ}58.5$ and southward to the cove differ considerably with the present survey observations. As this is in an area of kelp and is generally foul, only rocks awash which did not conflict with the present survey information were carried forward from the incomplete manuscript.

The rock awash on incomplete manuscript T-11526 in lat. $54^{\circ}58.32'$, long. $132^{\circ}01.4'$ was specifically investigated on the present survey and is considered to be nonexistent.

3. Hydrography

Depths at crossings are in good agreement.

In general the usual depth curves in depths of 5 fathoms and greater are well defined. In less than 5 fathoms the usual inshore curves were not always completely developed because of slopes and foul inshore areas.

The foul area located at lat. $55^{\circ}57.80'$, long. $132^{\circ}10.25'$ on the advance manuscript of T-11525 has been discredited by the present survey.

The investigation of least depths and delineation of bottom configuration is considered very well done.

4. Condition of the Survey

Supplementary notes were unusually ample and helpful in providing detailed information on features observed during the survey. The field plotting, sounding records, and Descriptive Report are adequate and conform to the requirements of the hydrographic manual, except for the following:

A. Nine topographic signals indicated in red on the boat sheet had to be moved by the smooth plotter in order to obtain agreement in either control of the sounding lines or at crossings. Most of these signals were moved to the positions determined by check fixes taken at the signals and subsequently shown in blue on the smooth sheet.

B. Names of some signals on the smooth sheet were too far removed from the signal location. It was therefore necessary that the verifier draw leaders in order to facilitate using the proper signals while protracting.

C. Although a tabulation of phase corrections was found among the field records received in the Rockville Office, no reference to these corrections was indicated in the Descriptive Report as required by the hydrographic manual.

5. Junctions

Adequate junctions were made with H-8385 (1957) on the north, H-8382 (1957) on the east, H-8383 (1957) on the south, and H-8440 (1958) on the west.

6. Comparison With Prior Surveys

A. H-1649B (1885) 1:80,000

This small-scale reconnaissance survey contains nothing of value for comparative purposes and is superseded by the present survey in the common area.

B. H-4195 (1921) 1:20,000

The prior survey covers the present survey in the Polk Island-Ingraham Bay area. Soundings on the present survey are generally 2-3 fathoms shoaler than on the prior survey in the Bay areas of reasonably flat bottom where a realistic comparison could be made. This may be attributed to sedimentation in these localities. The present survey is more comprehensive and portrays the irregular bottom in much greater detail, as indicated by the numerous newly found shoals. All least depths from the prior survey were confirmed usually with lesser depths and slightly different positions with the following exceptions:

1. In lat. $54^{\circ}58.55'$, long. $131^{\circ}59.25'$ a 19 fathom sounding from H-4195, falls in present depths of 35 fathoms.

2. In lat. $55^{\circ}00.09'$, long. $131^{\circ}58.13'$ the 22 and 92 fathom soundings from H-4195 fall on a slope in present depths of 40-46 fathoms.

3. In the vicinity of lat. $54^{\circ}59.45'$, long. $131^{\circ}58.7'$ the $4\frac{1}{2}$ fathom soundings fall in present depths of 13-15 fathoms.

4. In lat. $54^{\circ}57.9'$, long. $131^{\circ}58.2'$ the 3- and 5-fathom depths fall in present depths of 10-12 fathoms. The fix at the start of the line is weak and does not conform to a recorded distance note. The soundings have no reliable positions and should be disregarded. *contributing the 3 and 5*

The above differences are considered to be due to an error on the prior survey. The prior depths are considered to be discredited by the development on the present survey and should be disregarded.

Some of the rocks on the prior survey, most of which originate with T-3280 (1912-21) and with general notes in H-4195 descriptive report, are unreliable insofar as elevation and actual location are concerned. Apparently the rock awash symbol was often used in a general manner to symbolize areas foul with kelp and/or rocks. The assumption is substantiated by the field examination made on the present survey. Areas in which rocks awash were shown on the prior survey were investigated at tides close to the chart datum. Some rocks were found to bare at MLLW, some were submerged 2-3 fathoms and others were non-existent. Some high water rocks (islets) on the prior surveys were found to be of lesser elevations and are shown on the present survey as rocks awash or reefs.

The rocks awash on the prior survey in the vicinity of lat. $54^{\circ}58.92'$, long. $131^{\circ}58.70'$ falls in present depths of 11-17 fathoms and are disproved by search and development at a minus tide.

5. The rocks transferred to H-4195 from T-3280 (1912-21) at lat. $54^{\circ}57.95'$, long. $131^{\circ}58.4'$ and lat. $54^{\circ}57.9'$, long. $131^{\circ}58.39'$ fall in present depths of $5\frac{1}{2}$ and $6\frac{1}{2}$ fathoms respectively and are discredited by the development on the present survey.

6. The rocks transferred to H-4195 (same source as above) at lat. $54^{\circ}58.6'$, long. $131^{\circ}59.89'$ and lat. $54^{\circ}58.56'$, long. $131^{\circ}59.88'$ fall in present depths of 6 and $9\frac{1}{2}$ fathoms respectively and are discredited by the development on the present survey.

7. The rock awash transferred to H-4195 (same source as above) at lat. $54^{\circ}59.78'$, long. $131^{\circ}58.75'$ is a bare islet according to the present survey information.

The present survey is adequate to supersede the prior survey within the common area.

7. Comparison With Chart 8086 (latest print date 9/20/65)

The charted hydrography originates with a full application of the present survey before verification and review. Only a few minor differences of about 1 to 2 ft. between charted and present survey depths were noted. Several charted rock awash symbols differ with the correct representation.

No revisions to the charted hydrography are considered necessary

8. Compliance With Project Instructions

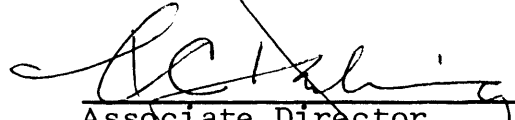
The survey adequately complies with Project Instructions.

9. Additional Field Work

This is an excellent basic survey and no additional field work is recommended.

Examined and Approved:


 Chief,
 Marine Chart Division


 Associate Director
 Hydrography and Oceanography

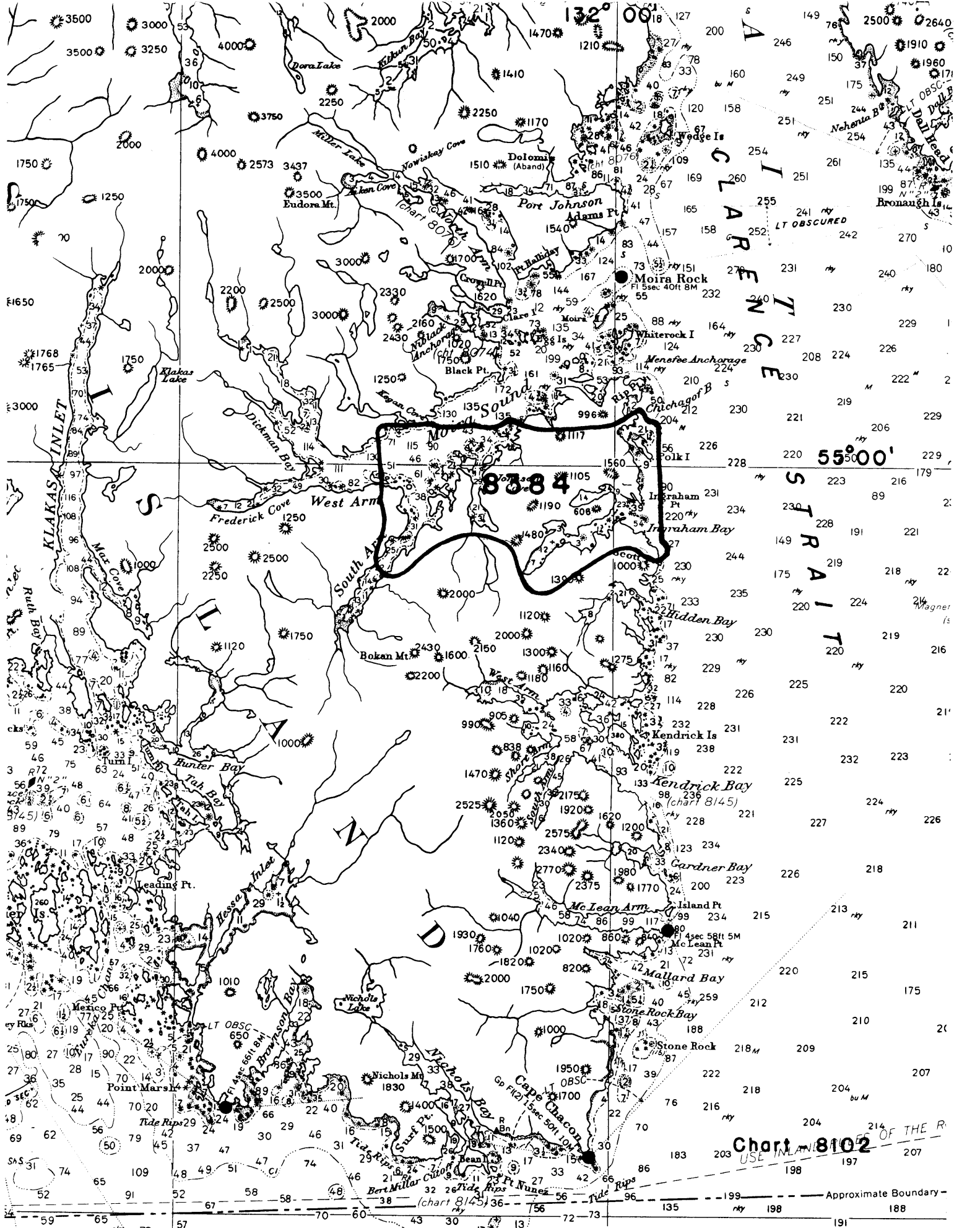


Chart 8102
USE INLANDS OF THE R

Approximate Boundary

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8384

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
1/10/61	8102	E.E. Thomas	<i>Partially applied</i> Before After Verification and Review, <i>not applied thru</i>
11 Mar 61	8002	<i>Geo. M. Gray</i>	<i>Large scale chrt 8086 (Pulins)</i> Before After Verification and Review <i>Completed</i> <i>thru 8102 draw # 14 (at this scale this is not fully appl)</i>
3-24-61	<i>New chrt</i> 8086	<i>M. Rogers</i>	<i>Fully omitted</i> Before After Verification and Review
10/9/80	17432	<i>Naitok</i>	<i>Full</i> Before After After Verification and Review, <i>Insp. Signature</i> <i>Dwg 6</i>
6/25/84	17420	<i>B. Frenschus</i>	<i>Full</i> Before After After Verification and Review <i>Dwg # 32</i>
			Before After Verification and Review
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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.