6497
6498

1618 JUL 22 AM 10 58

20 55E
22
80

Form 504
Rev. April 1935
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

~~Topographic~~
Hydrographic } Sheet No. H-6497
H-6498

State TEXAS

LOCALITY

~~WEST~~ GULF OF MEXICO

OFF PADRE ISLAND

1940

CHIEF OF PARTY

G. C. MATTISON

U. S. GOVERNMENT PRINTING OFFICE

6497
6498

Form 537
Ed. Dec., 1930

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.

Field No. 81

REGISTER NO. H-6497

State Texas

General locality West Gulf of Mexico

Locality Off Padre Island

Scale 1:80,000 Date of survey May 29; August 22, 1939

Vessel HYDROGRAPHER

Chief of Party G. C. Mattison

Surveyed by L. P. Raynor, E. R. McCarthy, E. B. Lewey, J. C. Tribble, C. W. Clark and J. W. Stirni

Protracted by E. R. McCarthy, J. C. Tribble, S. A. Fellner

Soundings penciled by M. J. Timmerman

Soundings in fathoms ~~feet~~ & 1/6

Plane of reference M. L. W.

Subdivision of wire dragged areas by

Inked by R. H. Carstens

Verified by R. H. Carstens

Instructions dated 2/17/37. Supplemental Instructions dated: 3/30/37; 2/23/38; 1/9/39.

Remarks:

U. S. GOVERNMENT PRINTING OFFICE, 1933

Form 537
Ed. Dec., 1930

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.

Field No. 83

REGISTER NO. H-6498

State Texas

General locality West Gulf of Mexico

Locality Off Padre Island

Scale 1:80,000 Date of survey October 16, 1938 August 5, 1939

Vessel HYDROGRAPHER

Chief of Party G. C. Mattison

Surveyed by L. P. Raynor, E. R. McCarthy, E. B. Lowey, J. C. Tribble, C. W. Clark and J. W. Stirni

Protracted by E. R. McCarthy, J. C. Tribble and S. A. Fellner

Soundings penciled by S. A. Fellner

Soundings in fathoms ~~feet~~

Plane of reference M.L.W.

Subdivision of wire dragged areas by

Inked by J. W. Vonasek

Verified by "

Instructions dated 2/17/37. Supplemental Instructions dated: 5/30/37; 2/23/38; 1/9/39

Remarks:

U. S. GOVERNMENT PRINTING OFFICE. 1932

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEETS NOS. H-6497 AND H-6498 (1938-39)

PROJECT NO. H. T. 214

DATE OF INSTRUCTIONS.

Original instructions were dated February 17, 1937. Supplemental instructions were dated March 30, 1937, February 23, 1938, and January 9, 1939.

GENERAL STATEMENT.

These sheets cover offshore surveys from approximately the 20 fathom curve to the 100 fathom curve. The general locality is shown on the attached buoy control layout.

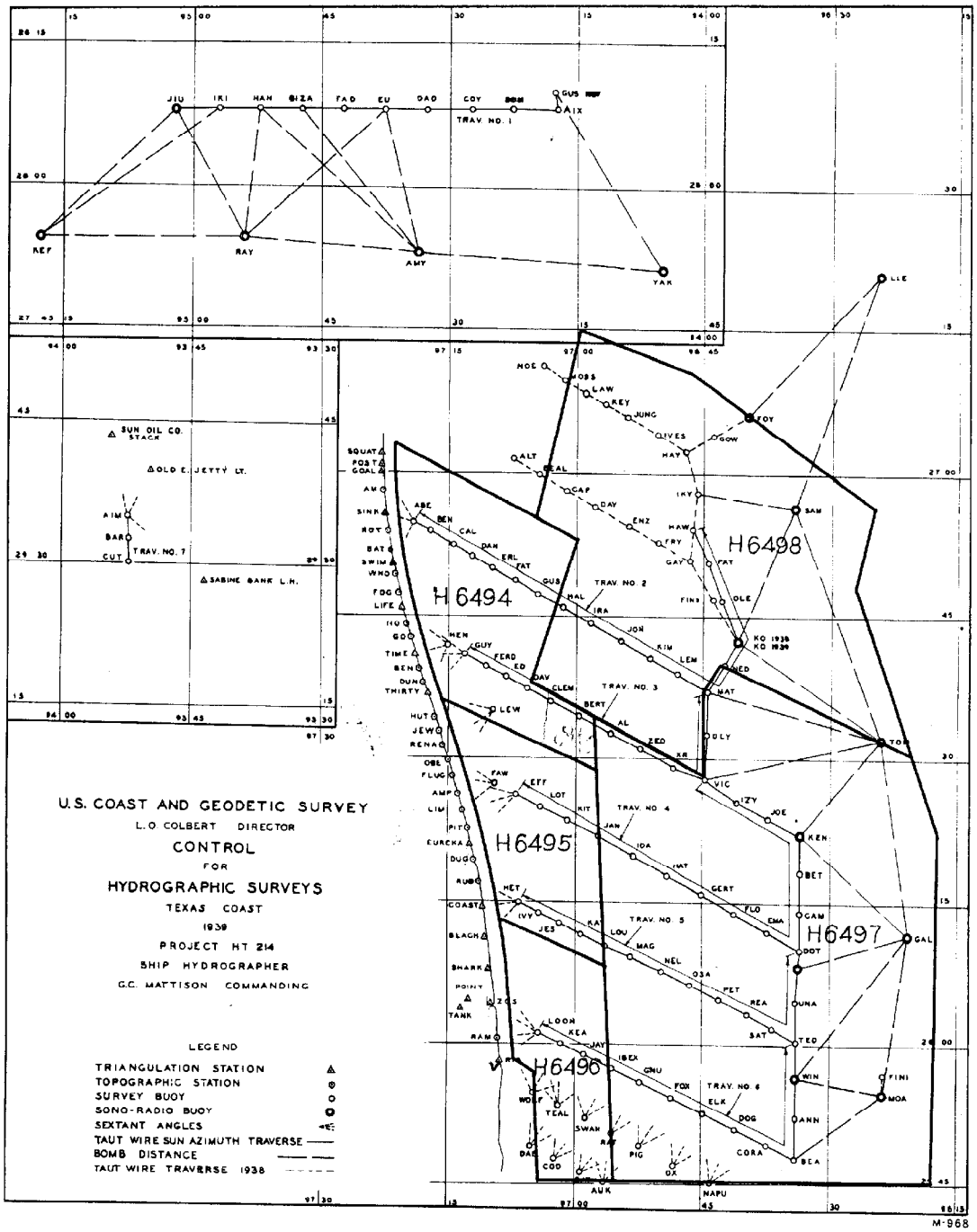
SURVEY METHODS.

1. Control.

The control for the hydrography on these sheets consists of lines of buoys located by taut wire and sun azimuth traverse, and by R. A. R. buoys located by bomb distances. Buoys Napu, Ox, Pig, Rat and Swan were located by sextant angles. See volume #11, K day, sheet 6497 for location of buoys Napu, Ox and Pig. See volume #4, page #27, sheet #6496 for location of buoys Rat and Swan. For complete report on control see "Location of Hydrographic Signals, Ship HYDROGRAPHER, 1939". A list of all buoys used on these sheets with their geographic positions and method of location is attached to this report.

Lib. No. S-1782"

Sounding lines were controlled by visual three point fixes as far offshore as visibility permitted, in general to a point between the 35 and 45 fathom curves. Beyond the limit of visibility,


U.S. COAST AND GEODETIC SURVEY
L.O. COLBERT DIRECTOR
CONTROL
FOR
HYDROGRAPHIC SURVEYS
TEXAS COAST
1938
PROJECT HT 214
SHIP HYDROGRAPHER
G.C. MATTISON COMMANDING
LEGEND
TRIANGULATION STATION
TOPOGRAPHIC STATION
SURVEY BUOY
SONO-RADIO BUOY
SEXTANT ANGLES
TAUT WIRE SUN AZIMUTH TRAVERSE
BOMB DISTANCE
TAUT WIRE TRAVERSE 1938
H6494
H6495
H6496
H6497
H6498
TRAV. NO. 1
TRAV. NO. 2
TRAV. NO. 3
TRAV. NO. 4
TRAV. NO. 5
TRAV. NO. 6
TRAV. NO. 7
SUN OIL CO. STACK
OLD E. JETTY LT.
SABINE BANK L.H.
M-968

R. A. R. control was used, four sono buoys being employed on sheet #6498 and six sono buoys on sheet #6497.

2. Smooth Plotting.

Most visual three point fixes were plotted by inexperienced draftsmen in the Pensacola processing office. All the R. A. R. and most single angle and bearing fixes were plotted by officers assigned to the Pensacola processing office.

The method of plotting the R. A. R. positions was as follows: Using an overlay tracing at all times, the bomb arcs were first plotted, then bearings on visible buoys. Next a log factor was approximated by scaling distances between approximate positions of ends of line. Using this computed log factor, a dead reckoning line was then plotted on a separate piece of tracing paper. By shifting the dead reckoning line along the fixed bomb arcs, the accepted bomb arcs were determined, positions adjusted to fit these arcs then punched through on to the smooth sheet. This method was slow and tedious but necessary to obtain accurate results with the pattern of lines run. Besides the numerous cross lines there were several dead end lines, or lines beginning on these sheets and continuing on the P. D. R. offshore sheet #6499. After the soundings were plotted it was found that relatively few lines required further adjusting. On sheet #6498 four lines required adjustment as follows:

1. Latitude 26° - 55', Longitude 96° - 30', positions 42-7 Y shifted northeast for crossing.

2. Latitude 26° - 51', Longitude 96° - 30', positions 42 Z to 7 Z shifted southwest for crossing. The above are dead end lines.

3. Latitude 26° - 43', Longitude 96° - 25', positions 84-9 AA shifted northeast for crossing.

4. Latitude 26° - 32', Longitude 96° - 21', positions 1-11 LL shifted west for crossing. The discrepancy of bomb returns on this line are probably due to the scope of the anchor cable at buoy "Tom".

On sheet 6497 three lines required adjustment as follows:

1. Latitude 26° - 27', Longitude 96° - 20', positions 1-3 U were shifted northeast for crossing.

2. Latitude 26° - 32.5', Longitude 96° - 30', positions 62-5 P were shifted north for crossing.

3. Latitude 25° - 59', Longitude 96° - 23', positions 68-77 K-1 were shifted west northwest for crossing.

All three of these lines were dead-end lines. Most of the dead-end lines on these sheets were plotted after the soundings had been plotted in order to reduce the amount of expected readjustment.

As each line controlled by R. A. R. was plotted approximate notes were made in the record books indicating which returns were accepted, given weight in determining the position or rejected. Check marks (v) indicate that the returns passed through or very close to the accepted positions while question marks indicate some weight was given the return and is inked on the sheet. Rejected (R) values were considered as water noises or worthless due to static and were not inked on the sheet.

The bomb distances were plotted in seconds of time directly from the buoy locations and at the time of plotting no distortion was found in the sheets. No distance arcs were drawn on the sheets at the time of plotting. The distance arcs on sheet #6497 (H-6497) were later drawn in meters rather than seconds ~~through error~~. No distance arcs were drawn on sheet #6498 (H-6498) due to distortion of the sheet.

Past reports from this vessel show that bomb distances appear to be affected by the size of the bomb. No indication of this difference was noted during the past season. Cases being noted where a two ounce bottle gave the same results as a six inch iron sphere over distances as great as 46 seconds. However, the matter of erroneous returns over irregular bottom continues to be a problem. As a whole, R. A. R. was much more satisfactory this season than during the past. More returns were received in the vicinity of the 100 fathom curve but require excessively large bombs for such short distances.

3. Velocity.

A velocity of 1525 meters per second was used in locating the sono buoys on these sheets and the same velocity used in plotting all R. A. R. positions. For complete report on velocities see "Report on Temperature and Salinity and Velocities, Ship HYDROGRAPHER, Project 214, 1939". The velocity used is the average theoretical velocity for the area covered, also bombed distances between taut wire traverse buoys check the velocity used. It has been ascertained that any probable error in this velocity is considerably less than the scope of the anchor cable at the sono buoys.

4. Gyro Compass Bearings.

A daily record of gyro compass corrections was kept throughout the season. On those days when corrections are to be applied, the amount and direction will be found noted in the sounding records.

In case velocities are later changed, GPM.

As has been stressed before, gyro bearing are apt to be in error as much as a degree for any one bearing and even as much as two or three degrees just after completing a turn.

5. Soundings.

The soundings on sheet #6498 for letter days A through P, volumes 1, 2 and 3, were taken with the Dorsey No. 2 fathometer. This work was done during the latter part of the 1938 season before the Dorsey No. 3 fathometer had been installed. The remainder of the soundings on this sheet (except for several lines of machine wire soundings) and all the soundings on sheet #6497 were taken with the Dorsey No. 3 fathometer.

6. Fathometer Corrections.

Except for that portion of the work done during the season of 1938, a copy of fathometer corrections is attached to this report. For analysis of fathometer corrections see "Fathometer Corrections, Gulf Coast of Texas, Ship HYDROGRAPHER, Project H. T. 214, Season 1938" and "Report on Temperature and Salinities, Fathometer Corrections and Velocities, Ship HYDROGRAPHER, Project No. H. T. 214, 1939".

7. Discrepancies.

No discrepancies were found on these sheets after readjustment of several R. A. R. lines had been made. Discrepancies in gyro bearings and bomb distances are not considered as being discrepancies in the results of the survey.

8. Dangers, Channels and Anchorages.

These sheets cover an offshore area with no dangers, channels, or protected anchorages.

9. Shoals.

Sheet #6497, Latitude 26° - 46.2', Longitude 96° - 33'. This shoal was developed thoroughly and plotted on sub-plan, scale 1:40,000. Least depth found was 26 and 1/6 fathoms, surrounded by depths of 40 fathoms. Latitude 25° - 45', Longitude 96° - 27.5' to Latitude 25° - 54', Longitude 96° - 24'. The development in this area reveals a marked ridge rather than isolated shoals.

No other important shoals were found on this sheet, however, several areas are outstanding for slight but definite ridges.

Sheet #6498, Latitude 27° - 02.5', Longitude 96° - 42.5'. Least depth found was 35-1/2 fathoms surrounded by 45 fathoms. Latitude 26° - 52.5', Longitude 96° - 46'. Least depth found was 33 3/5 fathoms surrounded by 40 fathoms. Latitude 26° - 46', Longitude

96° - 42.5'. Least depth found was 39 fathoms, surrounded by 44 fathoms.

All of the above shoals are established fishing areas and should be made prominent on the chart.

10. Comparison With Previous Surveys.

It is recommended that the few soundings from previous surveys in this area be disregarded. These soundings are generally shoaler than was found during the present comprehensive survey. Probably these earlier soundings were far out in location.

STATISTICS.

Sheet #6498	-	Statute Miles Sounding Lines:	1,305.5
		Soundings:	13,414
		Positions:	1,200
		Area, Square Statute Miles:	1,387
Sheet #6497	-	Statute Miles Sounding Lines:	2,545.3
		Soundings:	27,172
		Positions:	2,281
		Area, Square Statute Miles:	1,882

John C. Tribble Jr.

John C. Tribble, Jr.,
Jr. H. & G. Engineer.

Forwarded:

O. C. Mattison

O. C. Mattison,
H. & G. Engineer,
Commanding HYDROGRAPHER.

JCT/L

MEMORANDUM BY CHIEF of PARTY

The sheets and records have been examined and are approved.

All field work on these sheets was done under the immediate supervision of the chief of party. The office work on smooth sheets was done in the Pensacola processing office or on board ship under the supervision of officers assigned to that duty.

It is recommended that all previous charted surveys be superseded by these sheets. The charted 25-fathom sounding in latitude 26° 06½', longitude 96° 44½' was searched for, but not found on H-6497. Fishermen reported a 27-fathom spot further north, and said that the 25-fathom spot did not exist where charted. The reported 27-fathom shoal was also searched for. Apparently the fishermen had these spots confused with shoals further south, as we never saw any fishermen anchored on any shoals other than those we found.

No 25 fm. spot is shown here on current charts.

All shoal indications were developed, and considerable time was spent on sheet 6497 in splitting lines and developing the somewhat irregular bottom.

G. C. Mattison

G. C. Mattison, Chief of Party,
U. S. Coast & Geodetic Survey,
Commanding HYDROGRAPHER.

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. ..H6497

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

Number of positions on sheet	2281.
Number of positions checked	19.
Number of positions revised	13.
Number of soundings recorded	27172
Number of soundings revised	3.
Number of soundings erroneously spaced	0
Number of signals erroneously plotted or transferred	0

Date: Dec 6, 1940

Verification by R.H. Carstens Time: 114 hrs

Review by Harold W. Murray Time: 8 hrs.

2629

HYDROGRAPHIC SURVEY NO. H6497

Smooth Sheet One

Boat Sheet One

Records; Sounding 12 Vols., Wire Drag ___ Vols., Bomb 2 Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes

Landmarks for Charts (Form 567) _____

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) _____

Special Chart for Lighthouse Service (Circular Nov.30, 1933) _____

Hydrography: Total Days _____; Last Date _____

Remarks _____

2776

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. H6498

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

Number of positions on sheet	1200
Number of positions checked	13
Number of positions revised	1
Number of soundings recorded	13414
Number of soundings revised	17
Number of soundings erroneously spaced	15
Number of signals erroneously plotted or transferred	0

Date: Nov. 30, 1940

Verification by J.W. Vonasek Time: 97½ hrs.

Review by Harold W. Murray Time: 5¾ "

2629

HYDROGRAPHIC SURVEY NO. H6498

Smooth Sheet One

Boat Sheet One

Records; Sounding 7 Vols., Wire Drag ___ Vols., Bomb 1 Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes

Landmarks for Charts (Form 567) None

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) None

Special Chart for Lighthouse Service
(Circular Nov.30, 1933)

Hydrography: Total Days _____; Last Date

Remarks

3776

	Remarks	Decisions
1	For title	
2	" "	
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
M 234		

GEOGRAPHIC NAMES

Survey No. H6497

Name on Survey	On Chart No. A,	On previous survey No. B,	On U. S. quadrangle Maps C,	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Padre I										1
Gulf of Mexico										2
										3
										4
										5
		Names underlined in red approved by L. A. Heck on 10/19/40								6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234 RR

	Remarks	Decisions
1	For title	
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
234		

GEOGRAPHIC NAMES

Survey No. H6498

Name on Survey	On Chart No. A,	On previous survey No. B,	On U. S. quadrangle Maps C,	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Padre I,										1
Gulf of Mexico										2
										3
										4
		names underlined in red approved								5
		by L. Heck on 10/17/40								6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

BUOYS

	BUOY NAME	Latitude			Longitude			Method of Location
		o	'	M	o	'	M	
	ABE	26	54	1686	97	19	354	Sextant angles - graphic
	AIM	26	34	1262	96	52	508	" " computed
	AIX	28	08	120	94	17	899	T.W. Traverse No. 1
*	AL	26	32	1244	96	55	1569	" " No. 3
*	ALT	27	01	756	97	07	674	" " 1938
	AMY	27	—	—	94	—	—	Bomb distance - graphic
*	ANN	25	52	25	96	33	1597	T. W. Traverse No. 6
	AUK	25	45	350	96	56	520	Sextant angles - graphic
	BAR	29	32	1027	93	52	397	T. W. Traverse No. 7
	BAT	25	46	328	96	59	256	Sextant angles - graphic
*	BEA	25	47	1382	96	34	46	T. W. Traverse No. 6
*	BEAL	26	59	1583	97	04	464	" " 1938
	BEN	26	53	1476	97	17	133	" " No. 2
*	BERT	26	34	876	96	59	800	" " No. 3
*	BET	26	18	148	96	33	801	" " No. 4
	BAM	28	08	209	94	22	791	" " No. 1
	CAL	26	52	1049	97	14	1194	" " No. 2
*	CAM	26	13	1498	96	33	865	" " No. 4
*	CAP (p)	26	58	504	97	01	139	" " 1938
*	CLEM	26	36	175	97	02	1374	" " No. 3
	COD	25	47	1318	97	02	584	Sextant angles - graphic
*	CORA	25	49	71	96	37	865	T. W. Traverse No. 6
	COY	28	08	181	94	27	659	" " No. 1
	CUT	29	30	309	93	52	310	" " No. 7
	DAB	25	49	16	97	06	195	Sextant angles - graphic
	DAD	28	08	200	94	32	561	T. W. Traverse No. 1
	DAN	26	51	617	97	12	486	" " No. 2
*	DAV	26	37	842	97	06	1065	" " No. 3
*	DAY	26	56	1171	96	57	1500	" " 1938
*	DOC	25	50	1140	96	41	453	" " No. 6
*	DOT	26	09	1552	96	33	959	" " No. 4
	ED	26	38	1315	97	06	394	" " No. 3
	EFF	26	26	524	97	06	1480	Sextant angles - graphic
*	ELK	26	52	587	96	44	1631	T. W. Traverse No. 6
*	EMA	26	12	64	96	37	379	" " No. 4
*	ENZ	26	54	1290	96	54	188	" " 1938
	ERL	26	50	79	97	09	1172	" " No. 2
	EU	28	08	140	94	37	323	" " No. 1
	FAD	28	08	30	94	42	162	" " No. 1
	FAT	26	46	1368	97	07	155	" " No. 2
	FAW	26	27	766	97	09	694	Sextant angles - graphic
	FERD	26	39	1507	97	10	926	T. W. Traverse No. 3
*	FINI	26	46	1264	96	43	1094	" " 1938
*	FINI	Located from buoy "GAL"						Bomb distances, gyro bearing, graphic
*	FLO	26	13	1769	96	41	229	T. W. Traverse No. 4
*	FOX	25	54	250	96	46	1001	" " No. 6
*	FOY	27	08	1402	96	39	773	" " 1938
*	FRY	26	52	1631	96	50	960	" " 1938

BUOYS

	BUOY NAME	Latitude			Longitude			Method of Location
		°	'	M	°	'	M	
*	MOA	25	54	662	96	25	1276	Bomb distance - graphic
*	MOSS	27	09	1786	97	01	1317	T. W. Traverse 1958
*	NAPU	25	—	—	96	—	—	Sextant angles - graphic
*	NED	26	40	158	96	42	493	T. W. Traverse No. 2
*	NEL	26	07	1187	96	49	1418	" " No. 5
*	NOE	27	11	386	97	04	140	" " 1958
*	OLE	26	46	1217	96	42	1052	" " No. 2
*	OSA	26	06	276	96	46	623	" " No. 5
*	OX	25	46	1422	96	48	289	Sextant angles - graphic
*	PAT	26	50	1116	96	44	690	T. W. Traverse No. 2
*	PET	26	04	1206	96	43	55	" " No. 5
*	PIG	25	46	976	96	52	26	Sextant angles - graphic
*	RAT	25	50	480	96	55	751	" " "
	RAY	27	—	—	94	—	—	Bomb distances - graphic
*	REA	26	05	271	96	39	1362	T. W. Traverse No.5
*	SAM	26	56	522	96	34	455	Bomb distances - graphic
*	SAT	26	01	1136	96	56	1378	T. W. Traverse No. 5
*	SWAN	25	51	1594	96	58	1220	Sextant angles - graphic
	TEAL	25	53	442	97	01	1511	" " "
*	TED	26	00	269	96	35	1490	T. W. Traverse No. 5
*	TOM	26	31	1746	96	24	61	Bomb distances - graphic
*	ULY	26	52	779	96	44	1048	T. W. Traverse No. 3
*	UNA	26	04	740	96	33	1577	" " No. 5
*	VI	26	06	118	96	53	1208	" " No. 5
*	VIC	26	27	1299	96	44	1184	" " No. 3
*	WIN	25	56	291	96	53	1549	" " No. 6
	WOLF	25	54	1104	97	04	1320	Sextant angles - graphic
*	XR	26	28	1840	96	48	709	T. W. Traverse No. 3
	YAK	27	51	1200	94	04	1594	Bomb distance - graphic
*	ZED	26	30	1486	96	52	536	T. W. Traverse No. 3

* Denotes buoys used on these sheets.

BUOYS

	BUOY NAME	Latitude			longitude			Method of Location
		o	'	M	o	'	M	
*	GAL	26	10	1064	96	21	62	Bomb distance - graphic
*	GAY	26	50	1543	96	46	1038	T. W. Traverse 1938
*	GERT	26	15	1582	96	45	90	" " No. 4
	GIZA	28	07	1606	94	47	110	" " No. 1
*	GNU	25	55	1420	96	52	386	" " No. 6
*	GOW	27	03	1779	96	43	1142	" " 1938
*	GUS	28	09	1674	94	17	1256	" " 1937
	GUS	26	47	795	97	04	604	" " No. 2
	GUY	26	40	1796	97	12	1476	Sextant angles - graphic
*	HAL	26	46	9	97	01	870	T. W. Traverse No. 2
	HAN	28	07	1718	94	52	111	" " No. 1
*	HAT	26	17	1542	96	49	142	" " No. 4
*	HAW	26	54	336	96	46	387	" " 1938
*	HAY	27	02	787	96	47	132	" " 1938
	HEN	26	42	204	97	15	412	Sextant angles - graphic
	HET	26	14	1816	97	06	1020	" " "
*	IBEX	25	57	655	96	56	995	T. W. Traverse No. 6
*	IDA	26	19	1848	96	53	205	" " No. 4
	IKI	28	07	1609	94	57	93	" " No. 1
*	IKY	26	57	1468	96	45	1344	" " 1938
*	IRA	26	44	730	96	58	523	" " No. 2
*	IVES	27	04	1000	96	50	1382	" " 1938
	IVY	26	15	1507	97	04	412	" " No. 5
*	IZY	26	05	1004	96	41	48	" " No. 4
*	JAN	26	21	1500	96	57	291	" " No. 4
*	JAY	25	58	1402	96	59	1215	" " No. 6
	JES	26	12	1405	97	01	1323	" " No. 5
	JIU	28	07	1606	95	01	1515	" " No. 1
*	JOE	26	23	1275	96	37	239	" " No. 4
*	JON	26	42	987	96	54	1395	" " No. 2
*	JUNG	27	05	1775	96	53	1157	" " 1938
*	KAT	26	11	1212	96	59	220	" " No. 5
	KEA	26	00	38	97	01	1072	" " No. 6
	KEF	27	—	—	95	—	—	Bomb distance & graphic
*	KEN	26	22	45	96	33	366	T. W. Traverse No. 4
*	KEY	27	07	524	96	56	581	" " 1938
*	KIM	26	40	1313	96	51	660	" " No. 2
*	KIT	26	23	953	97	00	1367	" " No. 4
*	KO	26	42	860	96	40	1081	" " 1938
*	KO	26	42	896	96	40	1001	" " No. 2
*	LAW	27	08	1108	96	58	1577	" " 1938
*	LEM	26	38	1790	96	47	1540	" " No. 2
	LEW	26	35	994	97	09	276	Sextant angles - graphic
	LIE	27	—	—	96	—	—	Bomb distance - soundings graphic
	LOON	26	01	262	97	04	456	Sextant angles - graphic
	LOT	26	24	1743	97	03	1506	T. W. Traverse No. 4
*	LOU	26	10	771	96	56	799	" " No. 5
*	MAG	26	09	307	96	53	884	" " No. 5
*	MAT	26	37	231	96	44	1045	" " No. 2

TIDE REDUCERS

A standard automatic tide gage (153) was maintained at Brazos Santiago until July 12, 1939, at which time the gage was moved to the Mississippi delta working grounds. When records from this gage were available, reducers were scaled directly from the marigrams without time or range correction. See Director's letter No. 30-FLM, dated June 28, 1939. For all other tide reducers, including the 1938 work on sheet #6498, the Galveston, Texas standard gage was used. Hourly heights were secured from the Washington Office. In order that these tide reducers be consistent with the reducers of the 1938 season, it was assumed that the tide occurred one hour earlier and had a range 50% greater than at Galveston. See Director's letter No. 30-MoC, dated October 20, 1938.

All tide curves used in obtaining the reducers for these sheets were sent to the Washington Office by registered mail on May 17, 1940.

Tide station at Brazos Santiago, Texas, Latitude 26° - 04' N, Longitude 97° - 08' W. Mean low water on staff 1.6 feet. (Director's letter No. 30-FLM, dated June 28, 1939.)

*Highest tide observed.

*Lowest tide observed.

*Values to be supplied by Division of Tides and Currents.

Tide station at Galveston, Texas, Latitude 29° - 19' N, Longitude 94° - 48' W. Mean low water on staff 3.1 feet. (Director's letter No. 30-FLM, dated January 25, 1940).

*Highest tide observed.

*Lowest tide observed.

*Values to be supplied by the Division of Tides and Currents.

TEMPERATURE AND SAILINTY CORRECTIONS

Corrections to be applied in feet and tenths up to depth noted opposite (Depths in Fm's and feet. All corrections are plus.)

Corr. in feet	Apr.24 May 4 Trip 1	May 8 May 18 Trip 2	May 22 June 2 Trip 3	June 6 June 16 Trip 4	June 20 July 1 Trip 5	July 6 July 16 Trip 6	July 18 Aug. 11 Trips 7 & 8	Aug. 16 Aug. 26 Trip 9
1.2	16-1	13-1	10-3	10-2	10-2	11-4	11-5	12-0
1.3	17-4	14-1	11-2	11-0	11-0	12-1	12-4	13-0
1.4	19-1	15-1	12-1	11-5	11-4	13-1	13-4	14-0
1.5	20-4	16-0	12-5	12-3	12-2	14-0	14-5	15-0
1.6	22-0	17-0	13-2	13-1	13-1	15-0	15-5	16-0
1.7	23-2	17-5	14-1	14-0	14-0	16-0	16-5	16-5
1.8	24-4	18-5	15-0	14-5	14-4	16-5	17-5	17-5
1.9	26-0	19-5	15-5	15-4	15-3	17-4	18-5	18-5
2.0	27-4	20-5	16-4	16-3	16-1	18-4	19-5	19-5
2.1	29-0	21-4	17-2	17-2	17-1	19-4	20-5	20-4
2.2	30-1	22-4	18-3	18-2	18-0	20-3	21-5	21-4
2.3	31-2	23-3	19-2	19-2	18-4	21-3	23-0	22-4
2.4			20-1	20-2	19-4	22-3	24-0	23-4
2.5		28-0	21-0	21-3	20-3	25-2	27-1	24-4
2.6			21-4	22-3	21-2			25-4
2.7			22-3	23-2	22-1	27-1	29-3	26-4
2.8			23-3	24-2	23-1			27-4
2.9			24-3		24-1			28-4
3.0		32-5	27-3	31-5	29-2	29-2	32-3	31-0

For corrections over 3 feet use the following values

3.5	38-0	31-4	33-0
4.0	43-0	36-3	34-0
4.5	48-2	41-5	
5.0	56-3	50-4	35-0
6.0	68-5	65-3 *	42-0 x
7.0	84-0	84-0	51-0
8.0	102-3	110-0	60-0
9.0	124-0	142-0	76-0
10.0	157-0	200-0	101-0
11.0	200-0		140-0
12.0			200-0

* Use same values for trip 4 on sheet No. 6498

x Use these values for trips 4 through 9 for sheet No. 6497

INDEX, DRAFT and SETTLEMENT CORREXRIONS

SHEET # ~~81~~ H-6497

Date	Day	I ft.	D ft.	S ft.	I/D/S ft.
May 29	A	-2.1	+0.5	+0.8	-0.8
" 31	B	"	0.3	"	-1.0
June 8	C	"	0.4	"	-0.9
" 9	D	"	0.4	"	-0.9
" 10	E	"	0.3	"	-1.0
" 11	F	"	0.2	"	-1.1
" 12	G	"	0.2	"	-1.1
" 15	H	"	-0.1	"	-1.4
" 21	J	"	+0.7	"	-0.6
" 22	K	"	0.6	"	-0.7
" 24	L	"	0.5	"	-0.8
" 25	M	"	0.4	"	-0.9
" 26	N	"	0.3	"	-1.0
" 28	P	"	0.2	"	-1.1
" 29	Q	"	0.1	"	-1.2
July 8	R	"	0.4	"	-0.9
" 13	S	"	0.1	"	-1.2
" 14	T	"	0.0	"	-1.3
" 21	U	"	0.7	"	-0.6
" 22	V	"	0.6	"	-0.7
" 23	W	"	0.5	"	-0.8
" 24	X	"	0.4	"	-0.9
" 25	Y	"	0.3	"	-1.0
" 26	Z	"	0.3	"	-1.0
" 27	A'	"	0.2	"	-1.1
" 28	B'	"	0.1	"	-1.2
Aug. 4	C'	"	0.5	"	-0.8
" 5	D'	"	0.4	"	-0.9
" 6	E'	"	0.3	"	-1.0
" 7	F'	"	0.2	"	-1.1
" 8	G'	"	0.1	"	-1.2
" 9	H'	"	0.0	"	-1.3
" 10	J'	"	-0.2	"	-1.5
" 11	K'	"	-0.3	"	-1.6
" 18	L'	"	+0.7	"	-0.6
" 19	M'	"	0.5	"	-0.8
" 20	N'	"	0.4	"	-0.9
" 21	P'	"	0.3	"	-1.0
" 22	Q'	"	0.2	"	-1.1

After transceiver used:

D_1 (Dorsey fathometer #1)used through May 8, 1939

D_3 (Dorsey fathometer #3)used after May 8,1939

S Values for settling		
0.8	(full speed)	120 rpm
0.6		100 "
0.4		80 "
0.2		60 "
0.0		40 "

INDEX, DRAFT and SETTLEMENT CORRECTIONS

SHEET # ~~85~~ H-C498

Date	Day	I fm.	I ft.	D ft.	S ft.	I/D/S fm.	I/D/S ft.
* Apr. 27	Q	+ 1	4.2	+0.7	+0.8	+ 1.	5.7
" 29	R	+ 1	4.2	0.5	0.8	+ 1	5.5
" 30	S	+ 1	4.2	0.5	0.8	+ 1	5.5
May 3	T	+ 1	4.2	0.3	0.8	+ 1	5.3
" 9	U		- 2.1	0.5	0.8		-0.8
" 10	V		- 2.1	0.4	0.8		-0.9
" 11	W		- 2.1	0.3	0.8		-1.0
" 12	X		- 2.1	0.1	0.8		-1.2
" 24	Y		- 2.1	0.8	0.8		-0.5
" 25	Z		- 2.1	0.8	0.8		-0.5
" 27	AA		- 2.1	0.6	0.8		-0.7
" 28	BB		- 2.1	0.5	0.8		-0.8
" 29	CC		- 2.1	0.5	0.8		-0.8
" 31	DD		- 2.1	0.3	0.8		-1.0
June 7	EE		- 2.1	0.5	0.8		-0.8
" 8	FF		- 2.1	0.4	0.8		-0.9
" 11	GG		- 2.1	0.2	0.8		-1.1
" 12	HH		- 2.1	0.2	0.8		-1.1
" 15	JJ		- 2.1	- 0.1	0.8		-1.4
" 29	KK		- 2.1	+ 0.1	0.8		-1.2
July 21	LL		- 2.1	0.7	0.8		-0.6
Aug. 5	MM		- 2.1	0.4	0.8		-0.9

After transceiver used

* D_1 Fathometer used through May 8,1939

D_3 Fathometer used after May 8,1939

D_1 initial corrected 2 fms

5/9/39 9:20 A.M.

D_1 Dorsey fathometer # 1

D_3 " " # 3

S

Values for settling

0.8 (full speed)	120 rpm
0.6	100 "
0.4	80 "
0.2	60 "
0.0	40 "

DEPARTMENT OF COMMERCE

OFFICE OF THE DIRECTOR — U. S. COAST AND GEODETIC SURVEY

Reference: 30 - FLM — WASHINGTON

June 28, 1939

To: The Commanding Officer,
U. S. C. & G. S. Ship HYDROGRAPHER,
Box 565,
Galveston, Texas.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Tide records.

With reference to your letter of June 20 forwarding tide records for Brazos Santiago and requesting instructions for the reduction of offshore soundings in this area, it is recommended that your tide observations for Brazos Santiago jetty be used for this purpose without time or range correction. Mean low water as determined from your observations corresponds to a reading of 1.6 feet on tide staff at Brazos Santiago jetty.

The portable gage records for this station are being returned to you for use in scaling tide reducers directly from the marigrams. It is believed that this method will be more practicable, as due to the confus ion of tide curves on some of the marigrams, satisfactory tabulation of hourly heights would be very difficult, if not impossible. This condition emphasizes the need of changing marigrams at least every two days in areas where the tide is small and erratic.

When the gage on the jetty is removed, records for the Coast Guard station can be used with a time correction of minus one-half hour, a comparison between simultaneous observations at the two stations showing the tide at the Coast Guard station to occur on the average one-half hour later than at the jetty. The difference in range between the two stations is small and can be disregarded. Mean low water corresponds to,a reading of 2.7 feet on staff at the Coast Guard station.

When it becomes necessary or convenient to remove the gages at Brazos Santiago, it appears that satisfactory results can be obtained by using observations at the Galveston primary station for reduction of offshore soundings. For this purpose, it can be considered that the tide offshore occurs one hour earlier than at the Galveston primary station. The difference in range can be disregarded. Hourly heights for Galveston for such periods as needed will be furnished upon request.

(Signed) J. H. Hawley,
Acting Director.

POST-OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

Refer to: 80-LEF

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

February 17, 1938

To: Commanding Officer,
U. S. Coast and Geodetic Survey,
Ship HYDROGRAPHER,
Galveston, Texas.

From: The Acting Director,
U. S. Coast and Geodetic Survey.

Subject: Plotting R.A.R. Sheets.

After carefully considering your 1936 practice in the plotting of R.A.R. sheets (that is, the omission of distance arcs and position intersection arcs), this office is of the opinion that certain distinct advantages accrue from showing such information on the final sheet.

You will, therefore, be guided by the following instructions relative to the plotting of R.A.R. smooth sheets.

1. Distance arcs shall be drawn with black pencil and shall not be inked. It will be necessary to use a fairly hard pencil for this purpose in order that excessive smudging will not take place while plotting the survey. The appropriate station names should be pencilled along the various arcs as frequently as needed for identification as well as the distances in meters or times in seconds, whichever the case may be.

2. The station symbols and names shall be inked; preferably using a different color for each station occurring on any one sheet. Where necessary to duplicate colors because of the large number of stations, stations given the same color should be selected with a view to eliminating confusion in so far as possible.

3. Position intersection arcs shall be inked in the color of their respective stations.

4. On your 1937 R.A.R. surveys which may have been smooth plotted without showing distance and intersection arcs, the preliminary aluminum mounted sheets should be retained until the surveys have been reviewed in this office.

(Signed) J. H. Hawley

Acting Director.

DEPARTMENT OF COMMERCE

OFFICE OF THE DIRECTOR — U. S. COAST AND GEODETIC SURVEY

WASHINGTON

30-MoC

October 20, 1938.

To: Commanding Officer,
U.S. C. & G. S. S. HYDROGRAPHER,
P. O. Box 565,
Galveston, Texas.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Tide Data, Texas.

Further reference is made to your letter of September 24, 1938, requesting data for the reduction of soundings off the coast of Texas.

In view of the fact that tide records could not be obtained by use of the fathometer and that no outside tide stations were successfully maintained except for short intervals, it will be necessary to rely on the records of the Aransas Pass station for tide reducers. Hourly heights for this station for the period April 24-August 2, 1938, have been tabulated in this office and are inclosed herewith. The tabulated heights are referred to the zero of the tide staff, which is 2.2 feet below mean low water.

For the hydrographic work of the previous season the tides offshore were assumed to occur one hour earlier and with a range 50% greater than the tides at our primary station in Galveston Harbor. Since the records show the tide at Aransas Pass to be practically the same as at the Galveston primary station, the same allowances for time and range can be assumed to apply to the Aransas Pass records in obtaining tide reducers for this season's work.

(s) L. O. Colbert,
Director.

COPY

COPY

FORM M-238

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
PHOTOSTAT OF

No. H H6497
H6498

received July 24, 1940
registered July 31, 1940
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
25			
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	T. B. Reed

✓ JBR

RAC
ARC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Ed. Feb. 1935

TIDE NOTE FOR HYDROGRAPHIC SHEET

August 8, 1940

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
12 volumes of sounding records for

HYDROGRAPHIC SHEET 6497

Locality Off Padre Island, Gulf of Mexico

Chief of Party: G. C. Mattison in 1939
Plane of reference is mean low water reading
1.6 ft. on tide staff at Brazos Santiago, North Jetty
6.1 ft. below B.M. 1

Height of mean high water above plane of reference is 1.1 feet

Note: Reducers were scaled directly from the marigrams for North Jetty when available. Other reducers were taken from the Galveston standard gage records. It was assumed that the tide occurred one hour earlier and had a range 50 per cent greater than at Galveston.

Condition of records satisfactory except as noted below:

Acting Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE

LAC
MRE.

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Ed. Feb. 1935

TIDE NOTE FOR HYDROGRAPHIC SHEET

August 8, 1940

Division of Hydrography and Topography:

✓ Division of Charts: Mr. H. R. Edmonston

Tide Reducers are approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 6498

Locality Off Padre Island, Gulf of Mexico

Chief of Party: G. C. Mattison in 1938, 1939
Plane of reference is mean low water reading
1.6 ft. on tide staff at Brazos Santiago, North Jetty
6.1 ft. below B.M. 1

Height of mean high water above plane of reference is 1.1 feet.
Note: Reducers were scaled directly from the marigrams for North Jetty when available. Other reducers were taken from the Galveston standard gage records. It was assumed that the tide occurred one hour earlier and had a range 50 per cent greater than at Galveston.

Condition of records satisfactory except as noted below:

Acting Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H 6498

Verified and Inked by J. W. Vonasek Date 11/30/40

1. The descriptive report was consulted and appropriate action taken. ✓

2. Soundings originating with the survey and mentioned in the descriptive report have been verified, including latitude and longitude. ✓

3. All references to survey sheets mentioned in the descriptive report include the registry number and year. ✓

4. Geographic names of hydrographic features are in slanting lettering and of topographic features in vertical lettering. ✓

5. All items effecting 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. ✓

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. ✓

M-996

15. The transfer of contemporary topographic information was carefully examined. ✓

16. All junctions were transferred. ✓

17. The notation "JOINS H " was added for all contemporary adjoining or overlapping sheets now registered. ✓

18. The depth curves have been drawn to include the significant depths. ✓

19. All triangulation stations and transfer of topographic and hydrographic signals were checked by the field party. ✓

20. Heights of rocks were checked against range of tide. ✓

21. Rocks transferred from topographic survey have a dotted curve where shown thereon. ✓

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 (~~see letter of October 20, 1934~~). ✓

25. Degree and minutes values and symbols have been checked. ✓

26. Source of shoreline and signals (When not given in report). ✓

27. Depth curves were satisfactory. ~~except as follows~~:

28. Sounding line crossings were satisfactory except as follows:
See note on pages 2 of descriptive report regarding adjustment of crossings.

29. Junctions with contemporary surveys were satisfactory except as follows:
Junction on the north with H6405 (1938) indicates that present soundings are about 3 ft. deeper than 1938 soundings except between positions 9-10 N (H6498, 1939) where the present soundings are about 3 ft. shoaler. accepted. Hurn

30. Condition of sounding records was satisfactory. ~~except as follows~~:

31. The protracting was satisfactory. ~~except as follows~~:

32. The field plotting of soundings was satisfactory. ~~except as follows~~:

33. Notes to reviewer:

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H-6497 (1937)

Verified and Inked by R. H. Carstens Date Dec 6, 1940

1. The descriptive report was consulted and appropriate action taken.

2. Soundings originating with the survey and mentioned in the descriptive report have been verified, including latitude and longitude.

3. All references to survey sheets mentioned in the descriptive report include the registry number and year.

4. Geographic names of hydrographic features are in slanting lettering and of topographic features in vertical lettering.

5. All items effecting 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.

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.

17. The notation "JOINS H " was added for all contemporary adjoining or overlapping sheets now registered.

18. The depth curves have been drawn to include the significant depths.

19. All triangulation stations and transfer of topographic and hydrographic signals were checked by the field party.

20. Heights of rocks were checked against range of tide.

21. Rocks transferred from topographic survey have a dotted curve where shown thereon.

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 (see letter of October 20, 1934).

25. Degree and minutes values and symbols have been checked.

26. Source of shoreline and signals (When not given in report).

Given in report

27. Depth curves were satisfactory ~~except as follows:~~

28. Sounding line crossings were satisfactory ~~except as follows:~~

29. Junctions with contemporary surveys were satisfactory ~~except as follows:~~

30. Condition of sounding records was satisfactory ~~except as follows~~:

31. The protracting was satisfactory ~~except as follows~~:

32. The field plotting of soundings was satisfactory ~~except as follows~~:

33. Notes to reviewer:

DIVISION OF CHARTS

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6497 (1939) FIELD NO. 81
Texas, West Gulf of Mexico, Off Padre Island
Surveyed May 29 - August 22, 1939
Scales 1:40,000 and 1:80,000
Instructions dated February 17 and March 30, 1937;
February 23, 1938 and January 9, 1939 (HYDROGRAPHER)

Soundings:
Fathometer

Control:
Three-point fixes on shore signals
RAR - Sono Radio Buoys

Chief of Party - G. C. Mattison.
Surveyed by - L. P. Raynor, E. R. McCarthy, E. B. Lewey, J. C. Tribble, C. W. Clark and J. W. Stirni.
Protracted by - E. R. McCarthy, J. C. Tribble and S. A. Fellner.
Soundings plotted by - M. J. Timmerman.
Verified and inked by - R. H. Carstens.
Reviewed by - Harold W. Murray - December 9, 1940.
Inspected by - H. R. Edmonston.

1. Shoreline and Signals.

   a. This is an offshore survey and no shoreline is shown.

   b. The origin of the control is given in the Descriptive Report, page 1.

2. Sounding Line Crossings.

   Agreement of sounding line crossings is very good. Such adjustments as were considered necessary in smooth plotting are discussed in the Descriptive Report, pages 2 and 3.

3. Junctions with Contemporary Surveys.

   a. The junctions on the north with H-6498 (1938-39) and on the west with H-6494 (1939), H-6495 (1939) and H-6496 (1939) are satisfactory.

   b. The junction on the east with H-6499a (1939) will be considered in the review of that survey.

   c. The southern limit of the present survey represents the southern limit of the present project and also that of charts 1288 and 1117.

4. Comparison with Prior Surveys.

a. H-1485a (1881) and H-1485b (1881); scale 1:40,000.

A fringe of vertical cast soundings from these sparsely covered surveys falls just within the western limits of the present survey. General agreement of depths is within 1 fathom. The more detailed development on the present survey supersedes these soundings; the bottom characteristics, however, may be used to supplement the present survey.

b. H-1350 (1875-77) and H-1352 (1875-77); scale 1:300,000.

These small scale reconnaissance surveys contain widely spaced sounding lines several of which extend across the present survey in an easterly direction. Agreement is fair throughout the common area but in the vicinity of the 50 to 100-fathom curves where the bottom increases its slope, differences of as much as 20 fathoms are noted and are attributed to displacement in the sounding lines because of inaccuracies in the dead reckoning and astronomic control. The present survey within the area covered supersedes this weakly controlled work. The bottom characteristics inside the 50-fathom curve, however, may be used to supplement the present survey provided the agreement of the accompanying sounding is within about 3 fathoms.

5. Comparison with Charts 1287 (New Print dated August 24, 1939).
1288 (New Print dated November 3, 1939).
1117 (New Print dated September 27, 1940).

a. Hydrography.

Hydrography shown on the charts originates with surveys discussed in the preceding paragraphs and also miscellaneous sources. The authority for the latter soundings cannot be readily ascertained but they have been charted since the first edition of Chart 1117 in 1923. There are four lines of these soundings which because of their distance offshore are probably controlled by dead reckoning and astronomic sights. Agreement is generally within a few fathoms except near the eastern limits of the present survey where the soundings vary as much as 40 fathoms shoaler. The larger differences are attributed to displacements in the sounding lines. The present survey supersedes these miscellaneous soundings.

b. Aids to Navigation.

No aids to navigation exist within the area of the present survey.

6. Condition of Survey.

a. The sounding records were neat and legible and conform to the requirements of the Hydrographic Manual.

b. The field plotting was excellent.

c. The Descriptive Report is clear and comprehensive and satisfactorily covers all matters of importance.

7. Compliance with Instructions for the Project.

The plan, character and extent of the survey satisfies the Instructions for the Project.

8. Additional Field Work Recommended.

This is an excellent survey and no additional field work is necessary.

9. Superseded Surveys.

H-1485a (1881)
H-1485b (1881)
H-1350 (1875-77)
H-1352 (1875-77)

Examined and approved:

T. B. Reed
Chief, Section of Field Records.

Chief, Division of Charts.

Chief, Section of Hydrography

Chief, Division of Coastal Surveys.

DIVISION OF CHARTS

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6498 (1938-39) FIELD NO. 83
Texas, Gulf of Mexico, off Padre Island
Surveyed October, 1938 to August, 1939
Scale 1:80,000
Instructions dated February 17 and March 30, 1937;
February 23, 1938 and January 9, 1939 (HYDROGRAPHER)

Soundings:
Fathometer and Machine

Control:
Three-point fixes on shore signals
RAR - Sono Radio Buoys

Chief of Party - G. C. Mattison.
Surveyed by - L. P. Raynor, E. R. McCarthy, E. B. Lewey, J. C. Tribble, C. W. Clark and J. W. Stirni.
Protracted by - E. R. McCarthy, J. C. Tribble and S. A. Fellner.
Soundings plotted by - S. A. Fellner.
Verified and inked by - J. W. Vonasek.
Reviewed by - Harold W. Murray - November 30, 1940.
Inspected by - H. R. Edmonston.

1. Shoreline and Signals.

a. This is an offshore survey and no shoreline is shown.

b. The origin of the control is given in the Descriptive Report, page 1. Distance arcs were omitted on the smooth sheet because of distortion. (See Descriptive Report, page 3).

2. Sounding Line Crossings.

Agreement of sounding line crossings is very good. Such adjustments as were considered necessary by the field party are listed in the Descriptive Report, page 2.

3. Depth Curves.

The usual depth curves may be satisfactorily drawn.

4. Junctions with Contemporary Surveys.

a. The junctions on the north with H-6405 (1938), and on the west with H-6403 (1939) and H-6494 (1939) are very satisfactory.

b. The junctions on the south with H-6495 and H-6497 of 1939 and on the east with H-6499 (1939) will be considered in the reviews of those surveys.

5. Comparison with Prior Surveys.

a. H-1485a(1881); scale 1:40,000.

This survey contains a fringe of soundings falling just within the present survey limits on the west. Agreement of depths is quite good. The present survey supersedes this survey except for the bottom characteristics which may be used to supplement the present survey.

b. H-1352 (1875-77); scale 1:600,000.

This is a small scale reconnaissance survey containing very widely spaced sounding lines, one of which extends eastward across the present survey in latitude 26°39'. Agreement of depths is good at the western limits of the present survey, but as the line extends offshore, the old survey depths vary steadily shoaler to as large as 40 fathoms in latitude 26°39', longitude 96°27' where a charted 60-fathom sounding falls just outside the 100-fathom curve on the present survey. These differences are attributed to the dead reckoning and astronomic control on the old survey which has resulted in displacing the line to the eastward as much as 5 miles. The bottom characteristics on the old survey may be used to supplement the present survey provided consideration is given to the possible displacement of the sounding accompanying the bottom characteristic. The present survey with this addition supersedes the old survey.

6. Comparison with Charts 1286 (New Print dated October 3, 1940).
1287 (New Print dated August 24, 1939).
1288 (New Print dated November 3, 1939).
1117 (New Print dated September 27, 1940).

a. Hydrography.

Hydrography shown on the charts originates with surveys discussed above except the 58 and 70-fathom soundings (Chart 1117) in the vicinity of latitude 26°50', longitude 96°28' which fall close to the 100-fathom curve on the present survey. The origin of these soundings cannot be readily ascertained but they are shown on the First Standard of Chart 1117 in 1923. These soundings are apparently obtained on the same line and displaced too far to the eastward. They should be disregarded.

b. Aids to Navigation.

There are no aids to navigation within the area covered by the present survey.

7. Condition of Survey.

a. The sounding records are neat and legible and conform to the requirements of the Hydrographic Manual.

b. The field protracting and plotting of soundings were exceptionally accurate.

c. The Descriptive Report is clear and comprehensive and satisfactorily covers all items of importance.

8. Additional Field Work Recommended.

This is an excellent survey and no additional field work is required.

9. Superseded Surveys.

H-1485a (1881) in part
H-1352 (1875-77) " "

Examined and approved:

T. B. Reed
Chief, Section of Field Records.

J. S. Borden
Chief, Division of Charts

Raymond R. Tyman
Chief, Section of Hydrography.

E. Rude
Chief, Division of Coastal Surveys.

H. 6498	applied to chart		1288 1287	Dec.	1940	H.O.S.
H. 6497	"	"	1288	"	"	H.O.S.
H 6497	"	"	1117	Dec	1940	H.O.S.
H 6498	"	"	1117	Dec	1940	H.O.S.
H 6499	"	"	1117	Jun	1941	H.O.S.
H. 6497	"	"	1007	Mar	1941	H.O.S.
H. 6498	"	"	1007	Mar	1941	H.O.S.

H-6497 (after review) applied to chart 1288. June 1944 F.A.M.
H-6498 (after review) " " " 1288 June 1944 F.A.M.