

6292

U. S. COAST & GEODETIC SURVEY
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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

1116-2
1117

DESRIPTIVE REPORT

~~Topographic~~ } Sheet No. ... 82
Hydrographic }

State TEXAS. - Louisiana

LOCALITY
Gulf of Mexico
SOUTH OF HEALD BANK.

1937.

CHIEF OF PARTY
Frank S. Borden.

6292

RP 7

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

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. 82

REGISTER NO. H-6292

State TEXAS - Louisiana

General locality GULF OF MEXICO

Locality South of ~~OFF~~ HEALD BANK

Scale 1:80,000 Date of survey August-November, 1937

Vessel HYDROGRAPHER

Chief of Party FRANK S. BORDEN

L. P. Raynor, G. L. Anderson, P. C. Doran, F. R.

Surveyed by Gossett, J. N. Jones, K. B. Jeffers, J. T. Jarman, P. Taylor.

Protracted by James N. Jones

Soundings penciled by James N. Jones

Soundings in fathoms ~~feet~~ and sixths of fathoms

Plane of reference M.L.W.

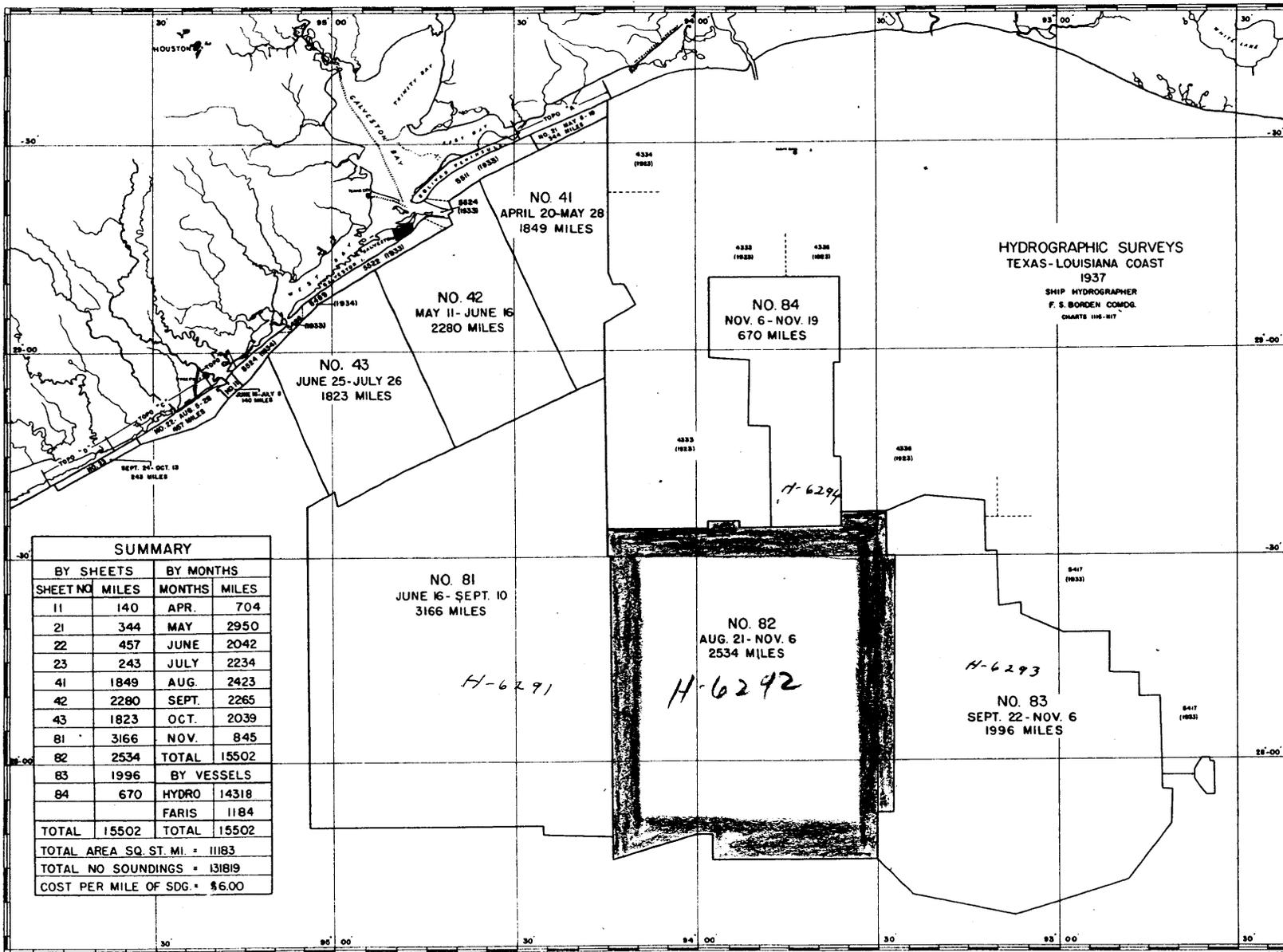
Subdivision of wire dragged areas by

Inked by Wallace A. Bruder

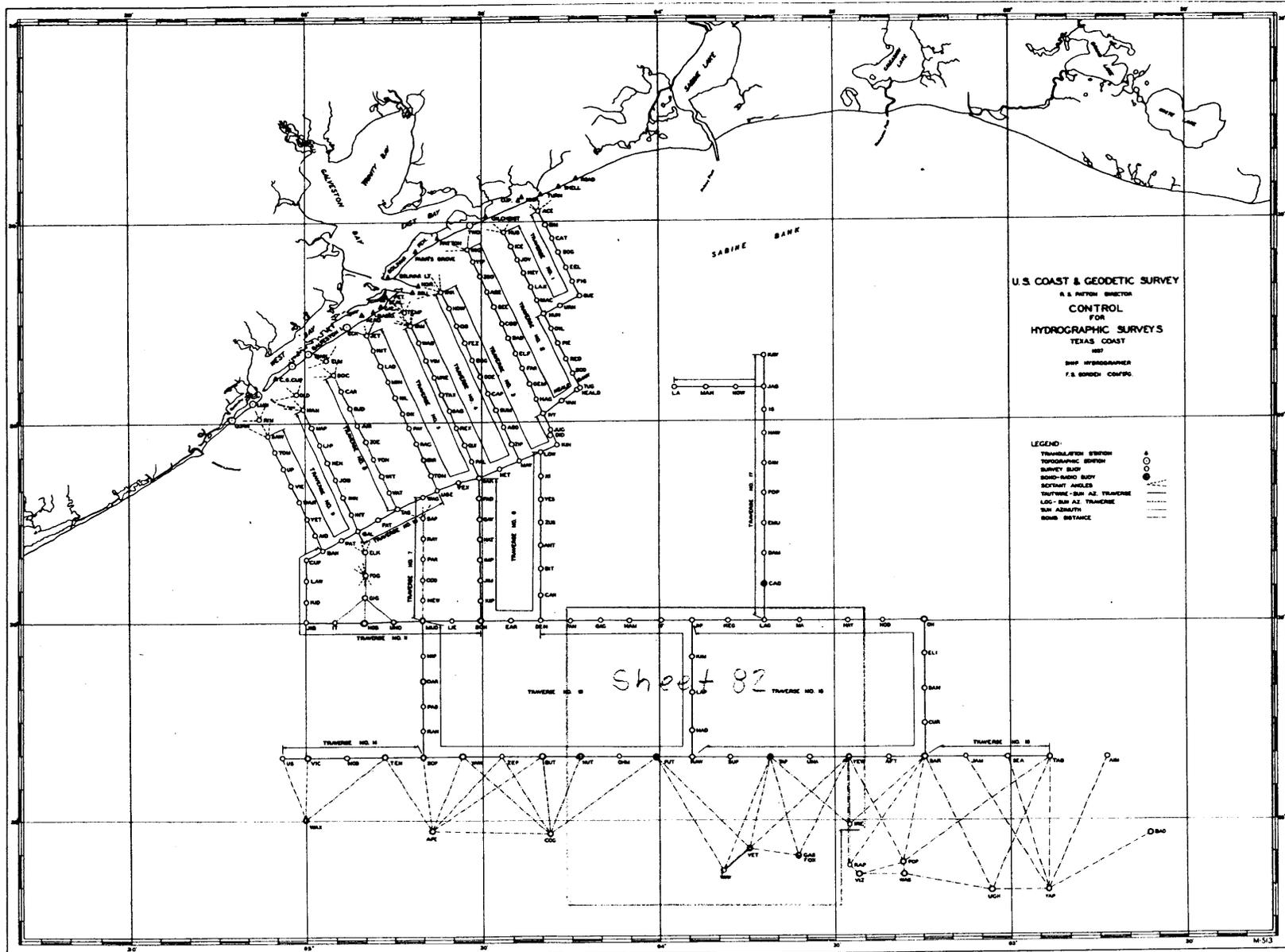
Verified by Wallace A. Bruder

Instructions dated February 17, 1937, 19

Remarks:



SUMMARY			
BY SHEETS		BY MONTHS	
SHEET NO	MILES	MONTHS	MILES
11	140	APR.	704
21	344	MAY	2950
22	457	JUNE	2042
23	243	JULY	2234
41	1849	AUG.	2423
42	2280	SEPT.	2265
43	1823	OCT.	2039
81	3166	NOV.	845
82	2534	TOTAL	15502
83	1996	BY VESSELS	
84	670	HYDRO	14318
		FARIS	1184
TOTAL	15502	TOTAL	15502
TOTAL AREA SQ. ST. MI. = 11183			
TOTAL NO SOUNDINGS = 131819			
COST PER MILE OF SDG. = \$6.00			



U.S. COAST & GEODETIC SURVEY
 A. S. FULTON DIRECTOR
 CONTROL
 FOR
 HYDROGRAPHIC SURVEYS
 TEXAS COAST
 1887
 S.W.P. HYDROGRAPHER
 F. S. BRIDEN COM'FR

LEGEND:
 TRIANGULATION STATION
 TOPOGRAPHIC STATION
 SURVEY BUOY
 SOUND-RANGING BUOY
 SEXTANT ANGLES
 TRUE TIME-SUN AZ. TRAVERSE
 LOCAL TIME-SUN AZ. TRAVERSE
 SUN AZIMUTH
 SOLAR DISTANCE

Sheet 82

DESCRIPTIVE REPORT

to accompany
HYDROGRAPHIC SHEET # 82 (1937)
H-6292

DATE OF INSTRUCTIONS:

This survey was made in accordance with instructions for Project No. 214 dated February 17, 1937.

SURVEY METHODS:

The control for this survey is based on hydrographic buoys located by taut wire and sun azimuth traverse, with the exception of the five offshore buoys which were located by bomb distances. Complete data on the method of computing buoy positions are contained in special report "Location of Hydrographic Signals, Ship HYDROGRAPHER, Season 1937."

Sounding lines were controlled by gyro compass bearings, sextant angles (a few of which were three point fixes), R.A.R. distances from sono radio buoys, depression angles, by sextant, on near buoys, or by a combination of several of the above methods.

Soundings were taken with Dorsey Fathometers Nos. 1 and 2 at a speed of ten knots, except where a reduction in speed was made to improve fathometer operation or to secure closer spacing of soundings.

Dorsey Fathometer No. 1 (run at full or half speed) was used whenever possible because it was much more reliable and easier to read. In deep water or on steep slopes it was difficult to follow

and at intervals the sounding was out out by the initial. (This condition was called the "dark area" by the hydrographic party and is so noted in the sounding records. The most troublesome "dark area" was between ^{44 1/2}~~42~~ and ⁴⁵~~43~~ fathoms). In depths of 30 - 40 fathoms there was an occasional "double" sounding, due either to the type of bottom or some mechanical defect. This discrepancy (in the nature of 3 - 6 feet) does not affect the smooth sheet because the few lines where this defect was troublesome were re-run and the incorrect soundings rejected in the field.

The crossings of Dorsey No. 1 soundings were remarkably good. ~~out~~ Of the 183 crossings noted over fairly even bottom only 85 were as great as one foot, and none as great as two feet.

(Tuning for IC timing, with oscillator, not transceiver) ⁷⁶⁸⁵

The Dorsey No. 2 fathometer, ^{when} was a new installation and during the period it was used on this sheet, required considerable experimentation and adjustment. In addition to this, considerable fluctuation of the sounding was noticed with a change of amplification. No satisfactory index correction could be determined for this fathometer at either slow or fast speeds; ~~or~~ ⁷⁶¹⁵ using ~~the transceiver~~ or the 312 type oscillator. It was found to be more satisfactory to consider the index correction the same as the Dorsey No. 1 on days when no intercomparisons were available, and apply an average correction on those days where a sufficient number of junctions or intercomparisons were available to warrant it. (Average difference about three feet; maximum less than two fathoms). This condition does not, in itself, decrease the accuracy of the work to any great extent, because in the majority of cases, where the No. 2 fathometer was used the

slopes were fairly steep and the bottom irregular so that the combined personal error and correction for slope doubtless could be found to be much greater. And in addition the critical depths were determined with the Dorsey No. 1 Fathometer. The Dorsey 2^{*} Fathometer sounding crossings are all satisfactory; one fathom or less.

SMOOTH PLOTTING:

The smooth plotting was on aluminum mounted topo sheets and the final accepted positions transferred to the smooth sheet. This was necessary on account of the confusion which distance circles from the large number of R.A.R. buoys would cause. It also allowed numerous small adjustments to conflicting data to be made which would have been difficult to accomplish without seriously marring the smooth sheets.

These reasons were apparent during the smooth plotting, when the changes in humidity were extreme and variations as great as 2% were noted in the smooth sheet paper.

In general all arcs, bearings, angles, etc. for each line or loop were plotted and in case of any discrepancies the dead reckoning from course and log was plotted and adjusted to determine which points to hold as correct. From this the final sounding line was drawn and as many arcs, etc. as seemed reasonable were held. In this way it is believed that the final positions have a small probable error.

In evaluating the discrepancies the scopes of the buoys must be considered. Roughly the buoy scope was about equal for the depth and possibly half again as large in extreme cases. This would make a con-

** It was possible, in general, to use the accurate No. 1 Fathometer to depths of 50-60 fathoms. Thereafter the No. 2. Dorsey with 312 oscillator was used. Feb 1910*

siderable difference on weak intersections of arcs or bearings.

Preference was generally given to angles and bearings in accepting a final position, except possibly bearings over six miles distant.

Bomb distances were very good under most conditions but became uncertain when a shoal or irregular bottom intervened. Another factor of uncertainty was caused by the variation in travel time of different sized bombs. (It was noted frequently during the progress of the field work, at a distance of 10 seconds or less that the travel time of a detonator was equal to a quarter-pint bottle bomb plus .16 second.) The size of the bombs was varied so as to avoid these sudden "jumps" as nearly as possible and as a result on many lines the bomb arcs were used without any adjustment. On other lines it was possible to use the differences experienced on adjacent lines, with good results.

Possibly the best check on the velocity used was obtained at buoy HAY with arcs of approximately 25 and 29 seconds from YEW and TAP which gave differences of 2 m./second and 4 m./second respectively.

On other buoys, notably buoy COG, differences as great as 0.3 second in travel time were noted with different sized bombs on different days.

Another disturbing influence on R.A.R. returns was the radio interference with the fifth harmonic of a broadcasting station. This was particularly noticeable after dark when it often completely blocked all returns.

Gyro compass bearings were found to be excellent as a whole.

** See additional comments regarding discrepancies noted in bomb arcs in Seasons Report, 1937 of Ship Hydrographer. F.S. Bond.*

There seemed to be a considerable personal factor which was largely eliminated by experience. As a rule the average error was much less than 0.5° . Corrections have been applied where they were large enough to warrant it or where they were clearly indicated.

Attached to this report are abstracts of fathometer corrections, and bomb velocities. Complete data for these are attached to the descriptive report for Sheets No. 41, No. 42 and No. 43, Ship HYDROGRAPHER, (1937). Also further data may be found in a special report "Temperature and Salinity Observations" Ship HYDROGRAPHER, 1937.

Also attached is a list of Geographic Positions for all buoys, and tidal note.

Soundings are plotted in fathoms and sixths of fathoms to a depth of 100 fathoms and in whole fathoms in greater depths. This is in accordance with the Director's letter of January 22, 1938, (Reference 22-AB 1995 HY 4.)

DISCREPANCIES:

There are no unadjusted discrepancies on the smooth sheet.

Notes have been made in the sounding volumes of numerous small adjustments in arcs, bearings, etc.

The only adjustment in soundings was between positions 95 and 99 V day. Changes are noted in sounding volume.

COMPARISON WITH PREVIOUS SURVEYS: See Rev. par. 6 c and 7 for further details

The soundings shown on Sheet No. 1350, (1875-6-7) agree fairly well with this survey but present survey should be used for charting, in area covered by this survey

At a junction with Sheets No. 4333 and No. 4335 1923-24 the soundings on this sheet are from one to three feet shoaler. The curves on this survey should be held as correct, for charting.

All other soundings charted in the area covered by this survey should be expunged. They are evidently out of position. (see attached list.)

Junctions with Sheets 81, 83 and 84 of the same season are good.
H-6291, 6293, 6294

GEOGRAPHIC NAMES:

The shoal in Latitude $28^{\circ} 20'$ Longitude $94^{\circ} 09'$ is locally known as the Clay Pile. This is a fishing bank of some importance and the name is well established. The name is shown in pencil on the smooth sheet.

DANGERS, ANCHORAGES, CHANNELS:

There are no dangers, anchorages, or channels within the limits of this sheet.

STATISTICS:

Statute miles of sounding lines	2,534
Number of positions	2,378
Number of soundings	13,347
Number of bomb positions	1,789
Sounding volumes	7
Bomb records	4

FORWARDED:

G. C. Mattison
G. C. Mattison,
Chief of Party.

Respectfully submitted

James N. Jones
James N. Jones, Jr. H. & G. Engr.,
Coast and Geodetic Survey.

SHEET 82

List of charted soundings out of position:

- (1) 19 fathoms ^{Authority} (Lat. 28° 20') This sounding is probably the 19 5/6
Bp 13787 (Long. 94 18) fathom shoal shown in this survey,
(1911) 8 miles eastward. ✓
- (2) 19 fathoms (Lat. 28 20) There is no indication of this sound-
? (Long. 93 48) ing on the present survey. ✓
- (3) 11 fathoms PD (Lat. 27 55) This sounding is probably on the 11 2/6
Bp 13789 (Long. 93 58) fathom shoal shown 9 miles E.S.E. on
this survey. ✓
- (4) 37 fathoms (Lat. 27 59 1/2) Out of position.
? (Long. 94 10) ✓
- (5) 32 fathoms (Lat. 28 00) Out of position.
Bp 13787 (Long. 93 50) ✓
- (6) 37 fathoms (Lat. 28 00 1/2) Out of position.
Bp 13789 (Long. 93 43) ✓
- (7) 31 fathoms (Lat. 27 58) Out of position.
Lat. #6 (1916) (Long. 93 35) ✓
- (8) 35 fathoms (Lat. 27 50) Out of position.
Bp 13789 (Long. 93 28) ✓

The above soundings should be expunged from the chart.
See Revision 8 for further details

✓ 313

MEAN

5

June 16-25 July 20-28 Aug. 4-13 Aug.19-28 Sept.5-15 Sept.21-30 Oct.5-14 Oct.19-30 Nov.4-19 July 20-Oct.30

VELOCITIES FOR REDUCTION OF BOMB DISTANCES

Depth Fathoms	Velocity	Velocity	Velocity	Velocity	Velocity	Velocity	Velocity	Velocity	Velocity	Velocity
2	1538	1542	1544	1543.5	1544	1541	1538	1535	1527	1541.1
7	1537	1541	43	43.5	44	42	38	35	27	41.0
12	1534	1541	42	42	44	42	38	36	28	40.7
17	1527.5	1534	38	38	36.5	42	39	36	32	37.6
22	1526.5	1530.5	34	33	31	39	38	35	34	34.3
27	1526	1528	30	31	29	33	32	32	34	30.7
32		1526	27	29	25	30	27	29		27.6
37		1525	26	28	22.5	27	24	27		25.6
42		1524	23	25	20	24	22	25		23.3
47		1522.5	19	20	18	20	21	23		20.4
52		1521.5	1516	18.5	15.5	18	20	22		18.9
57		1520.5			14	16		21		17.8
62		1519			13	15		20		16.8
67		1517.5			12	14		19		15.8
72		1516			11			17		14.7
77		1515			10.5			16		13.7
82		1515			10			15		13.3
87		1514			09			14		12.3
92		1513			08.5			13		11.3
97		1512			07.5			13		11.0
102		1511			07			12		10.2
107			1511		06					08
112			1510.5		05.5					08
117			1510		05					07.5
122			1510		04.5					07
127			1510		04					07
132					03					03
137					02					02
142					01					01
147					(1500)					00
152					(1500)					00
157										

Observations not complete

Note: — The velocity corresponding to the mean depth from each position to each buoy was used in reducing the records — gntz

I-D-S CORRECTIONS
SHEET 82-H-6292

SHEET 82		I	D	S*	I/D/S
Date	Day		Feet		Feet
Aug. 21	A	-1.0	0.5	0.8	0.3
	22	B	"	"	0.2
	26	C	"	"	0
	27	D	"	"	-0.1
	28	E	"	"	-0.2
Sept. 6	F	"	0.8	"	0.6
	7	G	"	"	0.5
	8	H	"	"	0.5
	9	J	"	"	0.4
	10	K	"	"	0.3
	11	L	"	"	0.3
	12	M	"	"	0.2
	13	N	"	"	0.1
	14	P	"	"	0.1
	15	Q	"	"	0
	21	R	"	"	0.3
	22	S	"	"	0.2
	23	T	"	"	0.2
	24	U	"	"	0.1
	25	V	"	"	0.1
	27	W	"	"	0
	28	X	"	"	-0.1
Oct. 5	Y	"	0.7	"	0.5
	6	Z	"	"	0.4
	7	A'	"	"	0.4
	8	B'	"	"	0.3
Nov. 6	C'	"	0.7	"	0.5

Values for S.
 0.8' (full speed) 120 rpm's
 0.6 @ 100 rpm's
 0.4 @ 80 rpm's
 0.2 @ 60 rpm's
 0.0 @ 40 rpm's

T. & S. CORRECTIONS - SHEETS 81 - 82 - 83

Correction Feet T. & S.	June 16-25 Depth Fms. - Ft.		July 20-Oct. 30 Depth Fms. - Ft.		Nov. 4-19 Depth Fms. - Ft.		Correction Feet T. & S.	July 20-Oct. 30 Depth Fms. - Ft.	
	1.0	11	4	8	4	9		2	5.8	49	2
1.1	12	3	9	2	10	0	5.9	50	4
1.2	13	2	10	0	10	5	6.0	52	0
1.3	14	1	10	4	11	4	6.1	53	2
1.4	15	0	11	2	12	3	6.2	54	4
1.5	16	0	12	0	13	2	6.3	56	0
1.6	16	5	12	4	14	1	6.4	57	2
1.7	17	4	13	2	15	0	6.5	58	4
1.8	18	3	14	0	15	5	6.6	60	0
1.9	19	2	14	4	16	4	6.7	61	2
2.0	20	2	15	2	17	3	6.8	62	4
2.1	21	1	16	0	18	2	6.9	64	1
2.2	22	0	16	5	19	1	7.0	65	4
2.3	22	4	17	3	20	0	7.1	67	3
2.4	23	3	18	1	21	0	7.2	69	0
2.5	24	2	18	5	22	0	7.3	71	0
2.6	25	1	19	3	23	0	7.4	73	0
2.7	26	0	20	1	24	0	7.5	75	0
2.8	26	5	20	5	25	0	7.6	77	0
2.9	27	4	21	3	26	0	7.7	79	0
3.0 ^{3.1}	28 ^{2.1}	2 ⁰	22 ^{2.3}	1 ⁰	27 ^{2.2}	0 ⁰	7.8	81	0
3.1 ²	29	5	23 ^{2.3}	5	29	0	7.9	83	0
3.3			24	4			8.0	85	0
3.4			25	3			8.1	87	0
3.5			26	2			8.2	89	
3.6			27	1			8.3	91	
3.7			28	0			8.4	93	
3.8			28	5			8.5	95	
3.9			29	4			8.6	97	
4.0			30	3			8.7	99	
4.1			31	2			8.8	101	
4.2			32	1			8.9	103	
4.3			33	0			9.0	115	
4.4			34	0			9 ¹ / ₂	180	
4.5			35	0			9	195	
4.6			36	0			8 ¹ / ₂	210	
4.7			37	0					
4.8			38	0					
4.9			39	0					
5.0			40	0					
5.1			41	1					
5.2			42	2					
5.3			43	3					
5.4			44	4					
5.5			45	5					
5.6			47	0					
5.7			48	1					

GEOGRAPHIC POSITIONS

TRIANGULATION
(Hydrographic name underlined)

Station Name	Latitude			Longitude		
	°	'	m	°	'	m
<u>Aero</u> , 1931-33	29	16	260.3	94	50	366.9
<u>Bolivar Point L. H.</u> , 1900	29	21	1834.9	94	46	7.1
<u>Buccaneer</u> , 1933	29	17	757.3	94	47	261.0
<u>Cotton Concentration Co. W. T.</u> , 1933	29	17	1200.1	94	49	1230.6
<u>High Island Hotel Cupola</u> , 1900	29	33	681.0	94	23	867.6
<u>Santa Fe Building Cupola Final</u> , 1933	29	18	698.4	94	47	1308.5
<u>Galves Hotel Stack</u> , 1933	29	17	1040.9	94	47	173.6
<u>Gilchrist</u> , 1933	29	30	1564.6	94	29	174.0
<u>High Grade Tacking Co. W. T.</u> , 1933, Sh. 42	29	17	589.4	94	50	918.8
<u>Highland 2</u> , 1872 (Sheet 41)	29	33	1579.5	94	23	260.2
<u>North Jetty Light</u> , 1933	29	20	1343.0	94	40	1198.9
<u>Parr's Grove</u> , 1932	29	25	1241.5	94	41	352.5
<u>Patton</u> , 1932	29	27	1382.2	94	37	625.7
<u>Mexican Petroleum Corp. Stack</u> , 1933	29	18	1615.5	94	46	558.7
<u>Fort Crockett E. Radio Tower</u> , 1933	29	16	1310.8	94	46	530.8
<u>Road</u> , 1934	29	36	1035.0	94	13	1422.4
<u>San Luis C. G. Station Cupola</u> , 1933	29	06	1501.2	95	04	1543.5
<u>Sealy Hospital Cupola</u> , 1933	29	18	1274.4	94	46	1072.1
<u>Shell</u> , 1934	29	35	795.4	94	16	1376.8
<u>South Jetty Light</u> , 1933	29	19	1208.7	94	41	887.3
<u>Turn</u> , 1934	29	34	490.7	94	19	1440.9

HYDROGRAPHIC SIGNALS
 (Located by Theodolite Cuts etc.)

Name	Latitude			Longitude			
	°	'	"	°	'	"	
Corn	29	10	1213	94	58	1457	Topo. T-4852
Eck	29	14	1072	94	52	1411	Hydro. Control Page 2
Lun	29	03	156	95	08	1547	Hydro. Control Page 4
Over	29	31	1551	94	26	276	Topo. 1937
Quan	29	00	1302	95	12	825	Hydro. Control Page 5
Ray	29	11	849	94	58	385	Topo. T-4852
Tank	29	10	791	94	59	632	Topo. T-4852
Two	29	29	1225	94	31	1540	Hydro. Control Page 1
Wind	29	08	1185	95	02	210	Topo. T-4852

142a

BUOYS

Buoy Name	Latitude			Longitude			Trav. No.
	°	'	"	°	'	"	
ABE	29	18	1362	94	28	760	2
ACE	29	51	1558	94	20	163	Graphic
ADD	28	59	1017	94	26	422	3 & 4
AFT	28	09	703	93	20	1210	15
AID	28	43	488	94	58	488	9
AIM	28	09	694	92	42	1510	Graphic
AIR	28	59	1279	94	50	1422	8
ANT	28	42	801	94	19	1559	6
APE	27	58	1498	94	38	578	Graphic
BAH	28	41	18	94	57	2	9
BAR	28	09	765	93	14	461	15
BAT	27	58	587	92	26	889	Graphic
BEE	29	16	1067	94	27	529	2
BELL	28	58	475	94	18	1155	3a
BIM	29	29	1402	94	19	35	1
BIT	28	38	1832	94	19	1562	6
BUD	29	02	484	94	52	386	8
BUM	29	02	434	94	27	1020	3 & 4
BUT	28	09	1570	94	19	1260	13
<u>CAD</u>	28	35	790	93	42	25	17
CAN	28	34	1169	94	19	1555	6
CAP	29	04	1589	94	29	18	3 & 4
CAR	29	04	1534	94	53	955	8
CAT	29	27	1177	94	17	1428	1
COB	29	14	761	94	28	270	2
<u>COG</u>	27	58	333	94	18	11027	Graphic

34 ft. Shoal Bell Buoy

BUOYS - Page 2

Buoy Name	Latitude			Longitude			Trans. No.
	°	'	"	°	'	"	
CUP	28	39	1145	94	59	1431	11
CUR	28	14	1242	93	14	556	15
DAD	29	12	532	94	25	122	2
DAM	28	39	1678	93	42	125	17
DAN	28	19	1703	93	14	674	15
DEN	28	30	411	94	19	1538	6
DID	28	58	705	94	18	1178	Flotting contours
DOC	29	07	680	94	54	1527	Graphic
DOE	29	07	720	94	30	641	3 & 4
DOG	29	25	1009	94	16	1209	1
DOR	28	30	507	94	25	49	6
EEL	29	23	683	94	15	968	1
ECC	29	09	1628	94	31	1228	4
ELF	29	10	332	94	24	26	2
ELK	28	40	1383	94	24	1601	12
ELI	28	25	222	93	14	813	15
ELM	29	09	1825	94	56	588	Graphic
EMU	28	44	728	93	42	9	17
END							
FAD	28	48	1262	94	30	98	6
FAN ✓	28	30	356	93	14	1451	12
FAR	29	08	95	94	22	1535	2
FAT	28	45	962	94	47	814	10
FEZ	29	12	803	94	33	62	3 & 4
FIG	29	21	479	94	14	785	1

✓ 422

Buoy Name	Latitude			Longitude			Trav. No.
	°	'	"	°	'	"	
FOG	28	37	448	94	49	1379	13
POP	28	48	1766	93	41	1572	17
<u>FOX</u> ✓	27	54	1240	93	35	1496	Graphic
<u>GAG</u> ✓	28	30	311	94	09	1361	13
GAL	28	43	1669	94	50	1562	9
<u>GAS</u> ✓	27	54	1327	93	36	364	Graphic
GAY	28	45	616	94	29	1616	6
OBM	29	06	1678	94	21	1578	2
GIG	28	33	1539	94	50	58	12
GIN	28	53	942	93	41	1535	17
GO	29	14	1680	94	34	670	3 & 4
GUE	29	19	10	94	13	421	1
GUS	28	09	1674	94	17	1256	14
HAG	29	03	1362	94	20	1232	2
<u>HAM</u> ✓	28	30	220	93	04	1242	13
HAT	28	42	680	94	29	1624	6
HAW	28	58	126	93	41	1461	17
<u>HAY</u> ✓	28	30	329	93	27	1050	15
HEALD	29	05	420	94	13	1257	2a
HIT	28	46	954	94	52	320	9
HOB	28	30	311	94	50	149	11
HOW	29	17	686	94	36	1124	3 & 4
HUB	29	28	1222	94	26	290	Graphic
ICE	29	28	1093	94	25	54	1
<u>IF</u> ✓	28	30	146	93	59	868	13
IMP	28	39	679	94	29	1513	6

Buccy Name	Latitude			Longitude			Trav. No.
	°	'	"	°	'	"	
INK	29	19	1458	94	58	1383	Graphic
INN	28	49	229	94	53	864	9
<u>IRE</u> ✓	27	59	471	95	27	605	Graphic
IS	29	01	1117	93	41	1436	17
IT	28	50	333	94	54	1581	11
IVY	29	01	668	94	19	828	3
JAG	29	08	206	93	41	1432	17
JAM	28	09	806	93	07	351	16
JET	29	13	369	94	49	910	Graphic
JIB	28	30	301	94	59	1316	11
JIM	28	36	958	94	29	1543	6
<u>JIP</u> ✓	28	30	142	93	54	450	13
JOB	28	51	1269	94	54	1385	9
JOY	29	24	837	94	23	1473	1
JUG	28	59	142	94	13	470	3
KAY	29	09	1549	93	41	1497	17
<u>KEG</u> ✓	28	30	104	93	49	228	15
KEH	28	54	515	94	56	286	9
KEY	29	32	733	94	22	1311	1
KID	28	33	668	94	59	1329	11
<u>KIM</u> ✓	28	24	1371	93	54	384	13
KIN	28	56	1519	94	17	187	3
KYP	28	53	1204	94	29	1624	6
KIT	29	10	1710	94	48	594	5
LA	29	05	271	93	57	63	17
LAD	29	08	1199	94	47	147	5

BUOYS - Page 5

Buoy Name	Latitude			Longitude			Trav. No.
	°	'	"	°	'	"	
<u>LAG</u> ✓	28	30	34	93	41	1627	15
<u>LAP</u> ✓	28	19	530	93	54	548	13
LAW	28	36	1280	94	59	1355	11
LAX	29	20	629	94	21	1150	1
LIE	28	30	424	94	34	1551	11
LIP	28	56	1662	94	57	800	9
LOW	28	55	1532	94	20	43	5
LUM	29	03	186	95	08	1547	Graphic
LSH CAN	29	05	481	94	13	628	Comp. 2a
<u>MA</u> ✓	28	29	1838	93	38	1589	15
MAC	29	18	645	94	20	1023	1
<u>MAD</u> ✓	28	13	1256	93	54	875	13
MAH	29	05	139	93	51	1366	17
MAP	28	59	1027	94	58	1363	9
MAY	28	54	781	94	23	1032	3 & 4
MIH	29	06	645	94	48	1383	5
MOB	28	09	1138	94	53	450	14
MUD	28	30	511	94	40	112	11
HAN	29	08	294	95	00	332	Graphic
NET	28	53	325	94	26	1618	3 & 4
NEV	28	33	524	94	40	184	7
NIL	29	04	127	94	44	937	5
NIP	28	24	1810	94	40	41	13
NOD	28	30	335	93	21	1011	15
NOW	29	05	253	93	46	1120	17

142a

Buoy Name	Latitude			Longitude			Trav. No.
	°	'	"	°	'	"	
NUH	29	18	584	94	19	885	1
<u>NUY</u> ✓	28	09	1267	94	13	228	13
QAK	28	51	1688	94	30	401	4 & 5
QAR	28	21	348	94	39	1623	13
ODD	28	36	977	94	40	74	7
OH	28	30	297	93	14	888	15
<u>OHK</u> ✓	28	09	1148	94	08	887	13
OIL	29	14	149	94	18	474	2
OLD	29	04	1591	95	01	983	Graphic
OK	29	01	1394	94	43	597	5
PAD	28	17	761	94	39	1620	13
PAL	28	54	552	94	31	863	4 & 5
PAR	28	39	1089	94	39	1585	7
PAT	28	42	973	94	53	1576	9
PAY	28	59	775	94	42	217	5
PTE	29	11	1258	94	18	1596	2
POP	27	53	1138	93	18	13	Graphic
<u>PUP</u> ✓	28	09	931	94	00	345	13
QUI	28	56	1297	94	52	1294	3
RAG	28	57	891	94	40	1509	5
RAN	28	13	1024	94	39	1613	13
RAP	27	55	314	93	27	745	Graphic
<u>RAW</u> ✓	28	09	689	93	54	613	13
RAY	28	42	1285	94	39	1529	7
RED	29	09	531	94	15	1084	2
REX	28	59	450	94	34	172	4 & 5

BUOYS - Page 7

Buoy Name	Latitude			Longitude			Trev. No.
	°	'	"	°	'	"	
RIH	29	00	1403	95	07	967	Graphic
SAG	29	01	1476	94	35	671	4 & 5
SAP	28	45	1448	94	39	1528	7
SAW	28	58	433	95	06	530	Graphic
SEA	28	09	697	95	00	251	16
SIR	28	54	1558	94	39	1180	5
SOD	29	07	293	94	14	795	2
SON	28	30	516	94	30	168	6
SOP	28	09	1214	94	39	1633	13
SPAR	28	58	386	94	18	1150	3a 34 ft. Shoal Spar Buoy.
<u>SUP</u> ✓	28	09	519	93	47	1154	15
TAB	28	09	767	92	53	251	16
TAG	28	47	129	94	44	285	10
<u>TAP</u> ✓	28	09	520	93	40	1584	15
TAX	29	04	750	94	36	1213	4 & 5
TEN	28	09	1220	94	46	1024	14
TOM	28	55	1491	95	05	78	9
TON	28	52	990	94	38	880	5
TUG	29	05	598	94	13	656	2
UGH	27	49	743	93	03	4	Graphic
UKE	29	06	1722	93	38	00	4 & 5
USA	28	09	375	93	34	292	15
UNO	28	30	510	94	44	1420	11
UP	28	53	573	95	03	1141	9
URN	29	17	1369	94	15	1381	1
US	28	09	1097	95	04	158	14
USE	28	49	1785	94	37	442	8

Buoy Name	Latitude			Longitude			Trav. No.
	°	'	"	°	'	"	
VAN	29	03	679	94	16	595	2
VAT	28	49	898	94	45	650	3
<u>VET</u> ✓	27	55	881	93	44	637	Graphic
VEX	28	51	896	94	53	1206	5
VIC	28	09	1141	94	59	1126	14
VIE	28	50	1534	95	02	686	9
VIM	29	09	854	94	39	488	4 & 5
VIZ	27	51	1440	93	24	1146	Graphic
WAD	29	12	86	94	40	1047	4 & 5
WAG	28	48	1491	94	39	1556	10
WAR	28	48	655	95	01	132	9
WAS	27	51	1485	93	17	1496	Graphic
WAX	28	00	420	95	00	24	Graphic
<u>WAY</u> ✓	27	52	788	93	48	1516	Graphic
WIG	29	28	155	94	32	488	Graphic
WIT	28	51	1789	94	45	1086	8
XI	28	52	1366	94	19	1575	6
YAM	29	14	1215	94	41	1562	Graphic
YAP	27	49	707	92	53	2222	Graphic
YAW	28	09	1202	94	33	331	13
YET	28	45	1532	94	59	1016	9
YES	28	49	508	94	19	1541	6 1002
YEN	28	09	890	93	27	657	15
YIP	29	23	227	94	30	1288	2
YON	28	54	890	94	48	105	8
ZEP	28	09	1576	94	28	749	13

v4ll

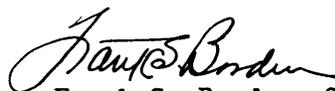
BOOTS - Page 9

Boat Name	Latitude °	′	″	Longitude °	′	″	Trav. No.
ZIP	28	56	1679	94	24	1406	3 & 4
ZOE	28	57	165	94	49	602	5
ZOO	29	20	1678	94	29	1032	2
ZUS	28	45	1535	94	19	1567	6

A P P R O V A L - S H E E T

MAY 2, 1938

^{H 6292}
SHEET NO. 82 HAS BEEN INSPECTED
BY ME AND IS HEREBY APPROVED.



Frank S. Borden, Comdr., C&GS.,
Commanding Ship OCEANOGRAPHER.

KAC

TIDE NOTE FOR HYDROGRAPHIC SHEET

July 20, 1938.

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. E. P. Ellis.

Plane of reference

~~Tide Reductions~~ approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 6292

Locality South of Heald Bank, Gulf of Mexico.

Chief of Party: Frank S. Borden in 1937
Plane of reference is mean low water reading
2.4 ft. on tide staff at South Jetty
6.2 ft. below B.M. 2

Time of tide on working ground 1 hour earlier than at South Jetty.

Height of mean high water above plane of reference 1.3 feet.

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES
 Survey No. **H6292**

Name on Survey	<div style="display: flex; justify-content: space-between;"> <div style="width: 10%;">On Chart No. 1117</div> <div style="width: 10%;">On previous survey No.</div> <div style="width: 10%;">On U. S. quadrangle Maps</div> <div style="width: 10%;">From local information see D.P.</div> <div style="width: 10%;">On local Maps</div> <div style="width: 10%;">P. O. Guide or Map</div> <div style="width: 10%;">Rand McNally Atlas</div> <div style="width: 10%;">U. S. Light List</div> </div>										
	A.	B.	C.	D.	E.	F.	G.	H.	K.		
<u>Gulf of Mexico</u>	✓										1
<u>Heald Bank</u>	✓										2
Claypile OK			Not important to charts	✓							3
<u>Claypile Bank</u>				✓							4
											5
											6
											7
											8
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Names underlined in red approved by <u>ASE</u> on <u>6/8/38</u>											26
											27

Remarks.

Decisions

1	For Title Only	
2	off sheet For Title Only	
3	An important fishing bank L.D. 19 ⁵ / ₆ fathoms surrounding depths 26 fms.	Lat. 28-20 Long. 94-09
4		10/25/38 GHE.
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Field Records Section (Charts)

H6292

HYDROGRAPHIC SHEET NO.

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

Number of positions on sheet	.....	2378
Number of positions checked	.....	37
Number of positions revised	.....	0
Number of soundings recorded	.....	13347
Number of soundings revised	.....	35
Number of signals erroneously plotted or transferred	.....	1

Date: Oct. 13, 1938

Verification by Wallace A. Bruder

Time: 14^h 30^m

Review by Harold W. Murray

Time: 14^h

HYDROGRAPHIC SURVEY NO. H6292

Smooth Sheet Yes

Boat Sheet Yes

Records; Sounding 7 Vols., Wire Drag Vols., Bomb 4 Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Vol.#1

Landmarks for Charts (Form 567) None

Statistics None

Approved by Chief of Party Yes

Recoverable Station Cards (Form 52) None

Special Chart for Lighthouse Service None
(Circular Nov.30, 1933)

Hydrography: Total Days 27 ; Last Date Nov. 6, 1937

Remarks _____

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT
~~PHOTOGRAPH~~

} No. H-6292
 } ~~No. 11~~

{ received May 3, 1938
 { registered May 11, 1938
 { 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			
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88			
90			

RETURN TO

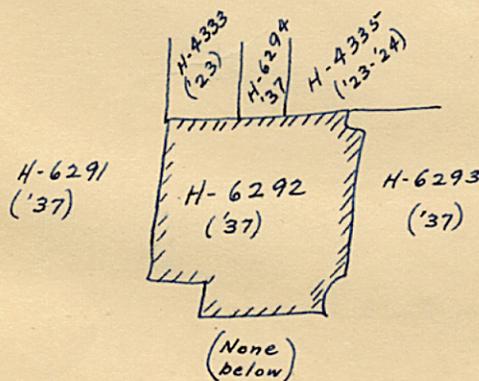
82	T. B. Reed
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✓ JBR

Report on H-6292
Chief of Party: Frank S. Borden
Protracted by James N. Jones
Verified and inked by Wallace A. Bruder

Surveyed in Aug-Nov., 1937
Surveyed by L.P.R., G.L.A., P.C.D., F.R.G., J.N.J.,
K.B.J., J.T.J., P.T.
Soundings plotted by J.N.Jones

1. The records conform very well to the requirements of the General Instructions. ✓
2. The usual depth curves can be completely drawn. ✓
3. The field plotting was completed to the extent prescribed in the Hydrographic Manual. ✓
4. The office draftsmen did not have to do over any part of the drafting done by the field party. ✓
5. The junctions with contemporary adjacent sheets are satisfactory and complete, except H-6291 which is at present being verified. ✓



Both junctions were made with the '23 work (H-4333 & H-4335) by recommendation of Lt. Ellis ✓

6. Remarks

- a. Vol. 7 pg. 53 gives bottom characteristic of gy M at $\phi 28^{\circ}30'$ $\lambda 93^{\circ}28'$ and the smooth sheet had the characteristic at $\phi 28^{\circ}35'$ $\lambda 93^{\circ}28'$ penciled. The verifier erased the penciled characteristic and allowed the $28^{\circ}30'$ to stand since this checks perfectly with position of buoy HAY and its characteristic. ✓
- b. Bottom characteristics should be inked without connecting symbols of any kind, leaving a slight space between the abbreviations. ✓
- c. \odot COG $\phi 27^{\circ}58.1'$ $\lambda 94^{\circ}18.5'$ was found to be 1108 meters too far north and 40 meters too far west. This correction was made before verification of sheet. *mentioned in Rep.* ✓
- d. With the exception of one place, the crossings were as per descriptive report, that is they check within a fathom. ✓
The exception is at $\phi 27^{\circ}49.2'$ $\lambda 93^{\circ}52.5'$ where there is a 5 fathom difference. This was inked as is, to be investigated and possibly revised by the reviewer. (Lt. Ellis suggestion) *Crossline accepted & plotted H.W.M.*

Respectfully
submitted:
W.A. Bruder
10/13/38

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6292 (1937) FIELD NO. 82

South of Heald Bank, Gulf of Mexico, Louisiana
Surveyed in August - November 1937, Scale 1:80,000
Instructions dated February 17, 1937, (HYDROGRAPHER)

Dorsey Fathometer Soundings.

3 Point fixes on buoy signals.

R.A.R. control on sono-radio buoys.

Chief of Party - Frank S. Borden.
Surveyed by - Officers of Ship HYDROGRAPHER.
Protracted by - James N. Jones.
Soundings plotted by - James N. Jones.
Verified and inked by - W. A. Bruder.

1.- Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual except that sono-radio buoy "COG" in lat. $27^{\circ}58.1'$, long. $94^{\circ}18.5'$ was plotted 1100 m. north and 40 m. west of its correct position and was revised in the office. This change in position does not affect the hydrography since the smooth plotting was done on an aluminum sheet retained by the field party and on which the signal was correctly plotted.

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

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey satisfy the instructions for the project.

3. Shoreline and Signals.

- a. This is an offshore survey and no shoreline is shown.
- b. The control is mainly furnished by R.A.R., using Sono-Radio buoys and has been supplemented by a number of sextant angles on buoy signals. The buoys were located by an adjusted taut wire and sun azimuth buoy traverse carried offshore from shore triangulation stations, the data being filed in cahier marked "Report on Hydrographic Signals (HYDROGRAPHER, F. S. Borden, 1937 - Library No. S 1570)".

4. Sounding Line Crossings.

Cross line agreement of the Dorsey No. 1 fathometer averages about 1 foot. Agreement of the Dorsey No. 2 fathometer soundings obtained in the deeper areas average about 1 fathom or less.

5. Depth Curves.

The usual depth curves may be satisfactorily drawn.

6. Junctions with Surveys.

- a. The junction on the east with H-6293 (1937) is satisfactory except in lat. $27^{\circ} 53'$, long. $93^{\circ} 29'$, where a line of 76 to 83 fathom soundings (pos. 19 to 20 F) on H-6293 varies about 6 fathoms deeper than the present survey depths of 73 fathoms. Since the deeper line is principally controlled by sounding agreement, the deeper soundings have been omitted.

The 99 fathom sounding (line 84 to 85 X) on the present survey in lat. $27^{\circ} 53.4'$, long. $93^{\circ} 28.8'$ appears at first sight to be 10 fathoms or more too deep particularly as the preceding sounding of 71 fathoms is on a small plateau. The 99, however, is marked "OK" at the time of entry and in addition is the deepest depth in a small valley extending about 2 miles ENE.

- b. The junction on the north with H-6294 (1937) is excellent.
- c. The present survey overlaps H-4333 (1923) and H-4335 (1923) on the north in the area north of lat. $28^{\circ} 25'$. Agreement in the common area is good in only a few spots, the present survey depths generally varying 1 to 9 feet shoaler. These differences are partly due to the more accurate soundings on the present survey and the elementary buoy control used on the 1923 surveys. Only a fringe of the 1923 soundings are shown at the present survey limits and these are in fair agreement. For charting purposes, the present survey depths should be used to its northern limits in the common area and charting then continued from the 1923 surveys.
- d. The junction on the west with H-6291 (1937) is satisfactory.
- e. There are no contemporary surveys to the south of the present survey limits. A satisfactory junction, however, is made with the scanty charted hydrography shown here.

7. Comparison with Prior Surveys.

- a. H-1350 (1875-77), scale 1:600,000.

This sparsely covered survey contains sounding lines spaced on an average of about 35 miles apart and covers the entire area of the present survey. Agreement is only fair since many depths vary 1 to 12 fathoms deeper than the present survey depths. They should be superseded by the present survey in the common area in future charting.

- b. H-4333 (1923) and H-4335 (1923), scales 1:80,000.

These surveys have been discussed in par. 6c above.

8. Comparison with Chart 1116 (New Print dated April 21, 1928).

Hydrographic information shown on the chart originates with surveys discussed in the preceding paragraphs and several reported miscellaneous sources (see Descriptive Report, page 7, for tabulation of soundings and sources). The source of the 19 fathoms in lat. 28°20', long. 93°48', which falls in general depths of 31 fathoms and the 37 in lat. 28°00', long. 94°10' falling in depths of 45 fathoms could not be readily ascertained. They are charted, however, on the 1st Standard of Chart 1116 of 1918. These miscellaneous soundings are questionable as to both depth and position and because the present survey shows similar or shoaler depths several miles distant in each case, they should be superseded by the present survey in future charting.

9. Field Plotting.

Field protracting and plotting were accurate and conform to the requirements of the Hydrographic Manual.

10. Additional Field Work Required.

The least depth of 9-5/6 fms. on the shoal in lat. 27°54', long. 93°36' and the 11-2/6 fms. in lat. 27°52.4', long. 93°49.0' are fathometer soundings obtained on lines spaced 1 to 3 tenths miles apart. Both shoals have coral bottom characteristics and it is not unlikely that shoaler depths may exist. A drift sounding or wire drag examination will assist in insuring that the least depths on these features have been obtained. ^{additional development on H-6501 (1939)}

11. Superseded Prior Surveys.

Within the area covered, the present survey supersedes the following surveys for charting purposes:

H- 1350 (1875-77) in part
H- 4333 (1923) in part
H-4335 (1923) in part

12. Reviewed by - Harold W. Murray, October 17, 1938.

Inspected by - E. P. Ellis.

Examined and approved:



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



K. T. Adams,
Chief, Division of Charts.



Fred. L. Peacock,
Chief, Section of Field Work.



G. H. Hulse,
Chief, Division of H. & T.

Applied to drawing of Chart 1117 Aug 18, 1939 - J.F. Walker

Applied to Chart Correction 1116 Sept 28, 1939 H.E. MacEwen