

6294

U. S. COAST & GEODETIC SURVEY
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6294

Form 504
Rev. Dec. 1933
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 84
Hydrographic }

State TEXAS - Louisiana

LOCALITY
Gulf of Mexico
~~SOUTHEAST OF HEALD BANK.~~

SOUTH OF SABINE BANK.

1937.

CHIEF OF PARTY

Frank S. Borden.

1162

1P

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY
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REG. NO.

Acc. 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. 84

REGISTER NO. H-6294

State TEXAS - Louisiana

General locality GULF OF MEXICO

Locality SOUTH OF SABINE BANK

Scale 1 : 80,000 Date of survey NOVEMBER, 1937

Vessel HYDROGRAPHER

Chief of Party Frank S. Borden

Surveyed by G.L.Anderson-P.C.Doran-F.R.Gossett
J.N.Jones-K.B.Jeffers-J.T.Jarman

Protracted by P.C.Doran

Soundings penciled by P.C.Doran

Soundings in fathoms feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by None

Inked by Wallace A. Bruder

Verified by Wallace A. Bruder

Instructions dated Feb.17. : October 13., 1937

Remarks: _____

APPROVAL SHEET AND SUPPLEMENTAL
INFORMATION TO ACCOMPANY DESCRIPTIVE REPORT
H-6294 (1937)
SHEET NO. 84

I have examined this sheet and hereby approve it. The sheet had not been completely plotted nor the Descriptive Report written at the time I was detached from the HYDROGRAPHER. The following additional information is furnished to supplement Mr. Doran's report.

The survey of this area (see ~~chart~~^{limits} on previous page) was not called for in the original instructions for the 1937 season's work. However, when work adjacent to the outer portion of this area was surveyed, indications were found that the longitude of some of the old sounding lines on sheets 4333 and 4335 were seriously in error although the latitude seemed approximately correct. Having had charge of the adjustment of the old surveys in this locality and knowing the history of the work the recommendation was made that those portions of sheets 4333 and 4335 which had been surveyed by the old P.D.R. methods be resurveyed.

The history of the work done in 1923 on sheets 4333 and 4335 is as follows: The eastern portion of sheet 4333 and the western portion of sheet 4335 were surveyed by E. R. Hand on the Ship BACHE, using the old "P.D.R." methods entirely. Near the outer ends of his lines, he obtained a number of meridian altitudes which indicated that the sounding lines were from 2 to 5 miles farther off shore than given by the dead reckoning. When I took command of the BACHE, the surveys previously started were completed by buoy control methods and it was found that the "P.D.R." lines were in error in latitude by approximately the amounts indicated by the meridian altitude sights. In adjusting this work on the smooth sheet, the P.D.R. lines were pulled off shore sufficiently to

place the twenty five fathom curve in agreement with that curve as determined by the buoy control method. This method improved the latitude of the positions but of course could not be expected to improve the longitude and it now appears that in this respect they were considerably in error.

It was hoped that all of the old "P.D.R." work could be resurveyed this season, inshore, to and including, the 10 fathom curve. Adverse weather at the end of the season prevented a complete new survey of the old "P.D.R." work but the most important areas were resurveyed and it is believed the region has now been adequately covered. All of the areas where there were indications of shoals were resurveyed and a complete new development was made of the ten and twenty fathom curves.

Examination of the junction between this sheet and sheet 4335 indicates that the sounding lines on sheet 4335 belong somewhat to the eastward of where they are plotted. This same indication was found further offshore when comparing the position of a detached 20 fathom curve which is common to both sheet 4335 and this year's sheet No. 83. ^{H-6293} It is believed this may be due, partially at least, to incorrect knowledge of the magnetic declination in this locality when the older work was done. The buoys were located on the old work by full speed double runs using magnetic compass for azimuths. The observations for declination made in this locality this year indicate that the declination is considerably less than is shown on present charts and the amount of the discrepancy is sufficient to account for the discrepancy in longitude of the sounding lines on Sheet 4335.

The ^{from H-657 (1858). Discard. H.W.M.} 10 fathom sounding shown on present chart No. 1116 in latitude $28^{\circ} 50' 5''$, longitude $93^{\circ} 47' 0''$ has apparently been carried forward from an early report or record as it does not appear to be taken from sheet 4333. This area was resurveyed and the bottom found to be unusually even and it

seems very unlikely that there is a 10 fathom shoal in this locality. It is recommended that it be expunged from the chart and the charting data taken entirely from the new survey. The line on the latter part of "H" day which appears somewhat detached from the other work was run intentionally in that locality to serve as a split between two widely spaced lines on sheet 4333.

In examining junctions between work on this sheet and the work on sheets 4333 and 4335, it is well to remember that in all cases where our sheets of the last two years have joined previous lead line work, the lead line soundings have been found deeper than our fathometer soundings. Also that the size of the discrepancy is somewhat proportional to the depth. The soundings on this sheet are from 2 to 3 feet less on the average than are shown on the previous leadline surveys.


Frank S. Borden, Comdr. C&GS.

FSB/B

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SHEET No. 84 H-6294

INSTRUCTIONS:

Instructions for project HT-214 were issued February 17, 1937 and additional work requested by letter 1995 HY 4 dated October 13, 1937.

SURVEY METHODS:

CONTROL:

All the signals used on this sheet were buoys located by taut wire and sun azimuth traverses. ^{*}The original plan was to tie in the buoy traverse to Sabine Bank Lighthouse or to Heald Bank Buoy but, due to the poor weather encountered the latter part of the season, ^{*}no tie in was made. The details of location of buoys are covered in a special report "Report on Location of Hydrographic Signals, Ship HYDROGRAPHER, 1937". A list of geographic positions of all buoys and a sketch showing buoy control are appended.

The sounding lines were controlled by three point fixes, gyro bearings and single angle, gyro bearings and depression angles, and, in a few cases, by bomb distances, the method depending on the visibility at the time.

The line from position 102 H to position 129 H (at buoy Pop) was run as dead reckoning between known points and adjusted by the usual method.

Although the buoy traverse on which control for this sheet depends could not be closed by exact methods a satisfactory check was made to show that its traverse was not appreciable in error. Gyro bearings were obtained from its ships on Sabine Bank Lighthouse and buoy KAT while its ship was on line between these two points. These checks its longitude ? buoy KAT. Also gyro bearings were obtained on "Steer" (Sabine Bank Light Buoy) and buoy "JAG" while ship was on line between "JAG" and "Steer".

A sono-radio buoy was placed at CAD and used for a few nearby positions. It was found, by direct comparison between the arcs and corresponding positions plotted by visual fixes on nearby buoys, that the arcs from this buoy, using theoretical velocities derived from the usual temperature and salinity data, were not correct for long distances.

A sono-radio buoy was placed at JAG and, as at CAD, it was found that the arcs did not give the true distances. As this buoy was in very shoal water, 64 feet, and the bombs were fired in approximately the same shoal depth, it would appear that the sono-radio buoys should not be used under these conditions unless an actual velocity or true sound path is determined. The use of the sono-radio buoy in this depth was in the nature of an experiment and as other methods of control were available the arcs from JAG were not used for position determination.

A table of velocities for reduction of bomb distances is appended. This table was derived as explained in special report "Fathometer Corrections and Data For Reduction of Bomb Distances, Ship HYDROGRAPHER, 1937" and appended to descriptive report covering sheets ^{H 6251, 2+3} 41-42-43.

SOUNDINGS:

All soundings were with the Dorsey Fathometer No. 1, read to the half foot. Last year the fathometer was read to feet and after a study of the crossings it was decided to read and record to the nearest half foot. This was done this year with excellent results. On this sheet 80% of the crossings are in perfect agreement,

the remaining 20% having a maximum disagreement of 1 foot. In many cases where the lines fail to cross exactly, it will be found that the actual difference is only a few tenths of a foot.

TIDE REDUCERS:

All soundings on this sheet were reduced to ^{mean} low water at the Galveston South Jetty Lighthouse tide station. The hourly heights were scaled from the tide rolls and the curves plotted for reduction of soundings. The tides on this sheet were considered to occur one hour earlier than at the Galveston South Jetty Lighthouse gage.

The above mentioned curves, with tables of reducers, ^{have} ~~are~~ been forwarded under separate cover. ~~attached to this report.~~ *TSB*

All reducers were entered in tenths of feet.

FATHOMETER CORRECTIONS:

The fathometer corrections were made in two sections (1) the temperature and salinity correction and (2) the index-draft-settlement corrections. These corrections are shown in the record books as T/S and I/D/S respectively.

The method of deriving these corrections is described in detail in special report "Fathometer Corrections and Data for Reduction of Bomb Distances Ship HYDROGRAPHER, 1937" and appended to report covering hydrographic sheets ^{H-425/-2-3} 41-42-43.

A table of fathometer corrections used on this sheet is appended.

All corrections were entered in tenths of feet.

DISCREPANCIES:

No gross discrepancies were encountered in the work on this sheet. Slight disagreements in recorded times, angles, fixes and bearings are noted in the sounding volumes and adjustments are explained therein.

DANGERS:

There are no dangers in the area covered by this sheet. The least water found on slight shoal in Latitude $28^{\circ} 46.3'$ Longitude $93^{\circ} 41.2'$ was 59 feet. The least water on the sheet, 51 feet, was on the inshore end of the sounding lines. *in lat. $29^{\circ} 11'$, long. $93^{\circ} 37'$*

COMPARISON WITH ADJACENT AND PREVIOUS SURVEYS:

A satisfactory junction was made with Sheet 82 to the south. *H-6292*

H-6294
Sheet 84 covers a portion of sheets Register Nos. 4333 and 4335. Photostatic copies of these sheets were on hand and a comparison was made. A direct sounding by sounding comparison was impossible in the field but the general characteristics were compared.

Sheet 4335:

The 120 foot (20 fm.) curve at Latitude $28^{\circ} 35'$ on 4335 extends westward from Longitude $93^{\circ} 35'$ to Longitude $93^{\circ} 42'$. On the new survey the same curve is in the same latitude but extends only to Longitude $93^{\circ} 37'$. The general trend and characteristics are there but the old work appears to be 2 to 3 feet deeper than on the new.

The 60 foot (10 fm.) curve on the new work corresponds, in a general way, with the old work, the noticeable difference being the smoother appearance of the new curve. I believe that this is ^{partially} due to the greater accuracy and uniformity of echo soundings as compared with the shoal-deep lines of soundings which tend to appear in hand lead work ^{when} with the lines are run in and off shore alternately and ^{partially} to the poor control of that portion of sheets 4333 and 4335 surveyed by P.D.R. methods. It appears that, in the deeper water, the hand lead soundings are deeper than the fathometer soundings, while near the 60 foot (10 fm.) curve the soundings are in closer agreement. I believe that this can be attributed to the fundamental difference between ^{echo} sound and hand lead soundings, that is, the fathometer soundings are correct (or can be corrected to the true value) under any circumstances while the hand lead sounding is subject to conditions which always tend to give a sounding deeper than ^{the} true ^{value}, such as bow in line due to currents and non-verticality of line at time of reading.

A sounding of 59 feet on the new work at Latitude $28^{\circ}46.3'$ and Longitude $93^{\circ}41.2'$ did not show on the old work. No indications were shown on the adjacent usual spaced lines.

Two shoal soundings of 64 feet at Latitude $28^{\circ}46.4'$ and Longitude $93^{\circ}39.2'$ look as though they correspond to a 62 foot sounding in the new work 0.8 nautical mile to the westward.

The 59 foot sounding in the old work at Latitude $29^{\circ}04.5'$ and Longitude $93^{\circ}43.2'$ seems to be 0.6 mile to the south and 0.4 mile to the east of 59 foot sounding on the new work.

The apparent displacement of the old lines to the eastward can, I believe, be attributed to the fact that the old sounding lines were run as dead reckoning lines on the offshore end while the new work

was controlled throughout by a rigid system of buoy lines.

Sheet 4333:

In the deeper portions of this sheet the soundings appear to be 2 to 3 feet deeper than the fathometer soundings.

The 60 foot curve is much smoother in the new work, but it indicates the same general trend as shown by the extension of the curve to the southeast in Latitude $29^{\circ}05.0'$ and Longitude $93^{\circ}45.0'$.

Detached 60 foot curves in Latitude $29^{\circ}05'$ and Longitude $93^{\circ}50'$ old work, show in the new work as 61-62 feet. Soundings in this vicinity appear 1 to 2 feet deeper on the old work.

The general statements and reasons therefor under sheet 4335 apply to this sheet also.

DEPTH UNITS:

As authorized in Bureau letter 1995 HY 4 dated January 22, 1938, soundings on sheet ^{H-6294} 84 were plotted in feet.

Respectfully submitted,

FORWARDED:

G. O. Mattison
G. O. Mattison,
Commanding HYDROGRAPHER.

Philip C. Doran
Philip C. Doran,
H. & G. Engineer,
Coast and Geodetic Survey.

*Staten Island, N.Y.
April 22, 1938*

Note: Smooth sheet plotting has not been completed at the time I was detached from the Hydrographer nor had the Descriptive Report been written. The sheets and this report have been forwarded to me for approval. The approval sheet with supplemental remarks is attached hereto.

Frank S. Borden

H-6294
STATISTICS: FIELD SHEET 84

Ship HYDROGRAPHER - 1937

Number of soundings	3,645
Number of miles of sounding	670
Number of positions	612
Number of sounding volumes	2
Number of bomb record volumes	1
Number of bomb positions	49

GEOGRAPHIC POSITIONS

TRIANGULATION
(Hydrographic name underlined)

Station Name	Latitude			Longitude		
	°	'	"	°	'	"
<u>Aero</u> , 1931-33	29	16	260.5	94	50	368.9
<u>Bolivar Point L. H.</u> , 1900	29	21	1834.9	94	46	7.1
<u>Buccanoe</u> , 1933	29	17	757.3	94	47	461.0
<u>Cotton Concentration Co. W. T.</u> , 1933	29	17	1200.1	94	49	1230.8
High Island Hotel <u>Cupola</u> , 1900	29	33	681.0	94	23	687.6
Santa Fe Building <u>Cupola</u> Finial, 1933	29	18	698.4	94	47	1303.5
<u>Galves Hotel</u> Stack, 1933	29	17	1040.9	94	47	173.6
<u>Gilchrist</u> , 1933	29	30	1564.6	94	29	174.0
<u>High Grade Packing 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</u> Light, 1933	29	20	1343.0	94	40	1198.9
<u>Farr's Grove</u> , 1932	29	25	1241.5	94	41	352.5
<u>Patton</u> , 1932	29	27	1382.2	94	37	625.7
Mexican <u>Petroleum Corp.</u> Stack, 1933	29	18	1615.5	94	46	558.7
Fort Crockett E. <u>Radio</u> Tower, 1933	29	16	1310.8	94	48	530.8
Road, 1934	29	36	1033.0	94	13	1422.4
<u>San Luis C. G. Station</u> Cupola, 1933	29	06	1501.2	95	04	1543.5
<u>Sealy Hospital</u> Cupola, 1933	29	18	1274.4	94	46	1072.1
Shell, 1934	29	35	795.4	94	16	1376.8
<u>South Jetty</u> Light, 1933	29	19	1208.7	94	41	687.3
Turn, 1934	29	34	490.7	94	19	1440.9

To accompany Sheet 84 N-6294

HYDROGRAPHIC SIGNALS
(Located by Theodolite Cuts etc.)

Name	Latitude			Longitude			
	°	'	"	°	'	"	
Corn	29	10	1218	94	58	1457	Topo. T-4852
Eok	29	14	1072	94	52	1411	Hydro. Control Page 2 Vol. 3
Lum	29	08	156	95	08	1547	Hydro. Control Page 4 Vol. 3
Over	29	31	1551	94	26	278	Topo. 1937
Quan	29	00	1302	95	12	825	Hydro. Control Page 5 Vol. 3
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 Vol. 3
Wind	29	08	1185	95	02	210	Topo. T-4852

BUOYS

Buoy Name	Latitude			Longitude			Trav. No.
	°	'	N	°	'	W	
ABE	29	18	1362	94	28	760	2
ACE	29	31	1555	94	20	163	Graphic
ADD	28	59	1017	94	26	422	3 & 4
AFT	28	09	703	93	20	1210	15
AID	28	43	486	94	53	488	9
AIM	28	09	694	92	42	1510	Graphic
AIR	28	59	1279	94	50	1422	8
ANT	28	42	801	94	19	1539	6
APE	27	58	1498	94	38	576	Graphic
BAN	28	41	18	94	57	2	9
BAR	28	09	765	93	14	461	15
BAT	27	58	537	92	26	839	Graphic
BEE	29	16	1067	94	27	529	2
BELL	28	58	473	94	18	1155	3a 34 ft. Shoal Bell Buoy.
BIM	29	29	1402	94	19	35	1
BIT	28	38	1832	94	19	1562	6
BUD	29	02	454	94	52	306	8
BUM	29	02	454	94	27	1020	3 & 4
BUT	28	09	1570	94	19	1280	13
CAD	28	35	790	93	42	26	17
CAN	28	34	1169	94	19	1555	6
CAP	29	04	1589	94	29	18	3 & 4
CAR	29	04	1554	94	53	955	8
CAT	29	27	1177	94	17	1428	1
COB	29	14	761	94	26	270	2
COG	27	58	533	94	18	1027	Graphic

BUOYS - Page 2

Buoy Name	Latitude			Longitude			Trav. No.
	°	'	"	°	'	"	
CUP	28	59	1145	94	59	1431	11
CUR	28	14	1242	93	14	556	15
DAD	29	12	552	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	Plotting 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
EAP	28	30	507	94	25	49	6
EEL	29	23	683	94	15	968	1
EGG	29	09	1688	94	51	1228	4
ELF	29	10	532	94	24	26	2
ELK	28	40	1363	94	49	1601	12
ELI	28	25	222	93	14	613	15
EKM	29	09	1625	94	56	588	Graphic
EGU	28	44	728	93	42	9	17
FAD	28	45	1262	94	30	98	6
FAN	28	30	556	93	14	1451	15
FAR	29	08	95	94	22	1535	2
FAT	28	45	962	94	47	814	10
FEZ	29	12	803	94	33	82	3 & 4
FIG	29	21	479	94	14	755	1

BUOYS - Page 3

Buoy Name	Latitude			Longitude			Trav. No.
	°	'	"	°	'	"	
BOG	28	37	448	94	49	1279	13
FOP	28	48	1788	93	41	1572	17
FOX	27	54	1240	93	35	1496	Graphic
GAC	28	30	511	94	09	1361	13
GAL	28	43	1669	94	50	1562	9
GAS	27	54	1327	93	36	364	Graphic
GAY	28	45	816	94	29	1618	6
GEM	29	05	1678	94	21	1378	2
GIG	28	33	1559	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	1382	94	20	1211	2
HAM	28	30	220	93	04	1242	13
HAT	28	42	680	94	29	1624	6
HAW	28	58	126	93	41	1461	17
HAY	28	30	329	93	27	1050	15
HEALD	29	06	420	94	13	1257	2a
HIT	28	46	954	94	52	390	9
HOB	28	30	511	94	50	149	11
HOW	29	17	666	94	35	1124	3 & 4
HUB	29	26	1292	94	26	290	Graphic
ICE	29	26	1095	94	25	54	1
IF	28	30	146	93	59	868	13
IMP	28	39	679	94	29	1513	6

BUOYS - Page 4

Buoy Name	Latitude			Longitude			Trev. No.
	°	'	"	°	'	"	
INK	29	19	1455	94	56	1583	Graphic
INH	28	49	229	94	53	864	9
IRE	27	59	471	93	27	605	Graphic
IS	29	01	1117	93	41	1436	17
IT	28	30	533	94	54	1581	11
IVY	29	01	663	94	19	828	2
JAG	29	05	285	93	41	1432	17
JAM	28	09	805	93	07	351	18
JET	29	13	869	94	49	910	Graphic
JIB	28	30	301	94	59	1318	11
JIM	28	33	968	94	29	1548	6
JIP	28	30	142	93	54	450	13
JOB	28	51	1269	94	54	1385	9
JOY	29	24	637	94	23	1473	1
JUG	28	59	142	94	18	470	3
KAY	29	09	1549	93	41	1497	17
KEG	28	30	104	93	48	228	15
KEM	28	54	815	94	56	206	9
KEY	29	22	733	94	22	1311	1
KID	28	33	688	94	59	1329	11
KIM	28	24	1371	93	54	384	13
KIN	28	56	1519	94	17	157	3
KIP	28	33	1204	94	29	1624	6
KIT	29	10	1710	94	43	594	5
LA	29	05	371	93	27	53	17
LAD	29	08	1199	94	47	147	5

BUOYS - Page 6

Buoy Name	Latitude			Longitude			Trav. No.
	°	'	"	°	'	"	
NUN	29	16	864	94	19	855	1
NUT	28	09	1287	94	13	228	13
OAK	28	51	1688	94	30	401	4 & 5
OAR	28	21	346	94	39	1823	13
ODD	28	36	977	94	40	74	7
OH	28	30	297	93	14	888	15
OHM	28	09	1148	94	06	887	13
OIL	29	14	149	94	18	474	2
OLD	29	04	1391	95	01	933	Graphic
OX	29	01	1394	94	43	597	5
PAD	28	17	781	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	55	1378	9
PAY	28	59	775	94	42	217	5
PIE	29	11	1268	94	16	1596	2
POP	27	53	1138	93	18	13	Graphic
POT	28	09	931	94	00	345	13
QUI	28	56	1297	94	32	1894	5
RAG	28	57	281	94	40	1509	5
RAN	28	13	1024	94	39	1613	13
RAP	27	53	314	93	27	745	Graphic
RAW	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

Buoy Name	Latitude			Longitude			Trav. No.
	°	'	"	°	'	"	
RIM	29	00	1408	95	07	997	Graphic
SAG	29	01	1478	94	38	671	4 & 5
SAP	28	48	1448	94	39	1823	7
SAW	28	58	433	95	08	530	Graphic
SEA	28	09	697	93	00	251	16
SIR	28	54	1558	94	39	1180	8
SOD	29	07	293	94	14	796	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.
SUP	28	09	519	93	47	1154	15
TAB	28	09	767	92	53	231	16
TAG	28	47	129	94	44	265	10
TAP	28	09	520	93	40	1584	15
TAX	29	04	750	94	38	1213	4 & 5
TEB	28	09	1220	94	46	1024	14
TCM	28	58	1491	95	08	78	9
TON	28	52	990	94	38	880	5
TUG	29	08	598	94	15	656	2
UGH	27	49	743	93	03	4	Graphic
UKE	29	06	1722	93	38	00	4 & 5
UNA	28	09	575	93	34	292	15
UNO	28	30	510	94	44	1410	11
UP	28	58	578	95	03	1141	9
URN	29	17	1369	94	15	1361	1
US	28	09	1097	93	04	158	14
USE	28	49	1785	94	37	442	8

BUOYS - Page 9

Buoy Name	Latitude			Longitude			Trav. No.
	°	'	"	°	'	"	
ZIP	28	56	1679	94	24	1408	3 & 4
ZBE	28	57	155	94	49	802	8
ZOO	29	20	1678	94	29	1032	2
ZUS	28	45	1535	94	19	1567	6

June 16-25 July 20-28 Aug. 4-15 Aug. 19-28 Sept. 6-15 Sept. 21-30 Oct. 5-14 Oct. 19-30 Nov. 4-19 July 20-Oct. 30

MEAN

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	35	31	39	38	35	34	34.3
27	1526	1528	30	31	29	35	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	21		17.8
62		1519			13	15	20	20		16.8
67		1517.5			12	14	19	19		15.8
72		1516			11	13	17	17		14.7
77		1515			10.5	12	16	16		13.7
82		1515			10	11	15	15		13.3
87		1514			09	10	14	14		12.3
92		1513			08.5	9	13	13		11.3
97		1512			07.5	8	12	12		11.0
102		1511	Observations not complete		07	7				10.2
107		1510.5			06	6				08
112		1510			05.5	5				08
117		1510			05	4				07.5
122		1510			04.5	3				07
127		1510			04	2				07
132					03	1				03
137					02	0				02
142					01	0				01
147					(1500)	0				00
152					(1500)	0				00
157						0				00

Sheet
84
H-4244

I-D-S & T & S CORRECTIONS

SHEET 84 H-6294

SHIP HYDROGRAPHER

1937

Correction Feet T.&S.	Nov. 4 - 19 Depth	
	Fms.	Feet
+1.0	9	2
1.1	10	0
1.2	10	5
1.3	11	4
1.4	12	3
1.5	13	2
1.6	14	1
1.7	15	0
1.8	15	5
1.9	16	4
2.0	17	3
2.1	18	2
2.2	19	1
2.3	20	0
2.4	21	0
2.5	22	0
2.6	23	0
2.7	24	0
2.8	25	0
2.9	26	0
3.0	27	0
3.1	28	0
3.2	29	0

H-6294

SHEET 84		I	D	S*	I/D/S
Date	Day		Feet		Feet
Nov. 6	A	-1.0	+0.7	+0.8	+0.5
	7	B	"	"	0.4
	8	C	"	"	0.4
	9	D	"	"	0.3
	10	E	"	"	0.3
	11	F	"	"	0.2
	15	G	"	"	0.4
	17	H	"	"	0.3

*Values for S,
 +0.8' (full speed) 120 rpm's
 0.6' at 100 rpm's
 0.4' at 80 rpm's
 0.2 at 60 rpm's
 0.0 at 40 rpm's

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 returns~~ approved in

2 volumes of sounding records for

HYDROGRAPHIC SHEET 6294

Locality South of Sabine 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:

C. H. Ham
Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES

Survey No. **H6294**

Name on Survey	On Chart No. 1116		On previous survey		On U. S. quadrangle Maps		From local information		On local Maps		P. O. Guide or Map		Rand McNally Atlas		U. S. Light List	
	A,	B,	C,	D	E	F	G	H	K							
<u>Gulf of Mexico</u>	✓															1
<u>Sabine Bank</u>	✓															2
																3
																4
																5
																6
																7
																8
																9
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																18
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																21
																22
																23
																24
																25
Names underlined in red approved																
by <u>SAE</u> on <u>6/8/38</u>																

Remarks

Decisions

	Remarks	Decisions
1		
2		see H-6293
3		
4		
5		
6		
7		
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27		

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H6294**

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

Number of positions on sheet	.....	612
Number of positions checked	.....	67
Number of positions revised	.....	0
Number of soundings recorded	.....	3,645
Number of soundings revised	.....	0
Number of signals erroneously plotted or transferred	.....	0

Date: *Sept. 6, 1938*

Verification by *Wallace A. Bruder*
and *H. W. Murray (Junctions)*

Time: $\left. \begin{array}{l} 18^h. \\ 11^h. \end{array} \right\} \begin{array}{l} 30^m. \\ 30^m. \end{array} \right\} 30 \text{ hrs.}$

Review by *Harold W. Murray*

Time: $6^h. \quad 30^m.$

H6294

HYDROGRAPHIC SURVEY NO. _____

Smooth Sheet Yes

Boat Sheet Yes

Records; Sounding 2 Vols., Wire Drag Vols., Bomb One Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes (Vol.#1)

Landmarks for Charts (Form 567) ----

Statistics None

Approved by Chief of Party ~~None~~ Yes

Recoverable Station Cards (Form 524) None

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

Hydrography: Total Days 8 ; Last Date Nov. 17, 1937

Remarks _____

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY }
 DESCRIPTIVE REPORT } No. H -6294
 X PHOTOSTAT OF XXXXXXXXXXXX No. X

{ 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			
24			
25			
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	T. B. Reed
----	------------

✓ JBR

VERIFIERS REPORT

Report on H-6294
Chief of party: Frank S. Borden
Protracted by P.C. Doran
Verif. & Inked by Wallace A. Bruder

Surveyed in November, 1937
Surveyed by G.L.A., P.C.D., F.R.G.
J.N.J., K.B.J., J.T.J.
Soundings plotted by P.C. Doran

1. The records conform very well to the requirements of the General Instructions. ✓
2. The usual depth curves were completely drawn, with the exception of the ¹²⁰60' curve at the bottom of the sheet that joins H-6292 (1937).
This was put in pencil. ✓
3. The field plotting was complete to the extent prescribed in the Hydro. Man. ✓
4. The office draftsman did not have to do over any of the field drafting. ✓
5. There is only one contemporary adjacent sheet and this sheet (H-6292) is at present unverified. See rev. for other junctions. ✓
6. Remarks
The lines of the smooth sheet were thoroughly compared to those of the boat sheet. Disagreements were thoroughly investigated and checked before inking. ✓

Respectfully submitted:
Wallace A. Bruder
September 6, 1938

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6294 (1937) FIELD NO. 84

South of Sabine Bank, Gulf of Mexico, Texas-Louisiana
Surveyed in November 1937, Scale 1:80,000
Instructions dated Feb. 17 and Oct. 13, 1937 (HYDROGRAPHER)
Letter #1995 HY 4 dated Jan. 22, 1938

Dorsey Fathometer Soundings.

3 Point fixes and bearings on
buoy signals.

Chief of Party - Frank S. Borden.
Surveyed by - G. L. Anderson, P. C. Doran, F. R. Gossett, J. N. Jones,
K. B. Jeffers, and J. T. Jarman.
Protracted by - P. C. Doran.
Soundings plotted by - P. C. Doran.
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.

The Descriptive Report is exceptionally 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.

This is an offshore survey and no shoreline is shown.

The control is furnished by buoy signals located by taut wire and sun azimuth traverses, the data being filed in cahier marked "Report on Hydrographic Signals" (HYDROGRAPHER, F. S. Borden, 1937 -- Library No. S 1570).

4. Sounding Line Crossings.

Agreement of sounding line crossings is excellent, 80% of the crossings being in perfect agreement, whereas the remainder have a maximum disagreement of 1 foot. (See D.R., pages 2 and 3, second portion.)

5. Depth Curves.

The usual depth curves may be satisfactorily drawn.

6. Junctions with Surveys.

- a. The junction on the south with H-6292 (1937) will be considered in the review of that survey.
- b. The present survey is a resurvey of a portion of H-4333 (1923) and H-4335 (1923-24) and therefore joins these surveys at its limits on the north, east and west. Portions of sounding lines on these surveys were controlled by dead reckoning and were known to be as much as 5 miles in error in position. (For complete details, see D.R., page 1.) Although a portion of the work was readjusted, particularly in latitude, other adjustments as in longitude were not feasible. Only a fringe of soundings has been shown at the present survey limits because the agreement varies as much as 7 feet in a few areas, although it is generally satisfactory in other areas. For charting purposes, the present survey should be used to its limits and charting then continued from the 1923-24 surveys.

7. Comparison with Prior Surveys.

- a. H-657 (1858) and H-1350 (1875-77), Scales 1:635,000 and 1:600,000.

These are small scale, sparsely covered reconnaissance surveys controlled by dead reckoning. Each contains 1 to 3 soundings falling within the present survey's limits which vary 1 to 7 feet deeper than the present survey depths except the 60 foot sounding (on chart 1116) from H-657 in lat. $28^{\circ} 50.5'$, long. $93^{\circ} 47.0'$ which falls in depths of 76 feet and is too shoal. Neither the present survey nor other surveys covering this area show a shoal in this area. The present survey does show, however, a similar shoal about 6 1/2 miles southeast with a least depth of 59 feet which is probably one and the same shoal. The 1858 shoal should be superseded by the present survey in future charting.

- b. H-1596a (1884), Scale 1:80,000.

A portion of this survey covers 1 to 5 miles of the present survey on the north. The sounding lines are spaced about 4 miles apart and are controlled by dead reckoning. Agreement of depths is generally good although some areas vary 1 to 3 feet deeper than the present survey. The present survey should, within the common area, supersede the above survey for charting.

- c. H-4333 (1923) and H-4335 (1923-24), Scales 1:80,000.

These surveys taken together cover the entire area of the present survey. The descriptive report, pages 1 and 2, first section, and pages 4 to 6, second section, contains a comprehensive discussion of these surveys, including a comparison with the present survey. Within the common area the present survey should supersede the above surveys for charting.

8. Comparison with Chart 1116 (New Print dated April 21, 1938).

Information shown on the chart originates with surveys discussed in previous paragraphs of this review and no further consideration is necessary.

9. Field Plotting.

Field protracting and plotting of soundings were exceptionally accurate as not a single correction was necessary in the office.

10. Additional Field Work Required.

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

11. Superseded Prior Surveys.

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

H- 657 (1858)	In part
H-1350 (1875-77)	In part
H-1596a(1884)	In part
H-4333 (1923)	In part
H-4335 (1923-24)	In part

12. Reviewed by Harold W. Murray, September 15, 1938.

Inspected by E. P. Ellis.

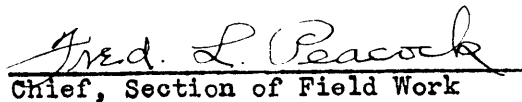
Examined and approved:



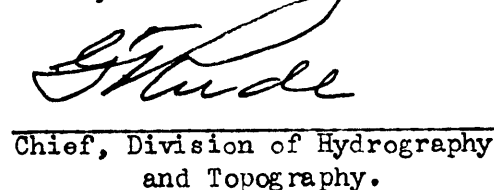
Thos. B. Reed
Chief, Section of Field Records



K.T. Adams
Chief, Division of Charts



Fred. L. Peacock
Chief, Section of Field Work



G. H. Hude
Chief, Division of Hydrography
and Topography.

Applied to Chart Correction 1116 Sept 28, 1939 H.S. MacSwan