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U. S. COAST & GEODETIC SURVEY
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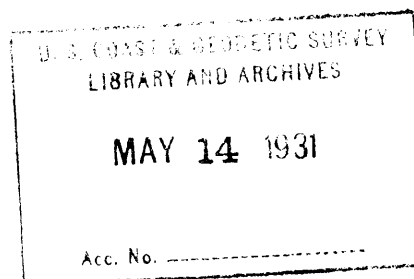
Form 504	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
R. S. Patten., Director	
State: Florida	
DESCRIPTIVE REPORT	
<i>Topographic</i> <i>Hydrographic</i>	Sheet No. 5113 #2
LOCALITY	
Gulf of Mexico	
Southeast of Pensacola	
1931	
CHIEF OF PARTY	
L. O. Colbert	

GOVERNMENT PRINTING OFFICE

DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
R.S. PATTON - DIRECTOR

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SHEET NO. 2. H 5113.
GULF OF MEXICO
OFF SANTA ROSA ISLAND
FLORIDA

PROJECT NO. 74



U.S.C. & G.S.S. OCEANOGRAPHER
L.O. COLBERT - COMMANDING.

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 2, H _____.

IN GULF OF MEXICO

OFFSHORE FROM SANTA ROSA ISLAND, FLORIDA

.

The collection of hydrographic data for this area was in pursuance of instructions to the Ship OCEANOGRAPHER dated January 29, 1930, January 31, 1931, and supplemental instructions of February 17, 1931.

The location of inshore ends of the sounding lines were controlled by buoy signals, planted outside of the visibility of the tall hydrographic shore signals used on the inshore sheet. Reference should be made to Hydrographic Sheet No. 1, H 5115, for the determination of these buoys. Briefly stated, three buoys were cut in from positions fixed by sextant angles on shore signals; Buoys F, G & H (or Fox, Goat and Hoe) were located from Buoy C, the most western of the inshore buoys, through a line of two buoys lying offshore from it by successive full-speed double-runs between each buoy and by sun azimuths for the range between adjacent buoys. Buoy J (or Jed) was located in a similar manner from Buoy A, the most eastern of the three inshore buoys, first established. A complete loop was made by running full-speed courses between Buoys J and H and by observing the sun azimuth of the range between them. This loop closed with an error of 160 meters in distance, which was adjusted. The azimuth checked exactly.

The buoys were plotted and adjusted on an aluminum sheet, using a projection scale of 1:40000. The positions were transferred to the smooth Hydrographic sheet. They were planted in the following depths and had the following swinging radius:

Buoy F ,	18 fths,	90 Meters
Buoy G ,	22 fths,	85 Meters
Buoy H ,	30 fths,	80 Meters
Buoy J ,	20 fths,	85 Meters

For the determination of the positions of the offshore ends of the lines, two can buoys without superstructure, were dropped while running at full speed on the outgoing line. They were moored in 102 and 108 fathoms, respectively, to 100 lb. anchors, using about 250 fathoms of old stranded sounding wire. They served for departure of the lines run inshore after the comparative soundings had been taken. Buoy X was located from the mean of two loops, which closed at locations determined by fixes on the inshore buoys, F, G, H. & J. To determine the distance offshore of these buoys, readings were taken on two taffrail logs, the electric log and the revolutions of both engine propellers.

Three vertical casts with the electric sounding machine using wire, comparative readings, temperature and salinity data were obtained beyond the 100-fathom curve. Eight other comparative soundings and data were secured at depths of 19 to 31 fathoms.

Comparative soundings, collection, recording and abstracting of temperature and salinity data, computations and abstraction of log ratings and lead reckoning loops were made by Lieut. T. B. Reed or under his supervision.

No obstructions, banks or submarine valleys were noted. No consideration of channels or anchorages is necessary in this area. A note on tidal data ^{is} ~~has been forwarded~~ ^{herewith.} ~~under~~ separate cover. Inspection of the smooth plotting was made by me during progress of that work. The following data are forwarded as a part of this report:

Statistic Sheet

Abstract of Fathometer comparisons, temperature, salinities and bottom characteristics.

Abstract of Water Temperatures and salinities.

Abstract of lead reckoning lines (Form 612)

Computation of log-ratings.

Attention is called to the peculiar trend of the 50-fathom curve, which runs due north at the western limit of the work for a distance of over 5 miles, and then turns at right angles to the eastward. The slope between the 20 and 30-fathom curve is greater than inshore from depths of 20 fathoms to 10 fathoms.

The impact oscillator operated satisfactorily up to depths of 60 fathoms and occasionally gave good flashes up to 80 fathoms.

The electric oscillator failed beyond 80 fathoms. The ship was not furnished with information to detect the cause of the failure of this apparatus, and advice was received from the office that other circumstances would prevent the issue of this information until after the close of the season. Judging by its operation in this area I would condemn the latter apparatus as not within the standard of accuracy of hydrography maintained by the Bureau under the method of vertical casts with wire and lead.

I recommend that the few soundings recorded beyond 80 fathoms be rejected and that those between 80 and 60 fathoms be considered doubtful until adjacent lines are run. If these depths agree with subsequent soundings adjacent to them, they may be considered correct and retained, otherwise they should also be rejected.

Respectfully submitted,

L. O. Colbert

L.O. Colbert, Comdr, C. & G.S.,
Commanding Ship OCEANOGRAPHER.

Norfolk, Va.,
May 8, 1931.

STATISTICS SHEET
TO ACCOMPANY
DESCRIPTIVE REPORT, HYDROGRAPHIC SHEET No. 2

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Number of positions: -	99
Number of Soundings:-	1538
Statute Miles of Sounding lines: --	210.6
Area in square statute miles:-	120

TIDAL NOTE
TO ACCOMPANY DESCRIPTIVE REPORT
of
HYDROGRAPHIC SHEET NO. 2
OFF SANTA ROSA ISLAND
FLORIDA

..

Hourly heights of tides for reducers of
A and B day were obtained from the Tide Observer at
Pensacola, Florida. No time correction was applied
to the reducers except the one hour correction be-
tween 90th meridian time in use by the tide gauge
and 75th meridian time in use by the ship.

Reducers for C day were obtained from
the predicted tides for Pensacola, Florida.

Abstract of —
Fathometer comparisons
Water Temperatures
Salinities
Bottom Characteristics

1931

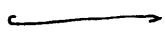
Abstract of Fathometer Comparisons, Temperatures, Salinities, and B
To accompany Descriptive Report of Hyd. Sheet No. 2.

Date	Time	Position		Depth by Fathometer				Specific Gravity			Water Temperatures			Sea	
		Lat. N.	Long. W.	Wire Fms.	H.L. Fms.-Ft.	Impact Fms.-Ft.	Osc. Fms.	Surface	Sub-Surface	Ther. No.	Surface	Depth	C°		Ther. No.
Mar. 5	10:40	30-13	86-54		16-1	14-2		1.0261			51497	15.3			Light
" "	11:25	30-13	86-57		14-1	12-3		1.0260			"	15.2	Bottom	15.2	51498
" 6	8:40	30-22	86-46		10-4	9-0		1.0261			51500	15.2	"	15.4	" "
" "	12:05	30-18	86-50		11-5	9-1		1.0260			"	15.2	"	15.3	" "
" "	13:20	30-18	86-50		16-1	12-4		1.0261			"	15.7	"		" "
" 12	12:05	30-08	86-58		18-5	17-0					"	15.9	"	15.1	" Lt. C
" "	12:55				19-2	19-2									
" "	17:45	30-14	86-58		14-0	13-3		1.0250	Bottom	1.0261	51498	15.2	"	15.7	" Lt. C
" 13	7:25	30-15	86-56		12-0	12-0		1.0254			"	15.0	"		" S.
" "	11:04	30-12	86-59		14-5	14-1		1.0250	Bottom	1.0268	"	15.5	"	15.9	" "
" "	11:35	30-10	86-59		16-0	15-2					"	15.3			" "
" "	12:55	30-09	86-49		19-2	18-4		1.0250			"	16.2	"	15.8	" "
" "	17:55	30-09	86-49		20-0	19-2		1.0252			"	15.9	"	16.2	" "
" 14	13:00	29-37	86-52	128				1.0261	Bottom	1.0264	"	14.5	"	14.2	51500 Smoo
" "		" "	" "									50	19.2		" "
" "		" "	" "									65	18.3		" "
" "		" "	" "									80	17.4		" "
" "	13:40	" "	" "									100	16.0		" "
" "	19:10	30-09	86-49		20-0	19-4		1.0255	Bottom	1.0262	51498	16.1	Bottom	15.8	" "
" 15	7:50	30-09	86-49		19-2	19-2	17.2	1.0265	"	1.0261	"	16.2	"	15.4	" "
" "	11:30	29-37	86-52	130				1.0248					"	14.2	51498
" "		" "	" "									65	18.2		" "
" "	18:10	30-10	86-49.7		20-0	19-3						16.2	20	15.8	" "
" 16	8:10	30-08	86-52	27	26-3	26-0		1.0250			51500	15.0	Bottom	15.7	51500 Light
" 17	9:05	30-23	86-41		5-3	5-3									Smooth
" "	9:18	30-22	86-41		9-1	8-4		1.0255			51498	14.8	"	15.2	51498
" "	17:30	30-13	86-50		13-5	13-1		1.0250	Bottom	1.0255	"	15.7	"	15.5	" "
" 18	7:20	30-13	86-50		13-2½	13-4		1.0244			"	15.5	"	15.5	" "
" "	8:30	30-08	86-50		27-1½	27-0		1.0249			"	15.8	"	15.5	" "
" "	10:05	30-07	86-50		37-2	36-4		1.0250			"	15.7	"	15.5	" "
" 25	11:55	30-16	86-52		11-3	11-1		1.0243	"	1.0252	"	16.5	"	16.2	" Light
" 25	15:17	30-16	86-50		13-0	11-0									Smooth
" 25	16:10	30-16	86-40		12-3	10-1									" "
" 26	10:40				13-2	12-1		1.0248	Bottom	1.0252	"	15.8	Bottom	16.2	Medium
" "	12:10	30-10	86-49.7		23-3	21-3		1.0246			"	16.7	"	16.2	Heavy

Salinities, and Bottoms. Project No 74.- Off Santa Rosa Island, Florida
 Net No. 2. 1931

Water Temperatures				Sea	Air C°	Wind	Weather	Barom.	Motion of		Remarks - Position No. - etc.
Ther. No.	Surface	Depth	C°						Ther. No.	Vessel	
51497	15.3			Light Chop.	55	E-2	Clear	30.16	Slight	Fne. Wh. S.	At Buoy "B"
"	15.2	Bottom	15.2	" "	55	E-2	"	30.16	"	Fne. Wh. S. Brk. Sh.	At Buoy "C"
51500	15.2	"	15.4	" swells	59	ESE-4	Cloudy	30.11	"		1.2 mi. S. of Δ Beach 3
"	15.2	"	15.3	" "	61	ESE-4	"	30.10	Lt. Roll		18-D
"	15.7	"	"	" "	61	ESE-4	"	30.05	" "		19-D
"	15.9	"	15.1	Lt. Chop.	62	W-4	Clear	30.28	Steady		"E-F" 124-52' "F-G" 98°-42'
											Reset disc on Fathometer ^{to read} correctly
51498	15.2	"	15.7	Lt. Chop.	62	WSW-3	Clear	30.18	"	Fne. Wh. S. Brk. Sh.	105 E
"	15.0	"	"	" Swells	62	E-2	"	30.23	"		1 F
"	15.5	"	15.9	" "	61	SE-2	"	30.27	"	P. B. L. 24. Fne. Wh. S. Brk. Sh.	At Buoy "D"
"	15.3	"	"	" "		SE-2	"			Crs. Gy. S. Wh. Co.	At Buoy "E"
"	16.2	"	15.8	" "	62					Wh. Co. Crs. S. Brk. Sh.	At Buoy "Jed"
"	15.9	"	16.2	" "							4 mi. SE of "Jed"
"	17.5	"	14.2	51500 Smooth		calm	Partly Cloudy	30.20	Steady	Gy. M.	At Marker Buoy "X" 40 A
		50	19.2	"		"	"		"		" " " " " "
		65	18.3	"		"	"		"		" " " " " "
		80	17.4	"		"	"		"		" " " " " "
		100	16.0	"		"	"		"		" " " " " "
51498	16.1	Bottom	15.8	" "					"	Br. S.	4 mi. 192° from "Jed"
"	16.2	"	15.4	" "		NW-2	Clear	30.16	"		Near Buoy "Jed" (Lead line correct)
		"	14.2	51498						Gy. M.	Hydrometer Broken. At marker Buoy
		65	18.2	"							" " " " " "
		16.2	20	15.8	"	W-N-2	Cloudy	30.05	Steady	Br. Sh. Crs. Gy. S.	1 mi. NW. Buoy "Jed" (Lead line correct)
51500	15.0	Bottom	15.7	51500 Light Chop. Smooth		N-4	"	30.11	Lt. Roll	Crs. Br. S.	Near Buoy "Hoe"
											4 mi. from Δ Cutter
51498	14.8	"	15.2	51498		N-2	Clear	30.16	Steady		3/4 mi. from Δ Cutter
"	15.7	"	15.5	"	60	SW-3	"	30.08	"	Fne. Wh. S.	Buoy "A1" 230 T. 1/2 mi.
"	15.5	"	15.5	"	60	Calm	"	30.10	"		" " " " Fathometer cold
"	15.8	"	15.5	"		"	"	30.10	"	Fne. Gy. S.	NNE 4 mi. Buoy "Hoe"
"	15.7	"	15.5	"						Crs. Gy. S.	
"	16.5	"	16.2	" Light Swell Smooth		NNE-3	Cloudy	30.06	"	Fne. Gy. S.	Hammer stopped working after this sidg. Repaired, reads 2 fms. low.
				"						Fne. Wh. S.	Near Pos. 49 I.
				"						" "	Near Pos. 65 J.
"	15.8	Bottom	16.2	Medium Swell	61	ENE-5	Cloudy	30.09	Lt. Roll		
"	16.7	"	16.2	Heavy chop.							

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Abstract of 
Fathometer comparisons
Water Temperatures
Salinities
Bottom Characteristics

1931

Abstract of Fathometer-Comparisons, Temperatures, and Bottom Character
To accompany Descriptive Report of Hydrographic Sheet No. 2.

Date	Time	Position		Depth by Fathometer				Specific Gravity		Water Temperatures				Sea	
		Lat. N.	Long. W.	Wire	H. L.	Impact	Osc.	Surface	Sub-Surface	Ther. No.	Surface	Depth	C°		Ther. No.
				fms.	fms-ft	fms-ft	fms.								
Mar. 26	13:45	30-17	86-49		13-3	11-3		1.0248		51498		16.3			Modern
" "	15:00				13-3	13-3									
" 30	12:25	30-16.5	86-47.5		11-4	12-5				"	15.75	Bottom	15.7	51498	Smooth
Apr. 2	8:10	30-22	86-49		10-0	10-1		1.0248		"	15.4	"	15.3	"	Longs.
" "	9:10	30-16	86-48		12-5	12-1				"				"	"
" "	10:30	30-08	86-47		24-3	23-0		1.0250	Bottom	1.0252	"	16.7	"	16.9	"
" "	13:02	30-10	86-46		19-3		18.4			"	16.4	"	16.9	"	"
" "	13:17	30-10	86-45		19-4		18.5			"				"	"
" "	1:30														
" 3	9:45	30-13	86-49		16-0	14.5				"	16.0	"	16.6	"	Mod. s
" "	9:55	30-13	86-49		15-5	15-1				"				"	"
" "	12:55	30-13	86-52		15-0	14-2				"	16.1	"	16.5	"	"
" "	16:30	30-07.5	86-57.0		19-0	18-0				"	16.5	"	16.9	"	"
" 4	11:55	30-07.5	86-57		19-2	18-1				"	16.3	"	16.6	"	"
" "	13:50	29-44	86-52	102-0											
" "	14:10	29-44	86-52	102-0											
" "	14:20	29-44	86-52												
" "	17:00	30-07	86-52		31-3	30-0				"	16.6	Bottom	16.6	51498	
" "	17:05	30-07	86-52		31-5	30-3				"					
" 5	7:15	30-09	86-49		19-2	19-2				"	15.9	"	15.3	"	Shorts
" "	9:40	30-18	86-49		11-5	11-1				"	15.7	"	15.7	"	
" "	9:45	30-18	86-49		11-5	11-2									

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es, and Bottom Characteristics
Sheet No. 2.

Off Santa Rosa Island, Florida
1931

Water Temperatures				Sea	Air C°	Wind	Weather	Barom.	Motion of Vessel	Bottom	Remarks - Position No. - etc.
Surf	Depth	C°	Ther. No.								
498	16.3			Moderate	62	E-4	Showers	30.02	Lt. Roll		Near 37 K Dial reset on fathometer To read correct
"	15.75	Bottom	15.7	51498 Smooth	58	ENE-3	Partly Cloudy	30.06	Steady	Fne. wh. s.	" " " " April 1.
"	15.4	"	15.3	" Longswell	60	ENE-1	clear	29.94	"	" " "	
"	16.7	"	16.9	" " "	64	ENE-1	"	29.98	"	Hrd. bk. sh. Crs. br. S.P.	1 L. 21 L.
"	16.4	"	16.9	" " "		ENE-1	"	29.98	"	Bk. sh. Crs. br. S.	Near "Nun". Hydrometer broken 3/4 mi. E. of "Nun"
"	16.0	"	16.6	" Mod. swell	64	ESE-3	Cloudy	30.00	Lt. roll & pitch	Crs. Gy. s.	Spring broke. Replaced with new one Near "Kacy"
"	16.1	"	16.5	" " "	66	ESE-3	"	30.00	" " "	Bk. sh. Crs. wh. s.	Near "A1"
"	16.5	"	16.9	" " "	66				10° roll		
"	16.3	"	16.6	" " "	65			30.02	" " "	Crs. wh. s.	
"	20.0	"	15.9	51500	65				Lt. roll		Fathometer reading inconsistently (depression 2) Buoy "Z" bears 265 h.T. V.A. 21
"		50	19.2	"	65				" " "		" " "
"	16.6	Bottom	16.6	51498	65				" " "		Near "Hoe"
"	15.9	"	15.3	" Shortswell		NW-1	Clear	30.03	Lt. roll	Bk. sh. Crs. wh. s.	Near "Jed"
"	15.7	"	15.7	"					" " "	Wh. s.	

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ABSTRACT OF WATER TEMPERATURES AND SALINITIES

IN GULF OF MEXICO, OFF SANTA ROSA ISLAND, FLORIDA

PROJECT NO. 74 March and April 1931

Sheet No. 2

DATE 1931	TIME	LAT	LONG	DEPTH FMS. FT.	SALINITY SP. GR.	TEMPERATURE		INTERMEDIATE TEMPERATURES
						SUR.	BOTT.	
Mar 13	12:55	30°-09'	86°-49'	19-2	1.0250	16.2	15.8	
Mar 13	5:55	30-09	86-49	20-0	1.0252	15.9	16.2	
Mar 14	1:00	29-37	86-52	128-0	1.0262*	19.5	14.2	
Mar 14		29-37	86-52					50 Fms. 19.2
Mar 14		29-37	86-52					65 Fms. 18.3
Mar 14		29-37	86-52					80 Fms. 17.4
Mar 14	1:40	29-37	86-52					100 Fms. 16.0
Mar 14	7:10	30-09	86-49	20-0	1.0258*	16.1	15.8	
Mar 15	7:50	30-09	86-49	19-2	1.0263*	16.2	15.4	
Mar 15	11:30	29-37	86-52	130-0	1.0248		14.2	65 Fms. 18.2
Mar 15	6:10	30-10	86-50	20-0		16.2	15.3	
Mar 16	8:10	30-08	86-52	27-0	1.0250	15.0	15.7	Hydrometer broken.
Apr. 4	11:55	30-07	86-57	19-2		16.3	16.6	
Apr. 4	2:10	29-44	86-52	102-0		20.0	15.9	50 Fms. 19.2
Apr. 4	5:00	30-08	86-52	31-3		16.6	16.6	

Copy ✓ by JHC

DEAD RECKONING ABSTRACT

HYDROGRAPHIC SHEET No. West Coast of Florida, off Santa Rosa Id.
 U. S. C. and G. Survey Ship Albatross (Locality)
 Commanding L. O. Colbert (Date) Mar. 14/1931 A Day
 Abstracted by MBR
 Plotted by MBR
 Plotting checked by MBR

Pos.	Time	Elapsed Time	COURSE			DISTANCE				CURRENT			LEEWAY		TRANSFER		ADJUSTMENTS		REMARKS		
			P. S. C.	Dev.	Var'n	True	Log Reading	Log Dist.	True Dist.	Mean	Rate	Dir'n	Dr'n	Dir'n of Wind	Rate	Dr'n	Closure	Other			
9	8:30:00					68.27	3.4	1.030													
10	8:32:00					68.61	3.4														
11	8:34:00		173	+1.0	+4.5	68.94	.33													H 20-35 E 32-22	
12	9:00:00					27.60	5.66	5.66	5.76												1/3 On Course 90°
13	9:02:00					39.04	5.69	5.86	5.76												Full Left at 9:12:00
14	9:04:00					39.56	0.32	0.32	6.17												On course 357°psc
15	9:20:00					39.82	2.87	2.87	1.89												
16	9:37:00					41.87	2.01	2.07	1.89												
17	9:51:00					41.87	1.36	1.36	1.38												
18	10:01:00					45.85	1.37	1.41	1.40												
19	10:18:00		173	+1.0	+4.5	45.85	2.88	2.88	2.79												
20	10:21:00					53.12			2.93												
21	10:24:00																				
22	10:30:00					70.45	2.75	2.41	2.41												
23	10:45:00					55.46	2.34	2.41	2.41												
24	11:00:00					93.21	2.76	2.75	2.81												
25	11:15:00					95.96	2.75	2.74	2.81												
26	11:30:00					61.01	2.76	2.88	2.79												
27	11:45:00					93.76	2.75	2.88	2.77												
28	12:00:00					0.137	2.70	2.69	2.77												
29	12:15:00					66.50	2.74	2.82	2.76												
30	12:30:00					4.07	2.70	2.68	2.73												
31	12:45:00					69.19	2.69	2.67	2.73												
32	12:50:00					6.71	2.64	2.65	2.71												
33	12:55:00					9.30	2.71	2.64	2.71												
34	1:00:00					9.30	2.71	2.64	2.71												
35	1:05:00					9.30	2.71	2.64	2.71												
36	1:10:00					9.30	2.71	2.64	2.71												
37	1:15:00					9.30	2.71	2.64	2.71												
38	1:20:00					9.30	2.71	2.64	2.71												
39	1:25:00					9.30	2.71	2.64	2.71												

G-F 19-58 LCH

DEAD RECKONING ABSTRACT

HYDROGRAPHIC SHEET No. West Coast of Florida, off Santa Rosa Id.
 U. S. C. and G. Survey Ship Albatross (Quality)
 Commanding L. O. Colbert
 Date Mar. 14 1931 A Day

Abstracted by MBR
 Abstract checked by F. B. S.
 Plotted by MBR
 Plotting checked by MBR

Pos.	Time	Elapsed Time	COURSE				DISTANCE				REVOLUTIONS			LEEWAY		TRANSFER		ADJUSTMENTS		REMARKS
			P. S. C.	Dev.	Var'n	True	Log Reading	Log Dist.	True Dist.	Mean	Port Set	Drift	Cor'n	Dist. of Wind	Lee-way	Cor'n	Dr'n	Closure	Other	
40	12:31:02	173	+1.0	+4.5	1.8	12.16	2.80	2.79	2.85	47200										Water buoy X dropped overboard at 4:01 P.M. Buoy has 250 fms. wire.
41	3:25:10	358	-0.7	+4.5	1.8	13.23	2.75	2.74	2.80	47675										Line of buoy X 3800m.
42	4:00:00					19.61	6.38	6.37	6.39	47830										
43	4:30:00					25.54	5.98	5.97	6.02	48584										
44	5:00:00					31.60	6.01	6.00	6.05	48811										
45	5:25:00					36.22	5.02	5.01	5.06	48706										
46	5:36:28					39.30	2.68	2.67	2.70	48892										
47	5:38:10					44.80	2.64	2.72	2.70	49048										

Mean dist. between pos. 41 and 47 from logs 21657.2160

Log No. 28-55
 Date 46-03
 Log No. 31-50
 Date 46-15-

1853

DEAD RECKONING ABSTRACT

HYDROGRAPHIC SHEET No. 1560
West Coast of Florida of Santa Rosa Island
 U. S. C. and G. Survey Ship Albatross (Locality)
 11-7084
 Date March 15, 1931
 Commanding L. O. Colver
 Day B

abstracted by ABP
 Abstract checked by ABP
 Plotted by ABP
 Plotting checked by ABP

Pos.	Time	Elapsed Time	COURSE				DISTANCE				CURRENT			LEEWAY			TRANSIT		ADJUSTMENTS		REMARKS
			P. S. C.	Dev.	Var'n	True	Log Reading	Log Dist.	True Dist.	Mean	Set	Drift	Cor'n	Dir'n of Wind	Vel.	True Dir'n	Closure	Other			
1	8:30.0		180	41.1	44.5	185.6	Log #	2 f =	.948												Line begins 120 m. from buoy. LED-HOE-00
2	8:31.20		"	"	"	"	43.91	3 f =	1.03												LED-HOE-00
3	8:47.00		"	"	"	"	45.10														LED-HOE-00
4	9:00.00		"	"	"	"	48.90														60-27
5	9:15.00		"	"	"	"	42.8														20-35
6	9:30.00		"	"	"	"	51.45														
7	9:45.00		"	"	"	"	57.71														
8	10:00.00		"	"	"	"	62.44														
9	10:15.00		"	"	"	"	68.02														
10	10:30.00		"	"	"	"	70.82														
11	10:45.00		"	"	"	"	72.10														
12	11:00.00		"	"	"	"	72.10														
13	11:06.22		"	"	"	"	72.26														
14	11:06.55		"	"	"	"	72.26														
15	11:08.18		"	"	"	"	72.20														
15a	11:57.00		"	"	"	"	73.7														
15b	1:13		"	"	"	"	73.98														
16	1:32.30		"	"	"	"	74.72														
17	1:45.00		"	"	"	"	75.47														

Mean 1.5 L. Pos. 1-12 (Repeating No. Log = 28.50 mi.)

Marker buoy "X" on S.W. bow

Marker buoy "X" on starboard

Marker buoy "X" 35 met. boom

buoy dropped at full speed

Marker buoy "Y" 250 fms. wire

Marker buoy "Y" 240 m. bearing 25

DEAD RECKONING ABSTRACT

HYDROGRAPHIC SHEET No. West Coast of Florida, off Santa Rosa Isl April 4 1931 C Day
 U. S. C. and G. Survey Ship Oceanographer, L. O. Colbert (Date) 10330 Commanding

Abstracted by P.L.
 Abstract checked by H.H.F.
 Plotted by T.B.R.
 Plotting checked by T.B.T.

Pos.	Time	Elapsed Time	COURSE			DISTANCE			CURRENT			LEEWAY			TRANSFER	ADJUSTMENTS		REMARKS
			P. S. C.	Dev.	Var'n	True	Log Reading	Log Dist.	True Dist.	Mean	Eng. Set	Drift Rev.	Dir'n of Wind	Log Vel. Dist.		Dir'n of Cor'n	Closure	
1	11:05:00		✓	✓	✓	✓	✓	✓										Buoy for Buoy 237 th T. Gauff 102 nd T. 1108 on Course. Slow ahead both Engines. 1108:30 Halt Speed Ahead.
2	11:11:00		✓	✓	✓	✓	✓											(#2 Log not working properly) during Entire day
3	11:14:00		✓	✓	✓	✓	✓											
4	11:30:18		✓	✓	✓	✓	✓											
5	12:00:00		✓	✓	✓	✓	✓											
6	12:30:00		✓	✓	✓	✓	✓											
7	1:00:00		✓	✓	✓	✓	✓											
8	1:22:30		✓	✓	✓	✓	✓											
9	1:24:25		✓	✓	✓	✓	✓											
10	1:31:35		✓	✓	✓	✓	✓											
11	2:37:25		✓	✓	✓	✓	✓											
12	3:00:00		✓	✓	✓	✓	✓											
13	3:30:00		✓	✓	✓	✓	✓											
14	4:00:00		✓	✓	✓	✓	✓											
15	4:30:10		✓	✓	✓	✓	✓											
16	4:42:30		✓	✓	✓	✓	✓											
17	4:46:25		✓	✓	✓	✓	✓											

Mean of Log #3 and Elec. Log and Revolution between

Pos. 2 and 8 = 21.95 mi

See No 2 not used

Hard Left

On Course

Line Ends. Marker Buoy Z¹ thrown overboard at full speed.

Buoy Z¹ bears 133° T 1 Dist 300 M.

Mean of Elec. Log #3 and Revolution = 121.74 m.

Not used

Not used

Not used

Not used

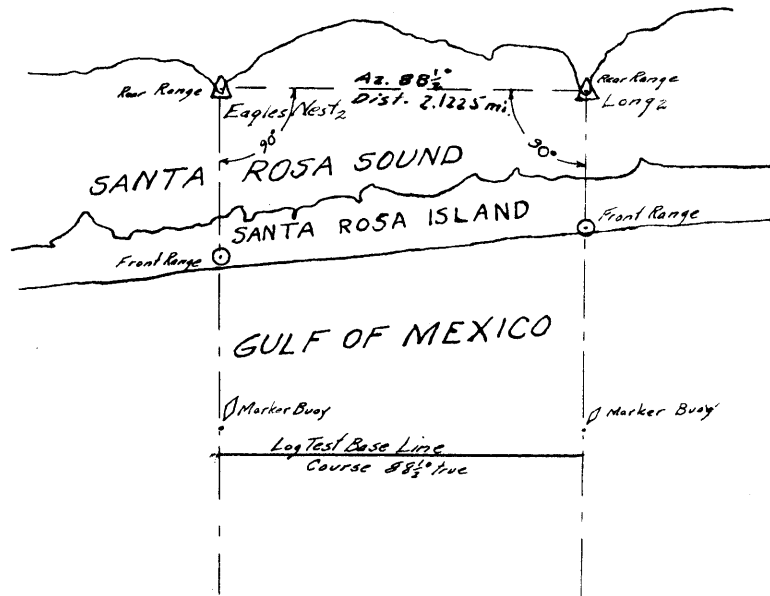
Buoy Hee on Stbd. Bow

Line Ends. Buoy Hee on Stbd. Beam.

SKETCH SHOWING
BASE LINE FOR LOG TEST RUNS OFF
SANTA ROSA ISLAND, PENSACOLA, FLA.

U.S.C. & G.S.S. OCEANOGRAPHER

February 20, 1931



SECTION OF CHART 1265

DESCRIPTIVE REPORT
OF
LOG AND ENGINE REVOLUTION TESTS
OFF SANTA ROSA ISLAND, PENBACOLA, FLA.

U.S.C. & G.S.S. OCEANOGRAPHER.

February 20, 1931.

METHOD OF PROCEEDURE:

Rear Range signals were erected on Triangulation Stations Eagles Nest₂ and Long₂ and front range signals were erected on the beach at an angle of 90° from the line Long₂ and Eagles Nest₂ being placed in position by setting a theodolite over Long₂ and by Eagles Nest₂ and signaling a flag into position. This made a very sensitive range as the front and rear range marks were about 0.8 mi. apart. Two marker buoys were then planted on these ranges at a distance of about $1\frac{1}{4}$ miles from shore, so that the tests could all be run at about the same distance off shore.

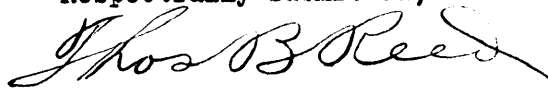
In making the tests the ship was run over courses parallel to the azimuth of the line Long₂ Eagles Nest₂; $88\frac{1}{2}^{\circ}$ true and $268\frac{1}{2}^{\circ}$ true making the length of the line Long₂-Eagles Nest₂ the true distance run for the computations.

The Chernikeef Electric log, Taffrail logs Nos. 2 and 3, and the revolutions counters of both engines were all read simultaneously when the bridge was exactly on the range. As the electric log reads to quarters of tenths, a stop watch was used between the "Clicks" and the reading corrected to thousands for greater accuracy in making the computations. Three readings were made on each taffrail log: one when exactly on range and two on an equal interval before and after the range and the mean of the three readings was used in making the computations. This was done to compensate for any racing or slowing down of the logs at the time of crossing the ranges.

One double run was made on each of the following engine speeds: 60 R.P.M., 73 R.P.M., 90 R.P.M., and 108 R.P.M.

The computations for electric and taffrail logs were made by solving simultaneous equations as described in the Hydrographic Manual. The mean of each double run was taken for the engine revolutions.

Respectfully submitted,



Thos. B. Reed,
Lieut. C. & G. Survey.

Approved and forwarded:



L.O. Colbert,
Commanding ship OCEANOGRAPHER

RUN NO.	TIME ON RANGE (Bridge Clock)	COURSE P.S.C.	SEXTANT FIX		ENGINE REVS.		ELECTRIC LOG			
					ST'B'D	PORT	Reading on Range	Time to next click	Time between clicks	Correct ed Read- ing
	h m s							secs	secs	
# 1E	8 51 31	84°	B to E.M.	65° 42'	954548	008278	35.300	0	13.8	35.300
	9 08 53		B _{WL}	99 54' 230 41'	955595	009347	37.225	10.9	13.9	37.230
60 RPM	17-22				1047	1069				1.930
# 1W	9 22 42	264°	B _{WL}	80 52' 190 05'	956383	010192	38.600	4.5	14.9	38.617
	9 43 49		E _{BN} D	590 44' 10 39'	957623	011455	40.775	0.0	15.7	40.775
	21-07				1240	1263				2.158
# 2E	9 57 22	84°	E _{BN} D	64° 45' 20 03'	958589	012480	42.500	4.8	11.6	42.515
	10 11 31		B _{WL}	90 54' 220 54'	959647	013558	44.375	2.0	11.5	44.396
75 RPM	14-09				1058	1078				1.881
# 2W	10 28 48	264°	B _{LD}	260 59' 500 20'	960822	014814	46.475	4.0	12.9	46.492
	10 46 17		E _{BN} D	590 03' 10 39'	962033	016065	48.650	0.0	12.6	48.650
	17-29				1211	1251				2.158
# 3E	11 01 40	84°	E _{BN} D	64° 40' 20 00'	963366	017440	51.000	2.1	9.8	51.020
	11 13 38		B _{LD}	320 37' 560 42'	964424	018527	52.975	4.2	9.4	52.988
90 RPM	11 58				1058	1087				1.968
# 3W	11 25 33	264°	B _{LD}	260 55' 500 10'	965412	019573	54.750	1.9	10.2	54.770
	11 39 09		E _{BN} D	590 06' 10 39'	966624	020810	56.950	7.3	10.0	56.956
	13-36				1212	1237				2.186
# 4E	11 50 42	84°	E _{BN} D	650 03' 20 09'	967789	022023	59.025	7.3	7.8	59.027
	12 00 45		B _{LD}	330 07' 57' 14'	968872	023123	61.000	3.0	8.0	61.016
105 RPM	10 03				1083	1100				1.989
# 4W	12 10 41	264°	B _{LD}	270 07' 500 30'	969882	024181	62.825	4.6	8.1	62.836
	12 22 00		E _{BN} D	590 20' 10 39'	971091	025416	65.025	6.0	8.0	65.031
	11 19				1209	1235				2.195

Note:

B = Beach₃; E.N = Δ Eagles Nest₂; L = Δ Long₂; W = O Wreck; D = Δ Dune

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TAFTRAIL LOGS									REMARKS 4
Time at Standby (Q. D. Clock)	Stbd log reading #2	Port log reading #3	Time on Range (Q.D. Clock)	Stbd log reading #2	Port log reading #3	Time after interval	Stbd log reading #2	Port log reading #3	
8 48 45	81.75	81.17*	8 48 50	81.80	81.17*				Wind On course 8 49 30
9 04 55	83.66	82.82	9 06 17	83.79	82.99	9 07 39	83.79	83.14	Rev. Ind. 62.5
9 18 30	84.93	84.20	9 20 07	85.12	84.41	9 21 44	85.305	84.59	
9 39 20	87.16	86.45	9 41 17	87.37	86.64	9 43 14	87.60 ^s	86.85 ^s	
9 54 20	89.00	88.29	9 54 52	89.09	88.37	9 55 24	89.17	88.43	Rev. Ind. 75.0
10 07 00	90.87	90.05	10 09 04	91.17	90.33	10 11 08	91.46	90.63	
10 23 10	92.61	92.11	10 26 22	93.09	92.51 [!]	10 29 34	93.55	92.91	Wind 20 MPH (Obs.)
10 41 50	95.15	94.43	10 43 53	95.42	94.70	10 46 00	95.75 ^s	95.00	Wind 11 MPH (Cor.)
10 58 15	97.70	96.90	10 59 18	97.89	97.09	11 00 31	98.06	97.06	Rev. Ind. 92.0
11 09 30	99.60	98.76	11 11 18	99.89	99.06	11 13 06	100.19	99.33	Wind 18 MPH (Cor.)
11 22 10	101.57	100.67	11 23 15	101.73	100.83	11 24 20	101.91	101.00	Rev. Ind. 90.0
11 35 40	103.78	102.81	11 36 52	103.99	103.00	11 38 04	104.18	103.19	Wind 28 MPH (Obs.)
11 47 20	105.89	104.88	11 48 26	106.12	105.10	11 49 32	106.33	105.30	Rev. Ind 113.0
11 57 10	107.87	106.79	11 58 31	108.13	107.06	11 59 52	108.40	107.31	Wind 8 MPH (Obs.) Cor. Wind 19 MPH
12 07 00	109.71	108.61	12 08 28	110.00	108.90	12 09 56	110.29	109.17	Wind 30 MPH (Obs.)
12 18 40	112.02	110.85	12 19 47	112.23	111.07	12 20 54	112.46	111.28	

* Not revolving properly during run.

△ Not revolving properly between crossing range and third reading.

s Apparently increased speed.

Copy ✓ by *MA*

LOG TEST FOR ELECTRIC LOG FACTORS
OFF SANTA ROSA ISLAND, PENSACOLA, Fla.

February 20, 1931.

RUN NO.	RPM	TIME	ELAPSED TIME	ELECTRIC LOG	LOG DIST.	TRUE DIST. NAUT. MI.	LOG FACTOR
1 E	60	8 51 31		35.300			
			(.289h)				
1 E	60	9 08 53	0 17 22	37.830	1.930	2.1225	
1 W	60	9 22 42		38.617			
			(.352h)				
1 W	60	9 43 49	0 21 07	40.775	2.158	2.1225	1.044
2 E	75	9 57 22		42.515			
			(.236h)				
2 E	75	10 11 31	0 14 09	44.396	1.881	2.1225	
2 W	75	10 28 48		46.492			
			(.292h)				
2 W	75	10 46 17	0 17 29	48.650	2.158	2.1225	1.059
3 E	90	11 01 40		51.020			
			(.199h)				
3 E	90	11 13 38	0 11 58 ^c	52.988	1.968	2.1225	
3 W	90	11 25 33		54.770			
			(.226h)				
3 W	90	11 39 09	0 13 36	56.956	2.186	2.1225	1.025
4 E	105	11 50 42		59.027			
			(.167h)				
4 E	105	12 00 45	0 10 03	61.016	1.989	2.1225	
4 W	105	12 10 41		62.836			
			(.189h)				
4 W	105	12 22 00	0 11 19	65.031	2.195	2.1225	1.018

Run No. 1 (60 RPM)

1.930 f ± .289 c = 2.1225
 2.158 f ± .352 c = 2.1225
 .6793 f ± c = .74712
.6236 f ± c = .61340
 f = 1.044

Run No. 2 (75 RPM)

1.881 f ± .236 c = 2.1225
 2.158 f ± .292 c = 2.1225
 .5492 f ± c = .61977
.5093 f ± c = .50091
 f = 1.059

Run No. 3 (90 RPM)

1.968 f ± .199 c = 2.1225
 2.186 f ± .226 c = 2.1225
 .4448 f ± c = .47968
.4350 f ± c = .42238
.8798 f = .90208

f = 1.025

Run No. 4 (105 RPM)

1.989 f ± .167 c = 2.1225
 2.195 f ± .189 c = 2.1225
 .3759 f ± c = .40115
.3666 f ± c = .35446
.7425 = .75561

f = 1.018

Comp. by MSB
 by K.B.J.
 Copy ✓ by MSB

LOG TEST FOR LOG NO. 2 FACTORS
OFF SANTA ROSA ISLAND, PENSACOLA, FLA.

February 20, 1931.

RUN NO.	RPM	TIME	ELAPSED TIME	MEAN LOG # 2	LOG DIST.	TRUE DIST.	LOG FACTOR.
1 E	60	8 51 31	(.288h)	81.80			
1 E	60	9 08 53	0 17 22	83.79	1.99	2.1225	
1 W	60	9 22 42	(.352h)	85.12			
1 W	60	9 43 49	0 21 07	87.38	2.26	2.1225	1.005
2 E	75	9 57 22	(.236h)	89.09			
2 E	75	10 11 31	0 14 09	91.17	2.08	2.1225	
2 W	75	10 28 48	(.292h)	93.08			
2 W	75	10 46 17	0 17 29	95.42	2.34	2.1225	0.971
3 E	90	11 01 40	(.199h)	97.89			
3 E	90	11 13 38	0 11 58	99.89	2.00	2.1225	
3 W	90	11 25 33	(.226h)	101.74			
3 W	90	11 39 09	0 13 36	103.98	2.24	2.1225	1.007
4 E	105	11 50 42	(.168h)	106.11			
4 E	105	12 00 45	0 10 03	108.14	2.03	2.1225	
4 W	105	10 10 41	(.186h)	110.00			
4 W	105	12 22 00	0 11 19	112.24	2.24	2.1225	0.998

$$\begin{array}{r} \#1 \quad 1.99 \text{ f } \pm .288 \text{ c } = 2.1225 \\ \quad \quad 2.26 \text{ f } \pm .352 \text{ c } = 2.1225 \\ \hline \quad \quad .701 \text{ f } \pm \quad \quad \text{ c } = .748 \\ \quad \quad .652 \text{ f } \pm \quad \quad \text{ c } = .612 \\ \hline \quad \quad 1.353 \text{ f } \quad \quad \quad = 1.360 \end{array}$$

$$f = 1.005$$

$$\begin{array}{r} \#3 \quad 2.00 \text{ f } \pm .199 \text{ c } = 2.1225 \\ \quad \quad 2.24 \text{ f } \pm .226 \text{ c } = 2.1225 \\ \hline \quad \quad .453 \text{ f } \quad \quad \quad = .482 \\ \quad \quad .446 \text{ f } \quad \quad \quad = .423 \\ \hline \quad \quad .899 \text{ f } \quad \quad \quad = .905 \end{array}$$

$$f = 1.007$$

$$\begin{array}{r} \#2 \quad 2.08 \text{ f } \pm .236 \text{ c } = 2.1225 \\ \quad \quad 2.34 \text{ f } \pm .292 \text{ c } = 2.1225 \\ \hline \quad \quad .607 \text{ f } \pm \quad \quad \text{ c } = .621 \\ \quad \quad .552 \text{ f } \pm \quad \quad \text{ c } = .502 \\ \hline \quad \quad 1.159 \text{ f } \quad \quad \quad = 1.123 \end{array}$$

$$f = 0.971$$

$$\begin{array}{r} \#4 \quad 2.03 \text{ f } \pm .1677 \text{ c } = 2.1225 \\ \quad \quad 2.24 \text{ f } \pm .186 \text{ c } = 2.1225 \\ \hline \quad \quad .3775 \text{ f } \quad \quad \quad = .3955 \\ \quad \quad .3758 \text{ f } \quad \quad \quad = .3565 \\ \hline \quad \quad .7533 \text{ f } \quad \quad \quad = .7520 \end{array}$$

$$f = 0.998$$

Comp. PT
Checked KBJ
Copy ✓ *MBR*

LOG TEST FOR LOG NO. 3 FACTORS
OFF SANTA ROSA ISLAND, PENSACOLA, Fla.

February 20, 1931

RUN NO.	RPM	TIME	ELAPSED TIME	MEAN LOG 3	LOG DIST.	TRUE DIST. NAUT. MI.	LOG FACTORS.
1 E	60	8 51 31	(0.29h)	81.17		2.1225	
1 E	60	9 08 53	0 17 22	82.98	1.81		1.056
1 W	60	9 22 42	(0.35h)	84.40			
1 W	60	9 43 49	0 21 07	86.65	2.25	2.1225	
2 E	75	9 57 22	(0.236h)	88.35			
2 E	75	10 11 31	0 14 09	90.34	1.98	2.1225	
2 W	75	10 28 48	(0.29h)	92.51			1.019
2 W	75	10 46 17	0 17 29	94.70	2.21	2.1225	
3 E	90	11 01 40	(0.20h)	97.08			
3 E	90	11 13 38	0 11 58	99.05	1.97	2.1225	
3 W	90	11 25 33	(0.227h)	100.83			1.029
3 W	90	11 39 09	0 13 36	103.00	2.17	2.1225	
4 E	105	11 50 42	(0.17h)	105.09			
4 E	105	12 00 45	0 10 03	107.05	1.96	2.1225	
4 W	105	12 10 41	(0.19)	108.89			1.030
4 W	105	12 22 00	0 11 19	111.07	2.18	2.1225	

#1 $1.81 f \pm .29 c = 2.1225$
 $2.25 f \pm .35 c = 2.1225$

 $.634 f \pm .1015 c = .743$
 $.653 f \pm .1015 c = .616$

 $1.287 f = 1.359$

$f = 1.056$

#2 $1.98 f \pm .236 c = 2.1225$
 $2.21 f \pm .29 c = 2.1225$

 $.575 f \pm .685 c = .616$
 $.522 f \pm .685 c = .502$

 $1.097 = 1.118$

$f = 1.019$

#3 $1.97 f \pm 0.20 c = 2.1225$
 $2.17 f \pm 0.227 c = 2.1225$

 $.447 f \pm c = .4245$
 $.434 f \pm c = .482$

 $.881 f = .9065$

$f = 1.029$

#4 $1.96 f \pm 0.17 c = 2.1225$
 $2.18 f \pm 0.19 c = 2.1225$

 $.372 f \pm c = .404$
 $.371 f \pm c = .362$

 $.743 f = .766$

$f = 1.030$

Comp. KBJ
Checked by PT
Copy ✓ by JBS

ENGINE REVOLUTIONS PER MILE
TESTS OFF SANTA ROSA ISLAND, PENSACOLA, Fla.

February 20, 1931.

Run No.	R P M	Elapsed Time	Mean Revolutions	True Dist.	Rev. Per Mi.	Mean Rev. Per Mi.	Speed in Knots	Mean Speed Knots
1 E	61	.289	1058	2.1225	498		7.35	
1 W	59	.352	1251	2.1225	589	543	6.03	6.69
2 E	75	.236	1068	2.1225	503		8.99	
2 W	71	.292	1231	2.1225	578	540	7.27	8.13
3 E	90	.199	1073	2.1225	506		10.66	
3 W	90	.226	1224	2.1225	577	541	9.40	10.03
4 E	109	.167	1091	2.1225	514		12.70	
4 W	108	.189	1222	2.1225	576	545	11.23	11.96

Mean Revolutions 541^2
Pitch of wheels 13 feet

$$\frac{6080}{13} = 468$$

$$\frac{541^2 - 468}{541} = 13.5\% \text{ slip.}$$

Computed by T.B.R.

✓ by K.G.C.

Copy for WBR

ABSTRACT OF LOG FACTORS
U.S.C. & G.S.S. OCEANOGRAPHER

PENSACOLA, FLORIDA

February 20, 1931.

	FACTORS			
	60RPM	75RPM	90 RPM	108 RPM
Electric Log	1.044	1.059	1.025	1.018
Taffrail Log No. 2	1.005	0.971	1.007	0.998
Taffrail Log No. 3	1.056	1.019	1.029	1.030
Engine Revolutions Per Mile	543	540	541	540 ⁵

Copy v MSR

U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

PROJECT 74

COMPUTATION OF
LOG AND REVOLUTION TESTS
OFF SANTA ROSA ISLAND, PENSACOLA, FLORIDA

April 5, 1931

U.S.C. & G.S.S. OCEANOGRAPHER
L.O. COLBERT, COMMANDING

NOTE:

The following log test was run over the same course as the test of February 20, 1931. The method of making and computing the test is described in the descriptive report accompanying the computations of the test on February 20.

This test was made with a fresh N.N.W. wind, and the engine revolutions per mile are probably considerably higher than they would have been under mor favorable weather conditions.

RUN NO	TIME ON RANGE (Bridge Clock)	SEXTANT FIX	ENGINE REVS.		ELECTRIC LOG				Corrected Reading	
			St'b'd	Port	Reading on Range	Time to next clock	Time between clicks			
5 E	11-06-26	82 Beach	66-52	837000	836488	66.250			66.250	E
		Dune								
		Peak	79-31							
5 E	<u>11-18-01</u>	82 Beach	92-53	<u>838202</u>	<u>837690</u>	68.325	1.0	8.75	<u>68.347</u>	E
		Dune								
	11-35	Peak	26-06	1202	1202				2.097	
5 W	11-28-40	266 Beach	108-01	859272	858737	70.075	2.2	9.3	70.094	W
		Dune								
		Peak	21-43							
5 W	<u>11-40-35</u>	266 Beach	76-37	<u>840473</u>	<u>839957</u>	72.100			<u>72.100</u>	W
		Dune								
	11-45	Peak	84-40	1201	1220				2.006	

Time at stand by Q.D. clock	Stbd. log reading #2	Port log readings #3	Time on Range Q.D. clock	Stbd. log reading #2	Port log Reading #3	Time after interval	Stbd log Reading #2	Port log Reading #3	Remarks
11-04-30	11.68	98.53	11-06-08	12-01 (12.00)	98.84 (98.83)	11-07-46	12.32	99.12	Rev. Ind 108 Wind NNW-5
11-15-30	13.76	0.49	11-17-43	14.17 (14.17) 2.17	0.89 (0.88) 2.05	11-19-56	14.58	1.27	
11-27-20	15-81	2.50	11-28-21	15.97 (15.98)	2.68 (2.68)	11-29-22	16.17	2.87	Rev. Ind. 106
11-39-40	17.96	4.68	11-40-17	18.08 (18.07) 2.09	4.79 (4.79) 2.11	11-40-54	18.18	4.90	

Copy ✓ by *WBA*

LOG TEST FOR ELECTRIC LOG

April 5, 1931

RUN NO.	RPM	TIME	ELAPSED TIME	ELECTRIC LOG	LOG	TRUE DIST	LOG FACTOR
5 E	108	11-06-26	0-11-35	66.250			
5 E	108	11-18-01	(.193) ^h	68.347	2.097	2.1225	
5 W	106	11-28-40	0-11-55	70.094			
5 W	106	11-40-35	(0.199) ^h	72.100	2.006	2.1225	1.034

$$\begin{aligned}
 2.097 \text{ f } \pm 0.193 \text{ c} &= 2.1225 \\
 2.006 \text{ f } \pm 0.199 \text{ c} &= 2.1225 \\
 \hline
 .41730 \text{ f } \pm \text{ c} &= .42238 \\
 .38716 \text{ f } \pm \text{ c} &= .40964 \\
 \hline
 .80446 \text{ f} &= .83202 \\
 &= 1.034 \\
 &= \cancel{.1034}
 \end{aligned}$$

*Comp by P.T.
 ✓ by O.B.H.
 Copy ✓ by T.B.R.*

LOG TEST FOR NO 2 LOG FACTORS

April 5, 1931.

RUN NO.	RPM	TIME	ELAPSED TIME	MEAN LOG #2	LOG DIST.	TRUE DIST.	LOG FACTORS
5 E	108	11-06-26	0-11-35	12.00			
5 E	108	11-18-01	(0.193) ^h	14.17	2.17	2.1225	
5 W	106	11-28-40	0-11-55	15.98			
5 W	106	11-40-35	(0.199) ^h	18.07	2.09	2.1225	0.996

$$\begin{aligned}
 2.17 \text{ f } \pm .193 \text{ c} &= 2.1225 \\
 2.09 \text{ f } \pm .199 \text{ c} &= 2.1225 \\
 \hline
 .43183 \text{ f } \pm \text{ c} &= .42238 \\
 .40337 \text{ f } \pm \text{ c} &= .40964 \\
 \hline
 .83520 \text{ f} &= .83202 \\
 \text{f} &= 0.996
 \end{aligned}$$

Comp. by P.T.
 ✓ by O.B.H.
 Copy r by 1030R

LOG TEST FOR NO 3 LOG FACTORS

April 5, 1931.

RUN NO.	RPM	TIME	ELAPSED TIME	MEAN LOG #2	LOG DIST.	TRUE DIST.	LOG FACTOR
5 E	108	11-06-26	0-11-35	98.83			
5 E	108	11-18-01	(0.193) ^h	0.88	2.05	2.1225	
5 W	106	11-28-40	0-11-55	2.68			
5 W	106	11-40-35	(.199) ^h	4.79	2.11	2.1225	1.021

$$\begin{aligned}
 2.05 f \pm .193 c &= 2.1225 \\
 2.11 f \pm .199 c &= 2.1225 \\
 \hline
 .40795 f \pm c &= .42238 \\
 .40723 f \pm c &= .40964 \\
 \hline
 .81518 f &= .83202 \\
 & \\
 f &= 1.021
 \end{aligned}$$

Comp. by P.T.
 ✓ by O.B.H.
 Copy ✓ by HBR

ENGINE REVOLUTIONS PER MILE

April 5, 1931

RUN NO.	RPM	ELAPSED TIME	MEAN REV'S	TRUE DIST	REV. PER MI.	MEAN REV. PER MI.	SPEED KNOTS	MEAN SPEED KNOTS
5 E	108	(0.193) 0-11-35	1202	2.1225	566		11.00	
5 W	106	0-11-55 (0.199)	1210	2.1225	570	568	10.67	10.835

Mean Revolutions per mile = 568

Pitch of wheel = 13 feet

$$\frac{6080}{13} = 468$$

$$\frac{568 - 468}{568} = 17.6 \% \text{ slip.}$$

Comp by P.T.
✓ by O.B.H.
Copy ✓ by W.R.

ABSTRACT OF LOG FACTORS
U.S.C. & G.S.S. OCEANOGRAPHER
PENSACOLA, FLORIDA

April 5, 1931.

	<u>FACTORS</u> <u>108 R.P.M.</u>
Electric Log	1.034
Taffrail Log No. 2	0.996
Taffrail Log No. 3	1.021
Engine Revolutions per mile	568

July 29, 1931

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
1 volume~~s~~ of sounding records for

HYDROGRAPHIC SHEET 5113

Locality Southeast of Pensacola, Gulf of Mexico.

Chief of Party: L. O. Colbert in 1931
Plane of reference is mean low water, reading
8.0 ft. on tide staff at Pensacola
7.1 ft. below B. M. 6

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

Paul Schureman
Acting Chief, Division of Tides and Currents.

Section of Field Records

Report on H 5113	Surveyed in 1931
Chief of Party L.O. Colbert	" by L.O. Colbert
Protracted by T.B. Reed	Soundings plotted by
Verified and Inked by J.F. Walker	O.B. Hartzog.

The sounding records were neatly kept and were legible.

No mistakes were found in the protracting. No attempt was made to verify the dead reckoning positions.

The soundings were plotted according to time and no mistakes were found.

All soundings greater than 80 fathoms were omitted at the recommendation of the field party. — See Seasons Report top of page 3 and last page of "Statistics, cont, and Summary of Field Work", inclosed with the Seasons Report.

The shoreline of Santa Rosa Island and the name were added by the writer. Signal Wane was plotted by the writer and the note giving its lat. and long. was added at the bottom of the sheet.

No comparisons were made with any other material except the overlapping sheet # 5115 which has fair agreement.

Respectfully submitted

J. Walker

Sept. 2, 1931

DEPARTMENT OF COMMERCE

AND REFER TO No. 82-DRM

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

SECTION OF FIELD RECORDS

Review of Hydrographic Sheet No. 5113

Southeast of Pensacola, Florida, Offshore

Surveyed in 1931

Instructions dated January 29, 1930 and January 21, 1931 (OCEANOGRAPHER)

Fathometer Work and Buoy Control

Chief of Party, L. O. Colbert

Surveyed by L.O.C.

Protracted by T. B. Reed

Soundings plotted by O. B. Hartzog


Verified and inked by J. T. Walker

1. Records - The records conform generally to the requirements of the Hydrographic Manual with the exception that there is a noticeable lack of bottom characteristics for the area.
2. Specific instructions - The work conforms, as far as it goes, to the specific instructions.
3. Field drafting - The usual amount of field plotting was done and was found to be satisfactory.
4. Junctions with surveys - A satisfactory junction has been effected with the contemporary survey H. 5115 and the older survey, H. 4133 (surveyed in 1920).
5. Reliability of work - Throughout the records there are clear indications that the fathometer was not functioning properly. And even where soundings were obtained they are of doubtful accuracy as witness the wire sounding of 128 fathoms at buoy X (pos. 40 A) and the fathometer sounding of 110 fathoms at the same buoy (pos. 14 B). Also the 91 fathom fathometer sounding (not plotted) at pos. 36 A and the 101 fathom fathometer sounding (not plotted) close by at pos. 12-13 C. It is such discrepancies that cast grave doubt on the reliability of the entire sheet.

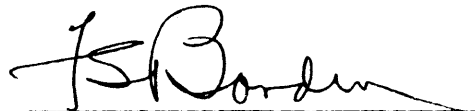
The rejection by the field party of all fathometer soundings beyond 80 fathoms seems to be an arbitrary one, based presumably on the fact that it was in these depths that the fathometer failed to respond consistently and also to the fact that the soundings on adjacent lines inshore of this depth are in fairly good agreement. While this limiting depth of 80 fathoms may be correct it is felt there is enough uncertainty in the rest of the work (except as indicated below) to make it inadvisable to chart the soundings without first having some corroborating evidence as to their accuracy. The soundings have therefore been accepted as submitted by the field party, but the present application to the charts will be restricted to the southern limits of the 1:80,000 scale chart 1265; that is no soundings will be applied to the charts south of latitude 30° 06'. This portion of the work sufficiently overlaps the inshore sheet H. 5115 to permit of a comparison with work of unquestioned accuracy.

6. Note to compiler - All the work on this sheet that falls within the limits of Chart 1265 has been transferred to the inshore sheet, H. 5115. The latter should therefore be used for selecting soundings for the 1:80,000 scale chart.
7. Additional work - When surveys are resumed in this locality, several check lines should be run through the work on this sheet to verify the accuracy of the present survey. One of these lines should be run close to the line 1 - 5 C as there are indications that the lower portion of this line is too deep.
8. Reviewed by A. L. Shalowitz, October 1931.

Approved:



Chief, Field Records Section



Chief, Field Work Section

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5113

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

Number of positions on sheet	... <u>99</u> ..
Number of positions checked	... <u>21</u> ..
Number of positions revised	... <u>0</u> ..
Number of soundings recorded	... <u>1538</u> ..
Number of soundings revised	... <u>0</u> ..
Number of signals erroneously plotted or transferred	... <u>0</u> ..

Date: Sept. 21, 1931.....

Cartographer: J. Walker.....

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5113

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. 2

REGISTER NO. 5113

State FLORIDA

General locality Gulf of Mexico, ~~Coast of Florida~~

Locality South East of Pensacola.

Scale 1:20000 Date of survey Mar. 14 - April 4, 1931

Vessel OCEANOGRAPHER

Chief of Party L. O. Colbert

Surveyed by L. O. Colbert

Protracted by T. B. Reed

Soundings penciled by O. B. Hartzog

Soundings in fathoms ~~1000~~

Plane of reference Mean Low Water

Subdivision of wire dragged areas by

Inked by J. T. Walker

Verified by J. T. W.

Instructions dated Jan. 29, 1930
Jan. 21, 1931, 192

Remarks: