

4473

4474

FILED

Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey *Hydrographic*
 Field No. *4473* Office No. *4474*

LOCALITY

State *Florida*
 General locality *Lake Okechobee*
 Locality *Northern Half*

1925

CHIEF OF PARTY
L. D. Graham

LIBRARY & ARCHIVES

DATE

4473 4474

(1 Angle Book Filed 4473)

Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: Florida

11-5613

DESCRIPTIVE REPORT.

Topographic

Sheet No.

4473 4474

LOCALITY:

L. Okeechobee

Northern Half

1925

CHIEF OF PARTY:

L. D. Graham

4473 4474

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

4473

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 4473

State Florida

General locality Lake Okeechobee

Locality Northern Half ~~Not~~

Chief of party L. D. Graham

Surveyed by L. D. Graham

Date of survey January to April, 1925

Scale 1:40,000

Soundings in Feet

Plane of reference M.L.W. ^{15 ft above Mean Low water at Punta} ~~Punta Rosa, Fla. +16 ft.~~ ^{Rosa}

Protracted by L.D.G. & F.G. Bryan Soundings in pencil by F.E.B.

Inked by H.C. Johnston Verified by H.C. Johnston

Records accompanying sheet (check those forwarded):

Des. report, 2 Tide books, _____ Marigrams, 2 Boat sheets,

17 Sounding books, _____ Wire-drag books, _____ Photographs.

Data from other sources affecting sheet

Remarks:

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

4474

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 4474

State . . . Florida

General locality Lake Okeechobee

Locality . . . Southern Half . . . ~~No. 2~~

Chief of party L. D. Graham

Surveyed by L. D. Graham & T. B. Reed

Date of survey January to April, 1925

Scale . . . 1:40,000

Soundings in . . . Feet

Plane of reference M. L. W. Punta Rasa, Fla. +16.0 ft.

Protracted by L. D. G., W. R. P., T. B. Reed Soundings in pencil by W. R. P. Porter
C. R. Bush

Inked by Verified by

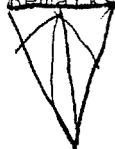
Records accompanying sheet (check those forwarded):

Des. report, 6 ^{stations / data} Tide ~~books~~, Marigrams, 3 Boat sheets,

18 Sounding books, Wire-drag books, Photographs.

Data from other sources affecting sheet

Remarks:



DESCRIPTIVE REPORT

To accompany

Hydrographic Sheets No. - - - and No. - - - -

Lake Okeechobee, Florida.

Survey from December 1924 to April 1925.

L. D. Graham and T. B. Reed, Hydrographers.

L. D. Graham, Chief of Party.

Launch Elsie

Date of Instructions October 18, 1924.

LIMITS AND GENERAL DESCRIPTION

The hydrographic survey of Lake Okeechobee includes all of the lake and all navigable streams and canals opening into it for a distance of one mile from its shores. The work was considered as one unit, and therefore the sounding records are continuous, but owing to the large area covered (the lake is forty miles long and thirty miles wide), it was necessary to use two hydrographic sheets.

Lake Okeechobee is a large shallow lake situated about one hundred miles from the lower end of the Florida peninsula and about one third of the distance from the Atlantic to the Gulf coasts. The surrounding country is very flat, none of it being much more than twenty feet above sea level. The highest part is along the eastern shore from Taylor's Creek to Bacom Point. This shore consists of a narrow sand ridge covered with a thin fringe of trees and is two or three feet higher than the adjacent country. In back of this is a strip of flat fertile land comparatively treeless. This strip is very narrow at the northern end but gradually widens to some twenty miles or more at the southern end. This is typical "Everglades" land, a rich black muck soil, and where properly drained, is very fertile. Large areas of this land are already under cultivation. The whole south end of

the lake from Bacom Point to Moore Haven, and along the western shore for a few miles beyond is so low that it has been necessary to construct levees or dykes along practically the whole distance. The lake level is frequently a foot or more higher than the land back of the dyke. This is all "Everglades" land, practically treeless except for a very small variety locally known as custard apple. Most of the land adjacent to the lake is drained and under cultivation. Most of the western shore is a big prairie with a heavy growth of long saw grass, and at present unfit for cultivation. Along the north shore there is a ridge similar to that along the east shore and for a mile or two back of that the land is marshy, and beyond this the land is a few feet higher, is sandy and covered with a growth of pines.

The shallow parts of the lake, for a distance of two or three miles on the western shore and only about a hundred yards off the eastern shore are filled with a thick growth of tenacious, vine-like grass, locally known as pepper grass. In many places a launch can not force its way through unless it is equipped with a weedless propeller. All boats on the lake are thus equipped. This grass grows in water in depths up to six feet or more. Many of the shoals are covered with a long stiff grass and bull rushes and sometimes with bushes. At high lake levels a boat can often run over the shoals, although at a distance they appear to be solid land.

There are about a dozen towns or villages on the shores of Lake Okeechobee. They are all new, none probably more than ten years old, and as yet are not of much importance. The largest and most important town is Okeechobee on the northern shore, about three miles inland from the lake. This city has a population of between 2,000 and 3,000 and is growing quite rapidly. In the last year or two it has been struck by the land boom so prevalent all over Florida. The Seaboard Airline and the Florida East Coast Railroad both have lines in to Okeechobee. There is also a paved road from West Palm Beach to Tampa passing through the town. One of the principle industries of the town is fishing. It is also a shipping point for produce. Two marine railways, operated by local fish companies, are situated here. They are of sufficient size to handle any of the shipping on the lake, but are not equipped to handle round bottom boats of fifty feet or over. Moore Haven, at the southwestern end of the lake is next in size with a population of a little under a thousand. It is the center of a rich farming district and is a shipping point, being on a branch of the Atlantic Coast Line Railroad. There are facilities for making repairs to hulls of boats of moderate size. Canal Point

at the entrance to the West Palm Beach Canal, and Pahokee, three and one half miles to the south, are small farming communities. In this vicinity there is a population of between three and five hundred. The Florida East Coast Railroad had completed a branch line as far as Canal Point in 1925 and were extending it through Pahokee and on to Miami. Clewiston, South Bay, Chosen and Little Bare Beach, along the south shores of the lake are all small agricultural villages. Clewiston is the terminal of a branch of the Atlantic Coast Line Railroad and ships a good deal of produce to the northern markets. Elderberry and Lake Port on the west coast and Utopia and Upthegrove Beach on the east coast are all small hamlets of a few houses each.

ANCHORAGES

While there are no bays well protected from the wind, there are nevertheless, several good anchorages in the lake. Wherever pepper grass grows in sufficient depths for a boat to go one will find a good anchorage, for in the roughest weather the water will remain very smooth in these areas. Along the northern shore of the lake from Taylor's Creek to Eagle Bay there is a growth of this grass in sufficient depths to afford good shelter to boats. The whole western shore as far south as Observation Shoal has pepper grass growing in moderate depths so that most of the small boats on the lake can anchor in it any where along its length. Boats of deeper draft can always find good protection north of Observation Shoal or in Pelican Bay over on the southeastern part of the lake. Taylor's Creek and the six principle canals all afford excellent shelter. Severe squalls come up very quickly on the lake at times making it necessary for a small boat to seek shelter at once. Even for the larger boats it is decidedly unpleasant to remain at anchor in an exposed part of the lake during a storm. There are few places out in the deeper parts of the lake where an anchor will hold well. As a rule there is fairly good holding ground wherever the pepper grass is found.

FLUCTUATION OF WATER LEVEL

There are no tides in Lake Okeechobee, but the water level varies considerably with the wind and rainfall. Eight tide, or rather water gauges were used while the hydrography was in progress. The Everglades Drainage District maintains water gauges at the upper locks of all the canals flowing out of the lake numbering six. In addition to these six we established two more to take care of the northern and western shores. This

gave us eight well distributed gauges which were read three times daily while the work was in progress. The nearest gauge or gauges were used in determining the tidal reducers, and as the lines were run all the way across the lake it was frequently necessary to change from the gauges on one side to those on the other and also to interpolate between gauges. The gauges varied as much as one and a half feet due to the wind, but as a rule where there were large fluctuations the lake was too rough to permit sounding.

Water gauges, Lake Okeechobee

1. On highway bridge near mouth of Taylor's Creek.
2. Lock No. 1. Entrance to St. Lucie Canal.
3. Lock No. 1. Entrance to West Palm Beach Canal, Canal Point.
4. Lock No. 1. Entrance to Hillsboro Canal.
5. Lock No. 1. Entrance to North New River Canal, South Bay.
6. Lock No. 1. Entrance to Miami Canal.
7. Lock No. 1. Entrance to Caloosahatchee Canal, Moore Haven.
8. On small dock at Elderberry, near Indian Prairie Canal.

Soundings were reduced to the sixteen foot level, that is sixteen feet above mean low water, using the Punta Rasa Datum. This datum was established by the U. S. Engineers at Punta Rasa on the Gulf. They ran the levels part way up the Caloosahatchee River, and later the Everglades Drainage Commission continued the line to Moore Haven on Lake Okeechobee. All water gauges were reduced to this datum. In addition to the Punta Rasa Datum we found two others used by the Drainage Commission; the Stuart datum used on the St. Lucie Canal differing +1.44 ft. from the Punta Rasa, and the Lake Worth Datum used on the West Palm Beach Canal ranging in between these two. One of the Assistant Engineers of the Drainage District informed me that it was impossible to run accurate levels across the boggy soil encountered so frequently in this vicinity.

There is now a railroad from West Palm Beach to Tampa via Okeechobee and it would be comparatively easy to run in a line of precise levels along this route. I had several requests for elevations and I think that such a line would be of value.

SURVEY METHODS

A triangulation net had been carried around the lake the previous season, establishing seventy two points by this means and in addition to this we located three hundred and thirty five signals by plane table. This gave us abundant control at all points on the lake. By building two tall hydrographic signals (Bec and

Ver) and an observing stand on the launch which raised the height of eye to over twenty feet, it was possible to carry fixed positions entirely across the lake, although at times the nearest shore was fifteen miles away.

Sounding lines were spaced one half mile apart. This at first appears to be a very wide spacing for such shallow water, None of it more than sixteen feet deep, but the bottom was found to be so flat and regular that closer development seems to be unnecessary. We found one area of over forty square miles near the center of the lake where the soundings were all the same, not one sounding in the whole area varying by even a half foot. Additional lines were run wherever there was any indication of shoaling or irregularity of the bottom. Over the rocky shoal between Bacon Point and Observation Island the sounding lines were spaced two hundred meters apart. I learned from local pilots that some of these rocks could be seen when the lake was at the thirteen foot level, but were not quite bare then. This checks well with our soundings, for we found two or three places with half a foot of water at that level. At the time we sounded the water was at the nineteen foot level and we were able to cruise safely over all this area in the Launch Elsie, drawing a little over four feet. We searched for a reported rock two or three hundred meters east of Bacom Point Beacon, probably bare at about the fifteen foot level. We ran many more lines here than we recorded, but there was no evidence of the rock. We later enquired from fishermen living in the vicinity and they never had seen a rock in that neighborhood when the water was low. There is, however, a rocky reef a little further to the eastward with very little water on it at low lake levels.

Special effort was made to carry the soundings well in-shore so that the sixteen foot contour could be obtained by hydrography, as the soundings were all reduced to this level. The shore line as it shows on the topographic sheets was obtained by means of an aerial survey when the lake was at an elevation of eighteen feet. The ordinary lake level varies between the sixteen and nineteen foot levels.

On account of the unusual regularity of the bottom and the very shallow depths it was possible to attain a sounding speed up to seven knots without losing any in accuracy of soundings. A slower speed was necessary through the grassy and very shoal areas, and the speed was apt to be a little irregular here due to the fouling of the propeller. Weedless wheels were used on both

launches, but it was impossible to keep them cleared in the heavy pepper grass encountered in the shoaler waters near the shores.

Sounding poles were largely used in the skiff and motor sailer for soundings in depths up to two fathoms. We found that an inexperienced leadsman could get much more reliable soundings with the pole than with the lead. For deeper soundings and ordinary eight pound lead and cotton line with phosphor bronze wire center was used.

Several cross lines were run to check soundings and in a large majority of cases the soundings checked within a half foot. Three short lines run by the motor sailer failed to check lines run by the large launch by a foot to a foot and a half in places. In every case it was found that soundings taken from the motor sailer were the deeper. Upon investigation it was observed that the soundings taken from this boat were taken in the bow wave and might easily be read a half foot or a foot too deep by an inexperienced leadsman. This condition only holds in the very few cases where the motor sailer was running at full speed in comparatively deep water and using the lead. Pole soundings were taken further aft and so were not subject to this discrepancy. Nearly all of the work done by the motor sailer was confined to the shoaler water along the shore and on the shoals where the launch Elsie could not go. Two of the the three lines mentioned above were later rerun by the launch and checked well with all lines crossed.

DANGERS TO NAVIGATION

There are several shoals in the lake, but only a few are dangerous to navigation, and these are marked by lighted beacons. The worst place is a rocky reef that extends practically across the southern end of the lake from Pahokee and Bacom Point on the east to Observation Island on the west. There are openings near each end of the reef and both are marked by lighted beacons. The eastern opening is marked by two lighted beacons (Pahokee and Bacam Point Beacons). The channel passes to westward of these beacons and should be closely followed if the water is low. The western channel is marked by "South Lake Rock Reef West End" lighted beacon (Signal Ob). The channel is to the westward of the beacon. Our Soundings show fair water on either side of this beacon, but as it is somewhat rocky it is best to keep closely to the channel as indicated by the beacons, especially at low lake levels. Our soundings developed another channel

across the reef near the middle but as it is unmarked it can not be used at present.

Rock Reef, near Clewiston is another rocky shoal, but it offers little danger as it is marked by a lighted beacon (Rock Reef) and is covered with grass and bushes. The channel into Clewiston is very narrow with submerged rocky spoil banks, and should not be attempted by a stranger. In 1925, with the water level at eighteen feet or more, none of the local pilots used this channel, but instead approached from near Rock Reef Beacon in a SSWly direction changing to about WSW when half way in and then passing through an opening in the spoil bank opposite the second packing house from the lake and very close to it. Local knowledge is required to use this route.

Halifax Bank, in South Bay, is close to the channel, but it is sandy and covered with grass and is also marked by a lighted beacon (signal Cal).

Observation Shoal covers the southwestern part of the lake, extending from Observation Shoal Beacon No. 3 on the north and Observation Island on the east, shoreward, comprising an area of some sixty square miles. This shoal is covered with grass and in the shoaler sections with bushes. Many of these latter parts are bare at the 16 foot level. One may approach the shoal safely from the eastward to within a half mile of the grass any where along it. The channel around the northern end is marked by lighted beacons and the channel through it to Moore Haven is marked by beacons and spoil banks.

North Lake Shoal, locally known as King Bar Shoal, is in the northwestern part of the lake. This shoal is sandy and the shoaler parts are covered with tall grass and bull-rushes which may be seen for some distance. There is a lighted beacon (signal King) in one fathom of water, on the southeast side of the shoal. There is a channel to the westward of this shoal used by local fishermen. A four foot draft can be taken through here.

The Kissimee River is but seldom used for navigation at the present time. A bar has formed across its mouth. At the time we sounded here, 1925, with the lake level at the nineteen foot stage, we found a narrow channel with five feet over the bar. The channel is not marked.

Taylor's Creek or Onoschatchee River, should be navigated with caution on account of sunken logs and snags. The shoalest and most difficult part of this creek is in crossing the bar at beacon five. This bar shoals at times but there are enough boats of about three foot draft using the channel to keep it open to that depth. The City of Okeechobee is on this creek about four miles above its mouth.

St. Lucie Canal is not yet completed and a stranger would need a pilot on account of several rocky shoals. The projected depth is eight feet. The West Palm Beach Canal is the only other canal on the east side of the lake where a special effort is made to ^{keep} it open to navigation. In 1925 four feet could easily be taken through. The other canals are used primarily for drainage, and little effort is expended in keeping them in a navigable condition. The Caloosahatchee Canal and River on the west allows a draft of three feet to pass through to the Gulf. There is a project under consideration to deepen this passage so that moderate sized yacht can cross here, via Lake Okeechobee and the St. Lucie Canal, from Coast to Coast.

North
STATISTICS SHEET NO. -----

Date	1924-5	Letter	Vol.	Positions	Soundings	Miles Statute	Vessel
December	31	A	1	62	1132	33.0	Launch
January	5	B	1, 2	86	1599	46.0	"
"	6	C	2	66	1113	32.0	"
"	7	D	2, 3	18	336	9.2	"
"	8	E	3	81	1308	42.5	"
"	9	F	3, 4	75	1262	30.0	"
"	12	G	4, 5	73	1479	36.0	"
"	16	H	5	89	1821	50.6	"
"	20	J	6	63	1340	38.0	"
"	21	K	6, 7	93	1722	47.0	"
"	22	L	7, 8	107	2041	68.0	"
"	26	M	8, 9	65	1311	41.0	"
"	27	N	9, 10	111	1976	60.0	"
"	30	P	10	84	1613	52.0	"
February	4	Q	10, 11	28	434	10.0	"
"	5	R	11	33	575	14.0	"
"	6	S	11, 12	94	1760	52.0	"
"	9	T	12	49	675	25.5	"
"	10	U	12, 13	68	1299	34.0	"
March	12	a	1	33	303	7.0	Motor Sailer
"	16	b	1	71	624	18.0	" "
"	16	a	1	19	108	2.0	Skiff
"	17	c	1	76	571	13.0	Motor Sailer
"	18	d	1, 2	37	309	8.5	" "
"	19	e	2	63	648	15.0	" "
"	20	c	1	28	176	2.7	Skiff
"	20	f	2	37	514	12.5	Motor Sailer
"	31	m	5	28	389	9.1	" "
April	1	n	5	21	234	6.0	" "
"	21	b'	10	9	171	4.0	" "
"	21	P' ✓	24	11	135	3.0	Launch
"	23	Q' ✓	24	5	73	2.0	"
"	24	d' ✓	10	37	401	11.0	Motor Sailer
TOTALS				1820	29452	834.6	

STATISTICS SHEET NO. ^{South} 2-4474

Date	1925	Letter	Vol.	Positions	Soundings	Miles Statute	Vessel
February	11	V	:13, 14:	70	: 1220	: 31.0	Launch
"	17	W	: 14 :	32	: 584	: 20.0	"
"	24	X	: 14 :	49	: 972	: 34.0	"
"	25	Y	:14, 15:	52	: 1040	: 36.0	"
"	26	Z	: 15 :	25	: 645	: 23.0	"
March	13	A'	:15, 16:	72	: 1312	: 44.0	"
"	18	B'	: 16 :	68	: 1346	: 42.0	"
"	19	b	: 1 :	13	: 162	: 2.0	Skiff
"	19	C'	: 17 :	66	: 1295	: 41.0	Launch
"	20	c ✓	: 1 :	16	: 68	: 1.3	Skiff
"	25	D' ✓	: 17 :	38	: 759	: 20.0	Launch
"	24	g	: 2, 3 :	43	: 767	: 17.5	Motor Sailer
"	25	h ✓	: 3 :	67	: 1028	: 23.2	" "
"	26	J	: 3, 4 :	89	: 1464	: 36.0	" "
"	26	E'	:18, 19:	125	: 2341	: 75.0	Launch
"	27	F'	: 19 :	79	: 1449	: 46.0	"
"	27	k	: 4, 5 :	75	: 1427	: 36.5	Motor Sailer
"	30	l	: 5 :	22	: 393	: 10.2	" "
"	31	m ✓	: 5 :	8	: 135	: 3.7	" "
April	1	n ✓	: 5 :	33	: 432	: 11.3	" "
"	2	p	: 5, 6 :	65	: 917	: 26.5	" "
"	3	q	: 6 :	64	: 1167	: 31.2	" "
"	6	r	: 7 :	9	: 143	: 3.2	" "
"	8	s	: 7 :	78	: 827	: 21.7	" "
"	8	G'	:19, 20:	39	: 700	: 19.0	Launch
"	9	H'	: 20 :	88	: 1694	: 50.0	"
"	9	t	: 7, 8 :	71	: 1230	: 33.0	Motor Sailer
"	10	u	: 8 :	80	: 1162	: 32.0	" "
"	10	J' ✓	: 21 :	105	: 1895	: 64.0	Launch
"	11	v	: 8, 9 :	61	: 799	: 21.5	Motor Sailer
"	13	w	: 9 :	62	: 908	: 25.5	" "
"	13	K' ✓	: 22 :	33	: 417	: 9.0	Launch
"	14	L'	: 22 :	66	: 1109	: 36.0	"
"	14	x	: 9 :	35	: 592	: 17.0	Motor Sailer
"	15	y	:9, 10:	43	: 427	: 11.5	" "
"	15	M'	: 23 :	52	: 809	: 22.0	Launch
"	16	N'	: 23 :	57	: 1008	: 33.0	"
"	16	z	: 10 :	38	: 674	: 19.0	Motor Sailer
"	17	a'	: 10 :	8	: 46	: 2.0	" "
"	22	c'	: 10 :	19	: 197	: 4.0	" "
"	23	Q' ✓	: 24 :	73	: 1085	: 34.5	Launch
TOTALS				2188	: 36635	: 1069.3	:



OCT 15 1925

~~Division of Hydrography and Topography:~~

Division of Charts:

Tide reducers are approved in
volumes of sounding records for

HYDROGRAPHIC SHEET NO. 4473

Locality: Florida - Lake Okechee

Chief of Party: L. D. Graham in 1925

Plane of reference is 16'.0 above mean low water - Punta Rasa Datum

16.00	ft. on tide staff at	Calloosahatchee	15.83	ft. on tide staff at	Miami Lock
15.78	" " " "	" West Palm Beach	15.60	" " " "	" Taylor's
15.60	" " " "	" St. Lucie			" Creek
16.00	" " " "	" Hillsboro	15.40	" " " "	" Elderberry
16.00	" " " "	" North New River			

For reduction of soundings, 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 each 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.



Chief, Division of Tides and Currents.

~~Division of Hydrography and Topography:~~

Division of Charts:

Tide reducers are approved in
16 volumes of sounding records for

HYDROGRAPHIC SHEET NO. 4473

Locality: Florida - Lake Okeechobee

Chief of Party: L. D. Graham in 1925

Plane of reference is ⁵16'.0 above mean low water - Punta Rosa Datum

15.00	ft. on tide staff at	Calloosahatchee	14.83	ft. on tide staff at	Miami Lock
14.78	" " " " "	West Palm Beach	14.60	" " " " "	Taylor's
14.60	" " " " "	St. Lucie			Creek
15.00	" " " " "	Hillsboro	14.40	" " " " "	Elderberry
15.00	" " " " "	North New River			

For reduction of soundings, 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 each 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.

This supersedes letter of October 15. Soundings are reduced to
15 ft. level instead of 16 ft. level.



Chief, Division of Tides and Currents.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

November 19, 1925.

REPORT ON VERIFICATION OF HYDROGRAPHIC SHEET

No. 4473 and 4474

The sounding records are complete and according to the general instructions.

The plotting of positions and the penciling of the soundings were good.

The field drafting was poorly done.

Due to the fact that the plane of reference was changed from 16 feet to 15 feet after the soundings were penciled in, the soundings were inked 1 foot less than those penciled on the smooth sheet.



H. R. Edmonston,
Field Records.

NOV 19 1925
W W B.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide reducers are approved in
19 volumes of sounding records for

HYDROGRAPHIC SHEET NO. 4474.

Locality: Lake Okeechobee

Chief of Party: L. D. Graham in 1925.

Plane of reference is 15'.0 above mean low water - Punta Rasa
15.00ft. on tide staff at Calloosahatchee 14.83 ft. on tide staff at Miami Lock
14.78 " " " " " W. Palm Beach Canal 14.60 " " " " " Taylor's
14.60 " " " " " St. Lucie " " " " " Creek
15.00 " " " " " Hillsboro " 14.40 " " " " " Elderberry
15.00 " " " " " North New River "

For reduction of soundings, 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 each 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.

Harman
Acty Chief, Division of Tides and Currents.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON May 20, 1926.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheets Nos. 4473 and 4474

Lake Okeechobee, Florida

Surveyed in 1925

Date of instructions, October 16, 1924

Chief of Party, L. D. Graham

Surveyed by L. D. Graham

Protracted by L. D. Graham, T. B. Reed, F. G. Bryan, C. R. Bush
W. R. Porter.

Soundings plotted by F. G. Bryan and W. R. Porter.

1. The records conform to the requirements of the General Instructions. The descriptive report is unusually complete and might well serve as a model.
2. The plan and character of development conform to the requirements of the General Instructions and satisfy the specific instructions.
3. The sounding line crossings are adequate.
4. The information is sufficient for drawing the usual depth curves.
5. The protracting of the sheet was accurately done, but the position numbers and day letters were much too large. The soundings also were too large and only 75% of those inked were shown in pencil.
6. Although the spacing of sounding lines is greater than is customary, all shoals are well developed by split lines and the entire area is well covered. In view of the shallow depths and flat bottom good judgment was shown in avoiding excessive and unnecessary detail in the spacing of sounding lines. No further surveying is required.
7. The character and scope of the surveying is excellent and the field drafting is fair.
8. Reviewed by E. P. Ellis, May, 1926.

H. 4473 & H. 4474

(C O P Y)

41-BCM

October 19, 1925.

Chief Engineer,
Everglades Drainage Commission,
Tallahassee, Florida.

Dear Sir:-

In connection with the recent hydrographic survey of Lake Okeechobee by this Bureau the soundings have been referred to a datum sixteen feet above mean low water at Punta Rasa on the Gulf as established by the U.S. Engineers. This mean lake level it is understood was derived from nine years of simultaneous observations made by taking three daily readings on six different gauges distributed around the lake during the period from 1915 to 1923 inclusive.

In order that the soundings finally may be referred to the most convenient datum it is requested that this office be informed if any changes in the canal outlets from the Lake have been made since 1923 which would tend to vitiate the present datum or whether any such changes are contemplated in the future that will affect the mean level of the Lake as already established.

Very truly yours,

(Signed) R.L. Paris,
Acting Director,