

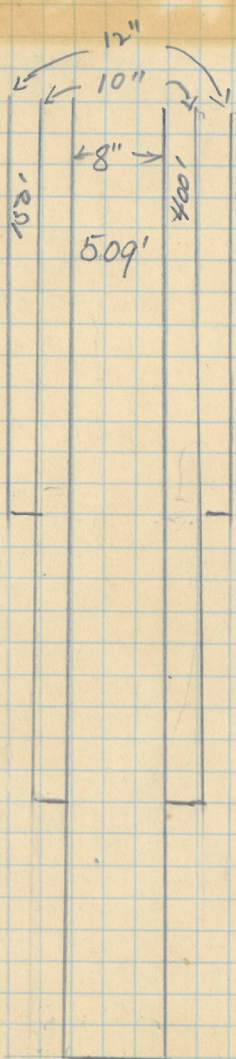
4

T. 45, R. 41

12 miles W. of Lantana

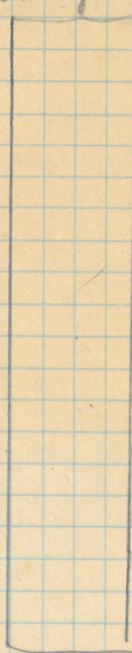
5-17-23

Live Oak City well



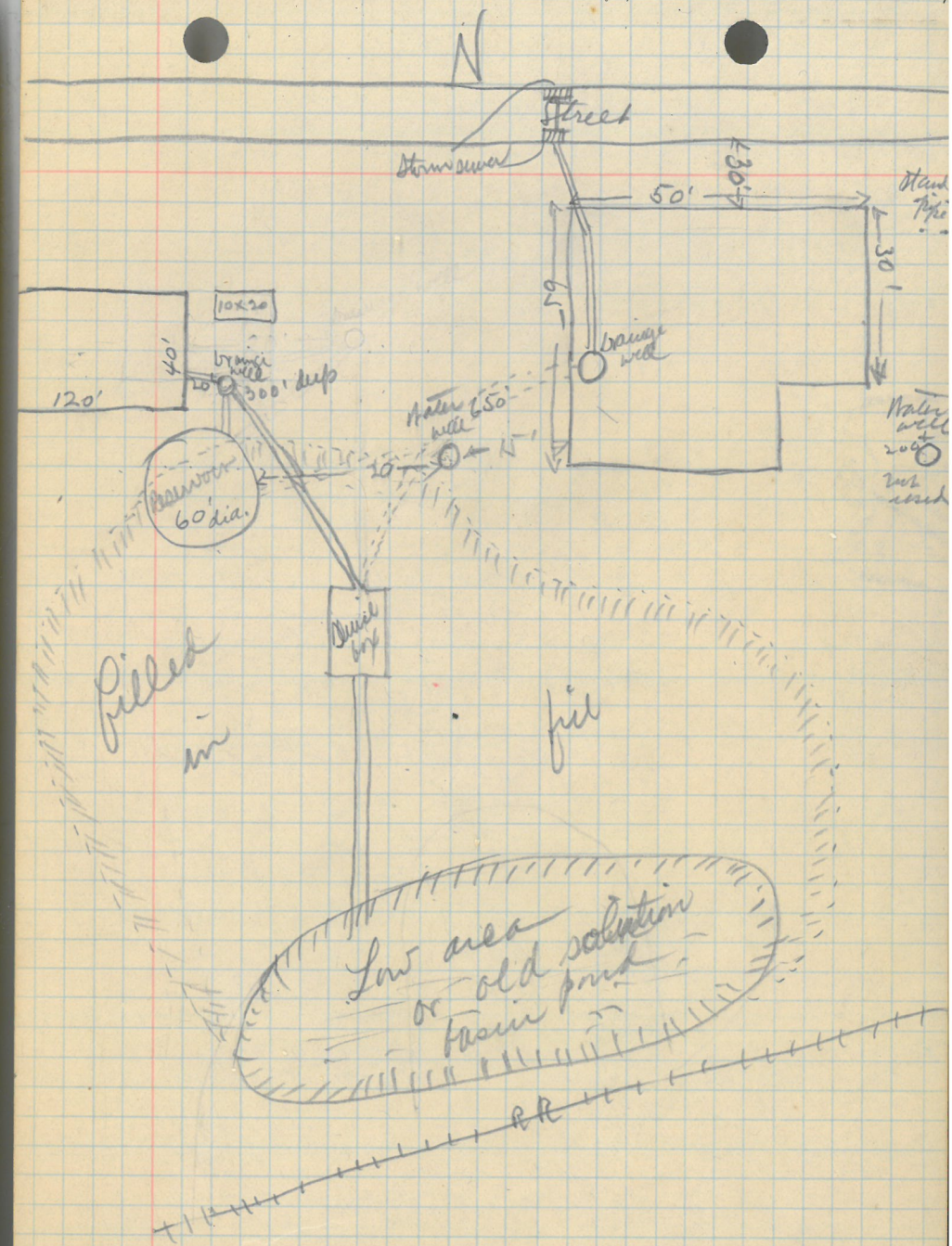
12" casing removed
entirely. 10" casing cut off
at about 250'

Drainage well
about 300'
8" casing
and cased
a little over
200'



Drainage well about 75' from water well. Water well head about 100' from surface. City well that has been used is about 200'. Head about -100 feet. Both of the new wells were shown to be connected with the drainage well as shown with phenol by A.D. Remier, Health Officer. Artificial drainage of wet weather pond also cut-off from drainage well. Shows connection in that water became muddy from the 650' well. Not now using the 200' foot well. Pond not far from well, only a short distance.

Report to Bond Trustees { E.D. Conner, Chm.
C.E. Jones, Secy.
City Council, D.K. Clippinger, Pres.



5 weeks ago from May 20th

At Pass, $1\frac{1}{2}$ mi. S of Live oak
well about 125 ft. drilled along
15 yrs ago - Became muddy
when the city well at Live oak
was being drilled. Probably shows the
general direction of movement of
underground water.

Rained awfully hard from about 6:00
to 7:30 am on Wed. May 16, 1923

On Mon. May 14, 1923, awfully hard rains
and it was a result of this rain that
water became muddy.

Drainage well.

How much casing now in well?

Get log of it if available.

Size of cavity, reported at depth of 225'

Any cavities found in water well?

When was water well completed? July 1922

Between 275' (3 feet) and 400' a
series of cavities, from 6" up to about 4'.

Crushed Rock Plant, about 1 mi. N.

210, 10, 52, 1914^{8-21-14,}

No. 1. Southern Mottl. Co. See plans.

272, 8, 180, -70, 1920.

No. 2. City Drainage Well. Helwan St.

175, 8, 110, 1914 continuing papers.

No. 3. Drainage

180, 10, 90, 1914

No. 4. Water Well for Hamm Laundry

121, 6, 118, -70, 1913

No. 5. Sewerage Wells. City of Fair Oak

251, 10, 82, 1-25-13.

No. 6. 261, 10, 84 2-5-13

No. 7. 125, 6, 95, 4-1-13 Shallowest drainage well

6-13-23

H.R. McInnis & Co. - Knoxville

Alachua, city supply

360, 240-8
~~100-8, 110-5, 115~~

360, 8, 250, - 45, 1913. Run at 20 ft.

Huntington, Fla.

A.C. R.R. 12-26-13

190, 6, 120, - 1910.

Brooksville.

At ice plant.

202, 8, 70, - 1912

Dafton

Houston & Co.

Bails & General

255, 3, 205, - 70, 1922.

Davenport. 2 1/2 mi. N.W.

Davenport drainage district

185, 10, 83, - 4, 1913

Florida Industrial Corp.

Gainesville, Fla.

Surfactin, condenser.

370, 10, 155, - 140, 1914,

5 ft. cwt., at 360 ft.

2 wells same record.

Fort Myers -

Dorchen Utilities Co. - Ice plant.

1400, 10-300, + 1917 ⁶⁻¹ in flow - 600' max 800'

400 gals. min.

0 - 300 - sand + mud

300-550 - Blue mud

550-880 - Argonia rock

880-900 Sandy mud

900-1000 - Close grained rock

1000-1400 - Soft rock

H.R. McInnis & Co.

Gasper, 6-3-13

for city supply, Gasper Nat. St. Co.

445, 10, 110, - 100, 1913.

0-45 clay and sand

45-50 water sand

50-105 clay and sand

105-255 lime rock

255-355 close grained lime rock

355-445 medium hard lime rock with good cavities at bottom.

Lanceland Ice Co - runs the
Donnan Utilities Co - near April
404, 8, 250, - April 1914.

Struck lime rock 250, continued
to the bottom.

Palatka.
City, wells near springs.

300, 12, 60, + 1922. 400 gals.
350, 12, 60, + 1922. 400 gals.
1922.

Flow starts at 225 ft.

Danford.
Donnan Utilities Co.

379, 10, 97, + 1918 City supply
333, 10, 150 ± 1918 } Ice
435, 10, 150 ± 1919 } mfg

St. Paddy, 4 mi. N^W E.
J. A. Thompson,

150, 12, - 1914 9 in pit
150, 8, - 1914. 9 in pit. Used
pho ring.

At the depth 120 ft. struck a 30-
foot cavity.

6-19-23 Live Oak

Stand pipe tank capacity 35,000 gals.
Daily consumption about 200,000 gals.

Water level in new city well - 61' from
top of "T" actual elev. of top of T. above sea 107.6
61.0
46.6 Elev. above sea.

Water level in new drainage well 27 1/2" lower than
top of concrete curb than level in new city well
or 58' 8 1/2" below top of concrete curb. Well
cut off 14' below surface. actual elev. - 105.16
58.70
46.46 Elev. above sea.

Water level in Fair Grounds drainage well
44' 1" below top of 4" pipe. Pipe in
ditch about 4' feet below general surface level
of ground. act. elev. 100.46 Check level 100.43 above
44.83 " depth 42.00
55.63 58.43

Water level in drainage well near Supt's house,
- 25 1/2 feet below top of concrete curb. 26' 8"
act. elev. 74.05
26.66 47.39. above sea

Could not measure water level in one of
the sewerage wells on account of volume of
water entering it. Other drainage well
could not be located.

Elev. of bench in face of depot - 107.359

70 meters east of station, one meter
east of former grade 104.678

6-20-23 Piton 5-6. Shown drainage well near Dec Plant

6-21-23 - 4. Newland Spring.

Drain well at Fair Grounds -

Put in 1 lb. Fluorescein at 6:15 PM
on June 20, 1923. Result of this test
not positive. Very probable that
the larger volume passed off during
the two pumpings made in the night.

June 20 - First Test.

New drainage well 336' deep, used. Amount
of fluorescein used about $\frac{1}{2}$ oz. This dissolved
in glass of water. This poured into about
12 gallons of water and then emptied into the
well. Time of pouring into well 10:15 A.M.
Began pumping city water well at 10:37 A.M.
Distance between new drainage well and
the new water well 58 feet.

6-21-23 Falmouth.

Level from Bench mark at Falmouth
to Newland Spring.

Elev. of Bench 94.081 - Water level in
Spring 39.7 feet above sea.

Notch cut in street gully near edge of
pavement water level, nail driven in notch,
Elev. 45.6 feet above sea.

River water flooded spring so could
not get actual level of underground water.
Estimated that water in spring is about 3 feet
higher than normal.

6-21-23 Disinfectant 1 qt in New drainage well
and about 5 gals in Fair Grounds drainage
well. Put it in New drainage well at
8:15 am and detected it in City mains
at about 11:00 am. On Friday, April
(about 2 weeks before our first visit) (Probably
April 20 or 27th 1923)

6-21-23 Pumped the old city water well (1080 feet)
for about 1 hour to test it out for connection
with Fair Grounds drainage well but
got no result.

Placed about 1 pound of fluorescein in
Fair Grounds drainage well at 1:30 pm.
Entered the New well at pumping station 3:30
to 4:00 pm. No positive result.

6-21-23 Elevation on top of wooden case to
drain well on Wilbur St. (Drugs leading
to school) 93.04 above sea. Wooden
cover about 3 feet below surface level
of street.

Well filled at depth of 39' 10"
below top of wooden cover. Could not
go further the underground water level.

Width of pumping station 40'

H. M. Hood cor Hamilton + 3rd St. 81, 4
H. H. White, imp 1 blk. N. P.O. 71.
C. H. Brown, 1st blk west ACX 102
B. H. Helverston South of PO on Ohio Ave. 1st cor of 3rd blk
North Stephen + Co. Store. Next PO Cor, West Blk, 104 65.
Thomas Bowling, 1 blk N. P.O. East on St to house. 85
C. A. Brown, 3 blk N. on Ohio Ave. 60
O. Williams 1 blk N. P.O. then turn along street cor
of 4th blk. 65
H. J. Hillman 3rd & last house on west side Ohio
Ave. 4 blocks 95
C. J. McGuire 4th blk west P.O. on Cornwell St. 103
M. L. Burnett 78
J. D. Bairden
H. J. Dyer
Edna Lee (2) 85

Sewage

1. Dr. H.C. White - 81, 4.
2. J. B. Habel (old H.F. Dexter well)
3. H.H. Lyle
4. City Sewage well
5. City Sewage well
6. H.J. Hagan (out of city) and not certain whether he has sewage well.

City drainage wells.

1. near septic tank (Pumped from McGraw)
2. In Fair Grounds
3. On Baycon Street
4. On Sadder Street
5. East Duval St.
6. On Mc Coy property
7. Near Elev. Light & Ice Plant.
8. Near old machine shops.
9. Near Duvarine Hotel (Private)
10. In rear of D.C. Washington on Van Buren St.

11. Helveston Ave.
12. R.E. Mc Neil, in rear of property (Private)
13. On Orange (Pine) St. - Near Mc Neil's.
14. In rear of D.K. Clippinger's lot.
15. In Wilbur St.
16. On Woods St.
17. Old drainage well at Water Works Plant
18. Near " " " " " "

C.L. James, Dept. Water Works & Sewer
System -

9-10-23

near Hill near A & M College property of
Jane Gibson. Dug August & Sept
1923, total depth now about 60 feet.
Struck some rock at probably 14 ft.
Most of the rock here samples came
from about 60 feet. Limestone
showing secondary deposition.
From material on the dump apparently
a little fuller earth was found.

10-29-23

Halton County.

Shell Bluff, Shoal River, about $3\frac{1}{2}$ mi.
N. Mossy Head Halton County, on S. 4,
T. 3 N., R. 21 W.

Made a collection here in company with
Dr. John Gardner, U.S.G.S. Exposure of marl
is well up in bluff, some 40 ft. above
level of water in Shoal River. Dr. Vaughan
made a section here where Dr. Gardner
will send us copy of.

Second point visited.

Crowder's crossing or ford about $\frac{1}{2}$ mi
below bridge crossing on Shoal River. Took sample
of bluish-green sandy marl, fossil present
only as casts. This was exposed just at
present water level. This is lower stratum of
Shoal River marl.
Third point visited.

Exposure of lower stratum of Shoal River
marl at Bridge crossing on Shoal River.
An abundance of small fossils present
at this locality. Dr. Gardner will

Halton Co.

identify these and make correlations.
See perhaps if this is not the Case
Grove marl instead of lower stratum
of the Shoal River as heretofore placed.
Section as follows.

1. From surface to top of marl ~~about~~ covered
with sand 0-11'
2. Greenish sandy fossiliferous marl 11-16'

Halton Co.

10-30-23

Red Bay, In company with
Dr. Gardner, made collection of
Chertawhatchee marl from Jim
Kennedy's branch near Red Bay
p.o. Mrs. Neil McLeod accompanied
us on this trip.

Crapping Spring on S. 20, T. 3 N., R. 17 W.
Exposure of sandy phase of marl full
of fossil impressions. No shells.
Old Beach Spring S. 20, T. 3 N., R. 17 W.,
no exposures here of marl. Water
from this small spring shows it to
be full of iron. Small seepage
spring coming out of sandy clay
full of silicious gravel.

Ray Spring, S. 20, T. 3 N., R. 17 W. marl exposed
on this run. Full of casts, no shells. Mrs.
Gardner thinks this may represent the Shoal River.
J. E. Buchanan, R. #2, Ponce de Leon, Fla.
about 7 mi. from Ponce de Leon.

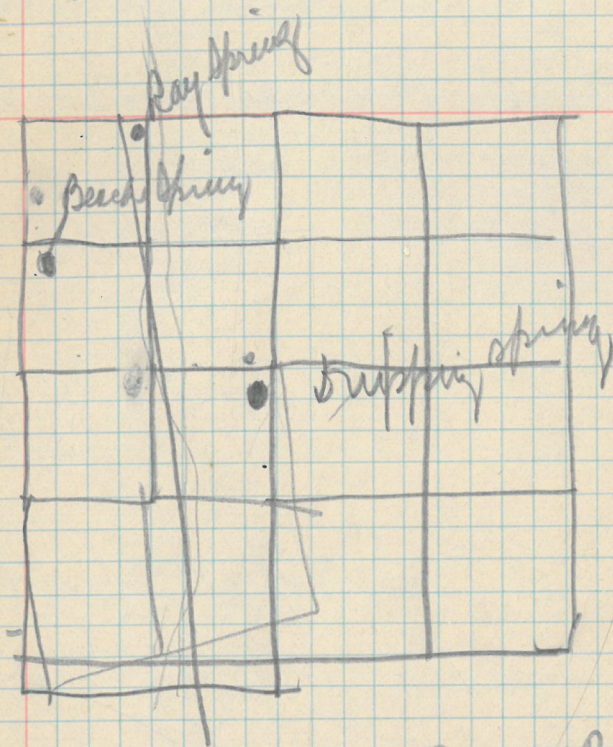
Matton Co.

10-31-23

Hise's Bluff on Cheatawhatchee River about 2 mi. from Bruce. This bluff exposes nothing but sand and mottled sandy clay.

Bruce.

Visited well drilled as test for oil. Service gone, drilling machinery partly there. Picked up from surface around site of well a mixed sample of drilling - *Lepidocyclus* *supra* very abundant, characteristic of E. Oligocene (Dr. Gardner). Other species of *Lepidocyclus* also present and some fragments of *Ostrea* thought possibly to represent the Miocene. Took liberal sample of cuttings. Old well entirely filled up. Apparently a second well was started but no depth attained.



Sago, T. 3 N. R. 17 W.

Matton Co.

road on Armstrong's place, determined by Dr. Gardner as Moccasin River

Palm Beach

1-8-24

Visited Lone Cabbage Island in Lake Natch about $\frac{3}{4}$ mile south of W. Palm Beach, in company with Dr. C. Wythe Cooke of the U. S. Geological Survey and Mr. Albert Smith, Jr., U. S. Cadastral Engineer. Boat used was through the courtesy of Mr. Osborn, Capt. Nelson in charge.

The island is about $\frac{5}{8}$ of a mile long and has a variable width, varying from ~~only about 50~~ ²⁰ feet ~~from the~~ to ~~nearly~~ ^{approximately} 110 feet. The elevation, ~~total~~ maximum, as seen from observation is not more than 4 feet above high tide. Flood tide at the time examination was made.

The formation making up ~~the formation~~ of the island is a very sandy limestone. Clear quartz grains are distinctly seen and cemented with calcium carbonate. Intermingled with the whole are fragments

The tip of the rock as leveled
by Collier & others is 2' feet above
high water.

of (marine) shells, such as fragments of
worm tubes and mollusks. These were
outcrops along the shore line just
above the high tide level in the
south part of the island and can be
seen outcropping over the entire northern
end. In the center and southern part
of the island a mantle of sand
from 1 to 2 feet thick overlies the
rock. Capt. Nelson stated that the
sand was largely the result ^{of deposition} of filling
from dredging out the channel.

The island is densely covered with
mangrove, buttonwood, ~~palms~~ sea grape.
A row of coconut palms have been
planted through the center of the
~~island~~ island extending from near the
center toward the south. Some of
these approximate 30 or 35 feet in
height.

A considerable amount of drift wood
and debris was noted over the island
particularly in the center and to
the southward. The mantle of sand
also appeared to be heavier over this
portion of the island.

The island is being used at
present as a boat yard, several boats
being noticed hauled up for painting
and minor repairs. A repair shop
and some shelter sheds constitute
the buildings.

In the afternoon the Palm Beach side
was visited, going to an exposure of
rock opposite the Cox place on the
Lake North side. This was similar to
the rock on Lone Cabbage Island.
Then up to the New Inlet where the
dredge is now working. Rock dredged
out here is more sandy than

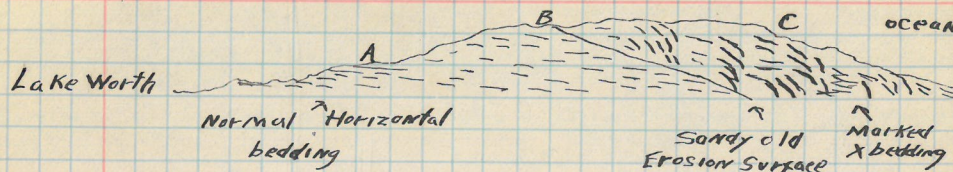
(Cox place, same as on Lone
Cabbage Island. About $5\frac{1}{2}$ ' above exposed.)

than that on Lone Cabbage Island
and at the Cox place. Sand dredged
out contains an abundance of
ilmenite - so much so as to give
it a very decided dark color.

1-10-24

Road way or cut at the Palm Beach Golf course, from Lake Worth through to the Ocean Drive. The cut is about 12 feet wide and about 500 feet long. At its deepest or highest point it is $24\frac{1}{2}$ feet above mean low water in Lake Worth. The exposure shows the same character of rock as on Cabbage Island - a very sandy limestone with many shell fragments. Cut was made about 7 years ago and stands in a ~~fair~~ face, showing no weathering or tendency to crumble.

Structure. On the Lake Worth side the bedding is horizontal but toward the ocean side marked cross bedding is seen. The following sketch illustrates the structure:



Interpretation: The evidence shows that section A is an old reef laid down under normal conditions, the transgression of the ocean upon this reef made the erosion surface indicated by B. Upon this newly made shore line through a process of building up by means of a series of smaller reefs section C was formed.

1-9-24

Murray Island.

We found this island to be about 5' 2" above high water at the highest point located. Limestone was exposed to about 4' above the same datum. Same character of ls as on Lone Cabbage Island.

1-11-24 Friday

Island No. 7. Rock exposed at what was said to be low tide. This island has been patented. The highest points were 2 feet above the water level as just stated. Rock of same character as on other islands visited. A rock reef was plainly visible at this stage of water, running off the northern end of the island and extending toward island No. 6, known as Forkman island.

Island No. 9. Known as ^{Pine} Island. Island in dispute. The highest point found was about 2 feet 2" above high water. Rock is exposed over the interior of the island. Same character as on other islands - a living-sandstone. Rock very much pitted and jagged, evidence of weathering.

Hypoleux Island. Traverse corner, or township line surveyed in 1858, T. 44 S, R. 43 E. Elevation of corner ^{on west side} now 2' 4" above normal high tide. On the east side of the island the corner (not seen as post but a big pile of rock which was taken to indicate the corner) was 2' above normal high tide. The general land level, with exception of a sand ridge bordering the west side, across the island ~~below~~ on this township line was about 3 feet above the normal high tide.

No. 15 - Hunter's or Horse Shoe Island.

No rock was seen. Quite an accumulation of white sand. Highest point noted was about 2' above high tide. The rock reef was evidently submerged and the accumulation of sand on this gave vegetation opportunity to get well started. Will probably be recommended to be thrown out by U.S.

Island No. 14. The rock on this is exposed at more 1 foot above high tide. One foot of sand accumulated on top of this over a portion of the island. No question but that the rock here has been exposed for some time as is shown by the extremely rough weathered surface.

T. 44 S R 43 E - ^{nmr} 1898

34

1-14-24 - Monday.

West Palm Beach canal to Canal Point
thence to St. Lucie Canal through Force
Oleander -

Made a collection of the shells from
the limestone dredged up from a depth
of 20 feet about 1 mi. up the St. Lucie
Canal from Lake Lucie. This collection
contributed to Coore for study by Mansfield.

In the West Palm Beach canal made
collection of shells from the mud on the
bank at a point 9 mi. from Canal Point.
This had the appearance of being the Ft. Thompson
Collection to Mansfield for study.

Lee County

2-11-24

From Ft. Myers to Marco, in company with
R. M. Harper and Stuart Morrison -

Bonito Springs -

This is a small spring running
into a creek near the town of Bonito
Springs. It is a sulphur water.

Marco.

Deep well drilled J. H. Soxsee + Son,
about 800 ± 4" + 1921. Salty.

Dilled by Kellogg, Ft. Myers? or Lehigh.

Water supply from cisterns and a shallow
well about 15' deep.

Carambas, water supply from cisterns and
a shallow well.

Shell mound on end of island. Composed
of oysters mostly. Used on road.

Collier County

From Marco to Ft. Myers.

3-12-24

First well about 9 mi. N. of
Marco, or about 1/2 N. Henderson Creek -
Well exposed at surface, showed smooth
weathered surface.

3-13-24

Ft. Myers to Immokalee + Lehigh.

About 8 mi. S. of Ft. Myers we
stopped at the well #1 of Fla. Exploration
Syndicate. Found log book and took
a composite sample of the drillings.

3-14-24 Calooschatchee Shell Quarries
Mr. D. G. McCombs, Prop.
Mulle, Fla.

Quarries at Romo Siding. Operating a little more than a year ^{July 1922}. Marl is used for road construction work in Highlands, Hendry and Glades Counties. Get out about 15 cars a day when they are running steady. Cars have a capacity of about 35 yards, run from 25 to 40 yard capacity. Use a Bucyrus drag line shovel, with Diesel motor. Shovel holds a yard. Mined about 100 cars in 1922.

Mined about 1900 cars in 1923. \$14.00 per car.
mined about 300 cars so far in 1924.

Section

- 0-3 Sand and soil
3-6 marl, very fossiliferous
6-8 Very hard rock, limestone
marl, more sandy.

Glades County

3-14-24

Moore Haven public water supply is taken from the drainage canal. Water is treated with a compound of alum for removing coloring, from this tank the water goes into a filter tank. Filter is composed of sand, gravel and a bottom of brass screens. From filter tank the water goes into the "clean" tank from which it is chlorinated. Can treat 50,000 gals. in 4 hours. Daily consumption about 30,000 to 50,000 gallons every 24 hours.

A small collection of shells from the canal bank was made from the bank of canal at the water plant.

3-14-24 About 12 mi. N. from Moore Haven on the road to Lakeport, the spoil bank along the canal. The dredge has thrown up marl that is very fossiliferous. From an examination of this it resembles the Apple Mill Hammock marl, all the genera present at the Apple Mill Hammock locality being present here. The predominating shells are *chione*, *arca*, *fulgur*, *tellina*, *phacoides*.

A small collection made from here, Collection #8, of Morrison

Road crosses Indian Prairie canal at 8 mi. from Applechota. Bridge is 27 1/2 mi from Moore Haven. No shells or rock exposed in canal bank at the road crossing. From an Indian (on horse back) met here it was learned that no shells was exposed in canal banks.

Okeechobee County
From Okeechobee to Jupiter.

3-15-24

At Okeechobee car loads of rock were being unloaded. This was the oolitic limestone from the Reynolds quarry at or near Naranja. It was being hauled from Okeechobee for surfacing State Road No. 8.

