

No. 20

PROPERTY OF

FLA. STATE GEOL. SURVEY

Tallahassee, Fla.

Feb. 1st 1910 to Apr. 30, 1910.

NU

Herman Guntz.

Index vol June 18, 1913

7/18/1866

$$\begin{array}{r}
 12.25 \\
 2.31 \\
 \hline
 12.25 \\
 36.25 \\
 2450 \\
 \hline
 28.2975
 \end{array}$$

1

$$\begin{array}{r}
 257 \\
 160 \\
 \hline
 97 \\
 3 \\
 \hline
 127
 \end{array}$$

$$\begin{array}{r}
 13 \\
 60 \\
 15
 \end{array}$$

$$\begin{array}{r}
 11 \\
 0 \\
 \hline
 11 \\
 2 \\
 \hline
 13
 \end{array}$$

27

Pierson 8:30 am. 2/7/10 1000 2
 Volusia, Astor N.J. River, 940

J. P. Doss.
 Astor, Fla. under repair.

H. D. Vallerchamp, Astor,

Pierson, 7:30. 2/8/10 1000

D² Land 1110
 Bensford deposit 1060
 " level of lake 1040
 On top of hill just near lake 64 ft above sea.
 D² Land 1120

Country between D² Land & Bensford
 high sandy rolling, plugging around 80
 + 90 feet contour above sea.

Volusia County.

3

Benson Spg. Enterprise
 Green " "

D² Leon " DeLeon.

Blue " D² Leon.

Orange City Natl. Works, Orange City.

George Hill, Ingt. Natl. Works.

D² Land, Fla.

D. D. Rogers, C. E.

Daytona, Fla.

D² Land 1130
Orange City 1100
2 mi. S 1140

Country here comparatively flat but
between Orange City & SE land very
rolling sandy pine woods.

Enterprise depot 1090

Green spring, later 1100

On road up from spring level, 1150

(Tainter place, or Judge Stillbirth place,
Mrs. Dickerson owns it) deep well.

(Send Wm. S. Thayer, agent
Enterprise, Fla.)

2 1/2 mi. N Enterprise 1150

Quite a rolling scrubby country here.
at bottom of hill 1120, good marsh
ponds.

Green Spg. ^{1/2 mi. or so} Enterprise, Fla. 7/10/10

Avg. rate of flow 2 ft per sec.
" depth 1 "
" effective width 2 " " "

The water has a very Peculiar
and decided green color.
Seems to be of a limestone or
formation. Since opened very
deep, 90 ft. deep. Is circular
in outline and about 50 ft.
across.

A. C. Osteen

6

✓ Osteen, Fla.

send upst.

A. J. Patillo,

✓ Osteen, Fla.

send upst.

about 12 yrs. ago in legislation

Lake Helen 1150

De land dept 1130

" " 1130

2/10/10

0-25

sand

25-45

clay

45-50

shell

50-55

Rock

55-105

sand

105-113

clay

113-125

shell

125-149

Rock

149-157

sand

157-197

Rock

197-237

water
sand +
shell

237-247

Rock

247-257

clay

257-265

sand

265-277

Rock

277-292

clay

292-312

shell
+ clay

312-392

rock

392-406

cavity
water

Log of well (red well)
D. S. Land, Fla.

2/11/10

392
14
406

Analysis of old well DE Land, Fla. 8
 Analysis by H. Herzog, Jr. Gainesville, Fla.

Chemical Analysis		One gal. water.
Total solids	7.95/100	lbs in Gallon
Residue after ignition (mineral matter)	4.44/100	" "
Gas & ignition (organic ")	3.51/100	" "
Sodium Chloride	0.66/100	" "
Free Ammonia	0.04/100	" "
Albuminoid "	0.01/100	" "
Oxygen (consuming power)	0.09/100	" "
Nitrates	0.02/100	" "
Nitrites	none	" "
Sulphates	0.12	" "
Phosphates	A trace	" "
		17.84

Feb. 12, 1900. when report was made, Analysis made in this month.

1684

9

A log of 10 inch well at DE Land might be obtained by writing Director, U.S. G. S.

Send report to E. D. McLeod, DE Land, Fla.

Total depth of jet well, 2/2/10 about 500, Water at 495 and down temp 71° F. Casing 493 1/2', 10 in. Total flow at 500 ft, 110 gals. minute, measured 2/12/10.

Carrabelle, one well owned by oil 10
company, 350 + dep. no further details.

U. S. P. #102

Appalachicola, G. H. Whiteside, at wharf,
3 inch, 450 dep. prim. supply at 375 ft. second supply
at 106-325 depth to rock 88. material in which
water occurs white clay. 1 lead + 4, temp. 74,
yield 40 per min. Sulphur. Use, cooling purposes.

U. S. P. #102
1903

Hastings County.

South Port, Gale-Davis Co.

268, 8, 80 + 25, -1, 1906.

Millville, German-American Lbr Co,

206, 6, 2.15, +10, 1907.

A. L. Williams, Panama City, Fla.

✓ Major Panama Ice Co. near cond
#5

C. M. Chandler, ✓

Panama City, send report

St. Andrews Bay at Panama City 1000

4 wells were drilled in the 12
 neighborhood of Oak Hill and Sexton
 Ridge, and Orange Hill. The famous
 oil well in Marion County. The
 deepest well 1980 feet deep. This well
 flowed. Two of the other wells flowed.

H. J. Jenkins,
 ✓ Round Lake, Fla
 send report + map 7/26/10

M. J. Clemens, with in regard to
 Hartford, Fla. profile.

J. E. Carter, send report
 ✓ Round Lake 7/26/10 + blank map

RR cut at Round Lake,
 Marion County. 13

Cut about 15 feet deep

1-2 feet sand yellowish or cream colored
 2-6 feet reddish + yellow mottled sandy clay.
 6-13 " fine to fine clay vari-colored, red,
 white etc.
 15-15' manganese colored clay

Round Lake 1230
 corner of cross near Alfred 1130
 Alfred 1110

two of siliceous rocks.

Cottontale 1110
 Cottontale 1125
 Mandarin 1140
 Chipola River 1095
~~Round Lake~~ Cypress 1120
 Round Lake 1130
 Snelde 1130

Limestone exposed in hiveside ¹⁴
near Cottendale.

River Jet 1100

Jitunville

1st flow about 100 ft. salt.

shallow wells, fresh, no flow.

1st were a very friable soft rock.

Below this a ~~off~~ white clay.

flow increased from 100 to 250 feet

Ford, mgr. in place, Jitunville.

O.A. Quarterman, Canaveral Club.

Florida Yacht Co.,

W.M. Brown: Port
now at miami

Jibre Taylor well 282 ft. 4ⁱⁿ ¹⁵
^{changed out 1906}
Analysis by Eng. Coast. Reg.

Alexander near Engleclie, dealer.
C.A. Spencer, owner. 8/16/10 W.

Jim L. Mobley, well driller,
at Myers cottage.

Dr. B.R. Wilson, mayor, ✓
Jitunville, Fla. and upst.
3/4/10

Raymond Gano well 4 in 188 ft. NW of
Jitunville

W.H. Ford.

Jitunville Ice Co. Jitunville, Fla.

matson's rules south of Titusville to Cocoa 16
Cocoa, ✓ Cocoa Sec Co.

2 mi. N. F. Dixon

J. A. Fiske

1 mi S. G. S. Harder, (3 miles)

Dr. W. L. Hughlett. ✓

County school board. City

J. B. Powell.

Joseph Smith -

Courtenay, 1 mi N. M. S. Davis Sams

" 1" " J. H. Davis Sams

Cocoa, 7 mi S. O. Currier. (2 miles)

" 1 mi " J. M. Mc Crady. (near Rockledge)

Rockledge, Plaza Grove.

" Lochan's store.

" G. M. Houston.

" H. S. Williams

17

Coguinia pit 1 1/4 S/N of Titusville.

Pit is about 5 feet deep. Coguinia
overlain by 1-2 ft of yellow sand (uncompacted)
the bottom of coguinia not seen, pit too shallow.

3/5/11

Pit about 1 1/2 S/N Titusville.

Pit where older sand has
fallen in so an exposure of the
coguinia could not be seen. A
sample of the rock shows it to be
more siliceous than the coguinia from
pit #1.

City Point,

18

✓ S. Hendry.

✓ G. Middleby, Jr. (lost house, red top)

Several at Sharps,

Dyal, Olif-

~~Ways~~ Capt. Sharp. -

Spafford. (house in road.)

James Thompson, at Frontenac.

Randerson, 11 mi from City Point.

Coquina reported to be found at
City Point below sand. It is
said to occur ~~below~~ along
the ridge or sand dunes extending
all along the river.

19

S. Hendry City Point, make
and #5

Capt. H. H. Sharpe, Sharpe, Fla.
and #5 ✓

Dr. C. B. Herrick, Sharpe, Fla.
and no 5) ✓

See E. E. Swinson at
City Point
in regard to Olif wells
at Sharps

McC. Dyke
Sharps
well.

Dr. B. (R) Wilson } Titusville
Robbins, well,

Well is old Indian field
Mr. S. J. Horton had a shallow flowing well
about 30 ft deep driven at the old
Indian field in or near the St Johns River.
This well ceased flowing and he now
has a second ^{flowing} well about 30 ft
in depth. Water is fresh and is
not sulphur.

S H S

Volusia County

(short list.)

At New Smyrna see Tom Murray
regarding wells at the head of Indian
River.

From here drive on to see
Will Gardner, 3 mi. South who has
charge of the Tom Murray pasture & wells.
Also see Mr. J. W. Briffis well in
marshy at Shiloh two miles or so
beyond Gardner - S H S

Also about well near Lyata, see Murray
& Gardner -

A well was put down at the old stockade
6 mi. W. of Turnbull about 3-40s ago.
This well is reported to have flowed
water sufficiently fresh to be used in
watering stock. Afterwards flowed salty
water and is now abandoned.

See Capt. B. G. Hates, U. S. Engineer's
Office for canal across from Shumaker
Creek near Lyrate, to Sanford.

One flowing well water ~~slightly brackish~~^{fresh}
but used for stock and to some extent
for drinking purposes one mile north
of Lyrate on east side of R.R.
See Murray + Gardner ^{at Lyrate}
J. J. ^{with their} ~~posture~~

U. S. Coast + Geodetic Survey,
Coast Chart # 161, Cape Canaveral,
Florida.
Issued Nov. 1883.

Capt. O. A. Quartenman
Master Shook, Life Saving Station,
Titusville, Fla. send #5.

Canaveral Club well.

This well was originally about 222 ft
deep and was drilled in 1890 by a Mr. Fox.
The well flowed a good stream but in
subsequent years decreased in flow to
the extent (1/3 of original volume). That in
1905 it was deepened by Capt. Quartenman
to nearly ³⁰⁰ or 297 feet. It now gives
about as much water as when it was
first drilled. The water is sulphur
and has a slight salty taste. No
brine of this well could be obtained and
Mr. Quartenman could give me nothing
from memory. 3/7/10.

Russchke, see Mr. Houston well
 Merrill, see Mr. Hewins, well.

John Mc Allister, well driller,
 Ean Gallie, & Co

One sand cut north of Fontaine
 two " " between Fontaine & Shupe
 high ridge between Rt & river from
 Shupe to City Point.

Big cut south just on leaving ~~that~~
 City Point. A second cut about 1
 mile or so from City Point depot with
 A third one about 1 mile from #2
 A fourth near Cocoa

A fifth near Cocoa.

H. Bradford, well Cocoa.

General for (Cocoa) + Russchke.

surface 10-12 ft
 lignite 10-12 ft
 shell + sand 4-5 "
 fine white sand 80-90 "
 Rock very hard 4-6 "
 Blue clay 15-18 "

Rock alternating hard + soft strata, with
 increase of water with depth.

This section given by W.A. Heaton,
 was an well running for 18 months.

Coquina

A coquina pit at Coquina shows

White sand 1 ft.

yellowish dark colored sand 2 ft.

Coquina 3 ft.

Water —

below this is soft or micaceous
coquina or marl, white.

Mrs John H. Merrill,

Tropic, Fla.

send \$5



B. S. Hardie with Rensselaer

E. V. Hall, driller, 300, 3, 90, + all 1891

Garvey well, Rensselaer

E. V. Hall

City Point. E. V. Hall driller.

Rensselaer,

Will Dixon	300,	3,	120,	2.28,	± 0	all 1893
R. L. Dixon						all, one ft.
Add Dixon	\$50,	3,	80,	2.30	+ 2	all 1893
W. H. Duce (3 wells)	85,	3,	100,	2.30	+ 40	all 1893

all about the same.

(all Mr. Conrad about one of these)

Georgiana,

E. V. Hall 300, 3, 90

A. J. Rogers, 225, 2, 90,

J. H. Handy, 225, 2, 90,

J. H. Handy, 560, 2, 220, ± 0

C. D. Provost, 300 3, 90,

" " " 300, 3, 90,

R. B. Ruchfil, 300, 3, 90

C. F. Birren 300, 3, 90

J. H. Manson

Mrs Kate Stewart

Off. Page 173, 3, 33. O. this well driller says.

W. P. Clemon 4

Sulphur

no salt

reported

Lotes,

28^{all}

Pratt place, 300, 4, 90, 2.6 + 1893
" " 300 3, 90, 2.6 + "

General for Georgiana, by Mr. Hall

0-90 sand
90-200 blue clay,
" " " " " "
200-206 water rock, ^{hard} white (coral) first floor
206-300 " " " " " "
only becoming softer, more water. The
first surface layer is very hard
but no hard layer penetrated after
this.

J. H. Bryant
Cocoa, Fla.
one upon.

H. Bradford
Cocoa, Fla.
send #5 ✓

Cocoa 1240

29

Along the river front from Cocoa is
quite a bluff. The sand has fallen
down over it and covered mostly
but occasional outcrops in some
places.

Dr. Cecil.

About 1 mile north of Cocoa along the river is quite a bluff. By barometric reading it is 40 ft from the water level to road along the bluff edge. The top of hill is not reached here, it is possibly some 20 or 25 feet more to the east. An exposure of coquina is seen at the water edge but on account of growth and overflow of sand above the relation of the coquina to the overlying formations could not be determined.

See Dr. Seafield above well

Cape Gallie

See about well 4 mi. N Cape Gallie

The coquina were outcrops along the river front both north and south of Cocoa. Just at Cocoa itself there is no bluff, it falls back from the river and forms quite a ridge and extending about 1/2 mile back from the river. The top of the bluff south of Cocoa is in places some 40 feet above the water edge. ^{They thinning} as descending in height as Cocoa is approached and again rising as you leave Cocoa.

Coquina along river edge at Cape + Bonaventure.

well of G. M. Jacobs, Chulaota, 3² mi
east of the town, +5, ✓

H. S. Williams, Roushage, Fla.
+5 ✓

Albert A. Taylor.

Cocoa, Fla. send #5 ✓

The point on north side of
road leading from Roushage
station to the river is 89 feet
above the water in the
river. profile as given by him
Taylor 3/4/02

33

0-14 - surface soil,

14-17 - rock, oolitic limestone,

17 -

to a depth of 60 feet white sand.

Courtesy, Sam's well.

M. S. Sam's, Courtesy, Fla. ✓

send #5 ✓

O. W. Page, Georgiana, Fla. send #5 ✓

Indianola.

J. S. Crawford

E. Thickett

J. Lapham

John M. Donald, 4 wells.

E. P. Maxfield

W. A. Whit, et al, 4 wells.

J. E. Reed.

Geo. W. Schuyler

see about hotel well at Indianola 34

Carter, at canal propose

Jones, beyond Carter.

H. S. Williams,

Rocledge, Fla. ✓

send #5

35

Jos. J. Maxfield, Nashua, Fla.

Spring, Maxfield Spring, Ore,

1000 ft min, 90°, sulphur, mg, lime.

John Fint, in charge now of

Maxfield place. The expense of

more (Nashua) in this place.

Dr. St. Clair is best,

Indianola, Fla. ✓

send #5

1st flow in and around Inchanola
at 135 ft.

- 0-40 - sand.
- 40-43 limestone
- 43-44 gravel

Log of well of Julia Lopham, or
Inchanola

- 0-60, sand
- 60-68 hard pan,
- 68- limestone, gravel, coral

Julius Gordonville
3 wells 1/2 mi S. Merritt

Louis
Mr. Jack, well at
on hillside at Cocoa.

H.H. Glass, Merritt, 1/2 mi S.

12, 2, 14, -7, 1910

Drunk as a whole

S.G. Seneca, Rockledge,
well put down by J. A. Coward,
examined Mar. 10, 1910.

38

surface soil + yellow sand 0-35
dark yellow sand - 35-38
cream colored sand 38-48
very white sand 48-50

Two wells in this place at
Bismarck, no more could
be obtained. see R.E. mine
on St. Pierre, St. in report
for them.

39

Coguinia reported to occur
at Georgina a few feet below
the surface. Island is
flat across here. The
island as a whole
seems to have a
flat topography. Limestone
reported in "sands" up
about center.

A. F. Francis, owner of Ronald
well at Lulu.

2 wells in Jerome place
1 in m R. B. Stuart
1 in m Walter Sellers,
p.o Brantly.

H. m. Booth,

Lotus, Fla.

send water supply report 3/14/10

L. D. Hancock

Lotus, Fla.

send water supply report 3/12/10

sample of water taken

Mr. Saint Clair, Brantly, 1 mi S.

L. Matthews, Bangor, p.o.

Drilling

well.

me acting
driller.

Cogema not seen exposed
along the shore from
a little south of Brantly
to a little north of ~~Bangor~~ ^{Bangor}

McAllister,

Mathers,

Casper.

} Dr. J. J. J.

Melbourne,
 R. Johnson.
 Henry Bowden, near, 400, +10
 Addison S. See, " 400, 6, 73, +10
 Oliver Gibbs, " 318, 4, 100, + 1907
 J. H. See, + W. J. Vesha " 400, 3, 200, +10
 M. D. Rhodes owner 45, 1 1/4 45, +3
 J. J. Shaws + Co, 1 m S. 382, 3, +10
 R. R. Rhodes.
 H. A. Martin

Send ✓
 E. B. Arnold #5
 Malabar,

1/2 mile w Melbourne on main fir
 mat occurs in hammocks and
 below about 4 inches of rich soil.
 mat is about 2 feet thick and
 immediately under it is a coarse
 white to cream sand.

5/12/10

McLeod Bros, + Auth, Stairia, 7th. 44
430±, 2, 40± + 30, 1925

given by Mr. Shaver, 5/14/10 ✓

P.A. Mc Millan, well dried

Eam Gallie

Dr. Ham,	G. N. Washbourne
H. C. Stare,	J. A. Grace
J. W. Comstock	C. W. Bolton
J. J. Farley.	Malabar.
✓ E. B. Arnold	
George Damon	

Chas. Christianity, well at
Grant,

see over + Taylor, Eam Gallie

Nico hills.

Sturford, ✓
Hoff.

Nelson

John Day

P. Bentzen

U alkaria

86

E. a. ~~Fredelius~~

Svedelius.

Buller, W. G. Nesbit,

Water rise 320, first flow

water depth 350, 3, 90, +15 in 2 in
rip

1892, sulphur,

0-60 mostly mud

60-80 shales turn etc.

80-90 very hard rock.

87

Old well at Melbourne
owned in partnership, by
several of the citizens. It
is used as public supply.

Abt 1887, put in

abt. 250 ft, 3,

very pure pressure, alt 22 lbs,
22

At Mr. Gibbs's place Melbourne
about shell mound

Alt 20-25 ft high and front
on Indian River, north

composed of common shell

and clams.

Arguing seen in place at ⁴⁸
 Melbourne Beach facing the sea.
 Said to occur at a number
 of places on the island
 and on the ocean side
 occurs but is covered by
 deposit of sand.

J. A. Coward, Cocoa,
 and H.S. ✓

Capt. J. M. Davis. ✓

49

11 lbs.

419.6, ³22 +

General supply, house,

$$\begin{array}{r}
 231 \\
 7 \\
 \hline
 892 \\
 15 \\
 \hline
 808
 \end{array}$$

✓

Mr. H. J. Hall, ✓ A. Near,

$$\begin{array}{r}
 1910 \\
 12 \\
 \hline
 98
 \end{array}$$

389, 4,

²30

+ H. 1898 Sept

$$\begin{array}{r}
 31 \\
 8/2 \\
 \hline
 311/10
 \end{array}$$

pressure 11 1/4 lbs. 2/15/10

$$\begin{array}{r}
 281 \\
 8.5 \\
 \hline
 11.55 \\
 1848 \\
 \hline
 19.635
 \end{array}$$

✓

50

The sand dune lies a short distance from the river at Melbourne, $\frac{1}{2}$ mile or so. Between Malabar and Melbourne is apparently closer to the river. At Malabar itself is lies quite close and at Grant it is not more than $\frac{1}{4}$ mile - the railroad parallel between Grant & Malabar.

Shell mounds are of frequent occurrence along here and are quarried for road material. One such mound is at the public road crossing of Turkey

51

Creek about 3 or 4 miles S. of Melbourne, and at Malabar is a large mound on the river itself. Going south between Grant and Mico is another shell deposit and in this deposit the common oyster shells of today seem to abound.

Coggina was seen in place at a point or at the mouth of Turkey Creek and it was reported to occur all along.

Lying some 1-4 miles west of Melbourne and vicinity is the "prairie". This is the head waters of the St Johns.

52

The country after getting off
of the dune country is flat
and is known locally as
prairie. The soil is dark
or mucky and in rainy
seasons is said to be
overflowed. Drainage is
necessary. Flowing wells
can be obtained out here
and this being the case
the greater portion or all of
Brevard County can be
mapped within this area.

53

Approximate log of M. B.
Rhodes well at Melbourne.

Sand	0-10 ft	water
Hard pan	10-11	water
Sand	11-20	water
Hard pan	20-20½	
Sand	20½-35	
Sandy clay	35-45	water + 3.

soft water

M. H. Goode, P.M.
Melbourne, Fla.

Eau Gallie

5K

Century Military Institute.

P. A. McMillan.

Capt. A. Near.

Geo. F. Paddison.

C. J. Young.

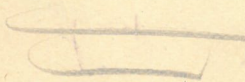
Mary Young.

~~Eau~~ Eau Gallie

340, 4, 100, +20+ 1905-

Indian River + Lora Hatch Fork + Ice Co
9a mfg.

E. G. Vivell.



G. L. Snedeker,

Melbourne

will put down well on
melaton during summer
of 1910

Approximate log of well of John
Carter, 3 1/2 E miles on peninsula
given by drill J. McAllister, 4/17/10

0-30 ft.	White beach sand, salt water
30-32	blue clay
32-70	quartz sand
70-85	tough blue clay
85-120	sand, lime & shell.
120-260	Green clay
260-340	soft water well.

Geo F Paddison, well, nos 56
Hodgson's store. Oct 1887

0-30 — sand
30-45 — blue clay
45-112 — more, sand, shell harder
as you go down.
112-237 — Green silt, very fine,
and plastic, containing very
hard, Siliceous concretions,
237-

Hopkins

57

237
120
117

Gomez,

8: alister
mi-

1200, 4, 300, 8,

+ 20, all 1900

Hobe Sound.

Cut out the
Schneider, minor

New & Jaynes,

1200, 4, 30, 20,

+ 12, all 1895

4 mi. N. West Ear Gallie

58

J. J. Snell,

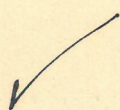
Bovine
2 mi S/E

Near + Taylor,

irrigation + stock

325, 3, 80,

+ 18 + alt. 1900



Hard sulphur

Hopkins well about 20 miles
a little south of west of Ear
Gallie, well flowed, not good
flow.

E. B. Taylor.

Ear Gallie,

and the

J. J. Padden,

59

Ear Coast Furber + Supply Co.

Near + Taylor.

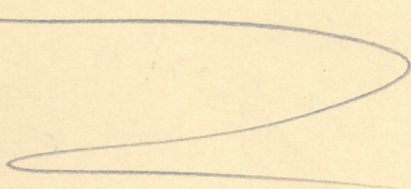
500, 6, 100, ⁵/₄, + 50, 1900 alt



(2)

Shell from 3 miles west
of Ear Gallie to the west
of Ear Gallie. Sample sent in

3/10/10



Dr. J. A. Pierce
(3.7.12) Hedges, 12/12/12

60

52, 1 1/4, 52, 3, 1, 0, 1908

And, #5

H. J. Nesbit,

31 Pierce, and #5

✓

61

Craigie, Palm Beach -

Lucy

Miami

4 fms, 9,000,000 gals, day

- 14 inches

Total flow of 4 wells 3 1/4 million
all 100 ft, 6 in, 100 ft.

Kissimmee,

It cloud perfectly, just
in mill yard + used
as fire supply. drilled
by ~~W. J.~~ J. H. Nesbitt, about 1
alt. 400, -6,

J. H. Ice,

St. Pierre

and #5

St. Pierre Ice Plant well,

0-75. sand + hard pan.
75-76. rock, very thin rock, 1 in.
76-200 blue marl,
200-201.6 Rock,
201-300 blue marl
300- rock,

Water rock at 700 ft.

Water analysis from well of
St. Ives Ice Co. 77 Pine St.
Analysis by Geo. W. Lord Company
2238 - 2250 North 9th St.
Philadelphia, Pa.
June 18, 1907.

Organic + volatile matter	2.993, per 100 gms.
Calcium oxide	4.121
Mg oxide	1.863
Sodium oxide	42.980 ✓
Sulfur trioxide	14.086
Chlorine	26.058
Carbonic acid (Combined)	11.904
Silica	1.982

Analysis
#22489

The above exist probably in the following
combination.

Organic + vol. matter	2.993	u.s. gms.
Sodium chloride	43.000	
" carbonate	15.974	
" sulfate	25.071	
Calcium carbonate	7.346	
Magnesium carbonate	3.906	
Silica	1.982	
Total solids	100.212	
Free carbonic acid	4.875	

C. Chester Brown
Chemist

Analysis of biter scale formed
by use of the above water. Analysis
by same company, Aug. 18, 1906.
Analysis
#21011.

Organic and Volatile	5.7 %
Calcium Carbonate	77.4 %
Calcium sulfate	11.4 %
Silica	2.1 %
Iron oxide + alumina	3.4 %
Mineral oil	light

Physical characteristics

Thickness, $5/32$ in., 4.0 m.m.
Hardness, soft.
Color, dark brown.
Structure, crystalline and amorphous.

H. P. Kiefalver.
Chemist.

Drainage canal from Miami River #65
The Everglades. 3/19/10. Canal about 5 mi
long and dredge miami still working. Station
#3. Stone and through coralline limestone
along entire distance from 10 to 15 feet or
more in depth to bottom edge. The
rock contains a great deal of silica
and is very hard. Distances
are in many instances to be seen.
~~Station~~ Water in the canal varies
in depth from 6 to 15 feet as
reported. He stopped at the dam
and dredge miami was 1/2 mile or so
in the distance. From records shown
by posts along the canal the dredge
~~could~~ excavated about 60 to 100
linear yards per day. This is the
Miami Canal. He came out the
Miami River a distance of 5 1/2 miles
and the canal is from 5 to 5 1/2 miles
long, and 60 feet wide.

67

Heard
Reported that fresh water has
been obtained at Big Pine Key.

Mr. C. J. Craigin Palm Beach, Fla.
3/27/10 Well second.

Joe Buff

Quarry Miami oolitic
limestone. Quarry about 10 to 15
feet deep, not much overburden.
Reported mined to 24 ft and
still in work.
Hahn & McAniff
owners

Mr. James, Chambers, ^{asst. Supr}
N. Palm Beach. ^{N. P. Beach Water Co}
✓

68

H

Nest Palm Beach Water supply
from Clear Lake, about 1 mile
west of town. Pumped water from
lake without filtering. The four
wells then were drilled, were
unsatisfactory and were never used.

Key Buck,

Write Geo. H. Ford, A.
for analysis of water from
well of Ariston ^{for} ~~for~~ ^{Dec + Election}
Company, N. Palm Beach.

69

Find out who is engineer of east coast extension work.

Be sure to get information in regard to sales in waters in St. Louis and Palm Beach counties.

See well 2 in N. Jensen

Daytona.

Paul Peterson, owner 2 1/2 mi. S.

~~Under Dan Van Doren, driller.~~

145, 85, 2, 8 + 4, 1910

sulfur

1st flow at 87 ft.
hard wood 86 ft.
cogum at 20 ft.

City owner

Bellew + Melton

260
240
180
165

depended by H. Van Doren

6 1909, 1910

82, 83, 84 ft casing

4/7/10
+ 9.3

3
4

Send Paul Peterson
Daytona
water supply paper.

Log of H. Van Borne, well at ⁷²
Daytona, 1/2 mi. N. Post Office

0-3, surface soil.
3-5, hard pan.
5-40 white sand.
40-45 coquina and shell
45-65 white sand
65-83 Blue clay
83-84 Hard rock
84-205 Light colored limestone, hard
+ soft layers with increase
of water with depth.

H. A. Miller, Supt. Rolling Stone
F. Z. C. Ry.
St. Augustine, Fla

F. Z. C. Ry, well at ⁷³
Daytona,

Van Borne, H. Miller,

1 1/2 mi. S.

85, 10, 80, 10, -10, 1908. Soft.
Well terminates in coquina rock.

Charlie Lee,

Bellough + Melton, drillers.

General, irrigation. ✓

130, 2, 86, 9 + 5, 87, 1910, nephew.
1st flow at 88 ft.

0-6 sand, dark,

6-15 marl, white

15-30 shell, sand. ✓

30-65 Blue clay

65-87 sand + shell

87-130 Limestone, medium hard, water, flow

1st flow at 88 ft increase with depth.

Mrs. Middleton, Seabreeze.

Wellough + Miller

General household.

136, 2, 96, ~~18, 48~~ - 6, 96, 1910, one p. line.

~~1st floor~~

0-12 ~~Yellow~~ sand

12-42 Green sand,

42-77 Blue clay.

77-96 sand + blue clay.

96-136 Limestone

Salt water at
560 ft or there.
about.

o

o

o

o

Total capacity reservoir at Daytona,

75

44,000, ~~gls~~ 36 x 6,

633.13 gls per inch in the reservoir

the north test well before it was
deepened now 6 inches in 39 1/2 min.

Oct. 28th, 1909.

South test well 6 inch in 39.8 minutes

South test well 6 inch in 33.8 "

North test well 6 in in 28.1 "

All wells on Dec. 6, 1909
flowed 6 inches in 7 minutes
before deepened.

The NW well after redrilled on
Dec. 21st, 09 by Van Horn flowed
6 inches in 7 1/2 minutes.

The $\frac{7}{8}$ well redrilled on 76
6 inches in $9\frac{1}{2}$ minutes, Dec. 26, '09

All the wells on Jan. 11, 1910
the 6 inches in 2.9 minutes

Geo. A. Mann, m. e.

Daytona, Fla.

Send #5- ✓

H. Van Dorn owner & director.
General & irrigation,

205, 4, 83, + , 1910, sulphur.

Samples from 190-205 ✓

77
J. J. Murray, wells 8 mi S. Oak Hill
four wells all about 110, $1\frac{1}{2}$, 90,
+ 7 $\frac{1}{2}$, 90, 1907, ~~200~~ One well
unsuccessful because of busting
off pipe. The well on the
west side of Indian River
and about 1 mile south of the
head of the river is almost
fresh. The well is not more
than 82 feet deep and does not
go through the bed rock.
The other wells (two) are slightly
brackish but not too much so
for the use of stock.

It was found that two wells were
B. R. Mann not flowing when visited

Apr. 8, 1910

Hawks Park, $1\frac{3}{4}$ mi. S/W ⁷⁸

J. G. Murray

~~L. H. Himm~~ Bannell,

105, 2, 90, bed was 90, + 7, '896

sulphur ✓

Oak Hill,

Byal well, 1 mile West. Flows.
put in by L. H. Himm?

Quartz + feldspar, well at Oak Hill,
at temperature still, flows.
sulphur.

Shiloh, 1 mi. N/W. ⁷⁹

J. H. Griffis, owner

L. H. Himm, driller.

149, 2, 149, ± 0 1907-07. very
strong salt. Well is not used
now but copped off.

Clay, iron ore at 90 feet or
so, very hard rock.

Mr Griffis was then surface
water wells about 21 feet
deep now for irrigation. Water
comes to within 12 feet of
surface.

Sebastian.

80

Indian River level at Sebastian 1000
Sebastian depot 1015

and
J. A. Groves, Sebastian ✓
S. C. Moore, Roseland. ✓
#5 ✓

see
H. D. Sample, above near or
Eau Gallie Sebastian ✓

J. M. Swain
county surveyor
#1. Pierce ✓
more
and #5- 7a

S. Pitching, owner. Sebastian, near
J. M. McAllister, driver. 11a
400, 3, 125, + , 1896, sulphur
irrigation

Geo. A. Braddish, General
~~H. D. Howard~~, J. M. McAllister, near
500, 4, + also 11a
1896 sulphur, 1896

Indian River Coverage Co.
also near.
365, 4, + 20 ± 1901 not used now
red in soil

C. H. Ryall, 1 1/2 mi. S. Sebastian,
J. M. McAllister
also 4, + 11a
sulphur
irrigation 1896

J. A. Groves, owner
J. M. McAllister ~~driver~~
460, 4, 100, 25, + 16, 1896
irrigation & land household.

Roseland

82

H. D. Ruffner, Alex Near. driller

4, $\checkmark$ + Hard sulphur
irrigation

L. C. Moore, 1 1/2 N. Roseland.

Alexander Mar. (3 wells)
H. J. Nesbitt

45 1/2, 4, 100, + 20 $\pm$ 1898

350, 3 ~~49 200~~ +
H. J. Nesbitt

453+, 4, 100, + 20 $\pm$ alt
1890

sulphur water, no salt.

83

21 Landerdale 4 mi. N, on ~~road~~ ^{bank}
New River.

Owner, J. W. Braddock

driller E. J. King. some sulphur
flesh, irrigation

78, 8, 78, 4, 5, + 1, 1909

0-4 mud

4-10 sand

10-13 rock

13-40 quick sand, white.

40-78 rock, boulders, gravel with
at 70 feet a very hard stratum of
rock.

4/12/10

Dania,

84

City.

E. J. King, driver. Fresh
slight sulphur.
city use.

94, 6, 85, -4, 1907.

At depth of 85 feet very hard well.

Delray.

O. V. Eliason,

E. J. King

108, 4, 95, -4, 1907

Fresh, slight sulphur.

Very hard well at 108.

85

P. H. Bryan, owner

J. A. Sanderson,

E. J. King

120, 3, 110, -5, 1906.

Home use.

At the depth of 120 feet salt water
was encountered. Casing pulled up
to 110 feet and cement was filled
in and salt water cut out. Water
is now fresh, slight sulphur.
This well abandoned and
another driven a few feet away
to a depth of about 85 ft. furnishes
an abundance of fresh water. Water
used for quack purposes around lake
except for drinking. Rain water used.

A well put down at the beach⁸⁶
just due east of Ft Lauderdale
was shot the entire distance of
270 feet, except the surface
water. Coquina and sand mostly
limestone sand to have been
encountered at 60 feet. $2\frac{1}{2}$ inch
and used 270 feet. Water
rose to within 6 ft of surface
It all not used, pipe pulled
up. Will put down for J.M.
Adams.

Eau Gallie:

87

- ✓ See Mr. H. D. Semple across well at
Sebastian.
- ✓ See some number of wells used by
your own company.
- ✓ Try to see well of J. J. Snell, 6 mi
west of Eau Gallie

C. L. Taylor, $1\frac{1}{2}$ mi W Eau Gallie
of Mr. Allen,

400, 3, 100, + 25", 1894

irrigation, surface.

✓ Gauge showed 7 lbs pressure on 4/5/0
but pipe was open and full
pressure could not be obtained

C. J. Craigie well, $2\frac{1}{4}$ mi. N. Pelin Beach 88.
 1212, 4, 846, + 40.2
 1889, 1890

- 0-5 - surface soil. surface ^{with level} 2' 1/2 ft. below surface
 5-74 rock
 74-81 fine sand
 81-86 mostly fine coquina rock
 86-87 quick sand & sharp pieces of stone.
 87-88
 88-57.2
 57.2-58 first really hard rock
 58-76.10 Coquina, alternate with sandy strata.
 76.10-78 Hard rock
 78-81.6 - Very hard flint
 81.6-84 Concrete sand, white & solid but not hard
 84-96 Quick sand bed, but mixed with bits of concrete
 96-96.6 - bit rock, not thin.
 96.6-97 Fine sand
 97-148 Quick sand bed.
 148-151 solid limestone.
 151-169 1/2 soft gray limestone.
 169 1/2-170 Hard rock.
 170.8-170.8 171 shell stratum.
 171-171.3 Very hard sandstone.
 171.3-175 sandstone.
 175-185 alternately hard & soft limestone.
 185-190 straw colored sandstone.
 190-238 drab colored solid sandstone gradually deepening in its color to a fine

blue at 230 ft with small delicate shells all through. 89

- 238-238.6 Bed of small dainty shells. Water level is 3 ft. 4" below wooden curb the lowest yet found.
 238.6-248 Very hard drilling, required to move casing in those altitudes. Water level about 25" above (near 242 ft) Very active quicksand
 248-250 Took out loads of quick sand
 250-262 sand, water in this sand ran slowly out of pipe at 3' 6" above ground
 262-263 Coquina
 263-300 Broken shell & sand, more shell (white & pulverized) the lower few feet. Water level even with wooden curb just above ground level.
 300-304 1/2 rock, water stands 2' 4" above curb in this sand.
 304 1/2-303 1/2 - Brown clay, first seen in this well.
 303 1/2-310 sand
 310-312.4 Blue sandstone
 312.4-312.10 Blue sand, shells and pieces of rotten stumps.
 312.10-315.2 Blue sandstone.

- 315.2 - 320 - - sand, water in this sand stands 3 ft. above wooden curb. 90
- 320 - 321 - blue sandstone
- 321 - 340 fine shell + sand, coarser broken shell toward bottom.
- 340 - 340.3 rock.
- 340.3 - 350 Coarse broken shell, blue pebbles + piece of coquina, water 2 ft above curb, runs freely at 1 ft above.
- 350 - 357. yellow sandstone, water 2 ft above curb.
- 357 - 359 broken shell, pebbles, piece of coquina
- 359 - 373 Concretion of pulverized shell in form of a soft sand stone.
- 373 - 374 gray limestone, with some broken shell lying immediately beneath. Water stands 2' 4" above, on penetrating this rock.
- 374 - 392 Stiff mortar composed of pulver. shell. Water stands at level of wooden curb.
- 392 - 400 Alternations of rock + blue marl.
- 400 - 409 blue marl
- 409 - 432 alternations of blue marl and sand which afforded the greatest flow to date and the first fresh water since 49 ft.

- 432 - 507 blue marl 91
- 507 - 510 coquina
- 510 - 542 Proportion of sand increases in the marl very much.
- 542 - 571 Quite sandy below casing, cannot drill at all. Proportion of sand in the marl increases.
- 571 - 614 Marly sand. Head of water in which is from 9 to 11 ft above ground and which consequently fills the casing 30 or 40 ft. Water rises so as to dribble from a height of 11 1/2 ft.
- 614 - 618 Quicksand bed.
- 618 - 618 1/2 rock.
- 618 1/2 - 640 Concrete sand or sandstone.
- 640 - 707 Lighter colored + runs to greenish muddy sand all these here. At depth 678 - 688 more sand, water + 10, from 690 - 700, very many tiny spruce shells.
- 707 - 710 brown concrete.
- 710 - 794 1/2 all sand with enough marl with it to give a green color to the slush as ejected, lighter as deeper.

- 794½-809 - Limestone + full of black specks & tiny bivalve + spiral shells.
- 809-826 Blue marl full of the black specks.
- 826-828 sand.
- 828-834 sandstone.
- 834-839 very fine tough clay, thoroughly impervious.
- 839-860 fine grained coquina. Let dribble of water at depth of about 844 ft. 4" casing driven to depth of 846 ft high in well.
- 860-867 solid hard limestone.
- 867-874 fine clay, devoid of grit.
- 874-876 Hard rock.
- 876-878 Lots of black specks here.
- 878-902 Clay, sandy + lots of black specks, no water.
- 902-905 Dark sand bed, here the water supply is 115,000 gallons per diem that comes from between these thin blades of limestone.
- 905-917½ thin flase of stone 909 ft above, this the lowest sand bed with thin blades of limestone at intervals.
- 917½-917¾ limestone.

- 917¾-923 Coralline. 93
- 923-961 Hard limestone rock at 923, solid rock nearly 39 ft.
- 961-973 Britty marl.
- 973-990½ solid rock
- 990½-1009 sandy marl full of tiny spirals
- 1009-1012 limestone.
- 1012-1023 yellow sandstone
- 1023-1025 Hard rock (commencing of Vicks. 9) ^{thick}
- 1025-1088 well, first of the regular water strata. Alternating hard and soft strata. Increase of water with depth. At depths of 1042 ft, 270,000 gals. 1057 ft 300,000 gals. 1075 ft 350,000 gals. Water strata found as frequent intervals.
- 1088-1110 Gray limestone.
- 1110-1160 - Gray limestone interspersed with water strata, but the flow increases but slightly. At 1160 flow total 400,000 gals.

1160 - 1174 Solid gray limestone . 94
1174 - 1175 Blue limestone .
1175 - 1193 All solid
1193 - 1195 1/2 Blue limestone¹".
1195 1/2 - 1196 6" water stratum .
1196 - 1212 mostly gray limestone with
some hard and some water
strata, flow increases but little.

Test of standing head of water from
bottom shows 40 ft. 2 inches.

Well from depth of 1160 ft to 1212
ft is 3 inches in diameter.

At the depth of 1023 ft a very
hard rock is reported and I think
that this is the beginning of the Dickson.
From this down, very hard rock, with
silty layers and also ~~with~~ water strata

are reported at frequent intervals 95

Mr. C. J. Cragin,
P.O. box 981,
Philadelphia, Pa.

and analyses.

from Titusville to Sanford.

Sand runs between La Brea +
Mims. Main flat pine woods
some scrub palmetto, sand to
summit, then more scrubby
country with sand for 1 mile
then very flat pine woods.

Log of well of L. E. Monon, 4 mi. S. of Sanford.

- 0-5 surface soil.
5-40 yellow sand
40-60 shell and sand, plenty of water, no flow.
60-91 quick sand.
91-95 shell, shark teeth etc. sand
95-100 well, 1st sample.
~~100~~ 100-101 hard rock.
101-113 quick sand
113- Sixsburg limestone.

This approximate only. ✓

92

Log of well of Title, Bond & Guarantee Co., 2 3/4 mi. S.W. Monon.

- 0-86 sand
86-100 blue marl.
100- shell, sand.

Needen, owner of place. 5 mi. ^{#3 route.} 985

see. Vaughan.

Land A. Vaughan
R.F.D #3, Sanford. + land
note up at.

Country from Cameron City
to St Reed very flat pine
woods with scrub palmetto
and some cabbage palms.
The box over quite a stretch of
scrub land also.

4 mi. S of Sanford, County
rolling pine with many oaks
red, white + scrub oak some

palmetto (not many). Small
white. More palmetto less
oaks. Spruce pine scrubby
poor soil. Long leaf pine palmetto
some oak poor soil, dried
up banks, not long leaf
pine, sand soil. Some
and now scrub palmetto
flat, short leaf pine cabbage
palms. Hammer. Robinson
spring, small sedge spring,
sulfur water.

A. E. Sjoblom

100

Lake Mary, Fla.

send #5 ✓

Sanford Water Works Co.

Neels City Water Works,

Sanford, 4, and are
are about 130 feet deep.

All 4 inches. Water supply
for City drawn from Lake Ada
about 4 miles S/W of Sanford.

Sanford Ice + Water Co.

128, 6, 80, +6, 1908,

Cooling purposes. A. E. Sjoblom, driller
superintendent.

Mr. Forest Lake

Pres.

send #5 Sanford, Fla.

Sanford Water
Co.

101

Well of W. B. Raulerson, 5 mi. W
of Geneva, salty, some sulphur, said
to be more salty or trine than
others. The first flow was had at
70 feet, this quite salty and 72 ft
of casing was used and this stratum
cased off. The second flow was had
on penetrating a sand zone at about
72 1/2 feet. This not so salty as first
flow. Could not go deeper on account
of bent casing, as flow is shell.

0-4 surface soil

4-64 black clay

64-70 shell, 1st flow at 70 ft. salty

70-72 1/2 harder zone

72 1/2-76 softer, water. salty.

Elevation of Whitman lands near 182
series + Pearson Run by Geo. J.
Chase.

Send,

R. H. Whitner,

4/26/10

Sanford,

2, #5

✓

Send

J. E. Pace,

Sanford,

#5 #2

✓

Country from Sanford to
Owiedo (a c?) sandy pine land
with scrub palmetto. Some
hammock. 4/26/10

103

E. Hy Palmer,

Sanford,

10 mi on R.R.

Owner,

6 mi S. due.

75, 4, 40, ~~20~~

+ several 1907

not used 9 1/2 lbs.

B.
25

4/26/10

H. J. Tanner,

S. Nelson

Owiedo.

Arge Camp.

on Zombarkulhu cr.

near well.

Send

A. J. McCullery

Owiedo

#5.

Mr. J. H. Newman Engineer
 Caloosahatchie Dredge,
 La Belle, Fla.

Mr. H. P. Savage, Engineer,
 "Okuchobu" + "Everglades" Dredges,
 Ft. Lauderdale, Fla.

Mr. P. F. Jenkins, Supt.
 Drainage Operations,
 Miami, Fla.

Newton settlement road
cross mill creek, 1st road to
left about 30 yds by main creek.

225-3. Fin St

7d. Williams 130

7d. 3,
306, 155
and up.

Solid red.
1890
Sueperior

Florida Little + Bored Co.
data of the large well
at Monroe 2 mi
N. of 3 & Brady, about
2 mi. EC&I

$$\begin{array}{r} 231 \\ 16 \overline{) 1386} \\ \underline{32} \\ 6 \\ 231 \\ 61 \overline{) 1386} \\ \underline{122} \\ 166 \\ 161 \overline{) 1386} \\ \underline{155} \\ 136 \\ 136 \overline{) 1386} \\ \underline{26} \\ 26 \end{array}$$

1330

Roll # 1

Picture # 1, Coconut Palm area Jensen. 4/11/0
 " # 2, Everglades, looking south from dike Everglades. 4/13
 " " 3, North canal, bridge everglades, looking west. 4/13
 " " 4, Everglades looking north from dike 4/13
 " " "Oleander" 4/14/0

Roll # 2

Roll #2
Picture #1 Hill of S. H. Curry 2 mi S/n Davis
"2 " of E. H. Palmer, 10 mi. RR 64

2.31-j-

1155

Joe Cameron's farm
Lewis Sta
Mr. Benson

Burkitt, 914 myths are