Volusia, Lake,

Seminole, Orange,

Polk and Osceola.

Alachua
Baker
Bay
Bradford
Brevard

Calhoun
Charlotte
Citrus
Clay
Columbia

Dade
DeSoto
Dixie
Duval

Franklin

Glades

Hamilton
Hardee
Hernando
Hifhlands
Hillsborough
Holmes

Jackson

Lafayette
Lake
Lee
Leon
Levy

Alachua County.

Additional note.

Campville,
Campville Brick Co.,
192 0 production 2,250,000
Value $36,000
J.W.Craver, Mgr.

Grove Park,
Magnesia Springs, about 75 - 5gal. bottles at 50cts. a bottle----- 1920
Magnesia Spring Water Co.,R.C.Brown,owner.
Pool is 24 by 64 ft. average depth 4½ft.
Will fill pool in 2 hours.

Average depth of surface wells 30 to 40ft.
Surface water soft and of good quality.
No dedper wells.

Alachua County.

10/19/21 H.G. T2/61/01

High Springs,
A.C.L.Ry., 120'-8"
Fruit Growers Ice Co., a 6in.well with 128ft.of air pipe, water stands 40ft. below susface.
City Water Works.
472'-8"- -38' 1915 drilled by J.B.McCreary Co., Atlanta.
Santa Fe river influences water when up Lake Butler also effects it.

Alachua,
City Water Works,H.H.Hobbs,Mgr.
378'-8" -32' 1913Elev. same as A.C.L.
45' - 3"- 42'- -32' 1916 not used
Analysis by State Board of Health.10/29/20

Constituents	P.P.M.
Color	0
Turbidity	0
Odor	0
Total solids	511
Fixed residue(mineral)	466
Volatile residue(organic)	145
Alkalinity(M.O.)	178
" (P)	0
Bicarbonates	178
Carbonatse	0
Sulphates	112.5
Total hardness	519.3
Calcium	152.3
Magnesium	33.8
Sodium	0
Carbon-dioxide-Iron	1.1
Carbon dioxide-	0
Manganese	0
Nitrates	0
Nitrites	0
Soap consuming power	300.0
Clorides	22.5

10/19/21 H.G.

Gainsville,
MunicipalWater Light and Power Co.,
GH. Cairns, City manager/
Town water supply is obtained from a mixture of water from a spring near town. and a well at the plant in twwn. There is also a well at the spring but this is no longer used. The well in town is a 12in. well about 400ft. deep. Drilled by Ohio Well drillingCo. see them for data.

Analysis of water from above well.
By E.R.Flint, U ofFlaq 1913

	P.P.M.
Free ammonia	0.25
Albuminoid ammonia	0.08
Nitrogen as nitrates	0.02
" " nitrites -	0.01
Clorides	1.35
Total solids	346. 00
Loss on ignition	158.00
Hardness calculated as calcium carbonate	279.00

Excess of ammonia due to new well at time of analysis.

Same water as above, State Chemist, 1913

Total solids, lime and salts	307.00
Clorine	10.6
Carbonic acid CO3	none
Bi-carbonic acid HCO3	219.6

10/17/21 H.G.

Cont'd

p.P.M

Spring Water.

Silicon dioxide	5.6
Aluminum oxide & ferric oxide	2.4
Calcium oxide	27.2
Magnesium oxide	12.4
Sodium oxide	0.4
Sulfur trioxide	10.3
Clorine	10.0
Organic and Carbon dioxide	35.3
Total solids	105.6

10/17/21 H.G

The acid and base radicals are probably combined as follows in Spring water when heated under pressure. An approximate estimation.

Silicon dioxide	5.6
Aluminum and iron oxides	2.4
Calcium carbonate	35.7
Calcium sulfate	17.5
Magnesium carbonate	18.8
" cloride	18.0
Sodium "	0.7
" sulfate	9.9
Total	103.6

Well at Spring.

Cont'd

Well at spring.

Silicon dioxide	10.2
Aluminum and iron oxide	4.2
Calcium oxide	67.4
Magnesium oxide	5.0
Sodium oxide	6.8
Sulfur trioxide	6.8
Clorine	11.0
Organic and Carbon dioxide	78.0
Total solids	189.4

H.G. 10/17/21

The acid and base radicals are probably combined as follows when heated under pressure. An approximate estim ation.

Silicon dioxide	10.2
Aluminum and iron oxide	4.2
Magnesium carbonate	6.5
Calcium "	103.0
" sulfate	16.5
Magnesium cloride	4.4
Sodium "	12.8
Organic and undetermined	29.3
Total	186.9
Oxygen i excess of clorine	1.8
	185.1

Well at plant

Silicon dioxide	21.4
Aluminum and iron oxide	2.4
Calcium oxide	109.4
Magnesium oxide	25.7
Sodium oxide	11.9
Sulfur trioxide	41.8
Clorine	12.0
Organic and Carbon dioxide	59.8
Total solids	289.4

The acid and base radicals are probably combined as follows when heated under pressure. An approximate estimation.

Silicon dioxide	21.4
Aluminum and iron oxide	2.4
Calcium carbonate	145.6
" sulfate	67.5
Magnesium carbonate	52.7
Soium clotide	19.8
Sodium sulfate	3.1
Total	312.5
Oxygen in excess of clorine	3.1
	n309.4

Analyses made at Univ. of Fla. 1913.
For purpose of determining value of each water for the generation of steam.

Sent to the Survey by G.H.Cairns. 10/22/21

10/17/21
H.G

Kanapaha,
Dawn, 70'-2"-60- -50 1921
T.H.Swearingen, 150'-4"80'- -40 1911
Drilled by John Acree, Archer.
Firstone used for domestic purposes, other for sawmill/

Archer,
Mills, 1 m. E.,90-2-85- -50 1920 Acree
In this well Mr Acree states a lightwood log was struck at depth of 85ft,
Maddox Machine Co.,
87-4-73- -35 1921 Public supply and machine shops.
Gus Moten, now drilling depth about 25ff.
Average depth of wells around Archer about 65ft. and water level about 40ft.
Limestone about 15 to 20ft. below surface.

Newberry,
Board of Public Works,
100-10--100- -42 1913 J.B.McCreary Co.
W.G.Redd, supt. Water plant.
A.C.L.Ry. 130-6- -38. H.H.Renfroe,Supt. of A.C.L. in charge.

Trenton,
V.W.Mimms,
65-3-65- -48 1917 Arthur Rutledge.
55-3-55- -48 1921 J.R.Palmer
These wells usde for public supply
Average depth of wells 45 to 90ft.Mostly about 60ft.
Log of first well above:

Surface soil and sand--	8ft.
Sandy clay	12ft.
Limestone	45ft.

J.F.Dupree, one well about 65ft. Used for domestic purposesand public supply. Hard.

H.G.

J.J.Jones, one well about 62ft. used for domestic purposes and public supply,Hard.

Wilcox,
Dasher bros.,40ft, 2in. Domestic.
J.O.Johnson,160-2- -60. Turp. still
Analysed by A.C.L 2yrs. ago.
Same well as listerd in 319 under Wilcox chemical Co.

Alachua,
G.W.Young, 190-3-78- -73 1900 hard.
Drilled by G.W.Young.
C.A.Stephens,3 mi. N.
182-3-170- -172 1911 Julius Thomas dril
T.Mathews,Bland,9 miles from Alachua,
194-3-187- -179 1915
Louis Rawls,Nebo,3 mi. S. of Alachua,
186-3-180- -181 1911 John Fielder Drlr.
Send W.T.Robarts,Alachualist of pub.
Water in and about Alachua can be reached at about 35ft,
The run of the depth of the walls on the hills in Alachua section of Alachua County range above 190 to 200ft. In teh bottoms or lowlands the limestone lies close to the surface and teh wells are more shallow, 37ft. and up.
Alden, 4 miles S. An open dug well about 106ft. down to water.Deepest dug well known in this section. Dug in slave time. Also curbed up with native rock. Also drilled w well on this place.

10/20/21
H.G

Alachua County

Magnesia Spring at Hawthorne, Fla.

	Parts per million
Total solid matter	241.5
Organic matter and loss in ignition	42.7
Inorganic nonvolatile	198.8
Magnesium bicarbonate	33.6
Calcium "	110.1
Sodium "	12.6
Magnesium chloride	16.2
Sodium "	14.0
Potassium "	.8
Lithium "	trace
Ammonium "	"
Silica	7.7
Phosphates and sulphates	trace
Total.....	195.0

- - - - - - - - - - -

Graham Spring Micanopy, Fla.
Total solids- 100 parts per mil.

Carter Spring
Total solids- 130 " " "

Taylor Spring
Total solids- 160 " " "

Composed of sulphate of lime, carbonate of iron, and sodium sulphate.
(R.E.Rose, State Chem.)

Alachua

Alachua County

Ford Spring, Melrose, Fla.

Total solids 48 parts per million
Composed of calcium sulphate, magnesium sulphate, and sodium chloride.

Alachua

Boulware Springs, Gainesville, Fla, Analysis by H.Herzog, Jr. *

* As given in Water Supply Paper U. S. Geol. Sur. No. 102, 1904.

Ingredients	Parts per mil.
Calcium Carbonate	34.81
Magnesium "	21.44
Sulphuric acid	
Silica	none
Alkaline Chlorides (Chlorine 4.08)	5.21
Nitrates	8.63
Nitrites	trace
Free ammonia	none
Albuminoid ammonia	.043
Oxygen required to oxidize organic matter	.06
Organic matter	1.45
	2.97

Alachua

Waters in Alachua Co.

Well of B.F.Williamson.

	Parts per mil.
Total solids	306.00
Mineral matter	168.93
Organic matter (Loss on ignition except C O_2)	28.00
CaO(Calcic carbonate 126.05)	78.61
MgO(Magnesic " 74.46)	35.62
Silica	31.90
Iron & alumina oxides	1.70
Sodium oxide (alkalies)	3.86
Chlorine (NaCl 9.79)	5.93
Sulphuric anhydride calcic sulphate (19.23)	11.31
Hydrogen sulphide	1.72

Free ammonia	none
Albuminoid ammonia	0.01
Nitrates	trace
Nitrites	none
Oxygen required to oxidize	0.10

- - - - - - - - - - - - -

Well of Alachua Ice & Water Co., Alachua.

Total solids 320 parts per million
Composed of carbonate of lime, sulphate of magnesia, and sodium chloride.

- - - - - - - - - - - - -

Well of J.H.Board, Melrose, Fla.

Magnesium carbonate	4.8
Salt	22.2
Iron carbonate	1.6
Organic matter	12.9
Total parts per mil.	41.5

Alachua

Alachua County

City well, Gainesville. 194 ft. deep.
Analysis by R.E.Rose

	Parts per mil.
Calcium oxide	49.8
Magnesium oxide	5.3
Sulphate	5.5
Chlorine	10.6
Carbonate	7.2
Bi-carbonate	255.5
Silica	3.8
Volatile matter	24.3
Total solids	139.6

- - - - - -

Well of Diamond Ice Co, Gainesville.
316 ft. deep.

Calcium	52.
Magnesium	11.
Sodium and Potassium	11.
Iron and Alumina	0.02
Carbonate	0.00
Bi-carbonate	210.
Sulphate	8.1
Chlorine	8.3
Nitrate	2.2
Phosphate	trace
Silica	17.
Total solids	212.

Alachua

Wacahoote Station

Well of F. M. Ramsey 2¼ miles southwest.
4 inch well 60 feet deep used for irrigation.

principal supply of water from 54 feet found in porous limestone
Water stands 4 feet from surface; has capacity of 120 gals per minute and is slightly impregnated with sulphur

Well #2 of F. M. Ramsey 2½ miles from station

4 inch, 48 feet deep water obtained from cavity. Used for irrigation.

Notes say well has been pumped giving 200 gallons per minute for 12 consecutive hours withou apparent diminishing of supply.

Alachua

The Magnesia Springs Water Company

Alachua

Magnesia Spring Water

ANALYSIS

One Gallon Contains:

Total Solid Matter	14.12 grains	
Organic Matter and loss in ignition	2.50 "	
The Mineral Salts contained in one gallon are:		
Carbonate of Magnesia	1.9642 grains	HELD IN SOLUTION AS BICARBONATES
" " Calcium	6.4400 "	
" " Sodium	0.7400 "	
Chloride " Magnesium	0.9460 "	
" " Sodium	0.8174 "	
" " Potassium	0.0460 "	
" " Lithium,	small trace	
" " Ammonium	trace	
Calcic Oxide, as Nitrate and in Organic Combination	0.3997 "	
Silica	0.4500 "	
Phosphate and Sulphate	small trace	
	11.8033 grains	

Alachua

Grove Park, Florida 11/11/13 191

Analysis by
H. Dickson,
Cincinnatti, O.

Analyzed by this man some N or Nitrogen yrs.

Levels made by Wm. Gibbs Oct. 21, 07.

Level of top of 12 in. casing of City Well taken as 100.
Water level in City Well Oct. 21, 07 31.52 ft from top of casing.

Level of top of casing of 2 in well 106.512 ft.
Level of water in 2 in. well 38.032 ft from top of pipe
Level of bench mark on Magnoliatree near Water Works Stop- 117.619 ft

Alachua

Level of bench mark on oak tree at R.R. near stream 100.619 ft
Low water level in branch, north east side of R.R. track 88.119 ft

The U.S. Topographic Map shows a fifty foot contour line as reaching to the railroad at the crossing of the little stream. Mr. Gibbs levels make this pond as given above

Baker County.

9/8/21 H.G.

Sandersson,
H.L. Wester, well driller, the following information from him.
General section for Sanderson And vicinity
0 to 7ft surface soil and sand
7 to 9ft hard-pan
9 to 27 white sand - surface water
27 to32 hard-pan
32 to 122 white sand
122 to Gray rock.
General depth of wells for Sanderson about 25ft. Usually 1½ driven pumps. Soft water, slight sulfur odor. Mr. Wester says sulfur odor occurs only in sections where hard-pan is present. In the regions underlain by clay no sulfur odor.
Deepest well in county about 140ft., at Maccleny, owned by Baker County Sales Co. Garage, See mr. Dugger or Mr. Albany. Mr. Rowe driller.

Maccleny,
G.M. Clayton,
98-2-86- -2 drilled by H.L. Wester.
General depth of wells around Maccleny 98 to 150ft. Head about -18ftl.
Send H.L. Wester, Sanderson. Water supply Reports and map of artesian flow.

approximately Eighty-eight feet.
Applying this correction to the above level
level of top of 12 in. casing 100 - 28 ft = 72 ft actual
level of top of pipe above sea.

Actual level of water in City well 40.48 ft
above sea.
Level of Court house in Gainesville 185 ft.
Difference of elevation between water level
in well and the City Court House 144.62 ft
The correction applied taken from topographic
map can be regarded as only approximate

Bay County

Notes from letters from Mr.G.M.West.
Panama City.

Oct.9,1908.At a place 500 feet east of an 8 in well of the Panama Ice Co.sunk byHayward and Co.of Savannah,Mr West found at a depth of about 4 feet below the present bed of the bay and 100 feet back from the shore, a cypress swamp.

See other correspondence for well logs.
Alum bluff upper Miocene alum tasting clay seems to be found at 30 to 6 0 feet. Eocene limestone supposed to lie below 470 feet.

June 24,1911.
Well on the S.E.¼,Sec.8 T.4S,14 W.
Sand and shell to depth pf 224 feet.
Black earth deposit.
Rock,sample preserved at 224.Ft.
Record fromG.M.West. Sample sent in indicates that the Eocene limestones had not been reached.Probably representing the Miocene.
The rock altho rather hard contains fragments of shells and suggests Miocene.

Bradford County.

Lawtey,
W.H.Edwards,
85-1¼-70- -4 1915 W.B.Edwards dlr.
Rock at 70ft.
J.H.Moore, ½mile E.
105-2-100- -8 1921 WH.Edwards dlr.
Range of deeper wells around Lawtye-Starke to Maxville- 40to 75ft. Surface wells 18 to 30ft.Some surface wells have gone dry during drouth.

Maxville,
Near store, 110-1¼- -3 1913 WH.E. dlr.

Clayno,
A.C.L.Ry.,650-4 boiler use
Sam A. Bryant, road master

Starke,
S.A.L.Ry., Use water from 6 2in. wells depth not ascertained. Might find out by writing S.A.Bryant, road master
City uses same well as recorded in 319.

New River,
W.D.Johns, 4 mi. S.W.
90-2- 45- -33 1917 hard B.Z. Mathews
Wells around New River are open dug wel and driven pumps about 18 to 30ft. deep.

Brooker.
J.J.Morgan,
130-2-70- -35 1912 hard

Clayno,
H.S.Warren,
40-1¼-30- -8 1912 hard
27-1¼-22- -8 1912 hard

10/21/21 H.G.

Hampton,
J.W.Watterson, owner- Charlie Weeks, drlr
120-4 hard
90-3 hard.
Public water supply of Hampton,
Public well, 80-2- -14 drilled by
Walsh Sparkman, 1906.
J.H.Saxon, owner-B.Z.Mathews, driller
86-2-75

10/21/21 H?G.

Heilbronn Water, Near Starke, Fla.

	Grains per U. S. Gal. Spring #1	Spring #2.
Sodium chloride	2.08	1.42
Sodium carbonate	0.40	0.60
Potassium carbonate	0.20	
Potassium sulphate	0.17	
Calcium carbonate	5.13	5.83
Magnesium carbonate	0.20	3.73
Ferrous carbonate	0.33	
Silica	1.51	1.51
Nitrogen by permanganate	0.20	0.0011
Iron oxide and alumina		0.23
	10.22	13.32
Gases		
Dissolved oxygen	0.92	0,67
Dissolved carbon dioxide	11.70	12.30

Note. - Heilbronn Water is free from organic impurities.

This analysis is copied from advertising matter and was made by Henry Leffmann, M.D., Philadelphia, Pa., chemist to the State Board of Health of Pennsylvania

Bradford

Broward

Artesian well at Dania, 54' deep.
Analysis by Dearborn Lab. July 2, 1910.

	Parts per million.
Silica	5.506
Oxide of iron & aluminum	2.400
Carbonate of lime	223.865
Sulphate of lime	
Carbonate magnesium	7.423
Sodium of potash sulphate	3.634
Sodium of " chloride	40.802
" " " carbonate	6.326
Loss, etc.	5.263
Total mineral solids	296.350
Total incrusting solids	239.294
" non- " "	57.054

- - - - - - - - - - - - - - -

Analysis by American Water Softener Co.

Iron, aluminum and silica	1.54
Calcium carbonate	234.87
Magnesium carbonate	13.20
Sodium chloride	43.88
Sodium carbonate	1.20
Free carbonic acid	26.74
Incrusting solids	249.61
Non-incrusting solids	45.08
Total solids	300.01

Copied from notes of E. H. S.

Broward

Brevard

No. Mis. 1408. Well water from H. Bradford, Cocoa. Dr. E. H. Sellards. For State Geological Survey.

Colorless; odorless; salty taste; small, white sediment.

Milligrams per Liter.

SiO_2	12
Cl	1,082
SO_4	201
PO_4	0
CO_3	0
HCO_3	152
Na+K	536
Mg	77
Ca	167
Fe+Al	4
Loss on ignition	470

Total dissolved solids...2,546

A. N. Henry, C

Brevard

No. Mis. 1405. Well Water from S. Henry, City Point. For Dr. E. H. Sellards of State Geological Survey.

Sulfur-yellow color; Hydrogen sulfid odor; Salty taste; large, black sediment.

Milligrams per liter.

SiO_2	17.
Cl	2248.
SO_4	207.
PO_4	8.
CO_3	0.
HCO_3	168.
Na+K	1174.
Mg	116.
Ca	440.
Fe+Al	1.
Loss on ignition	960.

Total dissolved solids...5053.

A. N. Henry, Chemist

Brevard

No. Mis. 1406. Well Water from Titusville Ice Company, Titusville. For State Geological Survey. E. H. S.

Colorless; odorless; very salty taste; no sediment.

Milligrams per liter.

SiO_2	8
Cl	11,879
SO_4	547
PO_4	0
CO_3	0
HCO_3	177
Na+K	6,542
Mg	669
Ca	637
Fe+Al	3
Loss on ignition	1,380

Total dissolved solids...23,060

A. N. Henry

Brevard

No. Mis. 1409. Well Water from L. D. Hancock, Lotus. Dr. E. H. Sellards. For State Geological Survey.

Colorless; slight H_2S odor; vegatable taste; large brown sediment.

Milligrams per liter.

SiO_2	12
Cl	642
SO_4	178
PO_4	0
CO_3	0
HCO_3	149
Na+K	309
Mg	63
Ca	132
Fe+Al	3
Loss on ignition	370

Total dissolved solids...1,710

E. W. McHenry, Chem.

Brevard

TALLAHASSEE, FLA.,

No. Mis. 1407. Well Water from Ollif Well, Sharpes. Dr. E. H. Sellards. For State Geological Survey.

Light yellow color; H_2S odor; salty taste; considerable brown sediment.

Milligrams per liter.

SiO_2	16
Cl	3,120
SO_4	302
PO_4	0
CO_3	0
HCO_3	165
Na+K	1,634
Mg	286
Ca	262
Fe+Al	4
Loss on ignition	974.

Total dissolved solids...6,520

E. W. McHenry, Chem.

Brevard

No. Mis. 1410. Well Water from H. P. bowden, 1 mile West of Melbourne. For State Geological Survey. Dr. E. H.

Colorless; odorless; vegatable taste; considerable black sediment.

Milligrams per liter.

SiO_2	18
Cl	573
SO_4	150
PO_4	0
CO_3	0
HCO_3	156
Na+K	269
Mg	68
Ca	123
Fe+Al	8
Loss on ignition	375

Total dissolved solids...1,555

E. W. McHenry

Brevard

Calhoun County.

Blountstown,
City well,
245-6-50- -2 1914.
Smiths Hotel,
125-4- -12
Neal Veneer Co.,
241-6-70- -12
H.V.Gaskin,
225-6- -15
Bl.Mfg.Co.,
225½6- -10
J.W.Brown,
285-6- -30

Surface wells 15 to 25 feet

C.R.Warren, mayor.
Clarksville,
Shallow wells 15 to 30 feet deep.
S.D.Bofkin, 6 mi. s.,
182-4- -18 Turp. still.
30 ft. to ls.

M.KC. 11/1/22

Calhoun

Well at Port St. Joe.

Calhoun

Analysis by Regis Chauvenet & Bro.
St. Louis, Mo.

	Grs. per U.S.Gal.
Carbonate of calcium	8.60
Oxide of Iron	0.44
Carbonate of Magnesia	1.30
Sodium chloride	2.78

The iron gives a slight tinge to the water, which, other wise is clear. There is a trace of vegetable organic matter presence, but no contamination, and we think the chlorine present is probably of mineral origin alone, as indicate above.

Chemically, then, this water is pure for all uses and the solids are unusually low. It is a water containing the salts common to many wells and springs, but showing, as a difference from most waters, no sulphates whatever.

(Statement by analyist)

July 15, 1911

Calhoun

Charlotte County.

Punta Gorda,
Southern Utilities Co. J.M.Sikes, mgr.
482-8-224- +48 1400 gal. per minute.
185-6- 0

City Water Works, C.M.Price, supt.
200-4½ 0
250 4½ 0

9/24/21 M.KC.

Citrus County.

Inverness,
Inverness Pow er Co.,389-200-5- -35
strong sulfur. Power Co.furnishes both
R.R., courthouse and jail with water.
Water does not scale boilers.
T.H.Lloyd,
210-2-100- -59
Mary C.Lloyd,
200-2 -100- -17
Baxter Morrison, 1 mile E.of Invernezs
70-80- -30 rock at 70
General section at Inverness
Sand 80ft- phosphater- lime.
Strauss. L.Lloyd, Civil engineer,
Geologist, Lawyer, etc.
Average depth of wells around Inverness
35 to 50ft.

Floral City,
No public water supply, wells 60 to 90ft.

Hernando,
70-6-60- -60 Turpentine still
J.Buttengback &Co,
250- 12# 60- -60 phosphate mine

10/11/21
M.K.C

Citrus County

Water from "oil well" near Crystal River.
R.E.Rose.
Analyst.

Odor of H_2S strong,
Taste, disagreeable,
Slight suspended matter,
Clear.

	Parts per mil.
Chlorine	903.9
Sulphate radical	2684.0
Silica	30.0
Calcium oxide	1385.0
Magnesium oxide	480.6
Total solids	6474.0

Citrus

Clay Co.

Magnolia Springs Water
Analysis by Prof. C.H.Chandler, Ph.D.
New York.

	Grs. Per U.S.Gal.
Sulphate of potash	traces
Sulphate of lime	1.2434
Chloride of Sodium	0.8414
Carbonate of soda	1.5269
Carbonate of lime	2.3617
Carbonate of magnesia	2.3875
Oxide of alum and alumina	traces
Silica	1.8137
Organic and volatile matter	0.9562
Total	11.1308

The water is wonderfully pure and free fr
from all indications of comtamination.

(Signed) C.H.Chandler, Ph.D.

(Notes copied from advertising cards)

Clay

Clay

No. Mis. 1402. Well Water from Fleming Well, Hibernia.
For State Geological Survey. E. H. S.

Colorless; odorless, tasteless; no sediment.

Milligrams per liter.

SiO_2	9
Cl	7
SO_4	5
PO_4	0
CO_3	0
HCO_3	98
Na+K	23
Mg	5
Ca	14
Fe+Al	Trace
Loss on ignition	45

Total dissolved solids...122

E. H. Sellards, Chemist

Clay

Clay

No. Mis. 1401. Well Water from N. B. Ivey, Green Cove Springs.
For State Geological Survey. E. H. S.

Colorless; odorless; vegetable taste; no sediment.

Milligrams per liter.

SiO_2	7
Cl	9
SO_4	7
PO_4	0
CO_3	0
HCO_3	107
Na+K	14
Mg	4
Ca	16
Fe+Al	Trace
Loss on ignition	67

Total dissolved solids...155

E. H. Sellards, Chemist

Clay

Columbia County

Lake City City well. Depth 400 ft.
Analysis by U.S.Geol. Survey.
Parts per mil.

Calcium	47.
Magnesium	18.
Sodium and Potassium	14.
Iron and alumina	0.00
Carbonate	11.
Bi-carbonate	215.
Sulphate	10.
Chlorine	9.8
Nitrate	0.20
Silica	36.
Total solids	256.

Columbia

Itchtucknee Springs, Columbia Co. Analysis for State Survey by the State Chemist.

Ingredients	Parts per mil.
Calcium oxide (CaO)	89.3
Magnesium " (MgO)	9.7
Carbonate (CO3)	27.6
Bi carbonate (HCO3)	420.9
Sulphate (SO4)	9.5
Chlorine (Cl)	5.3
Silica (SiO_2)	5.0
Volatile matter	48.1
Total solids	211.6

Columbia

Columbia County

Old city well, analyst unknown.

	Parts per mil.
Appearance	clear
Odor	none
Suspended matter	none
Total solids	152.00
Chlorine	15.00
Hardness	98.84
Nitrates	.20
Nitrites	.0384
Free ammonia	.7432
Albuminoid ammonia	none

W.S. and I.Paper #102, p257.

Surface well on the former campus of the Agricultural College at Lake City.

	Parts per mil.
Free ammonia	.000
Albuminoid ammonia	.000
Nitrogen as nitrates	.312
" " Nitrites	.000
Chlorine	5.000
Hardness	4.620
Total solids	39.000

From Bull. 89, Fla. Agr. Exp. Station p97.

Columbia

Columbia County.

Water from Turner residence pump, Lake City.

	parts per mil.
Total solids	201.
Chlorine	46.
Hardness	34.68
Nitrates	5.78
Nitrites	.009
Free ammonia	.050
Albuminoid ammonia	.015

A.W.Blair, Analyst. 11/10/00

- - - - - - - - -

Water from Mr. Miller's pump, Lake City Station

Total solids	54.
Chlorine	23.
Hardness	9.
Nitrates	.71
Nitrites	.0354
Free ammonia	.08
Albuminoid ammonia	none

A.W.Blair, analyst. 12/1/00

- - - - - - - - -

Water from Mr. Hensleys place, Lake City.

Total solids	47.
Chlorine	11.
Hardness	13.87
Nitrates	.83
Nitrites	.0306
Free ammonia	.02
Albuminoid ammonia	.0114

A.W.Blair, Analyst. 12/3.00

- - - - - - - - -

Water from pump on Perry's corner, Lake City Marion Street.

Total solids	97.
Chlorine	11.
Hardness	28.32
Nitrates	8.84
Nitrites	trace
Free ammonia	.005
Albuminoid ammonia	.01

Columbia

Columbia County

City water, Lake City, from Laboratory tap
Oct. 5, 1900.

	Parts per Mil.
Total solids	70.
Chlorine	18.
Hardness	13.29
Nitrates	.218
Nitrites	none
Free ammonia	.03
Albuminoid ammonia	.23

A.W.Blair, Analyst

- - - - - - - - - - - - - -

Water from pump at Barracks, Lake City

Total solids	39.
Chlorine	6.
Hardness	4.85
Nitrates	.287
Nitrites	none
Free ammonia	.005
Albuminoid ammonia	none

A.W.Blair, Analyst, 10/5/00

- - - - - - - - - - - - - -

Water from North end of Foster Hall, LakeCit

Total solids	39.
Chlorine	5.00
Hardness	4.62
Nitrates	.312
Nitrites	none
Free ammonia	.000
Albuminoid ammonia	.000

A.W.Blair, 10/8/00

Columbia

Columbia County

Water from Mr. Irving's well, Lake City.

	Parts per mil.
Total solids	303.
Chlorine	79.
Hardness	76.30
Nitrates	10.46
Nitrites	.034
Free ammonia	.01
Albuminoid ammonia	.0124

(Out houses near by, open well)

A.W.Blair, Analyst. 12/5/00

- - - - - - - - - - - - - -

Boiler water, Adams Bros. Lake City.

Total solids	63.
Silica	2.20
Iron oxide	1.20
Calcium carbonate	5.00
Sodium chloride	30.20
Magnesium carbonate	4.16
Sodium carbonate	11.00
Organic matter	8.30

H.K. Miller, Analyst. 5/13/99

- - - - - - - - - - -

Water from open well of Mr. Caldwell, LakeCity

Total solids	108.00
Chlorine	32.
Hardness	11.56
Nitrates	7.50
Nitrites	none
Free ammonia	.010
Albuminoid ammonia	.045

A.W.Blair, Analyst. 10/30/00

Columbia

Columbia County.

Water from W.P. Jernigans, open well,
Lake City.

	Parts per mil.
Total solids	120.
Chlorine	9.
Hardness	15.83
Nitrates	9.60
Nitrites	.0017
Free ammonia	.00
Albuminoid ammonia	.005

A.W.Blair, Analyst, 12/5/00

- - - - - - - - - - -

Water from Laboratory tap.

Total solids	152.
Chlorine	15.
Hardness	98.84
Nitrates	.20
Nitrites	.0384
Free ammonia	.7482
Albuminoid ammonia	.0166

A.W.Blair, Analyst, 12/11/00

- - - - - - - - - - -

Water from R.L.Borger, Lake City
From residence May 12, 1902.

Total solids	110.
Chlorine	38.
Hardness	21.96
Nitrates	present
Nitrites	"
Free ammonia	some
Albuminoid ammonia	none

A.W.Blair, Analyst, 5/13/02

Columbia

Dade

Well of Miami Beach Co.

Analysis of Indianapolis Ind

Analysis April 27 by
2 Stanard Knight of Permutit Co.

analysis of Cobb well Sent of Allen Beach Fla
Hardness this water from the 1000 ft well.

Total Hardness Calc. as $CaCO_3$		1226 Parts
Calcium hardness	"	312
magnesium	"	914
alkalinity		
Free carbon dioxide		116
Chlorids		10
Iron		2680
Thus the hardness is 69 deg. Centa		175 0.1

Indianapolis Ind. May 3. 1917

Sample thru A.B. Davis.

	Grs. per U.S. Gal.
Total Solids	304.23
Iron oxid	1.05
Calcium chlorid	27.54
Magnesium sulphate	39.20
Sodium chloride	226.31
Sodium Sulphate	5.04

	Parts per million
ammonia	negative
nitrits	.16
nitrats	.14
Bacterial cnt	4 to per cc

dye for analysis $3.50 ea

Senor John W Meade 1138 N Broad St
Dade

Well at Golf grounds 1½ miles
n.w. Miami Fla. E. C. Hotel Co.
Drilled by H. Walker. Sample by A. Bauer.
Sample No. 2 missing.

3 ft. oolite Miami limestone
24-25 ft. siliceous, coarse, not oolitic. Granular, some granules clear silica. Fossils as casts, except one apparently piece of crab claw.
25-28 ft. Granular sand grains rounded or fairly sharp
28-32 ft. Limestone, fossils dissolved out, replaced by calcite crystals.
33-64 ft. a mixture of calcareous and siliceous fossils often not changed.
64-66 Pretty well crystallized limestone. Fossils preserved, but calcite in crystalized condition.
66-76 ft. A solid hard limestone, the hardest and closest of the section. Scarcely any fossils.
76-88 ft. A limestone originally containing fossils, now mostly dissolved out leaving cavities. Fragments of bryozoa are seen. Also a number of rounded or flattened pebbles with rounded edges mixed with the original shells.
88-99 ft. Similar to but closer(?) than 76-88 containing also water worn pebbles. Pretty hard limestone.
99 ft. Pretty hard limestone also large grained sand and dark pebbles.

Walker reports that the 400-ft. well put down near depot went thru alternate hard and soft rock layers.

(Copied from notes of E.H.Sellards)

Dade

Dade

Homestead Well 300' deep. 8" casing
Analysis by American Water Softener Co.
August 4, 1911.

	Parts per million.
Total solids	984.059
Calcium carbonate	87.081
Magnesium carbonate	57.270
Sodium carbonate	246.014
Sodium sulphate	270.187
Sodium chloride	270.187
Free carbonic acid	4.457
Iron, aluminum & silica	4.285
Incrusting solids	150.180
Non-incrusting solids.	786.390

(Not a good water, even after treatment, as it contains a considerable amount of sodium sulphate and sodium chloride.)

Copied from notes of E. H. S.

Dade

Dade

Water from Homestead, Fla.
Made by American Water Softener Co. for
Fla. East Coast Ry. Nov. 17,1911

	Grs. per U.S.Gal.
Total solids	14.00
Calcium carbonate	10.50
" sulphate	0.32
" chloride	1.01
Magnesium carbonate	0.67
Sodium chloride	0.30
Free carbonic acid	0.90
Iron, alumimum, silica	0.74
Incrusting solids	13.24
Non-incrusting solids	0.30

Contains 13 1/2 grains scale matter to the gallon, over 13 grains carbonate of lime. 13 6/10# of pure lime and 2 1/10# of soda ash per 12,000 gallons.

Copied from notes of E.H.S.

Dade

Dade

Surface Well at Goulds, Fla.

Total solids	14.60	250.30
Calcium carbonate	9.22	158.06
Calcium sulphate	.16	2.74
Calcium chloride	1.36	23.31
Calcium nitrate	1.86	31.88
Magnesium carbonate	.67	11.48
Free Carbon dioxide	.74	12.68
Iron, aluminum, silica	.37	6.34
Incrusting matter	13.64	233.84

Copied from notes of E.H.S.

Dade

Dade

Mineral analysis of water from well in pond at Likely. Dearborn Lab. at Chicago, Ill.

	Grs. per U.S. Gal.
Silica	.479
Oxide of iron & aluminum	.070
Carbonate of lime	.362
Sulphate of lime	.809
Carbonate of magnesia	.628
Chlorida of magnesia	.299
Sodium & potassium chloride	3.065
Sodium & potassium carbonate	
Loss, etc.	.128
Total soluble mineral solids	5.840
" " incrusting solids	2.647
" " non- " "	3.660
Suspended matter	1.051
Organic matter	.467

	Parts per Million
Silica	8.211
Oxide of iron & aluminum	1.200
Carbonate of lime	6.206
Sulphate of lime	13.869
Carbonate of magnesia	10.766
Chloride of magnesia	5.125
Sodium & potassium chloride	52.546
Sodium & potassium carbonate	
Loss, etc.	2.194
Total soluble mineral solids	100.120
" " incrusting solids	45.379
" " non- " "	62.746
Suspended matter	18.018
Organic matter	8.006

Copied from notes of E.H.S.

Dade

Miami, Dade County

Drinking water of A. F. Lang.
Miller 5/13/99

SiO_2	8.
$CaCO_3$	182.1
$MgCO_3$	6.6
NaCl	26.8
Organic matter	1.1

Dade

DeSoto County.

Arcadia,
Southern Utilities Co.,Ice plant.
1-380-8- -17 hard strong sulfur
4- 60-3- -17
2- 60-2- -17
1- 60-6- -17
City Water Works, M.M.Hall,supt.
620-8-620- -18 hard sulfur
330-330-8- -18
A new well 1 mile S. of the above:
363-363- 6- +16 put the gauge on this well. It registered 81bs. A 3in.well about 40ft away was also flowing. This small well is about 110ft. deep.It is not used.

Ft. Ogden,
Flowing wells 200 to 400ft.deep.
Flowin well at depot 300ft. deep 6in.well.
No city water supply, Surface wells 20 to 40ft. depp

Nocatee,
Flowing wells in town also in surrounding country, 200 to 400ft, deep.
Average 8 or 10ft, head sulfur.

9/24/21 M.K.C.

DeSoto

Dixie County.

Eugene,
H.M.Wade, owner, A.C.Marable driller.
97-2½- -4½ turpen. still
66-2½-50- -4½ saw mill
54-2- 45- -4½ domestic
47-2- 40- -4 "
50-2- 40- -4 "
55-2- 40- -4 "
Wells averagen 24 to 32ft. hard water

Cross City, No deep wells, shallow wells and pitcher pumps.
Write W.A.Brown,Genl. Mgr.,Cross City Turp. Co. about deep well , asaid to be 156ft deep 8in.well. These people connected with Putnam Lumber Co., Jax. see them. Send Mr Wade list of publications.

Old Town,
Wells average about 30ft. Limestone close to surface. Not nescessary to drill deep wel

F.J.Smith, Trenton, send phospjate rep.

10.18/21 H.C.

Dixie

Duval County.

Jacksonville,
City Water Works,
Now pumping 15 wells, daily capacity 8,500,000 gallons.
Last well drilled by Ohio Well Drilling Co.,1921, 1156ft. deep Volume 2,000,000 gallons per day.
Atlantic Ice Co., 1180 ft. deep.

Judge D.A.Simmons, ochre came from his place 15 miles W. of Jax.

Gamble and Stocton Co, Mr. Neff, supt. 1,630,000 common brick, Value $30,021

Duval

Duval

City Water, Jacksonville.
Albert Ledds, Analyst, Stephens Inst. of Tech.

	Grs. per U.S.Gal
Silica and insoluble matter	0.729
Alumina	0.047
Carbonate of Lime	3.866
Sulphate of Lime	4.053
Sulphate of Magnesia	2.927
Sulphate of soda	5.843
Chloride of soda	4.811
	22.276

In parts per million.

Free ammonia	.0143
Albuminoid ammonia	.0044

Duval

9/10/21 H.C.

Pablo Beach,
Visited the plant of Buckman and Pritchard Inc., located about 5 miles S. of Pablo B Beach at teh P.O. Mineral Vity.Mr. Buckmano was in New York. Mr.F.M.Jeffers,office mabager andMr. Walter M. Phillips,works manager showed us every courtesy.Were shown thru the plant altho it had not been run since Jan. 1921.

Ilmenite and zircon are the 2 minerals now separated; ilmenite the most common. The percentage of the minerals ih teh sand ranges from about 10% to 30%, the latter inthe so-called "Friendship vein".

Have not separated any great amount of r rutile,this being left with the ilmenite, thus bringing up the grade of the latter.

Duval

Duval County.

THE FLORIDA TIMES-UNION,
JACKSONVILLE, FLORIDA,
FRIDAY, JANUARY 6, 1922.

INCREASED FLOW FROM ARTESIAN WELL

The city commission was informed yesterday that by deepening an artesian well at Seventh and Silver streets the flow had been increased from 50,000 every twenty-four hours to 1,780,000 gallons. The well had been deepened by J. W. Wiggins for the city from 770 feet to 1,265 feet.

Dad. Tarantella (Low).

FINDS DRILLING TOOLS IN ARTESIAN WELL

While deepening a city artesian well at Seventh and Silver streets, J. W. Wiggins, contractor, struck several pieces of pipe and some drilling tools at a depth of about 600 feet, the City Commission was informed Thursday night by O. Z. Tyler, superintenednt of plants. They had probably fallen into the well when it was first bored and had to be removed before Wiggins could start boring.

The well, deepened to 1,265 feet, now has a flow of 1,780,000 gallons of water every 24 hours. Its original depth was 770 feet, with a daily flow of 50,000 gallons.

TO BEAUTIFY HIGHWAYS.

Asheville, N. C., Jan. 6.—Beautification of highways throughout the state will be the principal topic for consideration at the annual meeting ... Forestry As-

Franklin County

2-15-18

Alex Barnes, driller

East Point

E. R. L. Moore

204' dep — 3" ⌀, casing 93' + 4

East Point

Cull Bros.

180' 3" 60' casing +

Kilbourne Bros. 5 mi. from Carrabelle on the east side of Crooked River

204', 3" 50' casing + 8 gals to minute

Helen Lumber Co. 12 Miles east of Carrabelle, probably the same well as the Hall bros. is about in Leon County.

250' 3" 120' casing -28'?

New River

Juniper creek between L & New River

Mize Superintendent Co. 180' 3" 40' + 6 gals. min. about 20 mi from Carrabelle

Morgan Superintendent Co. or Pace Superintendent Co.

250' 3" 80' +

2 mi. from Mize well or about 18 mi from Carrabelle

Pace Superintendent Co.

356' 3" 40' -9' (Middle Ridge Road name)

Colonization Co. at Water CR Running

130' 3" 40' + about 100 g. min.

Franklin County

2-14-18

~~John Cook~~ Mr. Ewing Rice of the Apalachee Paving Co. says that all streams lying the boundary of Franklin Co have nothing but muddy bays. It is not until one get beyond Franklin and into Liberty that Mr. Rice knows other than mud show up. No rocks or marks so far as he knows within the county, that is outside of Indian mounds.

Road from Bristol to Sumatra

Carrabelle.

Hilburne.-

C. T. Nathew - On New River ~~Rapids~~ and stone shows about 2 mi. after going into New River and continues for at least 10 miles. At Parsons dive about 2 feet ~~thru the~~ rock. The stratum is about 2 ft thick.

Deep well at Carrabelle

Carrabelle Ice Co.
1018' deep. 12" casing to 50' then all casing.
Head -6'
Sulphur water
Drilled 1902.
Driller —

Rock at depth of 50' on which this casing was landed.

Alex Barnes.

Parker Turpentine Co. about 15 miles from Carrabelle and about 2 mi. west of New River.
150' 3" 40' -8 S

Knox's still about 2 mi from Carrabelle on west side of New River
140' 3" 40' + 8ft min. S

C. B. Coombs Turpentine Co Carrabelle
80' 3" 40' -8

87
3.84
90.

102
1
3.84
106.84
13.9
90.9
91

10.8
5.1
15.9

Franklin County

Carrabelle,
Carrabelle Ice Co.,
Reporeted by E.R.L.Moore,
1075+ -1 1905 or 1906
300+ -1 " "
These used for Mfg. of ice,
See Mr. Kilburn at Port St. Joe
about ine plant wellzs at Carrabelle

Wrute Miss Grace Kelly,2014 Kalorama Rd.
Wash.,D.C. about oil well
See S.T.Gray of Carrabelle or
O.M.White of Bartow for more inf.
R.P.Bradford, City Marshall

Eastport Gulf Trading Co.,
288
Franklin Lumber Co.,560 +0 not used
sulphur
Camp Lumber Co, 1 mile N.W.,
1160 +0 not used sulphur
H.L.Mattair, Carrabelle, send list of pu.

Surface water wells average about 18ft.

Well of C.T.Wathen,
226-3-144- -1½ Drilled by W.B.Lewis,
now of Dothan Ala.

H.G.12/9/21

Franklin

Franklin County,

Apalachicola,

City water works,
90-2- -5 no casing driven well
used for boiler soft nols.
365-6-365- +5 hard slight salt.
Well driled near bay was too salty to use
also one about ¼ mi. N.
4 im. above, Bay City Lumber Co., has
flowing well +3ft.
Acme Packing Co., +3ft. good water
slight sulfur
City well in park said to be 800 ft. deep
not used, strong in sulfur, mag. and some
salt.
Write to Mr. W.F.Whitesides, Apl. Ice Co.
about deep well recently drilled at
Ice plant.

M.K.C.12/1/22

Franklin

Franklin County

Apalach.,
Analysis of water from City well n park
drille dby City.

		+7ft. head
Cl.	82	about 12 ft above
CO3	0	sea level
HCO3	337	

Loss on ignition 115
Total sol ds 670
Total dissolved solids mostly lime, salt
and organic matter
R.E.Rose
reported in 1911

Well at Plant	
Color	0
Turbidity	0
Odor	0
Total solids	.800
Alkalinity	290
Fixed residue	593
Loss on ignition	207
Chlorine	94
Iron	,15

G.W.Simmons Jr.
SB.H. 12/6/21

Comparative analyses showing decrease
in total soilds in plant well at pl

1907- Total soilds 1660, composed of
NaCl, CaCO3,MgSO4, Fe2O3,

1909- Total solids 519, composed of
NaCl,CaCO3, MgSO4,

M.KC. 12/1/22

Gadsden County.

Havana,
City Water Works,
225-6- -100 Boland,B.F.,drlr.
Sand 4ft.,Hard clay 20ft.,6 to 10ft.
quicksand.

Hinson,
E.F.Mayton,
400-10-200- -100 B.F.Boland

Concord,
Wells 50 to 60 feet deep, get water just
below quicksand im marl. Mo ls. at that dep

Fairbanks Ferry,
Atosawmill about one eighth mile W. of r
river in an open dug well,ls. is about 30
feet below surface

Midway,
Shallow wells 20 to 30 ft. deep.
do not reach ls.
Fullers Earth Plant,
300- 8- not used
2 wells 20 to 30 ft. deep used for boiler
purposes.

Fla. Yellow Pine Co., 10 mi. W. of Quincy,
350-4- -100 slight sulfur

Used at Turp. still.

Gadsden

M.K.C. 9/1/22 M.K.C.12/29/21

Gadsden

Fla. State Hospital.

215, 12, 50, -41, Aug. 1920.

Water level when completed was 41 feet
below surface. Mr. C. S. Hammett, Engineer
measured it Jan. 1922, after a prolonged
dry speel, and found it to be
100 feet the surface. Well tested
when completed, 400 gallons per min.
Drilled by Ohio Well Drilling Co.

2-25-22

Glades County.

THE FLORIDA TIMES-UNION.
JACKSONVILLE, FLORIDA,
FRIDAY, JANUARY 6, 1922.

RICH EVERGLADES LANDS DESTROYED BY FIRES

Moore Haven, Jan. 5.—It is estimated that thousands of acres of the richest lands in the Everglades have been destroyed by fire within the past six or eight months in this county alone. Along the west beach of Lake Okeechobee is a belt of rich muck land between fifteen and twenty miles long and varying in width from one to three miles. The soil is composed almost entirely of decayed vegetable matter commonly called muck. When dry it will burn and when fire gets well started in it the heat will drive out the moisture and the fire will continue its ravages indefinitely.

In this particular portion of Glades county muck land the fire has been raging for months and no effort has ben made to stop it. Section after section has been swept by fire and in some instances the land completely destroyed. The land along this section of the lake shore is owned almost wholly by the state and this is where the fire has done the most damage, it being the dryest portion. The state has been selling land of this character at from $100 to $250 per acre along the south beach, where development is more advanced. Therefore, when a section of this kind of land is destroyed by fire the state suffers a heavy loss. The county also loses in taxable values, as the land, when burned so deep that it is no longer subject to drainage, is not worth paying taxes on.

The state is paying out millions of dollars to drain the Everglades, reclaiming the richest land in the world, and then allowing it to be destroyed by fire.

The legislatures of 1919 and 1921 enacted all the laws necessary for the protection of these lands. The last session provided the most stringent laws regarding the starting of fires on Everglades muck lands. But all laws become worthless if there is no disposition on the part of those in authority to enforce them.

Glades.County.

Moore Haven,
Florida Ice and Power Co.,
Drilled by C.M.Boland, Bartow.
Well located in section 11, 2000ft, N. of A.C.L. depot.
Drilling began May 1,1918, completed July 1,1919.
The followin partial log of this well by R.A.Black, driller.
From 642 to 806ft.

Sandy lime	643 to 707	55ft.
Dark marl	707 tom 748	41ft.
Shell	748 to 753	5ft.
Blue marl	753 to 765	12ft.
Shell	765 to 772	7ft,
Brown marl	772 to 785	13ft.
Dark shell	785 to 789	4ft.
Black shell	789 to 794	5ft.

A flow of salt water. 6in. casing set in 792ft. 8in. and drove to 794ft. 10in.
Water rock at 794ft. 10in. 806ft.total depth. Struck flow of water at 798ft. The flow increased ½ up to 804ft.
Salt-water at 792ft,then thru 6ft. of li lime and then encountered a fresh water. Both the salt-water and the fresh water f flowed. Pressure 18lbs.

City Water Works,
2-96-6- -6
1-120-6- -6

Watr hard, with a brown color, not fit to drink or for washing purposes e either. Ice plant furnishe drinking water

Palmdale
Well at hotel 190'- 3"- +5'

Glades

9/21/21 H.G.

Moore-Haven,
Florida Ice and Powre Co.,
Casing record of well,

12"- 168'
10"- 265'
8"- 425'
6"- 794'

P ressure about 40 ft. Above sur face . Well on level with A.C.L.Depot.

Above information from R.A.Black, in letter 7/30/19

WHITE SPRINGS
Analysis by N. A. Pratt, M.D.
Chemist.
(Copied from advertising matter sent out by White Springs Company, Jan.1917)

One Million Parts Contain Solid Mineral Contents, 188 Parts Consisting of

Sulphuric Acid	17.02
Chlorine	12.24
Lime	44.00
Magnesis	8.51
Phosphoric Acid, with Oxide of Iron	Trace
Silicic Acid(Soluble)	14.40
Potash	7.13
Soda	18.20
Carbonic Acid	44.18

In addition the water contains Free Gases, viz: Hydrogen, Sulphide, Carbonic Acid, Oxygen, Nitrogen. The constituents, as per analysis are probably combined as follows per 1,000,000 parts:

Potassic Chloride	11.32
Sodic Chloride	11.23
Organic Matter	21.32
Magnesis Sulphate	25.53
Sodic Carbonate	20.91
Calcic Carbonate or Be-Carb	80.50
Ferrous Oxide (Phosphoric Acid Trace)	1.40
Silicic Acid (Soluble)	14.10

Spring flows 32,444 gallons per minute.

Hamilton

White Sulphur Springs,
Hamilton Co.
Analysis by N.A.Pratt.

	Parts per mil.
Lime	44.00
Magnesium	8.51
Potash	7.13
Soda	18.20
Carbonic acid	44.18
Sulphuric acid	17.02
Chloride	12.24
Phosphoric acid with oxide of iron	trace
Silicic acid (soluble)	14.40
Total solids	188.

Note: In addition the water contains free gases viz: Hydrogen sulphide, Carbonic acid, Oxygen, Nitrogen.

The constituents probably combine as follows:

Calcic carbonate or Bi-carb.	80.50
Sodic carbonate	20.91
Magnesium sulphate	25.53
Potassic chloride	11.32
Sodic chloride	11.23
Ferrous oxide (Phosphoric acid trace)	1.40
Silic acid(soluble)	14.40
Organic matter	21.32

Hamilton

Hardee County.

Bowling Green,
City Water Works, Mr. Case, supt.
338-8- -26 sulfur
Well at Mr. Case's home 90-2 sulfur
" " Ball ground 175-3 "

Surface wells 20 to 40ft.

Wauchula,
City Water Works, D.B.Griffis, supt.
732-8-200- -17 hard slight sulfur.
Well at Ice Plant is closer to river and on lower ground,
275-8- +8
Many artesian wells along Pease River one half mile E. of town, head 8 to 10ft. used for irrigation.
Aqua Vitae mineralsspring, across river from Wauchula and near Zolfo Sp.P.O.
A fair flow of sulfur water from the spring and also from well near spring. Water sold as mineral water and used for bathing pool. Analysis by State Board of Health.
Joe R.Williams in charge of pool at time of visit.

Zolfo Springs,
City well 700 or 800ft. hard no sulfur.
Many artesian wells in vicnity 300 to 400 ft. deep. Some flow at 30 to 90ft.
Shallow surface wells 6 to 30ft.
All sulfur except city well.

9/24/21 M.A.C.

Hardee

Hardee County

Gardner,
Conwell Lumber Co.,
195-2½-60- -4
Shallow wells 15 to 30ft.
Wells in town,
160-2½- -4
200- 2½- -4
150 - 2½- -4
225 - 2½- -2
No city water supply.

Hardee

Hernando County.

Brooks ville,
Evans Light and Ice Co.,
2-205-6-150- -56 hard
City well,
185-8- -105
The following information by Mr.C.A. Hilliard,well driller, Brooksville.
O.Manicke, near Brooksville,
210-4-28- -165 rock at 21ft.
Kimbrough, Spring Lake,on high hill.
180-3-58- -100
L.S.Pettiway, Spring Lake,
180-4 - -45 clay and boulders on down
8 miles N.E. of Brooksville on high hill
221ft., water at 160ft
no good solid rock.
Andrew Burt, 4 miles W.of Brooksville,
140-4-40- -100
½mile E. of above well, water sand at 80ft. Peat at 90ft.
1½miles E.of above, Henry Evans,
160-4-50- -80
5 miles S.W. of Brooksville,at saw mill,
148-6-60- -50
Barnetts, near Powell,
80-78-3- -45
2 miles E.of above rock at 16ft.very hard
Nutcalogy Hammock, 197ft., water at 140, started in ro ck, rock all the way.
Mr. Hilliard drilled 3 wells around hammock for the Inverness Lumber Co.,
130ft- 170ft and 180ft- no water and no rock sand and clay all t he way.

10/10/21 M.K.C

Ayers Crossing,
P.L.Weeks, 88-4½- -40
D.Ayers,
100-4½- -40
100-2 - -40

At Bayport,
Fresh water at 18ft, 30ft.deep.
16ft. to water.

Hernando County.

Log of well drilled for Buttgenbach Phosphate Company, near Croom, by J.O.Edson of Dunnellon. Well drilled August-October,1920. Water stands about 42 feet from surface. Yields ± 1200 gallons per minute. Casing 12" for 79 feet, balance open hole in hard limestone.

Surface sand and clay	20	feet.
Soft phosphate	30	"
Gravel and boulder phosphate	5	"
Hard,crystallized limestone	10	"
Limestone,almost uniform	813	"
Total depth of well ----	878	"

At 440 ft. a 2 ft.cavity encountered Some black clay and gypsum crystals, 4 feet. Thin layer of asphalt 50%-silica 50%.
At 860 feet± 10' asphalt 50'-Silica 50%. Sample sent to State Survey. A piece of this was sent to Dr.Sellards who makes the following comments in a letter under date of 3-31-21 "I have looked at Bystra's sample but do not recognize anything very unusual about it.Presume that it is clay with much coally matter in it.You recall that coal has been reported in a well near Juliet at something like 1000 ft."
At 868 Cavity of two feet again,also black and gypsum crystals, 5 feet.

The above log is from a letter from Dr.Bystra July 31,1921. This is on file in the letter cabinet.

3/19/21. The sample from 860 feet was tested by Caesar at the Laboratory and found to be a clay colored dark by organic matter. Dr Cutting thinks enough oil and a liquid could be had to organic matter.

Weekewachee Springs, Hernando Co. Analysis by N. P. Pratt. 1904.

Encrusting Constituents	Parts per mil
Silica	6.77
Peroxide of iron and alumina	trace
Carbonate of lime	119.78
Sulphate of lime	4.65
Carbonate of Magnesia	12.07

Non-encrusting constituents

Magnesium Chloride	none
Magnesium sulphate	19.62
Calcium chloride	6.54
Sodium chloride	2.88
Sodium sulphate	11.97
Total solids by evaporation	227. 84

Hernando

Highlands County.

Sebring,
Sebring Light and Water Co.,
2 wells 800 to 850ft.
Peoles Ice and Mfg. Co.,
The surface of Lake Jackson is about 35 ft, lower than the circle and ice plant about 10ft. lower than the circle. Elev. of old depot about 160ft, New depot about 15ft. higher. Ice plant about same as new depot.
Section at Sebring:

Alt. white and yellow sand and clay	100
Coarse and fine white sand	200
Rotten limestone	400
Ls, alt. hard and soft.	
Hard ls., flinty	

Wells:
1150-8-404- -60, 1919 O. well Dr. Co
834-6-450 1912, C.M.Boland.
Analysis of water from 834ft. well, 1912
"Hypothetical form of the combination of mineral ingredients- parts per million grains per United States."

Ammonium	.21
Sodium Cloride	14.67
Sodium Sulfate	12.17
Sodium Nitrate	trace
Calcium Phosphate	trace
Calcium Bicarbonate	69.13
Magnesium "	51.25
Silica	5.00
Alumina and Iron Oxide	2.00
Total	154.43

"Froehling And Robertson"
Richmond Testing Laboratory.

9/21/21 H.G.

Highlands

Peoples Ice and Mfg. Co.,
Recorddof hot well:
Sand 0 to 12ft
Red sandy clay 12 to 18½ft. Bottom of pit.
Below this is more sandy clay, thickness not known. Under the sandy clay white sand Water from this sand stratum. Well about 50ft. deep. Well put down July 1921, temperature at time 130. 3 wweks later the hot waste water was moved. Temperature 9/21/21 was 108.

A 3in. well about 40ft, from the hotwwell gives water of ordinary tempreature. This well is 30ft. deep.
The following is a comparative analysis of the water from the 2 wells:

Constituents determined	P.P.M. Cold well	HOt well
Bicarbonates(HCO3)	trace	trace
Carbonates(CO3)	none	none
Clorine(Cl)	14	25
Soluble solids	39	65

Water typical of shallow wells in sandy solis.
Signed,
A.M.Henry; analyst.

E.L.Hines, Vice-Pres., Peoples Ice and Mfg. Co., Sebring, Fla.

9/21/21 H.G.

9/21/21 H.G.

Hot waste water turned out at same place as originally on Sept. 21,1921. Temperature readings hereafter should therefore demonstrate whether or not the waste water is responsible for the hot water in the well. We tried to put a self-registering thermometer in the well; but could not owing to the pipe connections and the need of the water for boiler uses.

Temperature of the water that was turned out near the well was above 140, possibly as high as 160

The country around Sebring is very snady. S sandy clay(redish-yellow) under lies the region from about 12 to 25ft. This sandy clay encountered in well at the ice plant at 12ft. Turkey oak and some black-jack principal under-growth with some long-leaf pine.

M.K.C 10/4/21

Hillsboro County.

Tampa,
Tampa Water Co., Chester R. McFarland
Use 21 wells for city supply. The following are represenative wells
1-259'-10"-62'
1-268'-10"-65'
1-253'-1o"-52'
1-370'-10'- went to 400' in this well clorine becamm too strong and well wsa filed up to 370'. Clorine at 400was 18.66; at 370 was 5.14.

Analysis of water from new Well on Buffalo Ave. 370' deep.

Total solids	176.
Loss on ignition	6.
Fixde solids	170.
Nitrogen as Free ammonia	0.
" "albuminoid "	0.
" " nitrites	0.
" " nitrates	0.
Clorine	6.
Alkalinity	97.
Hardness	129.
Free carbon dioxide	none 4.4
Color	none
Turbidity	slight
Sediment	considerable

Analysis by Booth,Barret and Blair, Philadelphia.
11/24/20

M.K.C

Hillsboro County

LOg of Ybor City Well #2,

From	To	Thickness	Formation
Sorface	8'	8'	Sand
8'	12	4	clay and rock
12	22	10	sand and water
22	29	7	hard white marl
29	39	10	clay water to top casing
39	58	19	soft rock water bearing
58	62	4	medium hard rock
62	72	10	very hard rock water bearin
72	88	16	hard rock no water
88	93	5	hard rock strong water bearin
93	153	60	medium hard rock
153	203	50	"
203	223	20	" water bearing
223	253	30	no water
253	268	15	"
268	301	33	soft rock and water

Analysis of water from above well

	P.P.M.	Grains.
Magnesim carbonate	12	.696
Calcium "	153	8.88
" sulfate	10.4	.604
" silicates	12.	.696
Silica	8.o	.464
Iron oxide and alumina	2,00	.116
Incrusting solids	197.4	
Sodium cloride	72.2	4.175
Organic matter,etc.	6 10.4	.604
Non-incrustin g solids	82.6	
total solids	280.	16.235

Analysis by Booth, Barret&Blair, Philadelphia

1/16/19

M.K.C

Log of Yhor City well # 3.
D.E.Fuller, Tampa, driller

From	To	Thickness	Formation
0	3	3	sand and soil
3	18	15	blue clay
18	20	2	brown clay and rock
20	30	10	white hard limestone
30	35	5	soft white ls.
35	45	10	hard white ls.
45	54	9	blue clay
54	64	10	hard white rock
64	68	4	Brown rock and clay soft
68	72	4b	hard brown rock
72	75	3	black flint
78	81	3	clay and hard white ls.
81	92	11	" " medium hard white ls
92	100	8	clay and hard white ls.
100	109	9	c,ay and medium hard whitenls.
109	113	4	clay and brown ls.
113	114	1	hard rock flint
114	123	9	hard rock
123	125	2	soft rock
125	127	2	cavity
127	130	3	hard rock
130	131	1	very hard brown rock
131	132	1	" " red "
132	142	10	hard red rock
142	143	1	soft well flowed
143	144n	1	hard white rock
144	147	3	"
147	155	8	black flint
155	162	7	soft brown water rock
162	166	4	Bla ck flint with
166	171	5	strata of sand
171	223	52	soft white ls.
223	226	3	hard gray rock
226	232	6	soft brown rock
232	235	3	hard gray rock
235	265	30	soft brown rock

M.K.C

265	270	5	soft brown rock and clay
270	272	2	grayb rock water
272	314	42	stream of water
314	324	10	soft brown rock

Clorine at 290 23.4 p.p.m.
" " 320 150.6 "
well filled to 285 on 4/5/19
and after pumping showed clorine 27 p.p.m.
cased hera to 147 .

Log of well #13-10", on Ola St. between 7th and 8th Ave. 1905. Elevation at top of casing 8.08 ft. casing 52ft.

From	To	Thickness	Formation
0	2.5	2.5	sand
2.5	6	3.5	brown clay
6	8	2	blue "
8	10	2	gray "
10	13	3	brownish rock
13	18	5	lead clored clay
18	20	2	rock
20	21.5	1.5	hard slate colored
21.5	25.5	4	blue clay
25.5	25.8	.3	hard whitish rock
25.8	29	.2	rock
29	51	22	blue clay
51	52.5	1.5	hard flinty rock
52.5	67.5	15	rock,streaks of clay,some water at 57 increase at 67
67,5	69.5	2	hard gray rock
69.5	73	3.5	sticky white clay
73	74.7	1.7	hard gray rock
74.7	75,7	1	white clay with gravel
75.7	81	5.3	tough gray rock
81	85	4	yellowsoft rock
85	89	4	hard light slate colored rock
89	92	3	soft brown yellow ro ck
92	95	3	gravel with some increase water

M.K.C

95	96.5	1.5	flint rock
96.5	99	2.5	white clay mixed gravel
99	99.3	.3	rock
99.3	106	6.7	soft rock small increase water
106	108	2	hard rock
108	110.5	2.5	soft yellowish rock
110.5	111.2	.7	hard rock
111.2	113.2	2	soft whitish rock
113.2	119	5.8	white clay like putty
119	120	1	hard rock
120	155	35	yeollw rock with some increas water
155	155.5	.5	flint
155.5	158.5	3	dark gray rock
158.5	160	1.5	vary hard gray rock
160	170	10	soft yellow rock
170	201.7	31.7	soft gray rock with pebble

No increase in water after 170ft.

Samples taken from this well and sent in .

Stomawa Mineral W ater
From Sulphur Springs Park, near Tampa.
Analysis by J.H.Pratt, Tampa, Fla.

	Gra. per U.S.Gal.
Sodium chloride	287.232
Potassium chloride	10.349
Calcium sulphate	40.900
Calcium bicarbonate	13.879
Calcium chloride	11.565
Magnesium sulphate	10.100
Magnesium chloride	37.016
Magnesium bicarbonate	13.880
Silicic acid	1.341
Iron	trace
Alumina	"
Phosphoric acid	"
Water of combination	10.830
Total solids in grs. per gal.	440.1

Results in part per million

Free ammonia	none
Albuminoid ammonia	0.07
Nitrates	none
Nitrites	none

(Copied from advertising matter)

Hillsboro

West Tampa
Wells of Ocala Ice & Packing Co.
W.F.Hamilton, Drilling Cntractor.

#1 8"
Depth 760' Water salty
Filled to 400' " sulphur
Water from below 175'
Stands 7' from surface

#2 Depth 360' diam. 6"
Casing to 135' Water sulphur
Stands 7' from surface
Water from 135' down

#3 Depth 393' diam. 6"
Casing 93' Water sulphur
Water stands 7' below surface
Water all the way down

#4 Depth 406' diam. 6"
Casing 90' Water sulphur
Water stands 7' below surface
Water all the way down

All these wells go through sand, clays, etc., about 60' then flint layers, after which hard limestone to about 475'. Below this, porous shell limestone and agin close limestone to 700'.

Hillsboro

Tampa, Fla.
A. C. L. Ry. Co.

	Grs. per Us Gal.
Total solids	16.90
Calcium carbonate	5.32
Calcium sulphate	1.42
Magnesium carbonate	1.21
Sodium chloride	3.47
Free carbonic acid	0.41
Iron, alumina & silica	1.07
Incrusting solids	11.24
Non-incrusting solids	3.47

This water was taken from water tank siding It is brownish in color and has a slight turbidity. This water contains 11-½ grains of scale matter to the gallon, this corresponds to 1.59 lbs. of scale matter to every thousand gallons of water evaporated. This water contains about the same scale matter as the water from Croom, although this water contains calcium sulphate and the Croom water does not.

Hillsboro

Ponce de Leon
Well drilled for G.B.Smith 3½ miles south of Ponce de Leon.
Notes of Gray Artesian Co.

1-5 Sand
5-60 Yellow clay
60-90 Coarse sand, yellow
90-107 White clay
107-112 Brown clay
112-160 White limestone
160-170 Yellow sandstone
170-250 Blue marl
Finished in limestone

Well is cased 158 feet with 4½" pipe. Water stands 95 feet below surface and was pumped at 50 gallons per minute for 5 hrs.

- - - - - - - - - -

FLOWING WELL OF A. R. HEMMINGWAY
1/3 mile northeast of town.

20 ft. coarse yellow sand
20- 50 " black muck mixed with sand
50-130 " blue marl
130-213 " limestone

This well flows 65 gallons per minute and has a head of 5' above surface.
Cased with 6" pipe for 80'

Has been analyzed by State Chemist.

Holmes

Ponce-de-Leon
Well drilled for Mr. J. A. Simmons.

See notes of Gray Artesian Co.

1-40 ft. Yellow sand
40-73 " " sandstone
73-105 " Blue marl
105-200 " White limestone.

Well is cased 80' with 6" pipe and flows 70 gallons per minute.

- - - - - - - - - -

Flowing Well at Ponce de Leon.

Well drilled for town of Ponce de Leon on north side of Railroad.

10 ft. coarse yellow sand
10 -39 " white sand and clay mixed
39 -43 " yellow sand
43 -60 " " sandstone
60 -130 " Blue marl
130 -203 " white limestone

Well is cased 70' with 6" pipe and flows 65 gallons per minute with a head of 6' above surface.

Holmes

1 Holmes

Ponce de Leon
Well drilled for D. Hughes, 4 miles south of Ponce de Leon.
Notes of Gray Artesian Co.

70 ft. sand and clay
70- 90 " coarse sand
90-120 " soft marl
120-400 " limestone
400 blue marl

Water in this well came within 45' of the surface and was tested to 75 gal. per minute for 18 hours.

Well is 400' deep, is cased 124' with 6" drive pipe.

- - - - - - -

Caryville Well
Henderson & Waite Lumber Co. 5 m. southeast.

30- ft. sand and clay
30- 40 " coarse yellow sand
40- 55 " white clay or kaolin
55- 65 " red clay with black gravels
65- 68 " coarse yellow sand
68- 90 " white clay or kaolin
90-105 " coarse yellow sand
105-120 " white sand with streaks of white clay
120-128 " yellow clay and sand
128-139 " limestone
139-141 " white sand and gravel
141-145 " blue flint
145-197 " white limestone
197-206 " white sand
206-213 " yellow sandstone

Holmes

June 6th 1918

Holmes County

Gravel about 5 S/W of Bracewell on land owned by Charlie Kendrick, Bracewell. Small white gravel on a hill. Holmes creek about 1½ miles east of this place.

White gravel on Sects. 31 + 32, T. 5 N., R. 17 W., on old man Dixon's place.

June 13, 1912. Letter to the State Chemist from G.W. Miller, Black, Ala.

Sample of bituminous coal said to come from 4 foot vein found at the depth of 87 feet. Land said to be about the highest in Holmes County. Locality in Fla. south of Black Alabama. Many springs near by or around.

Jackson

Well at Cottondale

Notes from Jaxon & Gray 1913
See Gray Artesian Co.

1-5 ft.	Sand
5-27 "	Hard red clay
27-200 "	White limestone with fisures and cavities near top.

This well is 10" in diameter and was drilled to drain a pond known as Caney Pond, located partly within the city limits, but owing to the water rising to near the level of the pond, it could not be entirely drained. There were some four or five hundred acres reclaimed.

There are some 15 or 20 2" and 3" wells in the town that stop in the limestone where this water is turned loose.

Well is cased 32 feet.

Jackson

Jackson County

ORIDA, FRIDAY, DECEMBER 16, 1921.

THE FLORIDA TIMES-UNION, JACKSONVILLE, FL

A DAY

FURNISHES WER FOR MARIANNA

LY CITY IN FLORIDA SO SUP- LIED—MARKS NEW ERA IN IVIL AND INDUSTRIAL LIFE F THE CITY.

TS ONLY 20 PER CENT OF OLD STYLE OF CURRENT

r Obtained from Mill on Dry ek Five Miles South of the City. nty of Power to Take Care of Needs for Many Years to Come.

Marianna, Dec. 15.—Tuesday marked the beginning of a new era in the civil and industrial life of Marianna, it being the day when the new hydro-electric current was cut in.

For many years it has been recognized as possible to obtain abundant and cheap water power for electrical purposes near this city and several attempts have been made by promoters to make contracts with the city to furnish such power. The ultra conservative element on the city council, however, always succeeded at the last minute in preventing any contract being made, and the old and expensive methods of producing lights and power by steam have been continued.

Early in the present year, at the instance of J. A. Ormond, who was serving an unexpired term on the city council to which he had been elected, at the request of the other members of the council to try to get the finances of the city in sound shape, the council reopened the subject of hydro-electric power to consider a proposition from Messrs. Singletary and Hough, as presented by Senator Singletary, to furnish current from the Merritt Mill site, on Blue Spring creek, a mile and a half east of Marianna. Subsequently, Hon. G. M. Thomas presented a proposition to equip his mill, on Dry Creek five miles south of the city, and furnish current from that plant. The Blue Springs Power Company in the meantime came into the hands of Hon. W. J. Singletary and C. Horne and these gentlemen asked to be permitted to offer a proposition. Much interest was aroused over the question, and it developed from careful engineering surveys that either site would furnish all the electrical energy that the city could utilize and more.

The proposition of Mr. Thomas was finally accepted by the city council and the contract by vote of the people to cover a period of twenty years, the rate being very low, in fact, less than 20 per cent of the cost to the city of making current at its own plant.

The financing of the proposition was taken care of locally and the engineering work was done by the Albany Electric Company of Albany, Ga., under the personal supervision of E. S. Killebrew, the president. The city's interests have been looked after by J. L. Carroll, chairman of the water and light committee of the city council, and W. B. Wright, superintendent of the water and light plant.

The test Tuesday night was highly satisfactory, and with the exception of the blowing of a fuse at the Thomas plant, which took a few minutes to repair, the lights were excellent throughout the evening on all the residence and business circuits. Tonight it is expected that the street lights and white way will be connected and a test made of the ability of the plant to carry the entire load. Every confidence is felt that there is plenty of power to take care of the present and any future needs of the city for many years to come.

So far as is known, Marianna is the only city in Florida equipped with hydro-electric lights and power, and the people are greatly elated over the prospects for a great saving in costs of lights and a rapid growth industrially on account of cheap and abundant power.

DEATH OF T. W. GETZEN, AN ESTEEMED CITIZEN

Jackson

Florida Industrial School for Boys.

303, 8, Old well used only in case of necessity. Kept in reserve.
327, 12, 40, -50, 1918. Drilled by Ohio Well Drilling Co. Jax. Fire purposes.

2-25-22. From Mr. C. D. Hammatt, Engr.

Marianna, Jackson County. *

A well drilled at Marianna penetrated limestone, marl and clay to the depth of 265 feet, where a bed of quicksand was encountered. An incomplete log of this well is given below:

1½ ft.	Sand and sandy loam, Pleistocene.
20 ft.	Red and yellow sandy clay and sand, Lafayette.
45 ft.	Alternating beds of hard limestone and marl. (This doubtless included section No. 1 at the east end of the town.)
200 ft.	Hard rock (chert) followed by alternating beds of marl and limestone with some chert, Marianna (?).

The log of this well does not afford any means of judging at what depth the base of the Marianna limestone was reached, but it is possible that an underlying formation was penetrated some distance above the quicksand.

---

* Fla. Geol. Surv. 2nd Ann. Rpt. p, 57, 1909.

Jackson

Mayo, Lafayette County.

Well of W. T. Dees, Anal. by St. Chem.

Tasteless, slight odor of H_2S
slightly turbid.

	Parts per mil.
Cl	58.8
So_4	39.0
SiO_2	90.0
CaO	1105.0
MgO	733.2
Total solids	2510.0

Well of Electruc and Water Co.

Odorless, tasteless, clear.

Cl	159.5
SO_4	11.4
SiO_2	----
CaO	547.0
MgO	87.7
Total solids	1812.0

Lafayette

M.K. 9/13/21

Lake County.

Leesburg,
City Water Supply,
2-148'-6"
1-148' 8"
1-102'-4" not used

Analysis of Water

Constituents	P.P.M.	grs. per gal.
Color, turbidity, or odor	0	0
Total solids	205	12
Volatile solids	60	3.5
Fixed or mineral solids	145	8.5
Calcium	100	5.9
Magnesium	47.7	2.8
Iron	0.2	0.01.
Carbonates	0	0
Bicarbonates	150	8.8.
Sulphates	0	0
Clorine	14.2	0.8
Total hardness	446	26.1

Analysis by State Board of Health.

H.G

Whitney,
Whitney Brick & Mfg. Co. operated during 1921 from Jan. to Aug. Plans probably to dismantle. Made common building brick.
J.B.Horrel, Mgr., Ocala .
Reason sfor dismantling are high price of wood as fuel, high price of labor and present low price of brick. Also trouble with sma small lime nodules in the clay. This could be overcome by grinding teh clay and mixing thoroughly.
Wellat plant , 367'- 3""- -10'

Keystone Brick Co.
Make common brick. Took sample

H.G. 9/13/21

Okahumpka,
Fla. China Clay Corp., J.S.Morris, Supt., Leesburg, Fla.
Average overburden of sand about 8ft,, then kaolin about 20ft. Under this sometimes white sand, sticky blue clay and sometimes r rock. Clay 25% of mass.
Lake County Clay Co., H.E.Price, Supt.
Write Mr D.R.Edgar, Metuchen, N.J. for 1920 statistics.
Section of pit:
0 to 7ft sand
7 to 19ft. stained clayey sand.
Wells at plant of Lake Co, Clay Co.
247'-6"- -12' usdd slight sulfur
225'- 6"- -10' not usde
Plant is 3 miles E. of Okahumpka.

1400 lakes in Lake County,
Elevatin of county 60 to 321ft.
From sign 5 miles W. of Leesburg at R.R. crossing.

Lake

Lake County

Water from well of Dibble & Earnest, Eustis
Odorless, clear, normal taste,
no suspended matter.

	parts per mil.
Chlorine	7.00
Sulphate radical	11.52
Silica	19.00
Iron oxide	0.30
Aluminum oxide	
Calcium oxide	32.00
Magnesium oxide	6.88
Total solids	123.00
Volatile matter	9.00

- - - - - - - - -

Water from A.A.Thompson well, Astor

	parts per mil.
Chlorine	801.9
Sulphate radical	107.5
Silica	11.0
Aluminum and iron oxides	
Calcium oxide	233.0
Magnesium oxide	89.6
Total solids	1793.0

Clear, odor of hydrogen sulphide, tasteless and no turbidity.

Lake

Leesburg, Lake County.

Well of Leesburg Ice Co.
Anal. by Fidelity & Casualty Co

	Parts per mil.
Carbonate of Lime	85.91
Sulphate of Lime	trace
Sodium and Potassium sulphates	trace
Nitrate of Lime	5.62
Sodium and Potassium Chlorides	34.97
Oxide of Aluminum and Iron	3.18
Total incrusting solids	129.02
Total non-incrusting solids	41.17
Total solids	170.20

Lake

TIMES-UNION, 9-1-21

FLORID

SKELETON PARTS ARE UNEARTHED ON ESTERO ISLAND

Believed to Be of Race Who Preceded Indians in Florida By Many Hundreds of Years.

Fort Myers, Aug. 31.—Parts of a number of skeletons believed to be those of members of a race that inhabited the Florida peninsula many centuries before the Indians, have been taken from an immense shell mound on Estero island, near here, and are now displayed at a local store.

One of the fragments, a tibia, or shin bone, is of such size that local doctors, basing their statement on the anatomy of men of today, say its original owner must have been more than seven feet tall. Other bones are of equal size, these including fragments of jawbones, with many of the teeth in almost perfect state of preservation.

The bones, which are unmistakably of human origin, were found in and near the center of the immense shell mound that has formed the highest point on Estero island. A large part of the mound is being removed for use as road material, and in the course of construction of a beautiful home being built for Capt. Jack DeLysle, owner of Seminole Sands.

J. L. Keck, superintending the excavation and removal of the big shell mound, discovered the bones. When exposed to the air with the removal of the shells and earth, many of the larger bones crumbled to small fragments. Those that were saved, however, were ample to show that they were human relics, and not those of animals or marine monsters.

A local physician, with some knowledge of fossil remains, who has made careful examination of the bones, teeth, etc., stated that in his opinion the relics are not those of either Indians or a negro race. He stated he believed the bones were those of members of a race that preceded the Indians in Florida by many hundreds of years.

9/26/21 T2 Lee Co.

Lee County

Ft. Myers,
Southern Utilities Co., Ice Plant,
1-1300'--10"--580'-- +20' 100gal.per m
1-900' -- 8"--240'-- +20' ""
1-700' -- 6"--180'-- +30' 150 gal. per m
J.M.Sikes, Mgr.

City Water Works, Mr.Bennet, City Mgr.
1-980'--8"--450'-- +25'hard sulfur& Mg.

Buckingham,
J.M.Rutledge,
176'--2½"-- -++3'

Olga,
F.Walker, 127'--4½"--+10',
H.L.Heitman, 90'--2" -- +10
Dr. Walker, 300'--4"-- +10'
J.E.Mills, 124' -- 4½"-- +10'
Claude Mills, 300'- 5" +- +10'
300' - 4" -- +10'
W.Watkins, 200' 4"-- + 10'
H.T.Jones, 300'-- 4" -- +10'
Dr. Miles, 4-600' -- 4½" +30'
2- 600'-- 6" -- +30'
Use 40-80' casing.in this locality
wells used for irrigating

9/27/21

A.Dormeier, Olga, Fla.
A Frenchman very well educated and very much interested in Geology.

Film #6 Rol #3 MArl pit Lmile E. of Olga
Section,
Sand 6ft.
Marl 4-5ft.
Clay

M.K.C

9/29/21

Estero,
Koreshan Unity,
600'-4"- +10' hard sulfur
190'-3"- +10' "
Mr. Hall,
272'-3"- 60'- +13' hard sulfur
R.Y.Collier,
260'-3"- +8'

Naples,
Well drilled at Hotel about 900'
a good flow but water was too salty
for drirking purposes.

Everglade,
A flowing reported there at about
500' but was too salty for use

Record of well drilled for John Aldridge by Bolandsxxx.

Six inch casing rested at 50 feet; 4 inch casing rested at 140 feet.

Total depth of the well 205 .

Depth of sample from the surface

49 feet. Yellow clay.

60 feet. Sandy lime rock, trace of phosphate.

65 feet. Lime rock, Ghattahoochee formation.

70 feet. Very calcareous sticky clay.

100 feet. Rather hard limestone.

110 feet. Very calcareous clay.

115 feet. Very calcareous gray sand.

134 feet. Intermediate betweenn limestone and clay.

140 feet. Limestone with a good deal of clay.

145 feet. Calcareous, but also containing a good deal of clay.

150 feet. Calcareous but containg a good deal of clay.

160 feet. Limestone but contains enough clay to make it slippery.

205 feet. Yellow stickx clacareous clay.

From the samples it seems that this well terminates in the Chattahoochee limestone, not having reached the Vicksburg limestone which lies deeper.

E.H.Sellards.

State Geologist.

Drilled probably in summer of 1917-

Leon

No. Mis. 1411. Well Water from 8" City Well, Tallahassee.
For State Geological Survey.

Colorless; odorless; tasteless; no sediment.

Milligrams per liter.

SiO_2	7
Cl	7
SO_4	2
PO_4	0
CO_3	0
HCO_3	143
Na+K	31
Mg	2
Ca	41
Fe+Al	8
Loss on ignition	35
Total dissolved solids	165

A. M. Henry,

Leon

Log of the City Well at Tallahassee, Fla.
Drilled by Atlantic Drilling Co. Aug. 15 to Dec. 18, 1891.

Log by Major Gamble.

	Thickness		
Surface soil, etc.	41 ft.		0 - 41
Limestone	250		41 - 291
Hard brownstone	23		291 - 314
Soft white limestone	34		314 - 348
Hard yellow stone	7		348 - 355
" white stone	3		355 - 358
" red quartzite	2 inches		
" brown stone	13		358 - 371
Soft yellow mud	2		371 - 373
Hard brown stone	4		373 - 377
" gray "	2		377 - 379
Pink colored marble	2		379 - 381
Hard brown stone	4		381 - 385
Fine sand	½		
Hard brown stone	8		385 - 393
Soft stone, alternately brown & wh.	112		393 - 505
" white stone	207		505 - 712

Interpretation made by Major Gamble, by whom samples were taken

Pliocene	0 - 41
Miocene	41 - 301
Eocene	301 - 717

Log in detail with notes as kept by Mr Gamble

Veins of water at	18 ft
Limestone at	41 "
8" pipe driven to	80 "
2nd water found at	90 "
A thin stratum nearly pure gravel at	140 ft
A six foot cavity at	142 ft.
Quick hole from	232 ft.
Termination of white limestone at	291 ft.
Very hard brown stone at	292 - 315
White soft limestone	316 - 350
Hard yellow stone	351
Some white stone, harder	360

Log and glass tube with samples are in the Public Library, Tallahassee

Talla. well contd

6 inch hard rock quartz with glass, at	360½
"Ditto" (Red quartz or white stone)	362
Hard brown stone, 13½ ft	375
Yellow mud mixed with ferruginous sand	376
Hard brown stone	380
Gray stone, somewhat soft 18"	382
Red colored marble, thin layers	384
Hard brownstone 4 ft.	386
Fine sand 5 in	390 - 390,5"
Hard brownstone	390 5" - 395
"	395 - 398
Soft sandstone 6 ft.	398 - 404
" " 6"	404 - 410
" " somewhat harder 19 ft.	416?
White limestone	435
Soft sandstone	438
Alternate strata brown & white stone	470
" " " " " stone	510
Enlarged well to 8 inches	
Soft white stone	602 - 717

Total depth of well 717.

Notes on the samples from the city well at Tallahassee, By Dr. E. H. Sellards. 10/15/20

The samples from this well preserved by Major Gamble are in the public library at Tallahassee. They are enclosed in a tube with no label as to depths. Sixteen samples are preserved.

1. The bottom sample is white limestone and with little doubt represents the rock from 504 to 717.
   Character of rock white limestone, many forams

Talla. well contd.

2. The second sample from bottom is likewise a light colored rock in which no fossils were seen. This is probably the rock from 392 - 504 = 112 feet
3. Third sample from bottom. Well crystallized brown limestone.
4. Very similar brownish crystallized limestone.
5. A white rock principally.
6. Slightly brownish well crystallized limestone
7. Finely broken up limestone.
8. Slightly brownish well crystallized limestone.
9. White limestone and brownish crystallized limestone mixed.

Counting from the top, samples are as follows:

1. Apparently collected large pebbles from the soil etc, representing 0-41
2. A white limestone, texture of the Chattahoochee
3. A white fragmental rock, texture of Ocala limestone.
   Probably these two samples represent 250 feet from 41-291
4. Hard brown ~~stone~~ limestone rock, texture pre-Eocene 291-314?
5. White limestone
6. " "
7. " "
8. Broken well crystallized limestone.
9. Limestone broken to resemble sand.

Further note on samples.

1st. Sample presumably at top includes a few pieces of ~~fossil~~ brown porous limestone possibly coming from a boulder. This may be from the top 0-41 feet but can not be sure.

Talla. well contd.

2. A massive white limestone which in texture is not unlike the Chattahoochee.
3. Fragmental white limestone which apparently is identical with that seen south of Lake City. Ocala limestone?
4. A hard limestone stained rusty brown with iron. No fossils seen.
5. A white limestone, minutely crystallized and powdered very fine. No fossils seen.
6. Rock very similar to last sample.
7. " " " " " "
8. " " " " " " slightly brownish in color, minutely crystallized.
9. Crystalline limestone, very finely powdered, effervesces slowly, No fossils.
10. Brown crystalline limestone. No fossils.
11. Chiefly white limestone. Many rounded objects which may be organic (fossils)
12. Brown crystalline limestone. No fossils)

Levy County

Water from Blue Spring
Anal. By State Chemist

	Parts per mil.
Calcium oxide	49.0
Magnesium oxide	10.50
Sulphate	64.40
Chlorine	35.07
Silica	5.70
Total solids.	196.80

- - - - - - - -

Water from well of Otter Creek Lumber Co.
Otter Creek, Fla.
Anal by H.Herzog, Jr.
Gainesville, Fla. 6/8/03

Total solids	319.40
Organic matter	38.00
Mineral matter	281.40
Carbonate of lime	238.20
Carbonate of magnesium	6.60
Ferric oxide	8.00
Alumina	2.00
Silica	18.00
Chlorine (as sodium chloride)	6.10

Levy

Williston, Levy County.
Well used for ice manufacture, 60 ft. deep

Anal. by Iroquois Mfg. Co. 1907

	parts per mil.
Carbonate and sulphate of lime	123.43
Magnesia	51.43
Sulphuric acid	152.58
Chlorine	36.00
Oxide of iron and alumina	some
Silica	non determined
Total solids	534.88

Otter Creek, well of Otter Creek Lumber Co.
Depth 85 feet; used for sawmill.
Anal. by H. Herzog, Jr. 1903.

Carbonate of Lime	237.95
Carbonate of Magnesium	6.68
Chlorine	6.00
Ferric Oxide	7.88
Alumina	1.88
Silica	18.00
Organic matter	37.88
Mineral matter	281.15
Total solids	319.21

Levy

