

No. 24.

PROPERTY OF
FLA. STATE GEOL. SURVEY

October, 1909. To

February, 1910

Herman Gunter.

Exchanged June 18, 1915

Ellis, Curtis + Hooker,
212 North Bldg

1911 7/15

Sec. Board
of Trade

H. Canfield, St. Augustine

Frank Williams, Hards

Mazum + MacDonald

Remington

Riverside Realty Co.

Mount Pippin, Cal

Higgins, well driller
Country Club property

Wm. C. Shaw, Jr., Macon, Ga.
Chief Engineer S.S. + F.

Wood, Engineer Jax Terminal Co.

J. J. Robinson, master mechanic S.A. L
L. Harrison, claim agt. S.A. L

Sparrow, Engineer of Roadway A.C.R.
Jax

Capt. B. R. Spaulding

J. M. Braxton, Asst. Engineer

Robt. S. Clemens

Woodward

J. R. - Peyton

Bruce

mathias, draughtsman A.C.R.

St. Augustine

Supt.

See Mr. Ben Carter Engineer of main-
tenance of Way, F. E. C. Examine profile
from Mayport to Jax. Levels from Jax to St. A.
27, 28, 22, 23 (Daytona?) 16, 57, 34, 41,

St. A. to Palatka, 36, 37.

Palatka south, 17, 11 (Daytona), 11, 9, 10 (New Smyrna), 13,
20, 18, 9, 6 (Titusville), 23, 38, 50, 26, 16, 26, 19,
22,

Branch New Smyrna to Orange at Jax. (N.S.) 7/29,
40, 69, 61, 43, 67 (Orange at Jax).

Titusville to Sanford branch, 6, 31, 20, 27, 24, 23, 40, 42, 17, 41, 26 (Enterprise jct.), Sanford 20.

Elevations, main line F. E. C. R.R.

S. Jax	10.20	Jax to may port.	
A. A.	6.50	S. Jax	10.20
Ormond	12.00	Pablo Beach	12.7
Daytona	4.50	may port	9.2
New Smyrna	8.00		
Titusville	8.50	New Smyrna	8.
Cocoa	22.50	Lake Helen	61.8
Eau Gallie	17.53	Orange city	38.0
Melbourne	15.30	Orange city jct.	38.0
St. Pierce	17.00	St. J. River, Blue Spg. Landing	5.0
Jupiter	12.11	Titusville	8.5
N. P. Beach	11.50	Enterprise	24.0
Delray	16.25		
H. Lauderdale	4.75		
Miami	9.00		
Homestead	8.50		
Key Largo highest point	13.00		
1 knight 1 Key	7.00		

From S. A. L. crossing of the St. Marys.

Bottom of channel or
superficial water.

Bomb river

30 ft.

One mile south up to 50 ft.

Morris Moore (col) Orange Park.

Log of well of Remington, Ocala, Fla.

Sand 20 ft. White cream colored

Clay, blue 10 to 12 ft.

Sand 5 to 7 ft.

Clay, blue 10 to 12 ft.

Pure white sand immediately above the well.

J. N. C. Stockton

Jacksonville, Fla.

95-

85
25-

$$\begin{array}{r} 104.4 \\ - 75.4 \\ \hline 28.6 \end{array}$$

$$\begin{array}{r} 98.4 \\ - 75.4 \\ \hline 23 \end{array}$$

$$\begin{array}{r} 96. \\ - 9.2 \\ \hline 87.8 \end{array}$$

$$\begin{array}{r} 122.7 \\ - 75.4 \\ \hline 47.3 \end{array}$$

$$\begin{array}{r} 102.8 \\ - 87.8 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 131- \\ - 91- \\ \hline 40 \end{array}$$

$$\begin{array}{r} 44 \\ 60.10 \\ \hline 16 \end{array}$$

Amcol. 24

Jax to Mayport.

South Jax. 10.2 above sea.

2 mi from Jax + 1500 ft. contour rises to 28.6, continues on level for 3000 ft. then drops 17 ft. on level from here for 2000 ft. drops 15 ft. rises to 17 ft. in 300 ft horizontally, drops 25 ft (curve) in 600 ft, and rises then to same level and continues practically on level straight for a distance of a little less than 3 miles. where it drops ^{vertically} as Big Pottsburg creek 30 ft, rising vertically to ^{19 feet} ~~same level~~ from here it rises 52 ft in 2800 ft. keeping this level for 1600 ft, dropping then 15 ft, running practically on the level from this point to a point about 12 mi. Jax. This level is approx. 47.3 feet above sea. A gradual slope to Pablo creek a distance of 15 1/2 mi from Jax generally about 10 ft above sea. The creek proper drops approx to sea level. Running along for a distance of one mile at a level of 12 to 14 feet above sea we reach at a distance 16 mi from Jax an elevation of about 21 feet above sea continuing for a distance of about 500 ft, then gradually slopes to 12 ft. above sea at Pablo.

Pablo to Mayport.

Mayport ^{depth} is 9.2 above sea, a distance of 1 mi. level. The highest point reached along this line is about 16 ft above sea and this occurs about one mile from Pablo and about 4 mi. from Pablo. Otherwise the level is about the same playing around the

1911 7/15
elevations 10 to 13 feet above sea -

7

New Smyrna to Blue Springs Landing.
runs 8 ft. runs level for distance of $1\frac{1}{2}$ mi.
Rises gradually and at Glencoe reaches 24 ft.
Runs almost on dead level for a distance of 7 mi.
Rises 8 ft and runs on this level for 7 mi.
Lake Ashley creek runs 40 ft above sea. Drops gradually
3 ft. and continues for $3\frac{1}{2}$ miles at this level
about 27 ft. above sea. Rises gradually until in
a distance of 2 mi. it reaches an elevation of
69 ft above sea. Rises and ~~falls~~^(47 ft) a distance of $\frac{1}{2}$
mile until at Lake Helen reaches 61 ft. From
Lake Helen it passes over a rolling country
over one stream and continues on a level of
about (general average) 65 ft. for a distance
of 3 mi. From this point we have a rolling
country but generally lower the average for
the next 3 mi being about 38 to 40 ft. The
next mile we run over a little reaching an
altitude of 67 ft. From this point gradual
drop to 38 ft at Orange City (one mile approx from
67 elevation) to 25 ft at Blue Springs Landing on
St. Johns River a distance of about $\frac{3}{4}$ mi from
Orange City Jct.

Situsville to Enterprise

8

2. 8.5 ft. above sea. Rises gradually to an
elevation of 22 ft. in 1 mi distance. Runs
practically on this level for 2 mi. A short
hill is encountered ^{800 ft} rising to 38 ft. Drops
to about 31 ft above sea a dis. of 2 mi.
Then drops to an average of about 23 ft for
a distance of 11 mi. Then drops 4 ft and
at Cow Creek drops to 12 ft, but running on
a general level of about 21 ft for a
distance of $2\frac{1}{2}$ mi. Drops 7 ft. staying
about this level for 3 mi. (14 ft above S.)
Rising from this point to about 47 ft. near
Osteen a distance of about $5\frac{1}{2}$ miles. From
Osteen for a distance of 3 mi. we pass over
a high country the highest point being 55 ft.
for a distance of 3 mi. the land averages
about 25 ft. for the next two miles
pass over a ridge highest point 41 ft, and
at Enterprise 24 ft. Enterprise dock about 7

South Jay to Mayport.

S. Jay

St. Petersburg to Lakeland

A.C.L. Sanford to St. Petersburg.

(see elevations above sea.)

Sanford 14 ft.

mouse station (m.p. 4 from S) 10

M.P. 5.	24	
" " 6.	27	
" " 7.	29	
" " 8.	81	
" " 9.	81	Pine Crest.
" " 10	53	
" " 11.	46	Island Lake
→	67	
" " 12.	57	
" " 13.	64	
" " 14.	86	
" " 15.	64	Groveland
" " 16.	44	
→	67	Palm Springs
" " 17.	51	
" " 18.	50	Granada
" " 19.	91	Forest City
" " 20.	95	
" " 21.	109	
" " 22.	116	Toronto
" " 23.	104	
" " 24.	91	
" " 25.	88	
" " 26.	74	
" " 27.	123	
" " 28.	159	
" " 29.	110	
" " 30.	99	
" " 31.	110	
" " 32.	120	
" " 33.	115	
" " 34.	98	
" " 35.	118	
" " 36.	107	
" " 37.	119	Killarney

1911 7/11
112

m. p. 38.	101
" " 39	104
" " 40	130
" " 41	159 ← (40 1/2)
" " 42	139
" " 43	112
" " 44	139 ← (42 1/2)
" " 45	124
" " 46	97
" " 47	109

Clermont

" " 46	100
" " 47	96
" " 48	117
" " 49	104
" " 50	106
" " 51	100
" " 52	99
" " 53	99
" " 54	103
" " 55	110 ← (mascotte)

" " 56	131
" " 57	99
" " 58	91
" " 59	90
" " 60	90
" " 61	90 ← Cedar Hammock.
" " 62	90
" " 63	87
" " 64	101

" " 65	84
" " 66	79
" " 67	78

" " 68	76
" " 69	77
" " 70	73
" " 71	68
" " 72	68
" " 73	68
" " 74	71
" " 75	73

" " 76	68
" " 77	71
" " 78	72

" " 79	95
" " 80	123

" " 81	96
" " 82	95
" " 83	93
" " 84	113
" " 85	115
" " 86	99

" " 87	142
" " 88	168

" " 89	144
" " 90	102
" " 91	91
" " 92	106

" " 93	79
" " 94	76
" " 95	72
" " 96	70

" " 97	68
" " 98	75
" " 99	75
" " 100	76

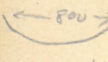
1911 7/25 1

13

M.P. 101	78	← Duxel
" " 102	74	
" " 103	73	
" " 104	63	
" " 105	59	
" " 106	54	
" " 107	49	
" " 108	47	
" " 109	47	
" " 110 1/4	56	← Odessa
" " 111	41	
" " 112	38	
" " 113	33	
" " 114	32	← Keystone
" " 115	25	
" " 116	20	
" " 117	15	
" " 118	4	
" " 119	4	
" " 120	9	
" " 120 1/4		← Carbon Spg.
" " 121	13	
" " 122	8	
" " 123	4	
" " 124	4	
" " 125	4	
" " 126	9	
" " 126 1/4		← Sutherland
" " 127	4	← Ozona
" " 128	4	
crossing of Culebra Creek		
" " 129	4	
Cedar Creek		
" " 130	12	

14

" " 131	12	← Dunedin
" " 131 +		
" " 132	17	
Stevensons Creek		
" " 133	9	
" " 134	29	
" " 135	33	
" " 136	46	
" " 137	69	← Armour.
" " 138	47	← Largo
" " 139	14	
" " 140	17	
" " 141	19	
" " 142	17	
		Bayou
" " 143	11	
" " 144	14	
" " 145	17	
" " 146	22	
		Lellman
" " 147	44	
" " 148	51	
" " 149	54	
" " 150	48	
" " 151	42	
" " 152	23	← St. Petersburg.

A. C. L. Morriston to Trilby. Datum sea level
 Morriston 57, runs on level for approx. 1 mile,
 rising then to an elevation of 78 ft in a
 distance of about $\frac{1}{4}$ mi, descending to 50 ft in
 distance of $\frac{1}{2}$ mi. Rise from 50 ft. elevation to
 elevation of 79 ft. $\frac{1}{2}$ mi., keeping this for 1 mi.
 descend. to 50 gradually and keeping approx
 this level for $\frac{1}{2}$ mi, ⁽⁵⁵⁾ rise again to 79 ft
 in distance of $\frac{1}{2}$ mi, then dropping to 70 and
 playing around this level for about $\frac{1}{4}$ mi, then
 dropping gradually to about 50 ft for $\frac{1}{2}$ mi.
 From this point it drops 9 ft (or level of 41) in 800 ft.
 rising gradually to 60 ft (Romeo 52)
 and keeping this level for 1 mi. (with ups + downs)
 Rises to 72 ft. and keeps same for $\frac{1}{5}$ mi., descending
 gradually to 38 ft. in $\frac{1}{2}$ mi. Rises to 50 drops
 to 38 ft distance of 1500 ft. Rising gradually to
 85 ft. in distance of 1 mi. From this point to
 a point $\frac{3}{4}$ mi. distant slopes gently going
 as low as 60 ft but rises again to 75 ft
 Gradually falls to 50 ft in $\frac{1}{2}$ mile and plays
 around this level for $\frac{3}{4}$ mi. rising again to 70
 ft. in distance of $\frac{1}{2}$ + mi. dropping until Juliette
 is reached (depot 48 ft). (800 ft) rising abruptly to 52
 A descending then to 40 ft in $\frac{1}{2}$ mi. rises to
 61 ft in distance of 2000 ft. drops to 36 ft
 in distance of 1000 ft. rising shortly to 41 ft
 continuing on this level for 600 ft, dropping

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to 31 ft. in 700 ft. Rising gradually from
this point until an elevation of 69 ft.
is reached in distance of $\frac{3}{4}$ mi. dropping
to 38 ft rising to 59 ft dropping to 35 ft in
distance of 400 ft. From this point plays
around the 40 ft level for a distance
of $1\frac{1}{4}$ mi. until at Duncannon 45 ft.
elevation is reached. Withlacoochee River given an
O. From the river is a gradual rise,
(Gulf jet, 74 ft.) until we reach 97 ft. elevation
2 mi. from river, drops to 72 ft in distance
of $\frac{1}{2}$ mi. and rises to 109 ft. in 3500 ft.
keeping practically this level for 1 mi.
drops to 80 ft in $\frac{1}{5}$ mi. rises to 91 ft in
700 ft. drops to 63 ft in 1800 ft. rises to
88 ft in $\frac{1}{5}$ mi. playing around the 85-
ft line for a distance of $\frac{1}{2}$ mi.
(Elliston 63 ft) playing around 60 ft for a
distance of $1\frac{1}{2}$ mi (Holder 58 ft) Rising
from this point to 84 ft and descending to
37 in a distance of 1 mi. Rising to 63 ft
dropping to 35 ft, rising again to 60 ft in

distance of $1\frac{1}{4}$ mi. Drops to 35 ft rising to
50 in distance of $\frac{1}{2}$ mi. Plays around 40 ft
for distance (Selcia 43 ft) of about 1 mi, rising
then to 75 ft in 1500 ft. dropping then
50 ft and continuing this level for $\frac{1}{2}$ mi.
(Hernando 50 ft) Rises and falls from
this point but plays from 65 ft to 40
averaging 50 ft, for a distance of 3 mi.
(Inverness about 43 ft)

Contour is not nearly so broken from
Inverness south and plays mostly around
the 50 ft. elevation for a distance of 1 mi,
where it drops ^{down} for the first time to 35 ft.
rising again shortly and continues around
the 50 ft. line for a distance of $1\frac{1}{5}$ mi. At
which point it drops ~~it drops~~ to the 32
ft line and continues around 40 ft. for
a distance of $\frac{1}{5}$ mi. rising then to 50
ft and continuing at the 50 ft level for
another $\frac{1}{5}$ mi. where it drops to the 40 ft
elevation and continues for about 1 mi,
rising here and playing around the
50 ft. elevation for $1\frac{1}{5}$ mi. where it rises
to 60 ft continuing around this level for

1911 27 1
3/4 mi. rising to 84 ft continuing for about
1/4 mi. dropping gradually then to the 50
ft line and continuing around it for about
- 1 mi. (Iloral City 62 ft) from here it
rises to 67 ft drops to 38 ft in less than
3/4 mi. Rises plays about 50 ft line for
1/2 mi. Rises to 80 ft. in a distance
of about 1/2 mile and continues
around the 80 ft. level for a distance
of 2 1/2 mi. In this distance however it
drops once to 46 ft. ^(midway) For the next
mile continues around 60 ft. level. ^(Istachatta) 56
Drops to 50 and below and continuing at
this level for 1/5 mi. Rises to 71 ft
and continues around the 60 ft elevation for
for 1 1/2 mi. (Leta 56 ft) For the 2 miles
contour plays around 50 ft. rising from
this point to about 70 ft and continuing
around this elevation (Croom 63) for
1 3/4 mi. (Dropping to 55 ft 1 mi. S. Croom)

20
Rises from around 70 line to 76 ft elevation
and plays ~~around~~ 70 to 76 ft for the next
1 1/2 miles. dropping from this point to
the 50 ft line and playing around
same for the next 1 1/5 mi. rising
then to 78 ft but dropping again to
(Bay City 60 ft) 50 ft in distance of 1/5 mi.
Rises to 80 ft in distance of 3/4 mi and
drops to almost 50 ft but playing mostly
around the 65 ft line for a distance
of about 1 3/4 mi. rising then to about 80 ft
continuing around this level until tiller
is reached which is given as 70 ft.

420 ft. S of section line between Secs. 7 + 18²¹
 T. 3 S. R. 26 E. (Fossil crosses RR about 1/4 mi
 above junction) (Information from Gibbs.)

Commencing at the creek with Mr. Guts as 0.00

Bank of creek, (Station 0) .2

Station 1 Elevation .4

2 1.4

3 1.6

4 1.6

5 1.6

6 1.6

7 1.4

8 1.0

9 5.0

10 7.3

11 8.0

12 8.3

13 7.1

14 2.8 (just a hole)

15 5.8

20 5.6

25 4.8

30 5.9

35 7.4

40 5.7

45 6.3

50 6.8

55 9.9

60 9.3

65 12.8

70 17.2

71 + 26 ft. ledge of bluff 17.6

On same line as above. Commencing at
 McKinty creek, and running west to half
 section line of section 7, T. 3 S., R. 26 E.

Station 0 (at bluff) Elevation .5

" 5 " 7.8

" 10 " 15.7

" 15 " 18.3

" 20 " 20.3

" 25 " 21.5

" 30 " 21.4

" 35 " 17.7 - (flat cypress ponds)

" 40 " 17.8

" 45 " 18.3

" 50 " 18.9

" 55 " 18.5

" 60 " 18.7

" 65 " 18.2

" 70 " 18.5

" 71 + 40 ft. (center of fishing cr.) 18.5

" 75 12.1

" 80 18.2

" 85 (cut V in junction) 24.2

(Station every 100 ft.)

Things to be attended to in returning to Saeed

23

Send J. M. Braxton, upstr.

Note J. N. C. Stocton regarding information sent

Durbin. 52 ft. sea level.

Armstrong

Rev. S. Langlade, 280, 6 ^{a in} + 12

Hastings

Frank Rugbee

J. B. Hickox

Flowing well on F. E. C. Ry near K. H. 24
488 mile post. (Joe Lambies drilled
about 20 yrs ago. Known as cremator.)

Montrie, 30 ft. above ^{montrie} creek, Old
Middleton place, abt 1/2 way Montrie po.
Boring a well for still Mr. H. H. Carter at
Florida East Coast Co., near Fair Nat. Bank, H. A.

Durbin Ck. 1 mi. N. Durbin.

E. R. Ogilvie, Durbin, 1 mi. 6 mi. E.

C. H. King, Bayard, 3 mi.

Mr. Carter, Hurds, well.

No wells from Bayard to S. Jay

H. J. Sherman, near Old Fort.

Hayman + Little, well, 6 mi. E. Durbin.

Monck + Owen, Hastings.

R. M. Williams, Bayard, & Co.

25

At Hurds a saw mill and turpentine still. One nice looking house where a wind mill evidently furnishes water.

From Armstrong to ^{near} Hastings seems to be a little higher. Cross a creek near m.p. 52 and from this in to Hastings is very flat.

Ray Cole

See Prof. Ralph in regard to survey from St. Augustine to Hurds.

26

Hastings. Franc Bartlett, well driller.

J. B. Hughes.

Irving Billingsworth, well driller.

(4) S/W 1/4 of N/W 1/4 of S. 17, T. 9. R. 28 E.

(G. M. Best, in regard to Middleton well)

Mrs. G. A. Howatt.

St. Augustine.

27

1/2 mi. N. on montrie road. put down
by Albert Lewis, his home is Bear Creek, Pa.

✓ Middleton, N.C. Bridge St. between
St. George + Hospital. his record of well
at montrie, (Bradfish) L. 38, J. 8, R. 29
28 ft. above high tide, (about)

See Mr. Walker about

Lewis well.

One well ~~between~~ about 100 ft. south of ✓
intersection of Brava + Sanford sts. It is
on Sanford.

Mr. R. N. Ellis, says wells at Jacksonville
flowed + 60.8 when first put down.

28

Pound pressure equal to 2.31 feet.

St. Augustine.

Fitz James Henry. Pastor Episcopal Church. well.

Barnard masters, (Bernard St.)

V. S. Sanchez (Plaza hotel)

Lewis Rody (Rody ave)

A. J. Weston

New Augustine.

Dr. Morley.

(Summer Haven)

5 ft - Sand
 6 in to 1 ft - clay
 - - - - - White (Quartz sand)
 - - - - - clay
 0 0 0 0 Coarse pebbles
 - 8 10 0 + shelly stuff

90 ft - Very hard rock like trap.

Greenish clay
 very compact

142 ft - Hard rock

Greenish clay with
 admixture of black
 sand.

172 ft - Hard rock - 4 1/2 to 10 ft thick -
 water pressure 14 to 16 lbs.

Vicksburg White (Quartz) stuff.

Generalized section of St. Augustine and
 given by Mr. W. J. Sherman.

Mr. Sherman states that the same 31 stratum that is struck at about 630 ft lies at about 180 ft at St. Augustine and lies at about 360 ft at Switzerland. State also that at depth of 400 ft. a pressure equal to the pressure at Jax can be obtained.

✓ P.S. Aram, Lt. A. Water Works. CLK.

Brine hydrants 130, fine pressure 90 to 100 lbs.
Japs 800 domestic " 45 lbs.
Cap. standpipe 286,000

✓ C.F. Wise, Chief Clerk Mr. Mc. Guire

Surface sand	8-12	32
Sand + shell	12-60	
Sand, shell + streaks of blue clay	60-95	
Blue clay	95-145	
Very hard lime rock	145-146 slight fine grit below this, comes to surface	
Sand + clay mixed	146-160	
Black sand + clay mixed	160-170	
Red rock, very hard	170-180	✓
Gray formation rock, soft, dark specks	180-185	
Chalky formation (not much water)	185-200 (10 to 15 ft)	
alternating hard + soft formation, mixture of shells + coral	200-520	

(by Mr. Walker -)
St. A. section -

Mr Walker, says that when the well at the 33
 electric plant struck the flow that the
 well at the Hambleton (power) plant stop flow.

Mud	0-20	Indian Key well by Walker
Thin well sandy	20-25	
Sand	25-130	
well,	130-132	
Sand	132-600	
possibly fracturing very soft white	600-652	
Hard + soft strata same as St. A.	652-687	

Fernandina, see John Simmons, 34
 manufacture -

Sand	0-110	Fernandina well by Walker
medium hard rock	110-126	
sand + clay	126-185	
Clay	185-400	
Sand	400-400	
Green clay	400-512	
Rock	512-517	
Blue clay	517-556	
Red (hard) rock	556-733	
alternating soft + hard	733	

Sand + clay mixed	285-295
sand with clay	295-300
sand high flow	300-320
dark tough clay	320-330
yellow clay	330-350
dark clay	350-381
gravel + rock	381-392
coarse gray sand	392-394
light colored clay	394-396
dark colored clay	396-400
Rock	400-412
Sand	412-414
Rock + lighter flow	414-416

E. May post well

H. Walker.

well started in old well of 281 - full depth.



Arch + shell formation	416-495
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At Ormond bed well at 100 ft as stated by Mr. Walker. The formation to this depth same as at St. A.

Ormond total well 720 ft. At 320 ft struck salt water. Temperature 76° F

written up 8/10/10

well in gas drilled by E.F. Joyce. 37

J. H. Christopher.

Gas Machine Co, (Hagletine + Brew) at Viaduct.

J. E. T. Borden, La Villa.

Windsor Hotel, (2)

City (3)

Gas Co, main st. near city works.

W. Bilger, 40 Record Co., St. Augustine.

(E. Y. Harrison, ~ ~ ~)

Fred M. Allen, ~ ~ ~ H. A.

H. L. Brown ~ ~ ~ H. A.

R.

37

38

0-3	Sand
3-40	Clay, blue.
40-43	Sand,
43-50	White quick sand with water, sometimes comes to within 1 ft of surface.
50-52	Shells, oysters, clams, etc.
52-100	Light colored clay. buff colored, last few feet of clay contains black pebbles. water bearing, not flowing.
100-112	Sandy clay
112-125	Rock, first 2 feet dark + hard, becoming softer lighter + softer. Sometimes get a flow just above this rock, usually penetrate 2 to 3 feet for water.
125-200	Rock, water very white, showing soft limestone.

Generalized section of Orange Mills, given by Mr. Moore.

($\frac{1}{4}$ mi. E mi City Nat. works.
Raising addition to St. A.)

39

Hastings. (matson's list of wells)

Drinner Island, Padgett & Co.

Erection, 5 mi. S.

Federal Point, J. Perry & Son ✓

" " , Wheeler Bros.

Montauk, Cutting Place.

Picolata, R. J. Oliver.

Edward + J^H
Bhrenburg

From Billingsworth } well drilled, Hastings.
Sartlett,

40

C. S. Brown, Palatka.

S. C. Warner, "

M. A. Johnson, "

} Three wells on St. J.
River, at Brown's
point, between Federal
Pt. & Palatka

0-2	Sand Hubbard & Hart
3-40	well, Federal Pt.
	Sand clay
40-60	Bed of oyster shells.
60-150	Clay
150-180	Red mud, hard.
180-225	White limestone.

Sent report to
J. S. Hubbard
Federal Point. ✓



E. H. Burnside, Espanola.

41

Mr. Wiley Melton, well driller
Kingston, Fla.
to put well at Bunnell for Lambert & Moody.

Bunnell 28 ft. & E.C., authority.

Kaufmann Metal Co, the other side
of where RR crosses Bay St.

J. W. Higgins, near Artesian
well drilling Co. Jacksonville, Fla.

Gardner well, North Beach, 4 ⁱⁿ 3
mils. 1 1/2 St. A.

Dolphin Paetli well (North Beach RR Co), North
Beach, 5 mi 1 1/2 St. A. 6 in well.

Things to be looked up in going ^{to} 2
Dec.

Get record of well at Driver Island
from Mr. Mann at Palatka.

Complete the record of wells at Dupont.
Get more definite information about Espanola wells.

See coast line wells at Baldwin.

Ponce de Leon well: cased 78 ft. not more
cost. ~~would not~~ give it.
Use swimming pool.

Sherriman well - completed the log.

< not the timing well, this is probably a spring

Anastasia Island well. straightman is out.

Flow of both wells at St. A.

2,520 gals. per minute, for hour
151,200 per hour.

Cap. of pump 1,336 gals. per minute.

Surplus water wasted 1,184 gals. minute.

Wells measured Nov. 9, 1909.

Filled ground + sand	0-15
Sand + some clay	15-33
Soft limestone rock	33-37
Light clay or marl, sticky	37-70
Clay, blue, sticky with some large pieces of black pebbles.	70-100
Greenish (light) marl (sticky)	100-120
marl, green (sticky)	120-130
"	130-150
"	150-170
"	170-200
"	200-220
"	220-240

Some thin layers of white limestone occurs all the way between about 100 to 400 ft. It is very soft and depth of above 220 water began to rise to surface blowing at depth of about 270, 5 gals. minute. From 390-396 a very hard sandstone,

Temperature of water 70°

Jacksonville well

Dec. 4 - 09

44

J.B. Hughes well at Hastings, 11 1/2 lbs.

F.L. Vey Co. } 12 lbs. (their measurement 1906)

N.H. Moore well, 8 lbs.

E.E. Dunslee well, 7 lbs.

J.R. Allen well (6 in) 6 lbs.

A.S. Mobley, 3 1/2 mi 5/3 6 1/2 lbs.

J.C. Peckwell, 8 1/4 lbs. (1 mi. S)

Hasting Bensing Co well, 10 1/4 lbs.

C.A. Thompson well, 10 lbs.

Total depth of Channing well at Orange with 219. Pinn outcrop 200 ft.

J.S. Blake, 4 1/2 mi 5/3 Hastings.

$$\begin{array}{r}
 82.318 \\
 \times 21.48 \\
 \hline
 175.46 \\
 \hline
 221
 \end{array}$$

$$\begin{array}{r}
 56 \\
 63 \\
 \hline
 119 \\
 \times 545 \\
 \hline
 173
 \end{array}$$

Bhrenberg well

5 1/2 lbs. - 188

5 1/4 lbs. - 143

5 1/4 lbs. - 219 ft.

45

46

46

J.R. Ayra, 4 mi. 3/2 Hastings,
Kilmer, S.S. Hillingworth -

166 ft. 4 in. 1904.

A.S. Mobley, 3 mi. 1/2 Hastings, drilled by
N.H. Moore. pressure, 12/4/09 6 1/2 lbs. 6 in

1908

R.C. Harris, Hastings. (and upar.)

James well 15 lbs. pressure when put
down. 8 cubic pints.

Moore drilling a well in Hastings.

Putnam County.

R.R. Price for map of Putnam Co.

At table 1000.

Collins, supt. water works.

Roundtree.

Analysis 120 ft. well at water works, Palatka.

Bacteria, per cu. cent. for 4 days.	12.
at 37°C	1.
Bacteria gas forming in 50 cc	0.
Chlorine for 100,000	17.64
Hardness - - -	20.00
Sediment,	0.

no organic material.

State Chemist -

(about 1907.)

✓ Mr. N. S. Collins, supt. City Water Works.
Palatka,
Fla.

Boston, G. W. Gleason & Co. 3 miles
3 mi $\frac{1}{2}$, matter

Rice Creek, Putnam & Sill Co. 1 mile 182, 2 in 44
Woodbury $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ Edmundson, 1 mile, 218, 4

Utica Brick & Tile Co. Palatka, Fla.

Output tile per year 1908 400,000
" brick 1408 1,500,000

general monthly sample on brick
" Sanford on tile

H. J. Scott, Mgr. U. Brick & Tile Co.
Palatka send report.

D. C. Stafford, Evergreen. Well drilled

H. S. Wells, Palatka, Fla. send anal.
(Wilson Cypress Co.)

M. R. Ryan, Palatka, send reports.

Mr. Remwell at Palatka in regard to
occurrence of phosphate in Putnam Co.

Also see Mr. Sullards

Send Dr. Welch report.

Friday. City class.

Mr. Martin Griffin, Palatka, send report.

L. C. Casanova, Palatka,

San Mateo:

Geo L Beach, 2 mi N. ✓

W. L. Juler, 1 mi S ✓

C. A. Hamilton, 1 mi S.

Strong place, O'Hara now has three mi.

Barnstable looking show Georgetown to
be about 20 feet higher than water in
St. Johns at San Mateo.

In returning to Hastings see 51
 Mr. Hulingsworth in regard to well
 at Yelvington. Also see Mr.
 Barth.

Crescent City.

Ice factory.
 Hubbard.
 Carpenter.
 Mrs. Albrecht.

✓ P.B. Raybon, Lake Como
 send report

52

0-30

Red + blue clay, very
 plastic. (River clay)

30-35

Shell stratum.
 (water flows.)

35-

Sand, white.

Below this were
 alternating strata of
 shell, sand + rock.

In this section a first flow is
 obtained about 35 ft. Second flow
 very strong at 160 ft. Characteristic
 sulphur water. The third flow is a
 salty water and can not be used for
 irrigation.

✓ E.F. Harner,
 Omega. Fla.

Send report

immediately surrounding Crescent Lake on the western shore a flow is obtained a depth of 30 to 40 or more feet. The formation is first sand then a clay and usually immediately under the clay occurs a shell stratum in which is water bearing. Sometimes however, the shell is absent and in this case it seems, from reports, the water bearing formation is a sand. Most of the wells around Crescent City are shallow and terminate in this first flow. A great number of wells have failed, so reported, while others seem to flow as much as ever. The deepest wells of which record could be obtained here those Mr. Cook. These four wells are used for power, city water supply and the manufacturing of ice. One two

inch well is used entirely for condensing, ^{which part of the flow of the} the other three wells, one 2 inch, one 4 in, one 6 in, are used for power in running an over shot wheel which runs a pump pumping water to the different parts of the city, the other portion of the flow being used for the water supply of the town and the manufacture of ice. The wells have been put down for a number of years and reported not to have decreased in amount of flow. The water is hard and contains some sulphur although not so strongly impregnated with it as that the wells along the East coast. It seems that the water from this depth, 316 feet, is almost as soft and as free from sulphur as is the water from the more shallow depths of 30 to 50 ft.

Leaving the lake westward one 55
encounter a high rolling or almost
hilly sandy pine lands. A great
deal of land is under cultivation
and mostly in orange groves. No
deep wells occur in this belt.
All shallow and terminate in a
sand or sandy clay.

Wells at Omega also ~~flow~~ at
a very shallow depth. This flow
is obtained from a shell stratum. The
second flow was encountered at a depth
of 160 ft. and a third water
bearing stratum at ft. No
measure of amount of flow or increase
in head was reported to have occurred
when the third water bearing stratum
was encountered.

28.

56.

Melara well, 5 in well for
160 ft. at which depth for
water under pressure was found.
At about 98 ft. rock was encountered
and casing stopped there. Water
from this depth 160 ft. was comparatively
soft and was but slightly sulphur.

At depth 160 ft. down was reduced
to 5 in, and second casing going
to perhaps 243 ft and for the
next 100 ft a very hard rock
with which he drilled for several
months (5). Penetrating this rock
second water was encountered and
an analysis found to mineralize

✓ J. A. Reader.
Melara

H. E. ^{W. E.} Howe, Salsuma Heights.
near on river

57

✓ Fred T. Owen, and report
Salsuma Heights.
Fla

H. A. Ring, Sisco, (and reports)

Sisco 1030

Pinnock 1020

Who is owner of still at
Dinner Island

58

Generalized section for Elioctor
by Mr. Bartlett.

0-10 ft	Surface
10-20	Red clay
20-24	Hard pan, black.
24-36	White sand
36-42	Blue clay
42-60	Shell with very little sand. contains water, no flow.
60-85	Blue clay and these pebbles)
85-90	Shell more water, plentiful. comes to within 1 ft of surface.
90-160	Blue clay, from 90 to depth of most more (harder) contains also something like sandstone (105-130)
160-175	Very hard, probably some flint. little water on top of rock and little black sand top of rock. Cavities in rock containing water increasing flow all along.
175-300	Soft limestone, more water.

0-6	Surface
6-20	red clay
20-24	Hard pan, black.
24-30	White sand
30-33	Blue clay (marl) (greenish)
33-53	Sand + shell.
53-59	Blue clay (marl).
59-80	shell + sand contain water above 9 ft of surface.
80-130	Blue clay marl.
130-146	Black quartz sand not plentiful, 7.5 ft of surface.
146-180	Very hard blue marl, clay
180-186	Black quartz sand, water
186-196	Blue marl
196-197 1/2	Very hard rock, flint, water below, flows.
197 1/2-201 1/2	Hard rock, flint but more water.
201 1/2 (222)	Softer limestone, more water with increase of depth.

Beach well at Holy Branch by Mr.
Bartlett.

Holy Branch. 980.

0-45	Surface material sand.
45-90.	Blue clay.
90-109	Black material looking like gun powder or pepper.
109-119	Blue clay
119-124	Shell + sand
124-124 1/2	Blue hard rock flint.
124 1/2-125	Cavity 6 in. sand, shell + water. 1.4 ft of surface
125-128	Blue rock flint, more water, same head another cavity in third drill stopped.

Lambert + Moody well at
Summell, by Mrs. Wiley Milton
Kingston,
Fla.

Water at Dupont - 4 ft. by Melton 61

Clay County

Bayard E. B. Wilson + Co. ^{po Washell}
formerly Wilson Cypress Co. $4\frac{1}{2}$ mi $2\frac{1}{2}$

Green Canyon. 945
Hibernia 150

62

Fleming well, 62

Hibernia, Tex. 1885.
468 ft.

0
shell + hard looking pebbles probably
miocene stuff at depth of 120 ft.
Oligocene limestone at bottom of well
468 ft. a good sample seen as
sawed by Mr. Fleming's Sample taken.

5 mi. N. of Northwest station at Turpentine 63
still a deep well does not flow. probably
put down by mine. Owned now by F.H.
Jennin & Co. formerly Silphman Smith & Co.

L. B. Lovelace, Lens, Fla. sent report
on water supply

there are two wells at Lens
but could only measure the
deeper one (404 ft). Colored
man reported that water
stood at about the same
level in the shallow one.
The deeper well is not used,
said to contain iron and
impaired boiler badly.

Mr. Lovelace said that the

first water encountered in the 64
deeper well stood nearer the
surface than the water at the
depth of 404 ft. Said limestone
was encountered and the lead
was lowered.

(Saw Mr. Jennin as just
12/8/09 sample of water)

Saw Mr. R. M. Tucker, driller for
J. W. Higgins, at Ortega Jan. 4, 1910.
Said it took too much time to save
samples of entire well. Promised to
save some and make note of most of
most important things. White River.
Well Jan. 4, 1910 drilled to depth of 110 feet
and at this time was in blue clay. Went
through a shell stratum at about 100 ft.

Capt. Hallens.

Send report to

- ✓ Mrs. E. G. G. Munsell, G. Cove.
- ✓ R. B. Drey.
- ✓ Geo. A. Chalk, Middlebury.

48

66

Maxville, 5 mi. E. Burlington + Long,
2000 ft +.

William Caring, DeLoach + Edwards, Maine.
5000 ft 3, + 20, 1906.

Jan. 6 - 10

G. Cove Stg. depot 28 - more see back

Hotel	
Depot	16 minutes at 7:30 - 1010
Memoria Creek	990
Magnolia Stg	1080
3 mi out	1010
Williams caring (8:30)	1000
Peter Cr	960
Russell	970
1 mi W. Russell	995
1 1/4 " " "	1010

About 1 mi W. Russell we cross a creek
and after this we rise gently to sandy country.
Rise all of 20 feet in distance of 1/4 to 1/2
mile from the creek west.

5 mi W. Russell (10:30) 1060

67

✓ H. S. Mattox, Green Cone spg. 67
Send the water of out.

Ribbon hole branch (4 mi S. middleby)	1035
On top of plateau from branch	1055
2 1/2 mi S middleby	1070
Crossing of Ck abt 1 1/2 mi from M.	1080
Just before crossing Black Ck	1020
Black creek	1010
Middlebury	1050

Middlebury	1050
Black creek	1020
On top of plateau across black Ck	1060
Crossing of Ck 1 1/2 mi from M.	1040
Quite a hill just across here perhaps 30 ft in	
Ribbon hole branch (4 mi S. mid)	1110
After crossing this ridge perhaps 20 ft on a	
shaly plateau 1/2 mile across.	
About 6 mi from G. Cone sandy hills. No top	
for flow, about 1 1/2 mi	

68
J. S. Smith, Green Cone, about well on
Haller.

Union Drive Co., J. H. Rooney, J. H.
H. owner, Peoria, Ill.
in information ✓

Just before crossing Peter Ck.	1120
Peter Creek (10:00 AM)	1070
Over Peter Ck	1140

Continues this high stretch from Peter
Creek for a distance of about 1 1/2 miles,
then drops down again.

Pomona 1/7/10 (11:00 AM) 850 69
 3 mi out 900
 5 " out 840
 Apalalca 780

J. F. Doyle, Perin, 3 h sand upst. 1/12/10

Naevius well 352 ft.

330 - 2 in.

128 - 3 in.

+ 25-

Botney well 365, - 48.

William crossing 355 ft

Levee well 220, 2 in
 - same

R. C. Maier, (temp.)
 Racey, Fla. sand upst.

R. H. Bohm,
 Colee, Fla sand upst.

70

Jan 12, 1910

Green Cove sps. — 560
 magnolia 560
 William Crossing 550
 Russell 540
 Crossing of Black creek 530
 Doctors Inlet 530
 540 - 9:51 AM
 Perin

Doyle well at Perin 1/4 mi N. 58.0

2 m. N. Perin 570

a little sand ridge here.

3 mi - 530

Little Black Creek 530

Swab branch 2 1/2 mi. E Middleby. 540 ⁷¹
 On top of hill up from branch 560
 Howard well at Birch yard 560
 Clear out here at surface 540
 Long branch
 On top up from Long branch 560
 North face where corner 540
 Up on plateau 580
 Nelson Long + Buddington strike 570

✓ C. H. Taylor, Peoria Ill (5)
 mgr. Union Pacific Co.
 (send map.)

✓ Dr. J. A. Rieder, Helena,
 send map.

Log of well at Springfield See North ⁷²

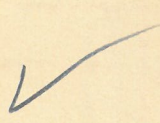
0-4	surface soils
4-50	Quartz sand
50-52	siliceous pebbles
52-340	Blue + yellow clays.
340 -	sand

Well on corner -
 Chas property, 225 ft deep
 Jan. 12, 1910, casing 200 ft. well in 73
 mile west.
 J. N. Higgins, Vidalia, Ga

Schutz, Mgr.
 Fernandina, Fla.

0-3	mud	Nassau Mm. & 74
3-9	Hard pan	Farm Co. well.
9-100	sand	Fernandina
100-200	blue clay	flow of water.
200-400	sand	water between 120 + 200 ft. flow a good stream.
400-500	coarse sand + large pebbles	
500-630	Rock	
630-650	Limestone (water)	

given by Mr. Schutz.



✓ R. V. Nolan, supt. water + light plant,
Fernandina, Fla. send report.

✓ The well of Fernandina water works
diminished in flow, had to one time use
a pump. The new well gives a large
volume of water and apparently has not
varied since the time it was drilled.

Free Amm.	none.	
Alb. "	slight trace	
Nitrites	" "	
Nitrates	none	
Chlorides.	1.19	grs. per gal.
Total solids	11.2	
Org. + vol. solids	1.75	
Hardness (CaCO ₃)	3.2	
Permanent hardness	none	

J. B. Keith
well
Fernandina
Fla.
Z. R. Smith
Dec. 30, 1908.

✓ John N. Simmons, Pres. Ice Works
Fernandina, Fla. send report.

Well at Fort Clinch

✓ Walter Schuch, Fernandina, send report.

Artesian Well Drilling Co.,
J. M. Higgins, Mgr. p. O. box
Jacksonville, Fla. 1082

Fernandina; public supply, 77

Cap. stand pipe 113,000 gals.
Elevation " " 100 ft.

Cap. reservoir, 150,000 gals.

Consumption for month of Dec. 1909
20,000,000 gals.

Gustaf Stanc

Fernandina, Fla.

(Send report)

See Mr. Stanc, in regard to
drilling of well City Water Works.

78

The original depth of well at
Fernandina was 620 ft. but
has since been deepened, stand
out etc. Cased 620 ft.

Wells Wade + Hampton.

Providence, R. I.

Well diminished in flow
to the extent that in order
to get a sufficient supply
for the city a pump
had to be used. When
the additional well was
put in pump was abandoned

W. Kinghorn,
 Do. Jax. 36
 Box 145,
 and report

Total depth of Joe well 434.
 Pulled all pipe out and on
 Jan. 17-10 had about $\frac{1}{2}$ of it
 put back. Not drilling. Well
 filled up about 60 ft. above
 the total amount of casing, 380 ft.

Samples from Bowling Green
 6 mi. S.
 between 250 - 300

Tilghman Phos. Co.

Location of new art well, Jax (14 inch)
 (500 ft. south of Phelps Street, 19")
 between Market & Liberty

Springfield Ice Works well

415 ft deep Jan. 17-10.
 Drill stuck in sand part.

Sample of well from 409-415

U.S. Government, Amelia Island Light Station

81

Depth 145 ft.

size $1\frac{3}{4}$ in

water stands -55 ft.

soft corals were at 142 ft, and continued to bottom. Well ends in this well did not go through, this was fine water, sand & clay & were no water.

J. P. O'Hagan, Amelia Island Light Station

✓ Termination, Fla. (redup)

U.S. Light House Engineers,

Charleston, S.C.

Write them for information in regard to elevation of Amelia Island Light House.

85

Capt. Loring, Keeper Musquito Island Light Station.

82

pump for two years, well never stopped flow entirely.

Nassau Brit. Co. }
 Callahan " " } Callahan
 O O Michels " " } + Co.

Mr. J. R. Wilson ✓
 Mrs. Ogilvie, 4 mi. E
 " Muddock 3 1/2 mi
 " Star, 2 mi N. ✓
 One at St. John
 " " Lessie (2) } ~~L. L. Evans~~
 Mr. Wells. ✓
 " Hodges. ✓
 One public well

Well of W. H. Hodges.
 Callahan -

0-2	sand	
2-10	Red clay	
10-28	Blue clay + sand	
28-50	shell	water in shell, plentiful. - 6 ft.
50-240	blue mud	no water, dry, contain black specks, shells seen at 160 + 190 ft in
240-248	gray sand	white water was found, flow small stream.
248-328		
328-330	Hard rock	
	Blue rock bed. (minors)	
	mud + sand	
330-390	contain some pieces of above	
390-397	gray sand	
397-420	limestone water	hard rock on bottom, no cavities but very porous. sea weathers expected to have been found.

0-8

2-8

8-35

35-55

sand
red clay
blue clay + sand
shell, have very hard with rounded siliceous pebbles.

Tom Wells + No. 85

3 in

At 115 ft. water flow, small flow from bed of gravel black & white mixed about 4 ft. thick.

At 180 ft. grey fine sand with water, flowed. at 2 ft. in

Heavily brown 6 to 10 feet of this, a bed of kaolin occurs below the shell stratum at depth of 50 to 60 ft.

86

Wells of J. N. Wilson
3 mi S. Callahan.

24 ft

24-50

continues from 32-36

shell
16

first water at 315 ft.
This was first flow.

first well head was 318 ft. + 31 ft. rose from this down.

Picture #1, Life House, Ferdinandina 1/2 to 87
 " #2, well at Ft. Clinch "
 " #3, " " " 16, 9. 1/29/10
 #4, Callahan, 12:00
 " #5, rig of H.C. Russell at Callahan 1/29/10
 #6, " ~~at Callahan~~ rig of Hughes & Co. 1/31/10
 " #7, " " " " "
 and Mr. H.C. Russell, H. Mary's Ga. one of #4.

make core for Russell #5. and
 I left 10 sacks with him for
 samples. ✓

Picture #8, well at Leslie, 2/2/10.

88

well of J. R. Wilson,
 Callahan, 3/4 mi E.

0-2	sand	
2-10	red clay	
10-45	blue clay + sand	
45-60	shell	Thin layer of hard ware at 52 ft. water above & below core within about 10 ft of surface.
60-200	Blue marl with occasional beds of shell, 3 or 4 ft. thick.	Blue to dark gray pebbles.
200-212	sand, medium coarse with shell spurs.	
212-250	shell	(sample)
250-418	Blue marl + fine sand, with inclusions of shell beds.	
355-364		Reeds very hard.
364-418	Reeds	hard + soft shales, interbedded, sandy etc. not so porous.
418-489		
	sand + blue marl	
	indurated gray	

Be sure to ^{see} well at Cullerton ⁸⁹
2 miles west. see Charlie Hadden
at the place of John Roddenbery.

See H. J. Gooding, Sr., Engineer,
Jacksonville, Fla.

D. C. Haffner has put down
well at
Imperial Co. (Shaw Co.) Italia
at Leslie Jones's at
One at Lofton. near Jerry.

State Chemist.

Iron well, 378, 3 in.

J. M. Ogilvie, about town well.

Analysis of town well at ⁹⁰
Cullerton #m 1322.

F. C. Higginbottom, }
Judge H. C. Burgess. } sent
Dr. C. R. Smith. } reports
2/4/10

Mrs. B. G. H. Munsell, R.

✓ Send Gibbs a black map.

✓ Send Robert Bryce, report,
Crawford, Fla.

The Cornwall Farm Land Co. ⁹¹

✓ Stillman, Fla. -
1536 1/2 mile N. W. Bay, Chicago, Ill. (2)

D. W. Griffing,
✓ Stillman, Fla.
bore volume

Analysis by
Chemical & Engineering Co.
Expert assistance.
25 Kinzie Street, Chicago, Ill.

of deep well at Stillman, Fla.

Organic matter	870/10000 %
Silica	360/ "
Calcium Carbonate	1570/ "
" Sulfate	160/ "
Mg. Sulfate	1050/ "
" Chloride	408/ "
Na Cl	203/ "

Total foreign matter $\frac{4161}{100000} \%$ ⁹²
or, 4/10 of 1%
[Signed]

Chemical & Engineering Co.
by H. P. Watkins, Mgr.

✓ Send report to
A. E. Ogilvie, Callahan, Fla.
Representation 1907 -

Send a copy of analysis of town
well at Callahan, to

~~J. E. Callahan~~, J. C. Higginbottom, Callahan

Judge B. C. Burgess, "

✓ by C. R. Smith "

{ Geo. E. Willis

Fernandina, Fla.

P. O. box 127.

Reeds Bluff, near Crandall
 on St. Marys River, upper
 100 ft or so high, sand, clay,
 hard or indurated sand and
 shell strata.

J. A. Flood, Yulee, Fla.
 sand up to $2\frac{1}{2}$ ft / 60

97

88

98

113

101

0

102

13

|||| |

145- 28
70
2

0-110

sand

110-150

Blue clay - very plastic

150-175

White pipe ^{or sample} clay + some shell

175-180

Blue gravel

180-200

White pipe clay + shell

200-315

soft + hard rock

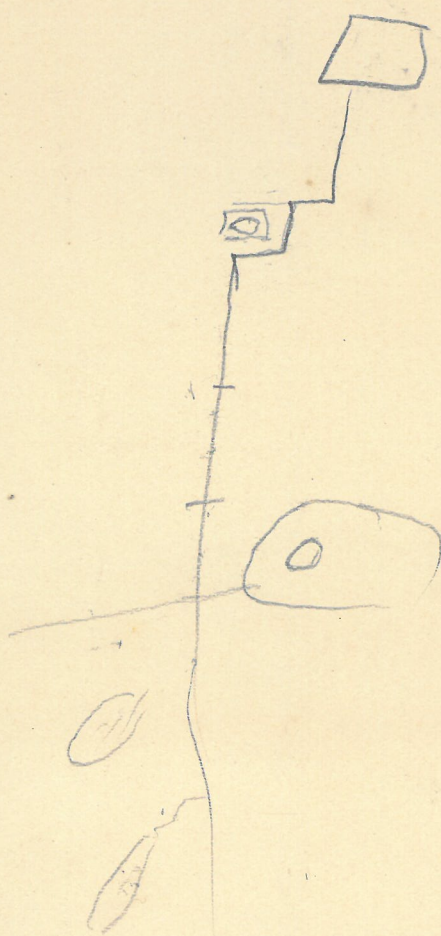
at depth of 270 were
in cavities and
continued in cavity
for 50 feet. continued
water. at 300 ft a
very compact + hard
rock.

Bohney
well

San Mateo
well

206 Spring St
 Utica NY

48.51
 462
 231
 21
 2.31



711

General for Hushing by Mr. Murrel.

0-3	sand
3-50	clay, ^{blue} yellowish
50-60	sand with water not flowing short distance of surface.
60-62	shell,
62-160	light colored clay.
160-170	Rock, dark very hard usually 10 ft thick a little water on top but usually will not flow until water is penetrated. About 1/2 flow 170 ft.
170-365	Cavernous limestone alternating hard + soft strata with increase of water. The limestone has many cavities containing water. Water milk white.

113

11

Shale at

Stone

265.5
 1.21
 1231
 11.5.5
 11.5
 2.31

6.0
 2.8

14.5.5.7.5

9/1

	mill
0-10	sand
10-54	clay, blue
54-55	Bluish siliceous? pebbles.
55-101	White clay
101-	Brentburg well or orange mill.

W. & W. for
 Springfield Dec 1884

W. & W.

115

Shade at

here

26592
132
1321
1155
1155
231

6.0
2.8

2.1

14.575
8481
294
1155
128
182

about full carth expn. betw of fig.
" " " " " or fig.
starting of the papers. page ends on
even.

19.31
2.15
207.4
228.55
which even

11/

55

55=101

104-

White clay

Bremburg well
or Orange mill.

W. & W. for
Springfield Dec 1884

W. & W.

